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EUROPEAN CENTRAL BANK

EUROSYSTEM

EUROPEAN CENTRAL BANK ANNUAL REPORT 2009

# ANNUAL REPORT 2009

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EUROPEAN CENTRAL BANK

EUROSYSTEM

# ANNUAL REPORT 2009

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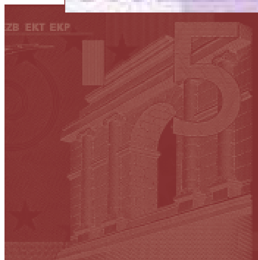

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# ABBREVIATIONS

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

**Unless stated otherwise, all references in this report to Treaty article numbers reflect the numbering in effect since the Treaty of Lisbon entered into force on 1 December 2009.**

# FOREWORD

In 2009 the European Central Bank continued to operate as an anchor of stability and confidence in the challenging environment created by the global financial crisis. Following the severe intensification of financial market tensions in autumn 2008, the year 2009 started with a rapid and synchronised fall in economic activity worldwide. This was followed by a very gradual recovery in the course of the year, while inflation remained very low. Overall, euro area real GDP contracted by 4.0% in 2009 and average annual inflation stood at 0.3%. At the same time, medium to longer-term inflation expectations remained firmly anchored in line with the Governing Council's aim of keeping inflation rates below, but close to, 2% over the medium term. This reflects the high degree of credibility of the ECB's monetary policy.

In this environment, and in response to continued subdued inflationary pressures, the Governing Council in the first few months of 2009 lowered the rate on the main refinancing operations by a further 150 basis points, to 1%, a level not seen in recent history in the countries of the euro area. The Governing Council left the key ECB interest rates unchanged for the remainder of the year.

In addition, with a view to ensuring the proper transmission of monetary policy impulses at a time when the functioning of the financial system was severely hampered, the Governing Council extended its enhanced credit support measures. These measures were designed to support financing conditions and the flow of credit to the economy beyond what could be achieved through reductions in key ECB interest rates alone. They were tailored to the financial structure of the euro area economy – where banks play a major role in financing households and firms – and have helped to maintain the flow of credit to the economy.

In particular, the ECB continued to provide liquidity in a fixed rate full allotment procedure in all refinancing operations and further lengthened the maximum maturity of its refinancing operations. It conducted three operations with a maturity of 12 months in 2009. As a result, financing conditions in the euro area improved considerably during the year, as reflected in particular in reduced term money market spreads and a significant decline in overall financial market volatility.

In the course of 2009 there were increasing signs of stabilisation in economic activity in the euro area and beyond. The parallel improvement in financial market conditions reduced the need for extraordinary intermediation by the Eurosystem. Taking these improvements into account, in December 2009 the Governing Council initiated a gradual phasing-out of those non-standard measures that were no longer needed. This timely decision was taken to avoid distortions associated with maintaining non-standard measures for too long, and to provide incentives for banks to continue making the necessary adjustments in their balance sheets. At the same time, the Eurosystem's enhanced credit support continues to ensure the provision of liquidity to the euro area banking system, facilitating the provision of credit to the euro area economy and further underpinning its recovery.

With regard to fiscal policies, as in other advanced economies, budgetary positions in the euro area countries worsened very significantly in 2009, reflecting the large economic contraction and the expansionary fiscal stance, which included fiscal stimulus measures and government support measures for the financial sector. According to the European Commission's autumn economic forecasts of November 2009, the average general government deficit ratio in the euro area increased from 2.0% of GDP in 2008 to 6.4% in 2009. Against this background, it is of paramount importance that the updated stability programme of each euro area country is underpinned by well-defined corrective measures in line with the respective excessive deficit procedure and clearly sets out the fiscal exit and consolidation strategies for the period ahead, with a strong focus on expenditure reforms.

The key challenge in order to reinforce sustainable growth and job creation is to accelerate structural reforms. In particular, reforms are urgently needed in the financial sector, where an appropriate restructuring of the banking sector should play an important role. Sound balance sheets, effective risk management and transparent, robust business models are key to strengthening banks' resilience to shocks, thereby laying the foundations for sustainable growth and financial stability. In the case of product markets, policies that enhance innovation should be developed to speed up restructuring and investment and to create new business opportunities. In labour markets, moderate wage-setting, effective incentives to work and sufficient labour market flexibility are required in order to avoid significantly higher structural unemployment over the coming years.

* * *

The policy and regulatory responses to the financial crisis gathered momentum in 2009 with a number of concrete proposals for the enhancement of the financial stability framework at the European and global level.

The report of the high-level group chaired by Jacques de Larosière, published in February 2009, put forward a set of recommendations for a new EU institutional framework for supervision. The European Commission followed up on these recommendations in September by issuing legislative proposals to the EU Council and the European Parliament. The proposals regard, first, the establishment of a European Systemic Risk Board (ESRB), responsible for the conduct of macro-prudential oversight, and, second, a European System of Financial Supervisors – comprising a network of three European Supervisory Authorities and the competent national supervisory authorities – responsible for micro-prudential supervision. The ECB has broadly welcomed the Commission's proposals in its formal opinions.

The main macro-prudential tasks of the ESRB will be to identify and assess risks to the stability of the EU financial system, and to issue risk warnings and, when appropriate, policy recommendations for remedial action. The performance of these tasks, based on a comprehensive information base and effective macro-prudential instruments, can be expected to contribute significantly to financial stability in the EU. The ECB, as an EU institution, stands ready to work closely with all 27 national central banks of the ESCB and the competent supervisory authorities to support the ESRB in performing these tasks.

At the global level, the London summit of the G20 Heads of State or Government in April 2009 was a milestone. It established the Financial Stability Board (FSB) as a successor to the Financial Stability Forum, with a broadened membership and a strengthened mandate for safeguarding financial stability. The ECB is a member of the FSB and contributes actively to the fulfilment of its mission, also as a member of its Steering Committee.

The G20 summit provided impetus for a wide-ranging regulatory reform, which is being followed up by the global standard-setting bodies and also by the European Commission.

The ECB has supported and contributed to this reform through its participation in the relevant forums and the provision of advice at the global and EU levels in areas such as the revision of banks' capital requirements, the enhancement of accounting rules and the arrangements for financial crisis management and resolution.

* * *

During 2009 the ECB continued to actively foster initiatives aimed at enhancing stability and integration in financial market infrastructures. In February 2009 the ECB published the "Eurosystem oversight policy framework", which describes the role of the Eurosystem in the field of oversight, the methods and instruments that the Eurosystem employs in this respect, and the allocation of responsibilities within the Eurosystem. In order to further enhance the safety, soundness and efficiency of the European post-trading sector, the ESCB and the Committee of European Securities Regulators (CESR) prepared recommendations for securities settlement systems and for central counterparties in the EU.

In addition, the ECB continued to act as a catalyst for private sector activities by facilitating collective action. The Single Euro Payments Area (SEPA) initiative, which the ECB has strongly supported since its inception, reached its second major milestone with the launch of the SEPA direct debit in November 2009. For the first time, there is now a truly European direct debit payment service.

In the field of central bank services, the single platform TARGET2, the Eurosystem's large-value payment system, now enables 23 central banks of the EU and their respective user communities to benefit from the same comprehensive and advanced real-time gross settlement services. Furthermore, progress was made on the establishment of the common, neutral securities settlement service called TARGET2-Securities (T2S). By February 2010, 29 central securities depositories had signed a Memorandum of Understanding with the Eurosystem, agreeing to use T2S once it is in operation. In addition, the central banks of Denmark, Sweden and Norway, supported by their respective national markets, expressed their interest in settling securities transactions in their national currencies in T2S. Work also continued throughout 2009 on the establishment of a single shareable platform (CCBM2) for Eurosystem collateral mobilisation. CCBM2 will allow the Eurosystem to provide efficient and cost-optimised collateral management and enhanced liquidity management services to Eurosystem counterparties.

* * *

Turning to organisational issues, the ECB had 1,385.5 full-time equivalent positions at the end of 2009, compared with 1,357.5 positions at the end of 2008. The increase is mainly explained by new tasks allocated to the ECB in relation to the T2S programme. The members of staff of the ECB come from all 27 countries of the EU and are recruited by means of open selection campaigns to fill vacancies published on the ECB's website. In line with the ECB's mobility policy, 196 members of staff moved internally to other positions in 2009, while 21 members of staff were seconded to other organisations for external work experience and 31 were granted unpaid leave to study, to take up employment with other organisations or for personal reasons. The continuous acquisition and development of skills and competencies by all members of staff, including management, remained a cornerstone of the ECB's human resources strategy.

In 2009 the ECB completed the reform of its retirement plan for staff members to ensure its long-term financial sustainability. To protect acquired rights, the existing retirement plan was frozen on 31 May 2009, and a new pension scheme was introduced on 1 June 2009.

The construction of the new ECB premises was approved in 2009. Following the launch of a new procurement strategy for the construction works, a total of 44 public tender procedures were conducted, and applications were received

from more than 400 construction companies. By the end of 2009 the ECB had received binding offers for work representing around 80% of the calculated construction costs. Largely as a result of the high degree of competition, the total amount of all offers is within the envisaged budget. On the basis of this favourable outcome, the Governing Council decided in December 2009 to finalise the contracts, to start construction in spring 2010 and to launch public tender procedures for the remaining trades and lots in the course of 2010. Completion of the building is foreseen for the end of 2013.

The ECB earned a surplus of €2.22 billion in 2009, as compared with a surplus of €2.66 billion in 2008. The Governing Council decided to release, as at 31 December 2009, an amount of €0.03 billion from the provision for foreign exchange rate, interest rate, credit and gold price risks, in order to comply with the maximum allowed ceiling, which is the value of the ECB's capital paid up by the euro area NCBs. The size of this provision, which is reviewed annually, now amounts to €4.02 billion. The ECB's net result for 2009, following the release from the provision, was €2.25 billion. This amount was distributed to the euro area NCBs in proportion to their paid-up shares in the ECB's capital.

Frankfurt am Main, March 2010

Jean-Claude Trichet

The new ECB premises, designed by COOP HIMMELB(L)AU, are due to be completed by 2013. The ensemble will consist of three main building elements, namely the high-rise, the former Grossmarkthalle and the entrance building.

CHAPTER I

# ECONOMIC DEVELOPMENTS AND MONETARY POLICY

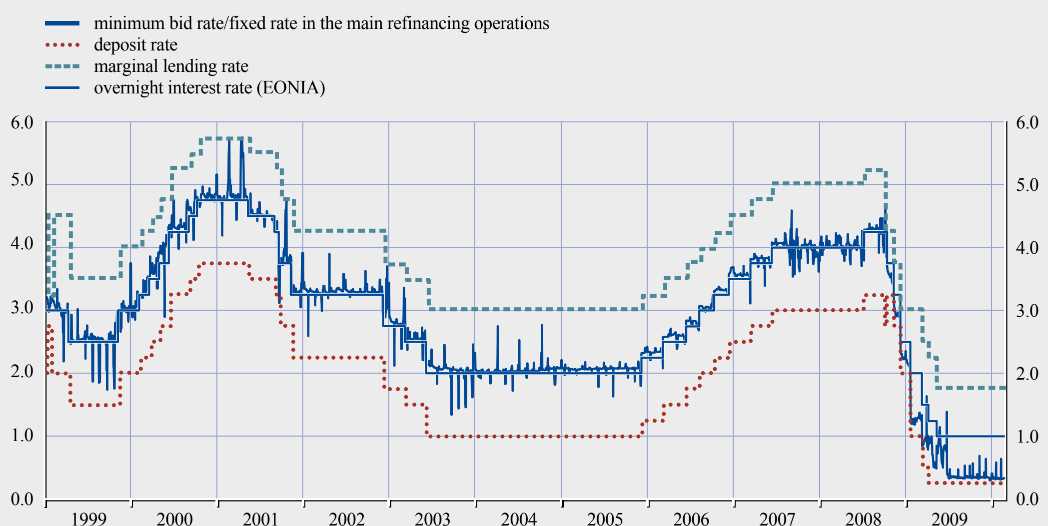
# 1 MONETARY POLICY DECISIONS

Throughout 2009, following the intensification of the financial crisis in autumn 2008, the Eurosystem continued to operate in a challenging environment. In response to subdued inflationary pressures in the context of a severe economic downturn in the euro area and elsewhere, the Governing Council further reduced the key ECB interest rates substantially. After a total reduction of 175 basis points in the fourth quarter of 2008, the Governing Council lowered the rate on the main refinancing operations by a further 150 basis points between January and May 2009, to a level not seen in recent history in the countries of the euro area. Since then the Governing Council has left the key ECB interest rates unchanged, with the interest rate on the main refinancing operations at 1.00%, the rate on the deposit facility at 0.25% and the rate on the marginal lending facility at 1.75%.

At the same time, given that the functioning of the financial system was severely hampered, the Governing Council adopted additional non-standard measures in 2009, thereby coping with dysfunctional money markets and facilitating the transmission of lower key ECB interest rates to money market and bank lending rates (see Box 1). This in turn was expected to foster more supportive financing conditions and the flow of credit to households and corporations. These measures went beyond what could be achieved through reductions in key ECB interest rates alone. This approach also took into account the major role that banks play in the euro area in providing financing to the real economy. As a result, financing conditions improved considerably, as reflected in particular in reduced term money market spreads and a significant decrease in overall financial market volatility. All non-standard measures adopted by the Governing Council were temporary in nature and designed to maintain price stability over the medium term both directly and indirectly by ensuring that inflation expectations remained firmly anchored in line with price stability.

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

(percentages per annum; daily data)




Source: ECB.
Note: The last observation relates to 26 February 2010.

Box 1

## ENHANCED CREDIT SUPPORT IN TIMES OF FINANCIAL DISTRESS

The enhanced credit support provided by the ECB in response to the financial crisis comprised a set of non-standard measures that aimed to support financing conditions and credit flows above and beyond what could be achieved through reductions in key ECB interest rates alone. This approach was tailored to the financial structure of the euro area economy and the specific circumstances of the global financial crisis. It focused on banks, as they are the primary source of financing for the real economy in the euro area. The ECB's enhanced credit support[1] comprised the following five measures:

– the provision to euro area banks of unlimited liquidity at a fixed rate in all refinancing operations against adequate collateral;
– the lengthening of the maximum maturity of refinancing operations from three months prior to the crisis to one year;
– the extension of the list of assets accepted as collateral;
– the provision of liquidity in foreign currencies (notably US dollars); and
– outright purchases in the covered bond market.

The non-standard measures adopted were designed so that they could be phased out once the situation had normalised. Their main aim was to mitigate the adverse effects that dysfunctional money markets were having on the liquidity situation of solvent banks in the euro area. The measures were also intended to support the flow of credit to firms and households. The decision to purchase covered bonds outright was taken in order to support the covered bond market, which is a very important financial market in Europe and a primary source of financing for banks.

In the context of subdued inflationary pressures and a severe downturn in the euro area economy, the ECB's non-standard measures supported both the banking sector's access to liquidity and the recovery of the euro area economy. They contributed to an improvement in financing conditions in the euro area and supported credit flows to the economy. The covered bond purchases fostered primary issuance and reduced the particularly elevated spreads in this market. As a result of the enhanced credit support and the strong reduction in key ECB interest rates between October 2008 and May 2009, money market interest rates, money market spreads and interest rates on bank loans declined significantly. The enhanced credit support fostered a considerable improvement in market liquidity and helped to alleviate funding risks.

Following improvements in financial market conditions in the course of 2009, the Governing Council announced in early December that it would gradually phase out those non-standard measures that were no longer needed. As of the first quarter of 2010, the number and frequency of longer-term refinancing operations were gradually scaled back. The last one-year operation was conducted in December 2009 and the last six-month operation in March 2010, while the number of three-month operations was reduced as of the first quarter of 2010. In early March the Governing Council decided to return to variable rate tender procedures in the regular three-month longer-term refinancing operations, starting with the operation to be allotted on 28 April 2010.

1 Further details can be found in the June and December 2009 issues of the ECB's Monthly Bulletin and in related press releases (available on the ECB's website).

Furthermore, an additional six-day fine-tuning operation was announced in order to smooth out the liquidity effect of the 12-month longer-term refinancing operation maturing on 1 July 2010.

The Governing Council also decided to continue conducting both the main refinancing operations and the special-term refinancing operations with a maturity of one maintenance period as fixed rate tender procedures with full allotment for as long as necessary, and at least until October 2010.

Following these decisions, the Eurosystem continues to provide liquidity support to the banking system of the euro area at very favourable conditions, thereby facilitating the provision of credit to the euro area. At the same time, the gradual phasing-out of the ECB's non-standard measures helps to ensure smooth conditions in money markets and to avoid distortions associated with maintaining non-standard measures for longer than needed. Improvements in financial conditions allow banks to begin performing part of their "normal" role in the money market, thereby reducing the need for the Eurosystem to play an extensive intermediation role. Keeping all non-standard measures in place for longer than needed would result in particular in an excessive reliance on exceptional central bank liquidity and associated moral hazard problems. In addition, it would weaken incentives for banks to continue with the necessary structural adjustments in their balance sheets.

Looking ahead, the Governing Council will continue to gradually phase out those extraordinary liquidity measures that are no longer needed, taking economic and financial market developments into account. The Eurosystem's operational framework will continue to support monetary policy in the fulfilment of the price stability mandate. In this respect, if upside risks to price stability were to emerge, the Eurosystem would take timely and appropriate action.

The cyclical slowdown in the euro area, which had started in 2007, turned into a recession in the first half of 2008 and then into an abrupt contraction in the winter of 2008-09, as the financial turmoil deepened following the collapse of Lehman Brothers in September 2008. This led to record declines in business and consumer confidence worldwide. Amid a severe downturn in the world economy, real GDP in the euro area fell by 2.5% quarter on quarter in the first quarter of 2009. Quarterly growth rates of real GDP turned positive again in the second half of the year, in an environment of improved financial market and economic conditions following considerable support from fiscal and monetary policies. Overall, euro area real GDP contracted by 4.0% in 2009, after having grown by 0.5% in 2008.

Inflationary pressures were low in 2009. The average annual inflation rate in 2009 stood at 0.3%, the lowest level recorded since the launch of the euro in January 1999, after a record high of 3.3% in 2008. Annual HICP inflation fell from 1.1% in January to -0.7% in July, before increasing again to 0.9% in December. The wide swing in the overall annual HICP inflation rate in 2009 was driven mainly by developments in commodity prices, and energy prices in particular, reversing the upswing seen in 2008, and the corresponding base effects. Despite the fact that inflation dropped into negative territory for a few months, survey-based measures of long-term inflation expectations remained firmly anchored at levels consistent with the Governing Council's aim of keeping inflation rates below, but close to, 2% in the medium term.

The underlying pace of monetary expansion in the euro area decelerated over 2009, and broad money and credit growth declined to their lowest levels since the start of Monetary Union. The outcome of the monetary analysis thus confirmed the assessment of low inflationary pressures.

### INTEREST RATE CUTS AND EXTENSION OF ENHANCED CREDIT SUPPORT DURING THE ECONOMIC DOWNTURN

Looking at monetary policy decisions in 2009 in more detail, information available at the beginning of that year confirmed a broad-based global economic downturn at the turn of the year. The intensification of financial tensions had led to substantial volatility in all financial market segments, low levels of liquidity across a number of market segments and forceful action by governments and central banks. The financial market turmoil had also resulted in a substantial increase in uncertainty and investors' risk aversion, as reflected, for example, in a sizeable widening in corporate and sovereign bond spreads towards the end of 2008. This in turn had a significant adverse impact on the world economy. In line with global developments, the euro area experienced a significant drop in output. In a climate of heightened uncertainty, a severe fall in world trade volumes was accompanied by a pronounced decline in domestic demand in the euro area.

Both headline inflation and underlying inflationary pressures declined significantly in the first few months of 2009. Annual HICP inflation rates decreased from 1.1% in January to 0.0% in May, owing in particular to earlier strong declines in commodity prices. At this time, it was anticipated that price, cost and wage pressures in the euro area would moderate, given the expectation of dampened global and euro area demand for a protracted period of time. In view of base effects related to the high levels of energy prices in mid-2008, inflation rates were expected to be negative for a couple of months around the middle of 2009, before returning to positive territory towards the end of the year. Cross-checking with the outcome of the monetary analysis, which confirmed a continued deceleration in the pace of monetary expansion and subdued flows of loans to non-financial corporations and households, supported the assessment of diminishing inflationary pressures and risks to price stability in the medium term.

Against this background, between January and May 2009 the Governing Council reduced the rate on the main refinancing operations by 150 basis points, to 1%, in four steps, bringing the total reduction since 8 October 2008 to 325 basis points. In May it also decided to lower the rate on the marginal lending facility by 50 basis points, to 1.75%, leaving the interest rate on the deposit facility unchanged at 0.25%, which narrowed the differential between these two rates from 200 to 150 basis points.

In addition to cutting interest rates, the Governing Council proceeded further with its enhanced credit support measures. Following on from the operations undertaken since October 2008, the Governing Council decided in May 2009 to conduct three liquidity-providing longer-term refinancing operations (LTROs) with a maturity of 12 months in June, September and December 2009. These measures exerted significant downward pressure on money market rates as they ensured that banks had broad and deep access to liquidity for a more extended horizon, thereby increasing their ability to lend to the real economy and placing downward pressure on bank lending rates. Furthermore, the Governing Council decided that the Eurosystem would purchase euro-denominated covered bonds issued in the euro area for a total of €60 billion over a period of 12 months, starting in July 2009. This decision aimed to support the covered bond market, which is a very important segment of the financial market in the euro area and a primary source of financing for banks.

The decision to extend the enhanced credit support took into account the expectation that price developments would continue to be dampened, beyond the substantial earlier fall in commodity prices, by the marked weakening of economic activity in the euro area and globally. The available economic data and survey information suggested tentative signs of a stabilisation in activity at very low levels, after a first quarter which had been significantly weaker than expected. This was in

line with downward revisions to the Eurosystem/ECB staff macroeconomic projections for euro area economic activity and inflation in the first half of the year. The world economy, including the euro area, was expected to remain weak over 2009 before gradually recovering in the course of 2010, while inflationary pressures in the euro area remained low.

Given the ongoing generous liquidity provision by the Eurosystem and the limited number of liquidity-absorbing fine-tuning operations, overnight interest rates continued to stand close to the rate on the deposit facility, which had been the case since the introduction of the fixed rate tender procedure with full allotment in October 2008. The new positioning of the overnight money market rate was considered acceptable in these exceptional circumstances as a means of helping to offset the impaired functioning of the money market and, in particular, the abnormally high spreads on term money market rates, e.g. those between the EURIBOR and the rates on overnight index swaps. The enhanced credit support measures thus also contributed to an environment of lower market interest rates and favourable funding conditions. In particular, the first 12-month LTRO, conducted on 24 June 2009, resulted in a record €442 billion being allotted to the euro area banking system at a fixed rate of 1%, bringing the total volume of outstanding refinancing operations to nearly €900 billion, and thereby contributed to lower money market rates also at longer maturities.

## ONGOING MONETARY POLICY SUPPORT AMID GRADUAL ECONOMIC RECOVERY

While keeping its key interest rates unchanged from May 2009 onwards, the Governing Council continued with its substantial enhanced credit support measures in the second half of the year, given their positive impact on the functioning of the euro area money market and on the transmission of monetary policy impulses in an environment of low inflationary pressures. This very accommodative monetary policy stance was in line with the ECB's price stability mandate and contributed to the gradual economic recovery in the euro area.

Over the second half of 2009 there were signs of a stabilisation in economic activity in the euro area and beyond. The stabilisation in the euro area was first indicated by survey data and the decline in risk aversion in financial markets, which led to a recovery in asset prices from the record lows reached in the period between the collapse of Lehman Brothers and the end of the first quarter of 2009. The gradual recovery was subsequently confirmed by real economy indicators. Overall, economic activity remained weak, but quarterly growth rates turned positive in the third and fourth quarters of the year, after five consecutive quarters of negative readings. At the same time, adverse lagged effects from the strong economic downturn, such as low capacity utilisation and increasing unemployment rates, continued to materialise.

Macroeconomic forecasts and projections, including the Eurosystem staff projections for the euro area, were revised upwards slightly during the second half of the year, mainly reflecting the more positive developments and information that emerged progressively. In December 2009 Eurosystem staff projected annual real GDP growth of between 0.1% and 1.5% in 2010 and between 0.2% and 2.2% in 2011. In line with this, the Governing Council expected the euro area economy to grow at a moderate pace in 2010, recognising that the recovery process was likely to be uneven and that the outlook remained subject to high uncertainty. Risks to this outlook were seen as broadly balanced. On the upside, they related to stronger than anticipated effects of the extensive macroeconomic stimulus, improvements in confidence and the recovery of foreign trade. On the downside, concerns remained relating to a stronger than expected negative feedback loop between the real economy and the financial sector, as well as renewed increases in oil and other commodity prices, the intensification of protectionist pressures and the possibility of a disorderly correction of global imbalances.

As regards price developments, the annual HICP inflation rate fell into negative territory between June and October 2009, reaching a trough of -0.7% in July. It turned positive again in November and stood at 0.9% in December. This profile was in line with expectations and mainly reflected temporary effects, in particular downward base effects related to the strong rise in commodity prices towards mid-2008 and their subsequent decline until the end of that year. Inflation was expected to remain moderate over the policy-relevant horizon, with overall price, cost and wage developments staying subdued in line with a slow recovery in demand in the euro area and elsewhere. At the same time, inflation expectations over the medium to longer term remained firmly anchored in line with the Governing Council's aim of keeping inflation rates below, but close to, 2% over the medium term.

The outlook for inflation was broadly similar in the September and December projection rounds, with the December 2009 Eurosystem staff projections foreseeing annual HICP inflation of between 0.9% and 1.7% in 2010 and between 0.8% and 2.0% in 2011. Risks to this outlook were seen as broadly balanced. They related, in particular, to the outlook for economic activity and the evolution of commodity prices. Furthermore, it was thought that increases in indirect taxation and administered prices could be stronger than expected owing to the need for fiscal consolidation in the coming years.

The outcome of the monetary analysis confirmed the assessment of low inflationary pressures over the medium term, as money and credit growth continued to slow down over the second half of 2009. Towards the end of the year, the annual growth rates of M3 and loans to the private sector were in negative territory. The subdued levels of production and trade, as well as the ongoing uncertainty surrounding the business outlook, continued in particular to dampen firms' demand for bank financing. To some extent, supply factors also played a role, as indicated by the Eurosystem bank lending survey for the euro area. The decline in annual growth rates of loans to non-financial corporations was particularly pronounced at shorter maturities, while the annual growth of longer-term loans remained positive. At the same time, after some months in negative territory, the annual growth of loans to households returned to positive levels towards the end of 2009. This pattern is in line with business cycle regularities, which indicate that the growth of loans to non-financial corporations normally picks up with some lag compared with the cycle in economic activity.

The ongoing effects of the enhanced credit support continued to foster both the banking sector's access to liquidity and the recovery of the euro area economy, thereby contributing to the normalisation of economic and financial conditions. In particular, the measures implemented by the Eurosystem supported the flow of credit to the economy through both supply factors (notably by alleviating funding pressures in the banking sector) and demand factors (owing to the very low level of interest rates). In addition, by emphasising its firm focus on price stability and its readiness to act at the appropriate time, the Eurosystem acted as an anchor of stability in times of heightened uncertainty. This was instrumental in fostering confidence in a context of expectations of a gradual recovery in economic activity.

As the transmission of monetary policy works with lags, the Eurosystem's policy action progressively fed through to the economy, providing substantial support to households and corporations. Financing conditions continued to improve. Money markets were functioning better and money market spreads had fallen considerably from the high levels observed at the beginning of the year. The past decreases in the ECB's key policy rates were increasingly reflected in bank lending rates, which had fallen to very low levels, indicating that the transmission process was functioning. Overall, improvements in financial market conditions and a gradual expansion of euro area economic activity were seen towards the end of 2009 and at the beginning of 2010 amid continued strong support to the euro area banking sector.

Taking into account the ongoing improvement in financial market conditions and the need to avoid distortions associated with maintaining the non-standard measures for longer than necessary, in December 2009 the Governing Council decided to continue its enhanced credit support, while beginning to gradually phase out, from the first quarter of 2010, those non-standard measures that were no longer required. The Governing Council decided to conduct the main refinancing operations as fixed rate tender procedures with full allotment for as long as needed, and to reduce the number and maturity of LTROs. It was decided that the one-year LTRO in December would be the last of its maturity and would be conducted at a rate equal to the average minimum bid rate over the life of the operation, and that only one further six-month operation would be conducted in March 2010. In addition, the Governing Council decided that the remaining LTROs in the first quarter of 2010 would be carried out using a full allotment fixed rate tender procedure. These decisions meant that the Eurosystem would continue to provide liquidity support to the banking system of the euro area for an extended period at very favourable conditions, thereby facilitating the provision of credit to the euro area economy.

At the beginning of 2010 the Governing Council continued to view the level of the key ECB interest rates as appropriate. Taking into account information and analyses that had become available, price developments continued to be expected to remain subdued over the policy-relevant horizon. Available evidence also confirmed that the euro area continued to expand, while some of the supporting factors were temporary in nature, notably the inventory cycle and the policy support measures worldwide. Overall, the Governing Council expected the euro area economy to grow at a moderate pace in 2010, with the outlook remaining subject to uncertainty. At the same time, inflation expectations remained firmly anchored in line with price stability. Cross-checking the outcome of the economic analysis with the signals from the monetary analysis confirmed the assessment of low inflationary pressures, given the parallel decline in money and credit growth.

# 2 MONETARY, FINANCIAL AND ECONOMIC DEVELOPMENTS

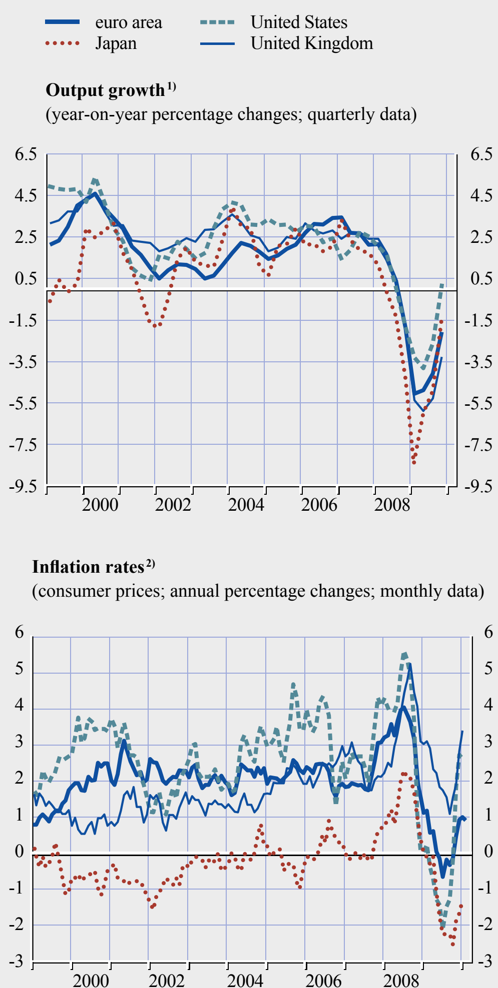
## 2.1 THE GLOBAL MACROECONOMIC ENVIRONMENT

### SEVERE REPERCUSSIONS OF THE FINANCIAL MARKET TENSIONS ON GLOBAL ACTIVITY

In the wake of the intensification of the financial turmoil that accompanied the collapse of Lehman Brothers in September 2008, perceived uncertainty rose across all asset classes to historical highs and remained persistently heightened throughout the first quarter of 2009. In this period the functioning of financial markets continued to be impaired, while the prevailing conditions of high levels of uncertainty fuelled large drops in business and consumer confidence indicators, both of which reached very low levels by historical standards. As anticipated by a sharp and broad-based fall in the global manufacturing Purchasing Managers' Index (PMI) to well below the contraction-expansion threshold, as well as by the above-mentioned drops in both business and consumer confidence, global economic activity remained very weak, after having contracted sharply across all of the main economic areas in the last quarter of 2008. Notwithstanding the important and unprecedented measures taken by governments and central banks around the world to limit systemic risks and to restore financial stability, global activity was hampered, especially as a result of the need of firms and households to adjust their balance sheets, which, combined with adverse wealth effects, added to the declines in confidence. In addition, while this was not the case for most of 2008, emerging markets began to be affected by the slowdown in advanced economies, as world trade recorded an unprecedented and synchronised drop during late 2008 and early 2009 (the latter is described in detail in Box 2).

Global activity returned to positive territory in the second quarter of 2009 (see top panel of Chart 2) as the fiscal and monetary policy measures put in place in many countries gained additional traction and, together with measures aimed at stabilising the financial sector, contributed to the improvement of financial market conditions and the reduction of uncertainty, and led to some initial reversal in the confidence losses experienced by economic agents. At the same time, world trade also began to stabilise and then rise again following the first quarter of 2009, although this recovery started from very depressed levels. The global recovery gained pace in the second half of 2009 and GDP growth returned to positive territory in the vast majority

**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.

of countries in the third quarter of the year. Global manufacturing activity was the key driver of the economic recovery, although, after some faltering, activity in the services sector also gained traction. One major feature of the recovery phase is the different speed at which it is taking place across countries, a development which possibly reflects, among other factors, the different nature of the policy measures adopted in the various countries, as well as the different strength of each country's fundamentals. The emergence of a cross-country divergence in the recovery phase contrasts with the high synchronisation exhibited during the downturn, possibly highlighting the extent to which the financial turbulence contributed to the amplification of real disturbances. It is also worth noting that activity is recovering at a much faster pace in emerging economies, which had limited direct exposure to the financial crisis. Notwithstanding positive signals, concerns about the global growth outlook remain. These concerns relate, in particular, to whether the gradual phasing-out of the extraordinary monetary and fiscal policy measures will be accompanied by a pick-up in private demand, given the significant adjustment in household balance sheets that is likely to occur in many countries, as well as the financial constraints that firms may still be facing.

After peaking at 4.8% in OECD countries in July 2008, boosted by rising food and energy prices, headline inflation started to fall at a quick pace, standing at around 0.5% in spring 2009 (see bottom panel of Chart 2). This rapid retreat in inflation reflected the strong downward correction in commodity prices, as well as rising spare capacity, as a result of the global drop in economic activity. In the middle of the year, OECD inflation actually turned slightly negative owing to significant base effects related to commodity prices. However, the negative inflation rates were, by and large, perceived to be a transitory phenomenon, as evidenced by measures of long-term inflation expectations, which remained in positive territory. In October 2009, on account of the fading of these base effects and of a rebound in commodity prices, headline inflation returned to positive territory and rose to 1.9% in the year to December 2009, down from 3.6% the year before. Excluding food and energy, inflation stood at 1.6% in the year to December 2009.

**Box 2**

### THE GLOBAL TRADE DOWNTURN

World trade contracted sharply in the fourth quarter of 2008 and the first quarter of 2009 following the intensification of the financial crisis in September 2008 and the associated downturn in global activity. The decline in trade was unprecedented in the post-war period in terms of its speed, magnitude and the high degree of synchronisation across countries. This box assesses the main factors driving the contraction in trade and looks at the prospects for global trade.

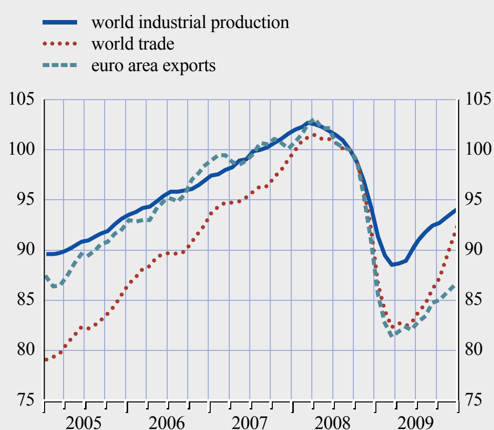
With the intensification of the financial turmoil in the autumn of 2008, global economic activity fell abruptly, resulting in a strong decline in the global trade in goods back to 2005 levels (see Chart A). The decline was sharp and rapid: world trade in goods fell by almost 17% between September 2008 and February 2009. It was also highly synchronised across regions.[1]

The main factor behind the collapse in trade was the sharp contraction in global demand. Global economic activity declined abruptly, with output levels falling by 1.2% in the fourth quarter

1 According to the CPB Netherlands Bureau for Economic Policy Analysis database, over 90% of countries reported declines in export values of more than 5% in quarterly terms at the beginning of 2009, while almost 15% of countries reported declines of above 20%.

**Chart A World trade and activity and euro area exports of goods**

(index: September 2008 = 100; seasonally adjusted; three-month moving average)




Source: CPB.
Notes: Euro area exports correspond to both intra and extra-euro area trade. The latest observation refers to December 2009.

of 2008 and by 1.4% in the first quarter of 2009. However, trade volumes fell by much more than expected given the size of the overall decline in final demand. This can be partly explained by a number of factors.

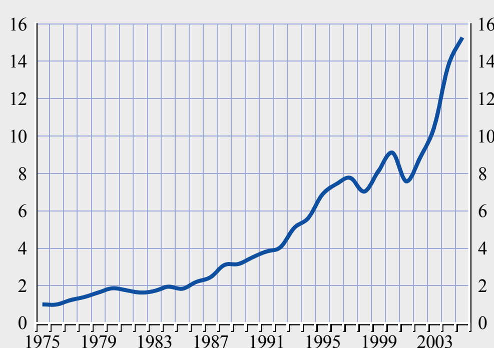
First, the composition of the global demand shock contributed significantly to the disproportionately large decline in trade relative to output. Global activity in the manufacturing sector contracted considerably with the intensification of the financial turmoil, while activity in the services sector was much less affected. Consequently, the decline in global demand primarily affected trade in goods, which accounts for a much larger share of trade than of GDP. As the manufacturing sector produces and consumes large volumes of intermediate goods, there was also a magnification effect via trade in intermediate goods. Moreover, the recession led to a shift away from trade-intensive GDP components, such as investment, to other components, such as government consumption, while the fall in exports also exacerbated the decline in trade as they are highly import-intensive. The financial crisis and the simultaneous confidence shock also led firms to abruptly reduce their inventories and their investment in capital goods. As a result, trade in intermediate and capital goods contracted much more than trade in consumer goods, driving a wedge between developments in trade and those in GDP.

Second, the increase in the responsiveness of trade to fluctuations in demand may also be partly explained by structural changes related to the globalisation process. Empirical evidence shows that the elasticity of world trade to world income has increased over recent decades. In addition, the response of trade is estimated to be even higher during global downturns.[2] This can be partly explained by an acceleration in globalisation trends over recent years, in particular the increased role of global supply chains in international trade. The globalisation of production processes, facilitated by an overall reduction in trade barriers and transportation costs, has led to considerable growth in vertical supply integration over recent years[3] (see Chart B), which is estimated to have accounted for about one-third of total export growth in the last 20 to 30 years.[4] This implies that goods are now manufactured via complex international networks, with firms in different countries working on different stages of the production of the same good in an international supply chain. These increasingly complex international supply chains may have acted as an additional propagation, and even amplification, mechanism of the recent trade contraction, which would also be consistent with the large fall in trade in intermediate goods mentioned above. However, given the lack of timely data, it is still not entirely clear how cross-border supply chains have evolved in response to the financial crisis and what may have been their relative contribution to the trade collapse.

2 See C. Freund, "The trade response to global downturns: historical evidence", World Bank Policy Research Working Paper No 5015, 2009.
3 See J. Amador and S. Cabral, "Vertical specialisation across the world: a relative measure", *North American Journal of Economics and Finance*, 20(3), December 2009, pp. 267-280.
4 See D. Hummels et al, "The nature and growth of vertical specialisation in world trade", *Journal of International Economics*, 54(1), 2001, pp. 75-96.

**Chart B Index of world vertical supply integration**

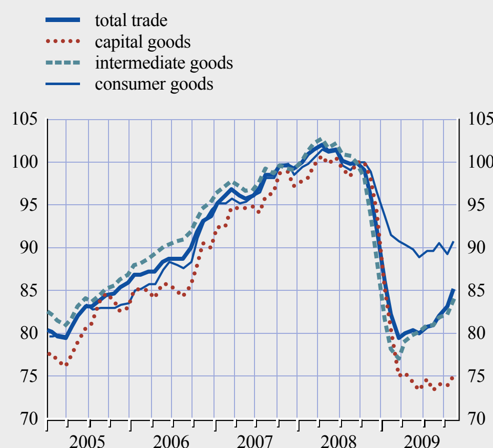
(index: 1975 = 1)




Source: Amador and Cabral (see footnote 3).

**Chart C Extra-euro area exports of goods by product**

(volume indices: September 2008 = 100; seasonally adjusted; three-month moving average)




Sources: Eurostat, ECB staff.
Note: The last observation refers to November 2009.

Lastly, there are a number of other factors which are also likely to have played an important role. For instance, the rapid tightening of credit standards following the financial turmoil generated a shortage of trade credit finance that may have further dampened trade activities. This, in turn, may have also created bottlenecks in international supply chains, aggravating the trade decline. According to estimates by the World Bank, the drying-up of trade finance may have accounted for some 10% to 15% of the decline in world trade since the second half of 2008. However, recent survey-based evidence has also suggested that the decline in trade finance levels is related not only to disruptions on the supply side, but also to a decline in the demand for trade finance, given that trade activities were decreasing.

As regards the euro area, in line with the developments in world trade, euro area trade flows also fell sharply after the intensification of the financial turmoil. Euro area exports of goods declined by around 19% between September 2008 and February 2009. The fall in extra-euro area trade flows was stronger vis-à-vis other EU and advanced economies. By contrast, the decline in trade with emerging economies was slower to materialise. In terms of the composition, exports of capital and intermediate goods both declined by more than 20%, while exports of consumer goods (including durable consumer goods) fell by about 11% (see Chart C).

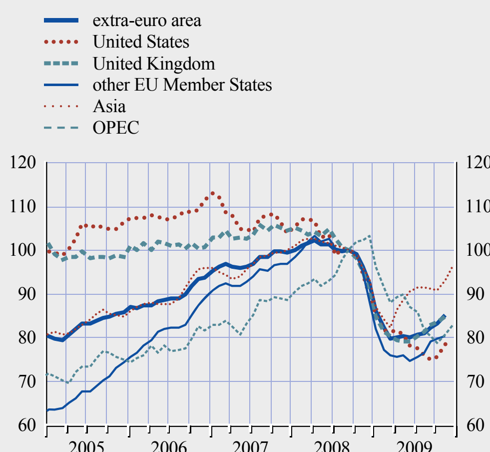
### Current situation and future prospects

Following the severe contraction at the end of 2008 and the beginning of 2009, world trade is increasingly showing signs of stabilisation. In the third quarter of 2009 world merchandise trade increased by 4%, as compared with a decline of about 11% in the first quarter of the year. World trade benefited strongly from the impact of temporary factors such as the macroeconomic stimulus plans, which boosted demand for durable goods, in particular cars. The supportive inventory cycle following the rebound in manufacturing activity and the gradual reactivation of global supply chains has also contributed to the recovery in global trade.

The recovery in trade flows was mainly led by Asia, and, in particular, by a strong rebound in Chinese demand probably largely related to the fiscal stimulus. Extra-euro area exports have also benefited from increased demand from Asia, which has partly compensated for the fact that demand from most advanced economies is still subdued (see Chart D). In terms of product breakdown, the improvements have been more pronounced for intermediate goods, partly as a result of the turn in the inventory cycle outside the euro area.

**Chart D Extra-euro area exports of goods by destination**

(volume indices: September 2008 = 100; seasonally adjusted; three-month moving average)




Sources: Eurostat, ECB staff.
Note: Latest observation refers to December 2009, except for extra-euro area, the United Kingdom and other EU Member States (November 2009).

In line with recent developments, prospects for both world trade and euro area exports have improved notably of late. It may be the case that global supply chains are helping to amplify the trade recovery via the same mechanisms which seemed to exacerbate the trade contraction. However, the short-lived nature of some of the factors behind the recent upturn in economic activity suggests that there may be a risk that this rebound in world economic activity and thus also of world trade could experience some loss of momentum in the coming quarters. Looking further ahead, the recovery in world trade will hinge heavily upon the extent of the recovery in world demand and the composition of expenditure. In this respect, a resurgence of protectionist policies around the world would potentially dampen the outlook for world trade. Given the disruptive implications for the world economy, as evidenced during the Great Depression, any protectionist measures should be strongly discouraged. Such measures would not only significantly impair the global recovery process by further hampering trade flows and global demand, they would also reduce global growth potential in the long run.[5]

5 See the box entitled “The risks of protectionism” in the September 2009 issue of the ECB’s Monthly Bulletin.

## UNITED STATES

Economic activity was weak in the United States, and in 2009 as a whole the economy contracted at a rate of 2.4%, compared with growth of 0.4% in 2008. Real GDP continued to post consecutive negative quarterly growth rates in the first half of 2009, following the sharp downturn in the second half of the previous year. However, a gradual stabilisation in financial market conditions, sizeable fiscal and monetary stimuli and a turn in the inventory cycle in the course of the year led to a return to positive economic growth in the second half of 2009. Private domestic spending remained subdued in the first half of 2009 in the context of tight credit conditions, the efforts of households to rebuild their net wealth and scale down debt accumulated over previous years, and deteriorating labour market conditions; over 8.4 million jobs were lost in 2008 and 2009. Government stimulus measures temporarily supported private demand, particularly in the auto and housing sectors. Businesses continued to cut back on fixed investment amid tight lending conditions, low capacity utilisation and the uncertain economic outlook. Housing market activity started to pick up in mid-2009 with the support of government stimulus measures,

but the recovery continued to be held back by substantial headwinds. Export performance was weak in early 2009 owing to a downturn in foreign economic activity. Nevertheless, foreign trade contributed positively to growth as imports fell more sharply than exports. However, both exports and imports recovered in the second half of the year. Overall, the current account deficit narrowed sharply from 4.9% of GDP in 2008 to 2.9% on average in the first three quarters of 2009, mainly as a result of the contraction of domestic demand and the drop in oil prices.

As regards price developments, the average annual change in the CPI for 2009 was -0.4%, down from 3.8% the year before. Headline inflation moved into negative territory in early 2009, reflecting strong base effects stemming from lower commodity prices. The annual rate of change in the CPI moved back into positive territory in late 2009 owing to an increase in commodity prices and a reversal of base effects. Economic slack limited any upward pressures on prices. Inflation excluding food and energy also decreased moderately during 2009, but remained positive at an average annual rate of 1.7% in 2009 (compared with 2.3% in 2008).

The Federal Open Market Committee of the Federal Reserve System kept the federal funds rate target within a range of 0% to 0.25% throughout the year and reiterated that it anticipated that economic conditions were likely to warrant exceptionally low levels of the federal funds rate for an extended period. In addition, the Federal Reserve extended its use of non-conventional policy measures to promote the flow of credit to the private sector and initiated purchase programmes for longer-term securities to support the functioning of credit markets.

As regards fiscal policy, the federal budget deficit widened to about 10% of GDP in the 2009 fiscal year – which ended in September 2009 – compared with 3.2% in the previous year. The increase reflected a sharp drop in revenues owing to lower tax receipts and a substantial increase in spending as a result of fiscal measures aiming to support the financial system and the economy.

### JAPAN

In Japan, economic activity deteriorated significantly in the first quarter of 2009, before entering a recovery phase in the second quarter. The downturn was primarily related to an unprecedented decline in exports and production. The improvement in the economic situation was mainly driven by an upturn in exports, reflecting, in part, the strong recovery in other Asian economies and the turnaround in the inventory cycle. Moreover, the recovery was supported by the internal and external fiscal stimulus packages.

Business sentiment improved moderately from the second quarter of 2009 onwards, but corporate profits remained at a low level and employees' income decreased substantially. In addition, the unemployment rate rose to an all-time high of 5.7% in July 2009, before decreasing slightly.

Annual consumer price inflation turned negative in February 2009 and the pace of decline peaked at 2.5% in October. Price developments mainly reflected base effects related to petroleum products and the substantial slack persisting in the economy. In December 2009 the Bank of Japan announced that it recognised deflation as a "critical challenge".

From December 2008 and throughout 2009, the Bank of Japan left its uncollateralised overnight call rate unchanged at 0.1%. In order to stimulate the economy, the Bank of Japan continued to use non-conventional monetary policy measures, such as outright purchases of Japanese government bonds and the expansion of the range of eligible collateral.

### EMERGING ASIA

In 2009 emerging Asia showed notable resilience to the global downturn. In the first quarter of 2009 the collapse of foreign trade led to negative real GDP growth rates in the

export-oriented economies of Hong Kong S.A.R., Korea, Malaysia, Singapore, Taiwan P.o.C. and Thailand. China, India and Indonesia, on the other hand, posted lower but still positive economic growth in the same period. Boosted by large fiscal stimulus packages and expansionary monetary policy, emerging Asia began to recover in the second quarter and recorded annual real GDP growth of 5.7%.

In 2009 consumer price inflation dropped considerably in most Asian emerging markets. Only India experienced rising food prices towards the end of the year, which caused a noticeable upward movement in the wholesale price index, the Reserve Bank of India's preferred measure of prices. Given emerging Asia's marked macroeconomic improvement from the second quarter of 2009 onwards and the gradual increase in investors' risk appetite, foreign capital, especially portfolio investment, began flowing back into these countries in March 2009, thus leading to a steady rebound in local bond and equity markets. In many countries, increased capital inflows coincided with substantial current account surpluses, which led to strong upward pressures on exchange rates.

As regards the Chinese economy, real GDP growth declined only slightly, from 9.6% in 2008 to 8.7% in 2009. The resilience of GDP growth to the global economic downturn can be explained by several factors. First, the Chinese authorities reacted promptly to the crisis. The RMB 4 trillion stimulus package and increased consumer subsidies, combined with an expansive monetary policy and strong credit growth, contributed to the 90% increase in investment in infrastructure in 2009 and to the resilience of private consumption. Second, given that the value-added content of Chinese exports is relatively low (as the import content of Chinese exports is relatively high), the direct impact of the global export slowdown on GDP growth was less severe. The trade surplus in 2009 declined by 33% in US dollar terms compared with 2008, mainly as a result of temporary factors. Finally, owing to the ongoing restrictions on inward and outward portfolio investments, banks' balance sheets were not severely impacted and capital outflows from China remained limited, thereby mitigating the impact on domestic consumption and investment. Annual consumer price inflation was negative between February and October 2009 owing to base effects, with underlying price pressures remaining moderate. From the second quarter of 2009 capital inflows returned to their pre-crisis levels and foreign exchange reserve accumulation continued at a fast pace, reaching USD 2.4 trillion by the end of 2009.

#### LATIN AMERICA

Economic activity in Latin America contracted sharply during the first half of 2009, following a very similar pattern to that of the world economy. In year-on-year terms, real GDP for the region as a whole contracted by 2.8% in the first quarter of 2009 and by 3.9% in the second (although in quarter-on-quarter terms, it expanded by 0.4% in the second quarter). For the region as a whole, the fall in economic activity in the first half of 2009 was the worst since quarterly statistical records began in 1980, even though several individual countries have experienced more severe recessions during the past three decades. However, by contrast with past episodes, there was no financial crisis in the region, despite the sharp real adjustment.

In the course of the second quarter of 2009, rising commodity prices and demand, as well as fiscal and monetary stimulus measures, started to support the economic recovery, albeit with some heterogeneity across economies. In the case of Brazil, the recovery was particularly fast, in part thanks to the relatively sound behaviour of the labour market, the fiscal stimulus and the authorities' success in easing the tight credit conditions arising from the international financial crisis. By contrast, in Mexico, the series of shocks impacting the country (including the decline in remittances and swine flu), its greater exposure to the United States, the sharp deterioration in its labour market and the relative stickiness of inflation help to explain why the adjustment proved to be sharper and more protracted. At the same time, inflationary pressures

continued to ease across Latin America as a whole. This led central banks across the region to relax monetary conditions throughout the first half of the year. The IMF also approved the granting of the new Flexible Credit Line facility to Mexico and Colombia for an amount of SDR 31.6 billion and SDR 7 billion respectively. As global financial conditions gradually started to improve and risk appetite returned, spreads on credit default swaps on Latin American sovereign debt narrowed, stock prices increased significantly and financial flows returned, resulting in currency appreciations. In some cases, however, these were limited on account of central bank intervention. Meanwhile, some countries (Brazil and Peru) also introduced some form of capital controls.

### COMMODITY PRICES RECOVERED IN 2009

After falling abruptly in the second half of 2008, oil prices stabilised in the first quarter of 2009, and subsequently started to increase. At the end of 2009 the price of Brent crude oil stood at USD 77.8 per barrel. Measured in euro terms, this corresponds to roughly the level recorded at the beginning of 2006. For the year as a whole, the average price of Brent crude oil was USD 62.5 per barrel, i.e. 36.4% below the average of the previous year.

During the first quarter of 2009 oil prices were kept at low levels by the impact of the financial crisis and the subsequent economic downturn, which had a strong negative effect on demand prospects. Facing such a massive contraction in demand, OPEC acted promptly with a sizeable reduction of its quotas, and its member states adhered to the agreed supply cuts. Against the background of such a large contraction in supply and less pessimistic feelings about global economic prospects, oil prices started to recover in the second quarter of 2009.

The economic downturn led to a strong deterioration in expectations regarding oil demand in 2009. Although a strong contraction in demand did materialise, especially in developed economies, the decline was much lower than expected, particularly in emerging economies, where fiscal stimuli were broadly resource-intensive. Consequently, from May 2009 onwards, the International Energy Agency repeatedly revised its demand projections for 2009 and 2010 upwards. The improvement in demand prospects was partly behind the price increases throughout the year.

**Chart 3 Main developments in commodity markets**

Sources: Bloomberg and Hamburg Institute of International Economics.

The prices of non-energy commodities followed a similar pattern (see Chart 3). Metal prices, copper in particular, posted significant gains, which were also sustained by purchases related to the massive stimulus package, geared towards infrastructure, announced by the Chinese government. Food prices also increased, although to a lesser extent, led in particular by sugar. In aggregate terms, non-energy commodity prices (denominated in US dollars) decreased by an average of approximately 22% in 2009 compared with the previous year.

## 2.2 MONETARY AND FINANCIAL DEVELOPMENTS

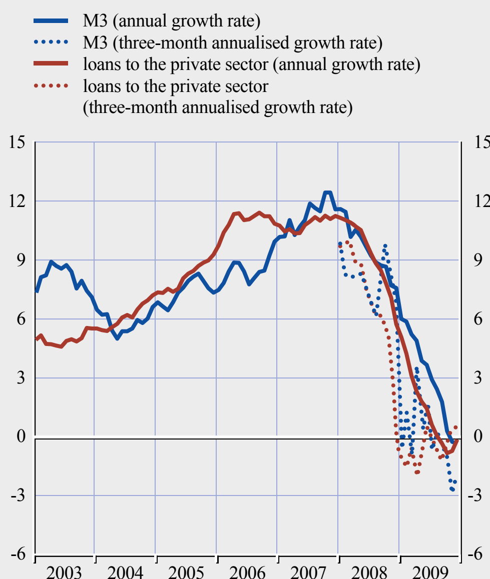
### THE PACE OF UNDERLYING MONETARY EXPANSION DECLINED IN THE COURSE OF THE YEAR

The pace of underlying monetary expansion, which captures the trends in monetary data that provide the relevant signals as regards risks to price stability, declined further in the course of 2009.[1] This was reflected in the approximately parallel declines observed in the annual growth rates of the broad monetary aggregate M3 and MFI loans to the private sector. At the end of the year these growth rates stood at -0.3% and -0.1% respectively, substantially lower than the 7.6% and 5.7% seen at the end of 2008 and the rates of around 11% recorded at the end of 2007 (see Chart 4).

The continuous decline observed in annual M3 growth in the course of the year largely reflected the strong downward impact of the exceptionally steep yield curve, which encouraged shifts from monetary assets into longer-term assets outside M3. As a result, headline monetary developments understated the pace of underlying monetary expansion in 2009. This was broadly a reversal of the situation in 2008, when the impact of the flat yield curve kept M3 growth above the trend rate of broad monetary expansion.

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

(percentage changes; adjusted for seasonal and calendar effects)




Source: ECB.

The steady declines observed in 2009 in the annual growth rates of money and credit aggregates masked the fact that the intensification of financial market tensions following Lehman Brothers' bankruptcy in mid-September 2008 was associated with fairly abrupt changes in monetary developments. In the aftermath of that event, the shorter-term growth rates (i.e. three-month annualised growth rates) of M3 and loans to the private sector fluctuated fairly erratically around zero during most of 2009. However, looking at the information embedded in developments for the various sectors and the individual components and counterparts of M3, the sharp slowdown observed in the growth of M3 and loans at the end of 2008 and the beginning of 2009 appears not to have been accompanied by an equally sharp slowdown in underlying monetary growth.

Moreover, the negative annual growth rates recorded in 2009 for M3 and loans should be seen against the backdrop of the high levels of monetary liquidity and indebtedness that had accumulated in the years prior to the financial turmoil. It is therefore natural for there to be some unwinding of these levels. Such unwinding could potentially have resulted in the growth rates of M3 and loans declining more strongly and for a longer period of time than would be expected, for instance, on the basis of developments in economic activity or interest rates.

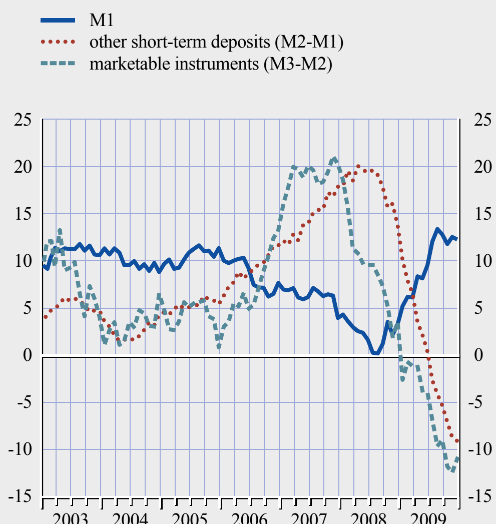
### DEVELOPMENTS IN THE COMPONENTS OF M3 WERE INFLUENCED MAINLY BY THE STEEP YIELD CURVE

The decline observed in annual M3 growth in the course of 2009 concealed a reasonable amount of heterogeneity in its main components (see Chart 5). This decline was accounted for

1 For an explanation of the concept of underlying monetary growth, see the box entitled "Underlying monetary dynamics: concept and quantitative illustration" in the May 2008 issue of the ECB's Monthly Bulletin.

**Chart 5 Main components of M3**

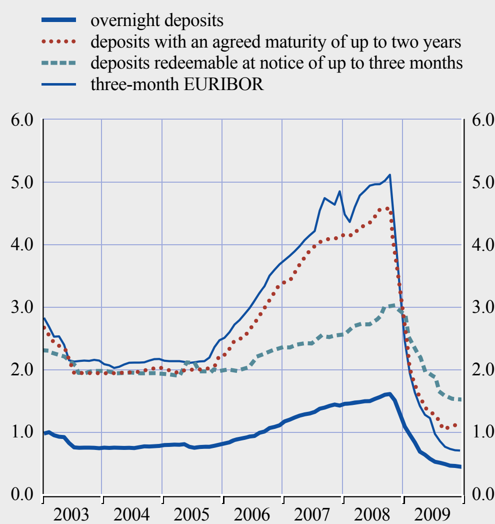
(annual percentage changes; adjusted for seasonal and calendar effects)




Source: ECB.

**Chart 6 MFI interest rates on short-term deposits and a money market interest rate**

(percentages per annum)




Source: ECB.

primarily by the increasingly negative annual growth rates of both short-term deposits other than overnight deposits (i.e. M2-M1) and marketable instruments (i.e. M3-M2), which stood at -9.1% and -11.0% respectively in December. On the other hand, the annual growth rate of M1 strengthened significantly to stand at a very robust 12.3% in December. The heterogeneity in the growth of the various components of M3 stemmed from the low level of interest rates and the increasingly narrow spreads between the interest rates paid on the various monetary assets. As a result, the opportunity cost of holding the most liquid monetary assets was low, leading to funds being shifted from short-term time deposits (i.e. deposits with an agreed maturity of up to two years) and marketable instruments into overnight deposits. However, there were also shifts into short-term savings deposits (i.e. deposits redeemable at notice of up to three months), as these remained somewhat better remunerated than short-term time deposits (see Chart 6). This substitution within M3 was in addition to the shifts out of M3 triggered by the steep yield curve.

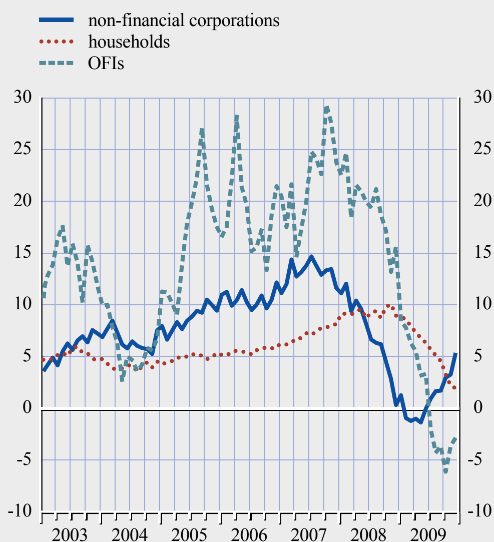
The fact that banks very noticeably reduced the remuneration of short-term deposits and marketable instruments as of late 2008 also reflected their access to additional sources of funding. In particular, short-term funding pressures were largely alleviated by the Eurosystem's provision of central bank liquidity, and banks were also able to attract longer-term funding in the context of the steep yield curve and to benefit from the support provided by government guarantees covering the issuance of debt securities.

### SECTORAL MONEY HOLDINGS REFLECT THE IMPACT OF THE ECONOMIC CYCLE

The decline observed in annual M3 growth also concealed somewhat divergent developments in the money holdings of the individual sectors. The broadest aggregation of M3 components for which sectoral information is reported is short-term deposits and repurchase agreements (hereafter referred to as "M3 deposits"). The annual growth rate of households' M3 deposits declined in the course of the year and stood at 1.9% in December, down from 9.0% at the end of 2008 (see Chart 7). By contrast,

**Chart 7 Sectoral deposits**

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




Source: ECB.

the annual growth rate of the M3 deposits of non-financial corporations only declined until mid-2009 (temporarily turning slightly negative), before strengthening again during the second half of the year to stand at 5.4% in December. These divergent developments were consistent with the evolution of the economic cycle. In this respect, the relatively gradual decline seen in the growth rate of households' M3 deposits (by comparison with the strengthening observed for non-financial corporations) reflects the fact that households' disposable income is typically more stable than economic activity. By contrast, firms' cash flows tend to improve early in the economic cycle and may then be used to establish liquidity buffers for the financing of production and investment activities in anticipation of an improvement in the economic environment.

The gradual decline seen in 2009 in the annual growth rate of households' M3 deposits was also very strongly affected by the steepening of the yield curve and the improvements observed in stock markets, which led households to shift funds from M3 deposits into longer-term and arguably riskier assets outside M3. Those shifts may have masked increases in precautionary holdings of money resulting from the economic and financial uncertainty that followed the collapse of Lehman Brothers. However, to the extent that this uncertainty concerned the situation in the banking sector and the safety of bank deposits, many of those additional holdings may have taken the form of longer-term deposits outside M3 following the extension of government guarantees on bank deposits.

The annual growth rate of M3 deposits held by non-monetary financial intermediaries other than insurance corporations and pension funds (other financial intermediaries – OFIs) declined further in 2009, falling by more than 18 percentage points to stand at -2.9% in December. This strong decline can be explained by the fact that OFIs typically react quickly to changes in the interest rate constellation, as well as by the reduction observed in securitisation activity, which entails the creation of OFI deposits held with the MFIs originating the securitised loans.

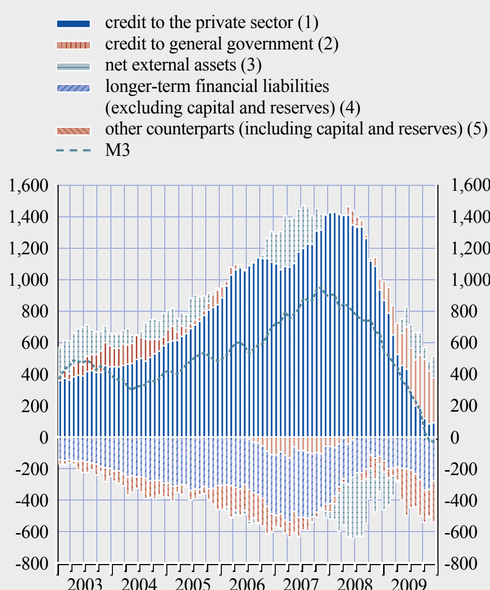
### GROWTH IN CREDIT TO THE PRIVATE SECTOR DECLINED MARKEDLY

On the counterpart side of M3, the annual growth rate of MFI credit to euro area residents declined further in 2009, reaching 2.4% in December, down from 6.9% in December 2008 (see Chart 8). This mainly reflected a significant decline in the annual growth rate of credit to the private sector, while the annual growth rate of credit to general government increased substantially.

The increase in the annual growth rate of credit to general government was mainly a result of sizeable increases in MFIs' holdings of government securities in the course of the year. Given the prevailing interest rate constellation, government securities were seen as an attractive, liquid investment opportunity in the context of subdued loan demand on the part of the private sector and a perception among banks that borrowers' default risk had increased. In addition,

## Chart 8 Counterparts of M3

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




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

those securities represented a safe investment opportunity that could easily be used as collateral in the Eurosystem's liquidity operations. At the same time, the issuance of government securities increased significantly in 2009.

By contrast, the annual growth rate of credit to the private sector declined markedly over the course of the year, standing at a modest 0.7% in December. This reflected the declines recorded in the annual growth rates of both private sector debt securities and loans to the private sector. The annual growth rate of MFIs' holdings of private sector securities other than shares declined as the effect of the large-scale retained securitisation activities conducted in late 2008 and early 2009 dissipated.[2] This practice acquired particular significance in the fourth quarter of 2008, when the ECB moved to fixed rate operations with full allotment for the provision of central bank liquidity. In 2009, as a result of that new stock of securities and the significant accumulation of government securities in the course of the year, euro area MFIs did not feel the need to create additional collateral, and so those retained securitisation activities steadily became less frequent.

The annual growth rate of MFI loans to the private sector, the largest component of credit to the private sector, declined further in the course of 2009, turning slightly negative in the fourth quarter of the year. Its short-term dynamics reveal that the steady decline observed in this annual growth rate in 2009 was a result of the strong fall seen in the fourth quarter of 2008 and the subdued flows recorded throughout the year. Indeed, the three-month annualised growth rate hovered around -0.5% throughout 2009 (see Chart 4). This picture does not change when the downward impact of the derecognition of loans in the context of securitisation activities is taken into account, although adjusting for this effect prevents both the annual rate and the short-term rate from dropping below zero. Nonetheless, while significant at the beginning of 2009, the difference between the adjusted and unadjusted growth rates declined steadily in the course of the year, reflecting the decline observed in securitisation activity.

The overall deceleration in lending to the private sector was broadly based across the various borrowing sectors, although it also concealed some heterogeneity in those sectoral developments. After declining markedly in the fourth quarter of 2008, the annual growth rate of loans to households declined at a more moderate pace in the first quarter of 2009 and remained broadly stable at around zero thereafter, with a slight increase towards the end of the year. This improvement was mainly a consequence of developments in loans for house purchase. By contrast, the annual growth rate of loans to non-financial corporations declined strongly throughout the year, falling from 9.5% in

2 "Retained securitisation" refers to the practice whereby at least some of the securities created in the traditional true-sale securitisation process are bought back by the originating MFI.

December 2008 to -2.2% in December 2009. This decline was observed for all maturities, but was more visible for shorter maturities, with only the flows of long-term loans (i.e. those with maturities of over five years) remaining positive throughout the year. The contraction recorded in the amount of outstanding short-term loans may reflect the substantially reduced trade volumes and inventory levels in 2009. In addition, non-financial corporations may, in part, have moved over to fixed rate, long-term bank loans in an attempt to lock in the prevailing low level of interest rates. At the same time, in the presence of heightened uncertainty, firms with access to market-based finance may have wanted to reduce their dependence on banks by increasing their recourse to market financing given the reduced spreads between the rates on securities issued by non-financial corporations and those on MFI loans.

These developments in loans to households and non-financial corporations appear consistent with historical regularities. Changes in the growth rate of loans to households tend to coincide with – or lead slightly – turning-points in real GDP growth, while loans to non-financial corporations tend to lag developments in GDP by a few quarters. These regularities reflect various factors. On the one hand, both interest rates and house prices tend to decline during economic slowdowns, which prompts renewed demand for loans for house purchase on the part of some households. On the other hand, firms typically make use of internal funds as cash flows improve during a recovery, only later turning to external financing, which may explain the fact that loans to non-financial corporations tend to lag GDP. At the same time, some supply factors may also be relevant. For instance, in the early stages of a recovery, banks prefer to increase lending to households rather than firms, as loans to households (especially loans for house purchase) are better collateralised.[3] The bank lending survey for the euro area indicates that credit standards were tightened throughout 2009, although that tightening weakened as time went by. To some extent, that tightening reflected balance sheet constraints, limited access to external funding and liquidity restraints, but it mainly stemmed from variations in borrowers' creditworthiness, which tends to worsen in economic downturns and improve in recoveries.

The annual growth rate of MFI loans to OFIs continued to decline, reaching 4.3% in December 2009, down from 10.1% in December 2008. This strong deceleration was probably related to the fact that investors' preferences shifted strongly towards more traditional financial products, leading to the general scaling-down of OFI activities. The almost total closure of the market for securitisation was an important development in this respect.

Of 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 increased substantially in the course of the year and stood at 5.8% in December, up from 0.6% at the end of 2008. It thereby ended the downward trend observed as of the second quarter of 2007. This increase mainly reflected stronger growth not only in longer-term deposits (i.e. deposits redeemable at notice of over three months and those with an agreed maturity of over two years), but also in longer-term debt securities (i.e. those with a maturity of over two years). Overall, the increase observed in longer-term financial liabilities in 2009 reflects a shift towards longer maturities in the light of the steepness of the yield curve. Government guarantees and improvements in market confidence are also likely to have contributed to this increase in the accumulation of longer-term MFI debt securities by the money-holding sectors.

Finally, turning to the external position of euro area MFIs, both external assets and external liabilities were reduced in 2009 – the first reduction in the absolute size of euro area MFIs'

3 See the box entitled "Loans to the non-financial private sector over the business cycle in the euro area" in the October 2009 issue of the ECB's Monthly Bulletin.

external position since 1999. This resulted, however, in an increase of €135 billion in euro area MFIs' net external position, as the reduction in external liabilities exceeded the reduction in external assets. This reduction of both assets and liabilities stems from the scaling-back of interbank cross-border positions in the context of a broader deleveraging process on the MFI balance sheet. For a detailed discussion of developments in the MFI balance sheet in the course of 2009 and their implications for loans to the private sector, see Box 3.

**Box 3**

### RECENT DEVELOPMENTS IN BANKS' BALANCE SHEETS AND THEIR IMPLICATIONS FOR PRIVATE SECTOR LOANS

As a result of the intensification of the financial turmoil in the last few months of 2008, MFIs around the world have faced mounting pressure to reduce the size of their balance sheets. Euro area MFIs have not escaped these pressures and reduced their main assets[1] by €329 billion (representing a decline of 1.1%) in the course of 2009. This was the first reduction since 1999 and unwound some of the strong leveraging observed between 2004 and mid-2008. Against this background, this box looks at the way in which loans to the private sector – the main source of financing for firms and households – were affected by this deleveraging in 2009.

#### Considerations relating to the adjustment of banks' balance sheets

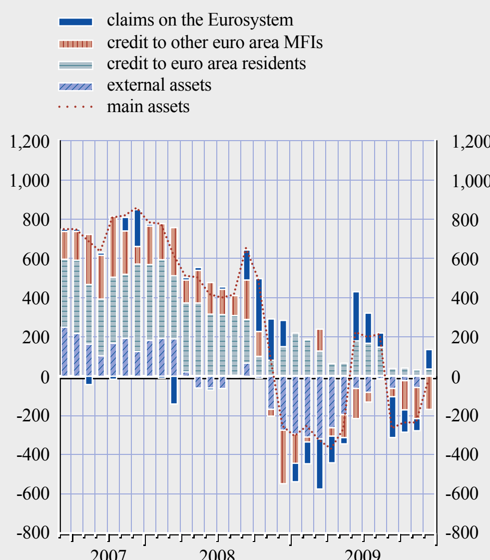
The pressure on capital ratios and funding positions associated with the financial turmoil meant that banks faced a complex combination of considerations in 2009 as regards the adjustment of their balance sheets. On the funding side, banks were negatively affected by investors' rising apprehension and the resulting increases in the cost of financing, which further exacerbated the strain placed on banks' capital positions by declines in asset prices and credit losses. In such a situation, a bank will need to reduce its leverage ratio, either by raising additional equity or by reducing its assets. In times of financial turmoil, that deleveraging will largely take the form of reductions in assets, given that otherwise huge amounts of equity would be required in a short space of time in the presence of increased risk aversion, which would increase the cost of equity even more. The shedding of assets will typically be implemented by means of the disposal of non-core assets in order to acquire liquidity and the reduction of exposure to risky assets. There is a natural pecking order as regards the various liquidity sources. Usually, a bank will first liquidate its short-term assets, then its external assets, and finally its long-term assets.[2] Thus, loans to firms and households, as longer-term assets, will be at the end of that list. In general, these assets can only be reduced by means of the restriction of new lending and the repayment of existing loans. Moreover, business models based on sustained customer relations, which are common in the euro area banking system, provide further incentives to refrain from shedding loans. In practice, given the complexity of these considerations, that pecking order is likely to function with a certain degree of heterogeneity across the MFI sector. Structural considerations

1 Main assets comprise all balance sheet asset items with the exception of fixed assets, "remaining assets" and money market fund shares/units.
2 For details of the pecking order for the liquidation of assets, see F. Allen and D. Gale, "Financial contagion", *Journal of Political Economy*, Vol. 108, No 1, 2000, pp. 1-33.

(such as a renewed focus on core business or a retreat from international finance) may reinforce that pecking order in the downsizing of the balance sheet, while temporary financing conditions (such as the possibility of obtaining central bank liquidity) may place a premium on increasing securities holdings once the initial phase of the deleveraging process is over.

**Chart A Euro area MFIs' main asset holdings by sector (excluding shares and other equities)**

(three-month flows; EUR billions; adjusted for seasonal effects)




Source: ECB.

### Most of the adjustment was implemented via the reduction of interbank credit

The decline observed in the aggregated MFI balance sheet in 2009 did not affect all asset classes in the same way. The €329 billion decline in MFIs' main assets was accounted for by major reductions (of €440 billion and €366 billion respectively) in external assets and loans to euro area MFIs, while credit granted to euro area residents (covering both the private sector and general government) increased by €379 billion (see Chart A). A large part of the decline observed in external assets was accounted for by the reduction of holdings vis-à-vis foreign banks and reflects, in particular, the scaling-back of the strong capital flows to financial centres prior to the financial turmoil.[3] Overall, therefore, interbank activity bore the brunt of the balance sheet adjustment. Around one-third of the decline observed in loan positions vis-à-vis euro area MFIs was the result of reductions in MFIs' claims on the Eurosystem, which can be attributed to the unwinding of the considerable increases seen in those claims in September and October 2008 as a result of the ECB's enhanced credit support measures. Another third was offset by an increase in holdings of securities issued by euro area MFIs.

### Credit to the private sector was affected less

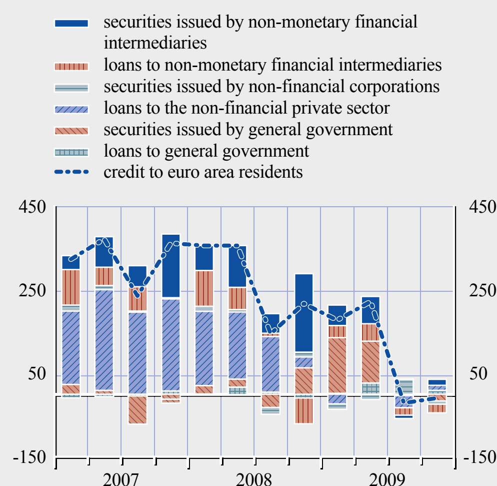
Looking at credit granted to euro area residents, most of the increase observed in 2009 was related to the sizeable increase (totalling €251 billion) recorded in holdings of general government securities. The accumulation of government securities was fostered by the interest rate constellation observed during the year, which provided good opportunities for profit. Investing in government securities also offered additional advantages. First, those securities allowed banks to temporarily invest their available funds in liquid, relatively well-remunerated assets in the presence of both limited demand for loans and a perception among banks that borrowers' default risk had increased. Second, they acted as a safe and convenient investment alternative with a low capital requirement in a situation in which banks were seeking to reduce the average level of risk in their portfolios. Credit to the non-financial private sector, which comprises credit to households and companies in the form of loans and securities (excluding shares), and

3 See the box entitled "The role of MFI external assets and liabilities in the recent deleveraging process" in the November 2009 issue of the ECB's Monthly Bulletin.

which represents the largest item on the MFI balance sheet, declined by €72 billion in 2009 (see Chart B). This decline was relatively small by comparison with the overall reduction in euro area MFIs' balance sheets, and as a result credit to the non-financial private sector actually increased slightly as a percentage of MFIs' main assets. However, that decrease in credit to the non-financial private sector, the result of a decline in loans, was more than compensated for by an increase (of €122 billion) in the holdings of securities issued by non-monetary financial intermediaries other than insurance corporations and pension funds. A large part of MFIs' increased holdings of these securities reflected the retained securitisation activity that took place during the first half of the year, whereby securities created out of loans removed from MFIs' balance sheets were bought back by the MFIs in question, often in order to use them as collateral in Eurosystem liquidity operations. Accordingly, the reduction observed in credit to the non-financial private sector does not reflect an actual contraction, but rather the reallocation of items within the balance sheet.

**Chart B Credit to euro area residents (excluding shares and other equities)**

(quarterly flows; EUR billions; not adjusted for seasonal effects)




Source: ECB.

Looking at the breakdown by instrument, a clear and distinctive feature of the balance sheet adjustment process undergone in 2009 was the efforts made by banks to improve their liquidity by increasing their debt securities positions. The acquisition of government securities, the replacement of inter-MFI loans with MFI securities and the securitisation of parts of their loan portfolios (balance sheet adjustments with a total value of €387 billion) enabled banks to obtain liquidity from the Eurosystem.

Overall, the scaling-down of euro area MFIs' balance sheets focused on inter-MFI positions (with positions being reduced vis-à-vis both domestic and foreign MFIs). This appears primarily to have reflected the unwinding of pre-turmoil asset accumulation. In the same way that increases in such positions may have facilitated the strong supply of credit to the rest of the economy, the shrinking of inter-MFI positions could have had a negative impact on bank lending to the private sector. All in all, the limited changes observed in 2009 for credit to firms and households in the context of the significant downsizing of euro area MFIs' balance sheets suggest that banks focused on lending as their core activity.

### MONEY MARKET CONDITIONS IMPROVED

Tensions in the euro area money market continued to ease in the course of 2009 as conditions normalised following the intensification of the financial crisis in September 2008. This was reflected in significant declines in money market rates and money market spreads. More specifically, spreads between secured and unsecured money market rates declined considerably from their peaks in October 2008, albeit remaining elevated by historical standards.

This improvement in the euro area money market was mainly a result of the extraordinary liquidity support that the ECB provided to euro area banks, the sizeable reduction in the key ECB interest rates following the intensification of the financial crisis in autumn 2008 and the interventions by euro area governments to support troubled financial institutions. The Eurosystem continued to provide the financial system with abundant amounts of liquidity throughout 2009, conducting all of its refinancing operations by means of fixed rate tender procedures with full allotment. Notably, the three LTROs with a maturity of one year – conducted in June, September and December 2009 – acted as a catalyst in improving banks' liquidity positions on a longer-term basis, thereby further promoting the reduction of term spreads in the money market while helping to support banks' provision of credit to the real economy.

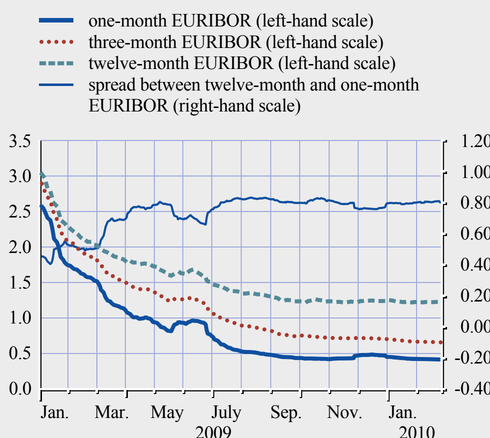
Secured and unsecured money market interest rates declined across the entire maturity spectrum in 2009. The pace of that decline became progressively slower, with interest rates approaching record lows towards the end of the year. Increases were only observed between the end of May and the first one-year LTRO, which was conducted with a fixed rate and full allotment on 24 June. During that period, excess liquidity – measured as the difference between total outstanding liquidity and the actual liquidity needs of the system – declined significantly ahead of the one-year operation, with banks preferring to switch their ECB funding to the longer maturity of one year and thereby freeing up the collateral used in maturing shorter-term operations. This resulted in temporary increases in money market rates, with more pronounced increases for rates on overnight index swaps (OISs) and, to a lesser extent, short-term unsecured rates. Notably, the EONIA increased by around 25 basis points between 7 May (when the series of LTROs with a maturity of one year was announced) and 24 June (when the Eurosystem conducted the first of these operations). The one-month EURIBOR also increased, albeit with a lag and to a lesser extent, rising by around 11 basis points between 19 May and 23 June. Following the allotment of a sizeable €442.2 billion in the first one-year LTRO on 24 June, excess liquidity increased again, reaching new record highs. As a result, money market rates declined again almost immediately in both secured and unsecured markets. They passed their levels of early May and soon reached – and subsequently maintained – historically low levels.

More specifically, looking at three-month unsecured rates, the three-month EURIBOR stood close to 2.8% at the beginning of January 2009, already much lower than its peak of 5.4% in October 2008. It then declined further to stand just below 0.7% at the end of February 2010. The slope of the money market yield curve – as measured by the spread between the twelve-month and one-month EURIBOR – steepened in the course of 2009, albeit with some volatility during this period. That spread rose from a low of 41 basis points at the beginning of 2009 to peak at 83 basis points in July, August and October, before easing marginally to stand at around 80 basis points at the end of February 2010 (see Chart 9).

As regards the secured segment of the money market, the three-month EUREPO stood at

**Chart 9 Unsecured money market interest rates**

(percentages per annum; spread in percentage points; daily data)




Sources: ECB and Reuters.

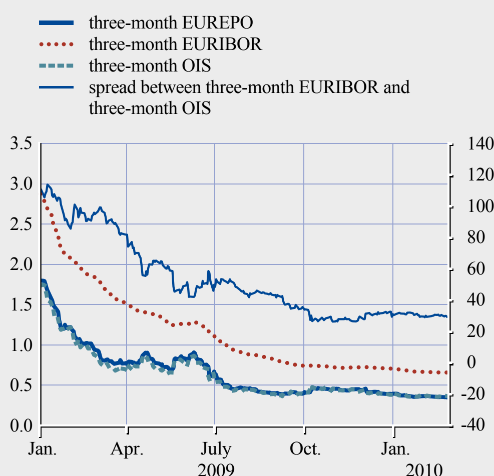
around 1.8% at the beginning of January 2009, also much lower than its peak of 4.4% in late September 2008. It then declined further to stand just below 0.4% at the end of February 2010.

As a result of these developments, the spread between secured and unsecured money market rates gradually declined in the course of the year, albeit with some volatility. It reached fairly low levels by comparison with the spreads observed in the second half of 2007 in the initial phases of the financial turmoil, but remained elevated by historical standards. The spread between the three-month EURIBOR and the three-month EUREPO declined from a peak of 109 basis points at the beginning of January to stand at 31 basis points at the end of the year and 29 basis points at the end of February 2010 (see Chart 10).

Looking at very short-term money market rates, the behaviour of the EONIA largely reflects the generous liquidity support that the Eurosystem has provided to euro area banks since October 2008. In the first half of 2009, up until the first one-year LTRO at the end of June, the behaviour of the EONIA displayed three main characteristics. First, it declined significantly following further reductions in the key ECB interest rates in that period. Second, with rare exceptions it remained well below the fixed rate in the Eurosystem's main refinancing operations and LTROs as a result of the excess liquidity in the system, with liquidity being provided by means of fixed rate tender procedures with full allotment in the main refinancing operations and the one, three and six-month LTROs. Third, the EONIA remained highly volatile as a result of constant fluctuations in the amount of excess liquidity available in the system. By contrast, following the allotment of €442.2 billion in the one-year LTRO on 24 June, which ensured that excess liquidity would be abundant for a long time to come, the EONIA stabilised at an average of around 10 basis points above the rate on the deposit facility. It then remained at those levels until the end of February 2010. The only exceptions were minor spikes on the last day of each maintenance period, when liquidity-absorbing fine-tuning operations were conducted. The subsequent one-year LTROs in September and December, which saw the allotment of €75.2 billion and €96.9 billion respectively, also contributed to keeping the EONIA relatively stable until February 2010 (see Chart 11).

**Chart 10 Three-month EUREPO, EURIBOR and OIS**

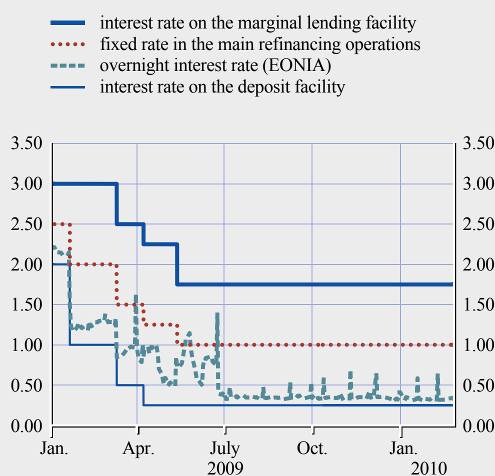
(percentages per annum; spread in percentage points; daily data)




Sources: ECB, Bloomberg and Reuters.

**Chart 11 ECB interest rates and the overnight interest rate**

(percentages per annum; daily data)



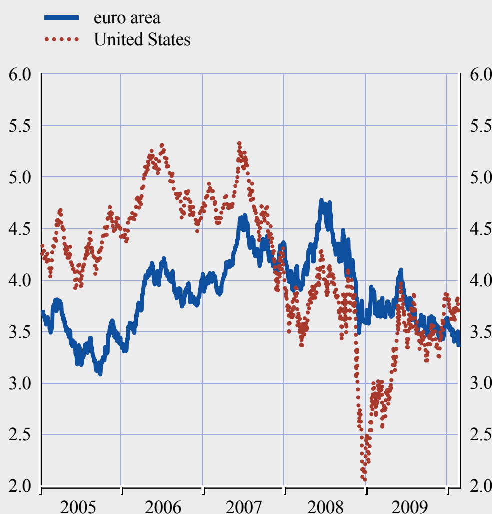

Sources: ECB, Bloomberg and Reuters.

## GOVERNMENT BOND YIELDS IN THE EURO AREA REMAINED AT LOW LEVELS

After moderate intra-year movements, euro area long-term government bond yields ended 2009 close to their end-2008 levels. This was in stark contrast to the United States, where yields increased significantly. At the beginning of 2009 ten-year sovereign bond yields on both sides of the Atlantic were at low levels compared with historical averages, following large cuts in monetary policy rates, downward revisions of inflation risks and a strong flight to quality from risky assets into government securities. US long-term yields had experienced a particularly large decline towards the end of 2008, so that they started 2009 from a level that was the lowest in the last four decades. With hindsight, the decrease in US yields in the fourth quarter of 2008 may be considered as having priced in excessive deflationary concerns. Indeed, US bond yields registered a strong rebound during the first half of 2009. Euro area bond yields, which had not experienced such a strong decline previously, showed a much less distinct increase over this period (see Chart 12). Following mild decreases from their mid-June peaks, euro area and US ten-year government bond yields were recorded at 3.6% and 3.9% respectively by the end of 2009.

**Chart 12 Long-term government bond yields**

(percentages per annum; daily data)




Sources: Bloomberg, EuroMTS, Reuters and ECB.
Notes: Before January 2007, long-term government bond yields for the euro area refer to ten-year bonds or to the closest available bond maturity. Starting from January 2007, the euro area ten-year bond yield is represented by the ten-year par yield derived from the euro area sovereign AAA yield curve estimated by the ECB. For the United States, bond yields for the ten-year maturity are reported.

The strong overall increase in US yields reversed the gap between euro area and US yields seen at the end of 2008, so that US ten-year yields eventually exceeded their euro area counterparts in late 2009. Euro area sovereign bond spreads decreased substantially overall from March, after they had reached new peaks at the beginning of the year. However, amid resurfacing concerns regarding fiscal solvency, sovereign bond spreads ended the year well above pre-crisis levels.

Overall, the developments in long-term government bond yields can be interpreted as the net result of two sets of driving forces. On the one hand, a somewhat brightening macroeconomic outlook, as well as the huge volume of new sovereign debt supply, were major factors exerting upward pressure on government bond yields. Debt supply expectations were in turn driven by the governments' requirements to finance their large-scale rescue packages for financial institutions and stimulus programmes, as well as by expectations of recession-induced lower tax revenues and higher unemployment benefit payments. On the other hand, these factors were met by relatively strong demand for government debt from private sector investors. Furthermore, in the euro area, key ECB interest rates were lowered markedly between January and May. Finally, in the United States, the Federal Reserve's large-scale purchase programme for long-term US government debt contributed temporarily to restraining the increase in long-term bond yields.

In early 2009 major government bond markets, like other financial market segments, were still largely influenced by investors' concerns and uncertainty regarding the fragility of the financial sector and the length and depth of the global recession. Monetary policy rates on both sides of the Atlantic were expected to remain at low levels for an extended period of time, as indicated by future and forward rates. However, the decline in government bond yields that had been observed in the second half of 2008 came to a halt at the beginning of 2009. At that time, bond market investors apparently reduced or reversed previous flight-to-quality movements and may have also been less concerned about the existence of deflationary pressures. In addition, investors increasingly realised that future government financing needs would be large. Indeed, the need for possibly sizeable future government outlays was highlighted by bank support measures on both sides of the Atlantic.

In the United States, when ten-year yields reached their peak of 4% in mid-2009, they had risen by about 175 basis points from their level in December 2008. This run-up in yields was interrupted by a historically large one-day drop (of 48 basis points) in US long-term bond yields, which happened on 18 March after the announcement of the Federal Reserve's large-scale purchase programme for Treasury securities. However, US long-term yields shortly afterwards resumed their increases. The effects of the purchase programme and other quantitative easing measures were more than offset by the impact from investors expecting large volumes of future US government debt supply and their reversal of previous flight-to-safety flows. Remarkably, the strong increase in US long-term government bond yields offset the large decline seen at the end of the previous year.

Euro area bond yields, in contrast, showed a more subdued increase in the first half of the year, rising by around 35 basis points by mid-June. While reversals of flight-to-quality flows were a likely factor driving bond yields also in the euro area, the upward pressure from sovereign risk on bond yields appeared to ease somewhat from March. Indeed, after sovereign bond spreads (vis-à-vis German government bonds) and respective credit default swap premia had climbed up to peak levels in February and early March, they exhibited a remarkable downward correction thereafter, bottoming out in August.

In the second half of the year long-term government bond yields on both sides of the Atlantic were on a slowly declining trend. However, over the course of December US long-term bond yields recorded a remarkable 60 basis point increase, possibly influenced by the completion of the Federal Reserve's purchase programme. In the euro area, high issuance was met by strong demand for safe assets, reflecting recurrent concerns among market participants over the fragility of the ongoing economic recovery. The apprehension related to future financing needs of sovereign issuers resurfaced prominently following the Greek government's revision of its public deficit in early October and the subsequent downgrading of Greek government debt by three major rating agencies. This brought Greek bond spreads near to their early-year peaks, while most other euro area sovereign spreads were much less affected (see Box 7). For AAA-rated government debt, euro area ten-year yields ended the year at around 3.6%, a low level by historical standards. At the same time, levels of short-term rates were markedly lower, so the euro area yield curve ended the year with an exceptionally steep slope.

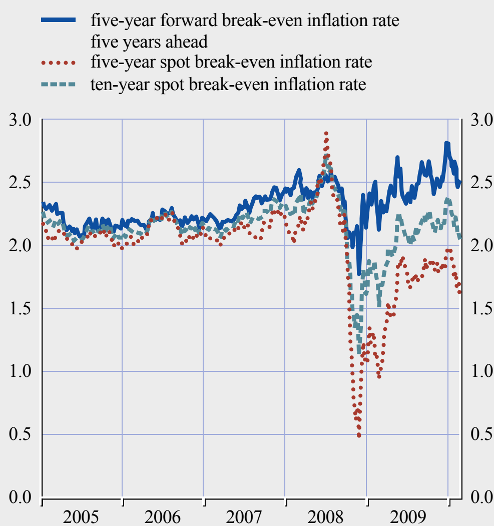
Unlike long-term nominal interest rates, real government bond yields in the euro area showed a distinct trend decline over the year, decreasing by 100 and 45 basis points at the five and ten-year maturity respectively. Accordingly, the five-year forward inflation-linked bond yield five years ahead remained broadly unchanged overall. A common interpretation would be that these patterns reflected an increasingly depressed short-term and a somewhat bleak longer-term macroeconomic outlook as perceived by euro area bond market investors. However, the developments in inflation-linked

bond markets during 2009 have to be interpreted carefully. Caution is warranted as inflation-linked bond markets had been subject to severe dislocations around the end of 2008, signalling abnormally high real yields in an environment of economic distress. Over 2009 liquidity conditions across the maturity spectrum improved somewhat. In addition, demand-supply imbalances (especially for longer maturities) shrank. While there was virtually no supply of long-term inflation-linked debt in the first half of 2009, it eventually resumed and is expected to pick up further in 2010. Although market conditions underwent some normalisation, they still have not fully returned to smooth functioning.

This notion of caution also applies to the interpretation of developments in break-even inflation rates (i.e. the difference between nominal and real bond yields of the same maturity). Under normal market conditions, these largely represent investors' inflation expectations and associated inflation risk premia. However, the above-described adjustment processes in inflation-linked bond markets impede this interpretation and point to the importance of taking into account technical market factors when interpreting movements in break-even inflation rates. As a consequence of the developments in nominal and real bond yields, five-year and ten-year spot break-even inflation rates increased by 90 and 80 basis points respectively in 2009, to stand at around 2.0% and 2.4% at the end of the year (see Chart 13). Accordingly, the five-year forward break-even inflation rate five years ahead increased by 70 basis points, ending the year at 2.8%. Given the still high volatility of spot and forward break-even inflation rates, these figures are not inconsistent with firmly anchored medium to long-term inflation expectations. Indeed, the corresponding forward rates derived from swap instruments, which were markedly less volatile, recorded an increase of 15 basis points only. Moreover, survey-based inflation expectations for medium to long-term horizons (from Consensus Economics) also remained remarkably stable at 1.9% over 2009.

**Chart 13 Euro area zero coupon break-even inflation rates**

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




Sources: Reuters and ECB calculations.

Uncertainty regarding future bond price developments, as reflected in option-implied volatilities, declined significantly in the course of the year. Compared with the exceptionally high levels at the end of 2008, bond market volatility approximately halved on both sides of the Atlantic. However, reflecting uncertainty about the extent of future government financing needs and the strength of the macroeconomic recovery, end-year volatility levels were still above those prevailing before the onset of the financial turmoil in 2007.

In the first two months of 2010 euro area and US long-term government bond yields decreased by about 25 basis points, to stand at around 3.4% and 3.6% respectively on 26 February. While yields on the highest-rated sovereign debt in the euro area declined moderately, intensifying market concerns about the sustainability of fiscal positions of some countries led to marked increases in long-term bond yields of these sovereign issuers. As a result, sovereign bond spreads for some euro area countries widened further. The most remarkable spread widening between end-December 2009

and end-February 2010 was recorded by Greek long-term government bonds, where the spread against German government bond yields increased by almost 100 basis points. Over the same period, euro area five-year and ten-year spot break-even inflation rates decreased by around 35 basis points, to stand at around 1.6% and 2.0% respectively at the end of February 2010. Accordingly, the five-year forward break-even inflation rate five years ahead decreased by 30 basis points to stand at 2.5% at the end of February 2010.

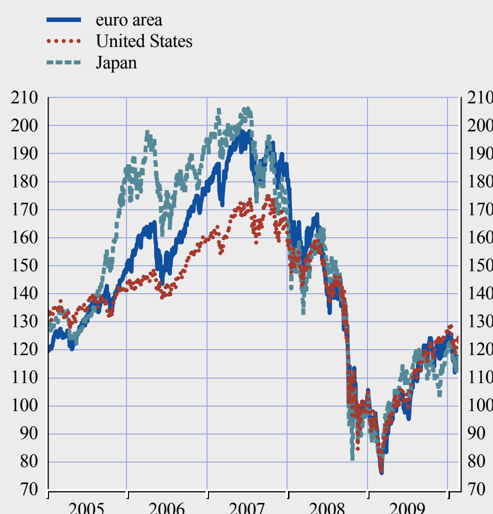
### EURO AREA STOCK PRICES INCREASED STRONGLY

After a continuation of previous declines in the first two months of 2009, the year was characterised by an impressive rebound of equity prices globally. This was spurred by returning confidence and decreasing risk aversion of investors, for which the large-scale support measures of governments and central banks were an important driving factor. Compared with end-2008 levels, major stock market indices in the euro area, the United States and Japan increased by around 23%, 23% and 19% respectively. Share price increases in the euro area were particularly strong for the financial sector, recovering from severely depressed levels. The surge in stock markets was driven by an improved corporate earnings outlook, supportive low real interest rates and a sizeable decline in the equity premium (i.e. equity investors' required risk compensation). Stock market volatility roughly halved compared with the end of 2008.

During the first two months of 2009 stock markets in major economies continued their downturn of the previous year (see Chart 14). Investors' risk aversion remained elevated and stock market volatility stood at somewhat higher levels compared with the end of 2008 (see Chart 15). The mood in stock markets finally improved in early March, driven by positive economic news and increasing confidence in government and central bank measures. Sound performance data from US banks were among the first important news that gave impetus

**Chart 14 Major stock market indices**

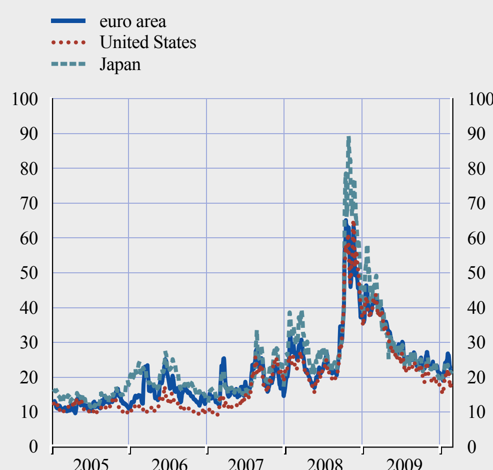
(indices rebased to 100 on 30 December 2008; daily data)




Sources: Reuters and Thomson Financial Datastream.
Note: The indices used are 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; five-day moving averages of daily data)




Source: Bloomberg.
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.

to stock markets. Several measures to tackle the economic and financial crisis, as discussed at the European Council meeting in Brussels in March and the G20 meeting in London in April, were well received by market participants and spurred investor confidence further.

In the euro area, positive news regarding consumer and business expectations (e.g. an improvement of business and consumer confidence in the European Commission's survey) further supported stock prices in the first half of 2009. However, uncertainty about the true state of the financial system was a major factor tending to contain euphoria in stock markets. Therefore, central bank measures expected to be supportive of the banking sector were well received by stock market participants.

The increase in stock prices continued in the third quarter of 2009 on the basis of overall positive economic news and decreasing risk aversion, but lost some of its pace in the final quarter. In late November stock markets were negatively hit by the announcement that a Dubai government holding company had asked creditors for a six-month standstill on its debt. Most probably the impact on stock markets, which was short-lived, reflected lingering market concerns about public and private balance sheet fragilities. Looking back at the strong stock price rebound in 2009, it should be recalled that it started from depressed levels. By the end of the year euro area and US stock prices were still 37% and 26% lower respectively, compared with their end-June 2007 levels. Stock market volatility also normalised considerably over the year, but was still somewhat above pre-crisis levels.

The increase in stock prices was to some extent supported by short-term earnings growth expectations. For corporations listed in the Dow Jones EURO STOXX index, the forecast annual growth rate of earnings per share 12 months ahead reached a historical low of nearly -4% in spring, but then increased sharply to stand at 30% in December. However, even this positive earnings outlook represents only a partial rebound from the slump in actual earnings, which decreased by around 35% between December 2008 and December 2009.

From a sectoral perspective, in the euro area, financial stock prices increased by 31%, while non-financial corporate stock prices only increased by 19%. Looking at the period since March in the United States, financial shares also outperformed non-financial shares, but over the year as a whole stock prices of non-financial corporations rose by more than those of financial institutions (27% as against 14%).

In early 2010 stock prices continued their upward trend until around mid-January. Subsequently, broad equity price indices on both sides of the Atlantic showed some declines and implied volatility temporarily edged upwards. One possible driving factor may have been market concerns regarding public finances and a resulting decline in investors' risk appetite. Overall, in the first two months of 2010, stock prices decreased by about 7% and 1% in the euro area and the United States respectively.

### HOUSEHOLD BORROWING WAS SUBDUED

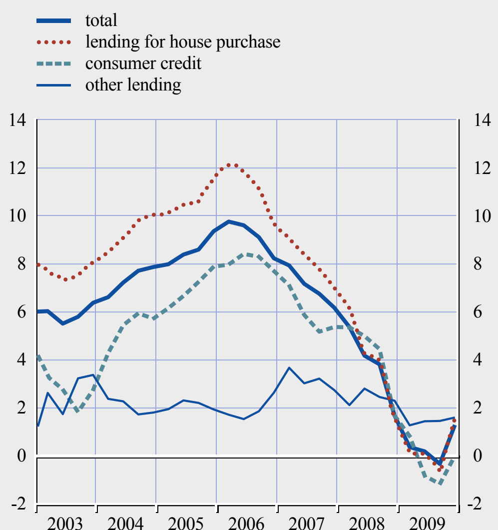
Household borrowing remained subdued throughout 2009, reflecting a high degree of uncertainty regarding income and housing market prospects, especially in the first half of the year. At the same time, banks continued to tighten their credit standards, although that tightening weakened in the course of the year. Expectations regarding general economic activity and housing market prospects were the main factors behind the tightening of credit standards. Banks reported increases in net demand for loans for house purchase, which turned positive in the second quarter of the year, while net demand for other types of lending approached positive territory towards the end of the year.

The annual growth rate of MFI loans to households, which are the main source of household borrowing, declined to 1.3% at the end of 2009, down from 1.7% at the end of 2008. This decline was smaller than that observed in 2008, as household lending recovered slightly towards the end of the year following the negative growth rates observed around the middle of 2009. The annual growth rate of loans granted to households by non-MFIs (i.e. OFIs, insurance corporations and pension funds) continued to exceed that of MFI loans to households. This partly reflects the impact of true-sale securitisation activities, whereby loans are derecognised (i.e. removed from MFI balance sheets) and subsequently recorded as loans from OFIs. While the level of securitisation activity recorded in 2009 was substantially lower than that observed in 2008, it remained sizeable in the first half of the year.

A breakdown of MFI loans to households by purpose indicates that borrowing for house purchase continued to be the main driver of overall lending to this sector in 2009. The annual growth rate of loans to households for house purchase stood at 1.5% in December 2009, unchanged from December 2008 (see Chart 16), masking a strong decline in the first half of 2009 and a moderate – albeit consistent – improvement in the second half of the year. These developments should be seen in the context of declines in house prices and housing market activity in a number of euro area economies. At the same time, the positive flows observed in the second half of the year could have reflected an increase in demand following those reductions in house prices. The levelling-off observed in the annual growth rate of loans for house purchase also reflected the lower mortgage rates resulting from the pass-through of the series of reductions in key ECB interest rates between October 2008 and May 2009. MFI lending rates for house purchase decreased by 151 basis points between December 2008 and December 2009 (see Chart 17). This decline was particularly visible for loans with initial rate fixation periods of up to one year, the rates on which fell by 238 basis points, while the rates on loans with initial rate fixation periods of over ten years declined by 87 basis points.

**Chart 16 MFI loans to households**

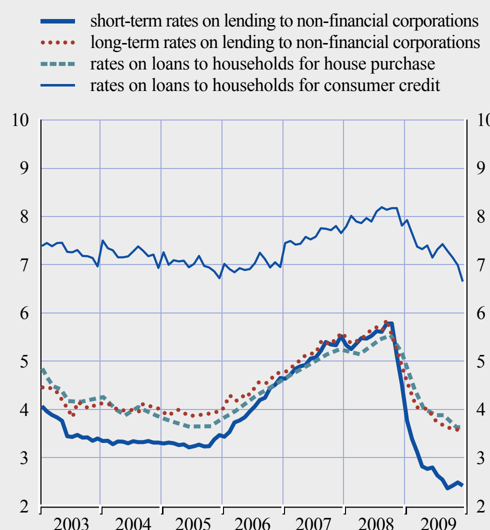
(annual percentage changes)




Source: ECB.

**Chart 17 Interest rates on lending to households and non-financial corporations**

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



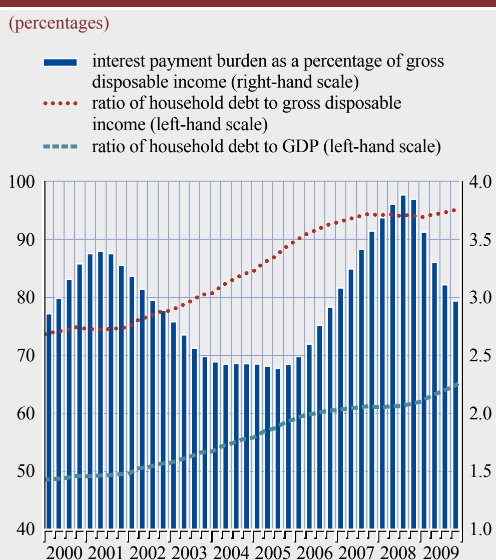

Source: ECB.

The annual growth rate of consumer credit stood at 0.0% in December 2009, down from 1.7% at the end of 2008. Developments in consumer credit were similar to those observed for loans for house purchase, although the annual growth rate of consumer credit fell deeper into negative territory in the middle part of the year. These developments can be explained by the low levels of consumer confidence during the year. In 2009 MFI interest rates on consumer credit declined by an average of 116 basis points.

### HOUSEHOLDS' INTEREST BURDEN DECREASED

As the amount of outstanding household debt increased moderately further and households' disposable income did not react immediately to changes in economic growth, the ratio of household debt to disposable income was fairly stable in 2009. It was estimated at around 95% in the fourth quarter of 2009, marginally higher than the level observed in 2008 (see Chart 18). By contrast, according to data from the integrated euro area accounts, the ratio of household debt to GDP increased by more than 2 percentage points during the year to stand close to 65% in the fourth quarter of 2009. The decline observed in bank lending rates considerably eased households' interest payment burden (measured as interest payments as a percentage of disposable income), which stood at 3.0% in the fourth quarter of 2009, down from the peak of 3.9% recorded in the third quarter of 2008. It is also worth mentioning that there is a high degree of heterogeneity in the indebtedness of euro area households. In particular, in some parts of the euro area high levels of indebtedness are coinciding with weak economic activity or remaining signs of overvaluation in housing markets. In addition, there are also cross-country differences in terms of the predominant loan fixation period. In this respect, a higher interest rate risk applies to those countries where financing has shifted more quickly to short-term loans in response to reductions in interest rates.

**Chart 18 Household debt and interest payments**




Sources: ECB and Eurostat.
Notes: Household debt comprises total loans to households from all institutional sectors, including the rest of the world. Interest payments do not include the full financing costs paid by households, as they exclude the fees for financial services. Data for the last quarter shown have been partly estimated.

### THE COST OF EXTERNAL FINANCING DECREASED CONSIDERABLY

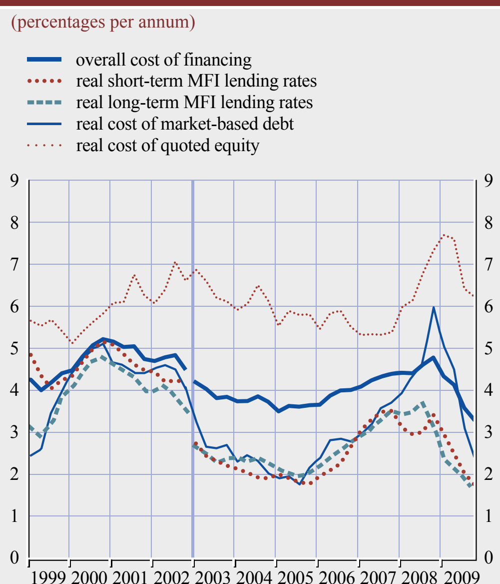
Despite a significant decrease in the cost of external financing throughout 2009, euro area non-financial corporations' external financing shrank substantially, largely driven by more subdued demand for loans amid a bleak economic environment. However, the leverage of the euro area non-financial corporate sector increased further, driven by a particularly sharp deterioration in corporate profitability.

After reaching a historical peak in November 2008, the real cost of external financing for euro area non-financial corporations decreased sharply and continuously throughout 2009 (see Chart 19), owing to a broadly based moderation of costs across all sources of funding. By the end of the year, the overall real cost of external financing had reached the lowest level recorded since 1999.

Regarding the cost of bank-based financing, the decline of bank interest rates in 2009 mainly reflected the gradual pass-through to banks' customers of changes in key ECB interest

**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.

rates implemented between October 2008 and May 2009. All in all, these developments suggest that euro area banks continued to pass on the reduction in key policy rates, broadly in line with historical patterns (see Box 4). Developments in banks' short-term lending rates are primarily influenced by movements in short-term money market rates, while banks' longer-term lending rates mainly reflect movements in government bond yields.

Between the end of 2008 and the end of 2009, as the three-month EURIBOR dropped by nearly 260 basis points, nominal short-term bank interest rates on loans to non-financial corporations declined by 210 basis points. Consequently, despite a mild rebound of inflation expectations since May 2009, real short-term bank lending rates declined by 158 basis points. Movements in long-term bank lending rates were even more pronounced than those in corresponding long-term government bond yields. Nominal bank interest rates on longer-term loans declined by around 120 basis points in 2009, which was considerably more than the 65 basis point decrease in the five-year government bond yield. As a result, the spreads between long-term bank lending rates and comparable market rates tended to narrow substantially throughout 2009, reversing the sharp widening of spreads registered in the previous year. Overall, real long-term bank lending rates declined by 130 basis points between the end of 2008 and the end of 2009.

Similarly, the large decline in the real cost of market-based debt financing by 389 basis points over the same period reflected not only the decrease of yields on government bonds, but also the narrowing of corporate bond spreads (measured as the difference between the yields on corporate bonds and the yields on government bonds). These spreads started to narrow at the beginning of 2009, declining across all rating classes and even falling back to levels below those recorded in August 2008 (i.e. shortly before the broad-based widening of spreads brought about by the intensification of the financial crisis). The gradual decrease in risk perceptions and some recovery of investors' risk appetite in the course of 2009 led to a particularly pronounced decline of spreads for bonds with a low credit rating and for speculative-grade bonds. For instance, between the end of 2008 and the end of 2009, spreads on euro area high-yield bonds dropped by as much as 1,500 basis points, compared with about 100 basis points for AAA-rated bonds.

Finally, the real cost of issuing quoted equity also decreased markedly throughout 2009, reaching its long-term average by the end of the year. This was fostered by the strong rebound in equity prices brought about by returning confidence and decreasing risk aversion of investors.

Box 4

## ASSESSING THE PASS-THROUGH OF KEY ECB INTEREST RATES TO THE MAIN RETAIL BANK LENDING RATES IN THE EURO AREA

The interest rate channel of monetary policy encapsulates the pass-through of monetary policy rates to bank lending rates. This transmission channel should be seen in the euro area as the major process through which monetary policy ultimately affects real activity and inflation, owing to the predominant role of the banking sector in providing financing to the non-financial private sector.[1] Reductions in policy rates normally translate into broadly similar movements in market interest rates, in particular at short maturities. Retail bank interest rates are typically priced against, and in some cases even linked to, market rates at relevant maturities. The policy rate adjustments are therefore expected to be largely reflected in the bank financing costs facing households and companies. Against this background, this box assesses the extent to which euro area banks have passed on the consecutive monetary policy rate reductions that began in the fourth quarter of 2008, covering the period up until December 2009.[2]

Between October 2008 and May 2009 the ECB lowered the interest rate on the main refinancing operations from 4.25% to a historically low level of 1.00%. In parallel with (and possibly driven by) the reductions of key ECB interest rates as well as the extraordinary provision of central bank liquidity, both short-term and long-term market rates declined substantially in the fourth quarter of 2008 and throughout 2009. For example, between end-September 2008 and December 2009 the three-month EURIBOR decreased by 431 basis points to 0.71%, while the seven-year swap rate decreased by 156 basis points to 3.09% (see Charts A and B). As illustrated in Charts A and B, it also appears that euro area banks to a substantial extent passed on the market rate declines observed over this period. For example, with regard to loans at short-term rates (i.e. with a floating rate and an initial rate fixation of up to one year), the average bank interest rates on loans to households for house purchase and loans to non-financial corporations declined by around 309 and 336 basis points respectively (see Chart A). Similarly, as regards long-term lending rates (i.e. with an initial rate fixation of over one year), the average bank interest rates on loans to households for house purchase and loans to non-financial corporations decreased by around 111 and 200 basis points respectively (see Chart B).[3]

While it is true that overall MFI lending rates have substantially declined since the key ECB interest rates started to be reduced, it is also clear that – with the exception of long-term corporate lending rates – euro area MFIs have only passed on part of that decline so far. However, this is not necessarily at odds with historical patterns, which suggest that banks usually only gradually pass through changes in policy and market rates to the lending rates charged to their customers. In other words, bank lending rates tend to display some degree of stickiness in response to a change in monetary policy. These frictions are furthermore often found to be

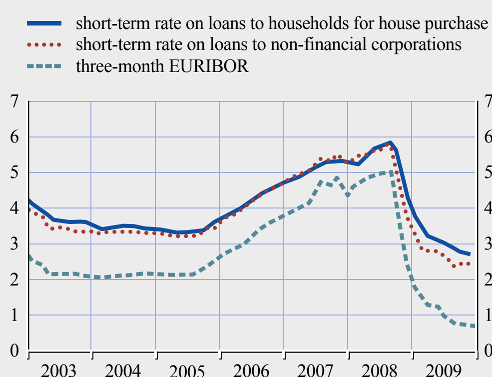
1 For a more detailed description of the concepts underlying the retail bank interest rate pass-through mechanism, see the article entitled "Recent developments in the retail bank interest rate pass-through in the euro area" in the August 2009 issue of the ECB's Monthly Bulletin.

2 This box focuses on recent developments in MFI interest rates on loans to households for house purchase and to non-financial corporations, which are the most important loan products on the assets side of the MFI balance sheet. Thus, by the third quarter of 2009 loans to households for house purchase and loans to non-financial corporations amounted to respectively 16% and 15% of total assets of euro area MFIs (excluding the Eurosystem).

3 Notably, in December 2009 various MFI lending rates reached their lowest level since the start of the harmonised MFI interest rate statistics in January 2003.

**Chart A Short-term rates on loans to households for house purchase and on loans to non-financial corporations and the three-month EURIBOR**

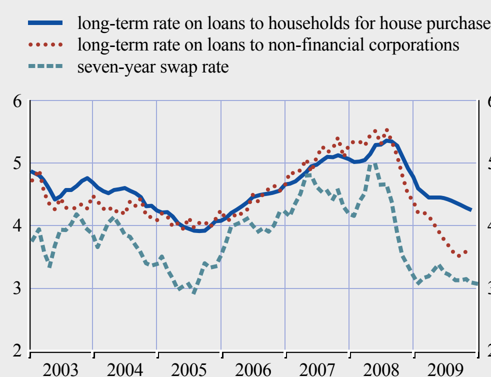
(percentages per annum)




Source: ECB.
Note: "Short-term rate" refers to loans with a floating rate and an initial rate fixation of up to one year.

**Chart B Long-term rates on loans to households for house purchase and on loans to non-financial corporations and the seven-year swap rate**

(percentages per annum)




Source: ECB.
Notes: "Long-term rate" refers to loans with an initial rate fixation of over one year. The different initial rate fixation bands have been weighted using new business volumes.

asymmetric in the sense that bank lending rates tend to adjust quicker in response to policy rate increases than to policy rate decreases. The magnitude and speed of bank lending rate pass-through are often associated with the degree of imperfect competition in the banking sector and the presence of nominal adjustment ("menu") costs. These frictions may deter banks from reacting on a regular basis to changes in policy and market rates, and banks may instead choose to delay the adjustment of their lending rates until the change in market rates exceeds a certain threshold.[4] Beyond this, other factors related to financial intermediation may affect the developments in the spreads between bank lending rates and market rates, such as costs related to interest rate and credit risk, the banks' degree of risk aversion, unit operating costs, bank liquidity and product diversification. These additional factors will not be specifically considered here.

According to the bank interest rate pass-through literature, the transmission of monetary policy rates, via changes in market rates, to bank interest rates can be modelled using an error-correction modelling framework where changes in a specific bank interest rate are regressed on simultaneous (and lagged) changes of a relevant market rate and (possibly) lagged changes of the bank interest rate itself, as well as an error-correction term reflecting the extent to which in the previous period the bank rate was diverging from its long-run equilibrium relationship with the market rate. Using such a standard error-correction model of the pass-through of changes in market rates to MFI lending rates, it is found that whereas the selected lending rates generally tend to adjust more or less completely over the long run, the adjustment is far from immediate and the speed of adjustment to the long-run equilibrium is also relatively sluggish (see table).[5] For example, while 91% of the decline in market rates is eventually passed through to short-term loans to households for house purchase, in the month immediately following the market rate change only 29% of the decline actually feeds through. In general, corporate lending rates tend to adjust somewhat quicker to changes in market rates than rates on loans to households for house purchase. For instance, 69% of the decline in market rates is reflected

4 For a more complete description of banks' interest rate-setting behaviour, see the article referred to in footnote 1 and the references made therein.
5 The full model description can be found in the article referred to in footnote 1.

## MFI lending rate pass-through based on an error-correction model

| | Immediate pass-through | Final pass-through | Speed of adjustment | Adjusted $R^2$ | Corresponding market rate |
|---|---|---|---|---|---|
| Short-term loans to households for house purchase | 0.29 | 0.91 | -0.02 | 0.62 | 3-month EURIBOR |
| Long-term loans to households for house purchase | 0.17 | 1.06 | -0.12 | 0.76 | 7-year swap rate |
| Short-term loans to non-financial corporations | 0.69 | 0.86 | -0.16 | 0.76 | 3-month EURIBOR |
| Long-term loans to non-financial corporations | 0.32 | 1.02 | -0.19 | 0.40 | 7-year swap rate |

Source: ECB.
Notes: For a description of the estimation methodology, see the article referred to in footnote 1. Sample covers the period from January 1997 to September 2008. All coefficients are statistically significant at the 5% level.

in corporate lending rates within the first month and also the speed of adjustment towards the long-run equilibrium is higher. This might reflect, among other things, the better bargaining position of (especially larger) corporations vis-à-vis the banks compared with households.[6]

To determine the extent to which the pass-through of MFI lending rates since the beginning of the latest round of ECB policy rate reductions has deviated from past regularities, a model forecast of the MFI lending rates based on market rate developments between October 2008 and December 2009 was produced. The MFI lending rates were consecutively forecasted one month ahead, and the cumulated month-on-month forecast changes are shown in Chart C, alongside the cumulated actual changes in the MFI lending rates. Overall, the results indicate that the strong declines in market rates have been passed on to a broadly similar extent to what would be expected based on past experience. Notably, by December 2009 the pass-through of short-term rates on loans to households for house purchase and of short-term and long-term rates on loans to non-financial corporations was largely in line with the forecast.[7] At the margin, only the long-term rate on loans to households for house purchase had adjusted by somewhat less than expected based on historical regularities.

All in all, despite the prevailing negative impact on euro area banks' balance sheets from the financial crisis and the general economic slowdown, in 2009 euro area MFIs appear to have managed to pass on the substantial reductions in key ECB interest rates to their main retail lending rates to a similar degree as in the past. Hence, at least as regards the bank interest rate channel of monetary policy transmission, the substantial easing of monetary policy by the ECB since the fourth

### Chart C Cumulated actual and forecast changes in MFI lending rates between October 2008 and December 2009

(in basis points)

Sources: ECB and ECB calculations.
Notes: Forecast based on an error-correction model estimation for the sample from January 1997 to September 2008 and market rate developments between October 2008 and December 2009. Percentage figures indicate the actual cumulated change in retail bank rates as a percentage share of the forecast change.

6 For example, large corporations have easier access to other sources of financing, such as corporate bonds and quoted equity, and may in some cases also obtain financing in international loan markets.
7 For all three rates, the actual value in December 2009 was well within the 95% confidence interval.

quarter of 2008 seems to have functioned satisfactorily and has thus supported the consumption and investment decisions of households and non-financial corporations. Nonetheless, the satisfactory pass-through of interest rates does not guarantee that the supply of loans has not been affected by the financial crisis. Thus, the results of the Eurosystem's bank lending survey indicate a continuous net tightening of credit standards on loans to the private sector throughout 2009. The continued vulnerabilities and lingering uncertainties concerning the soundness of the euro area banking sector call for close monitoring of bank loan pricing behaviour and of banks' general provision of credit to the non-financial sectors in 2010.

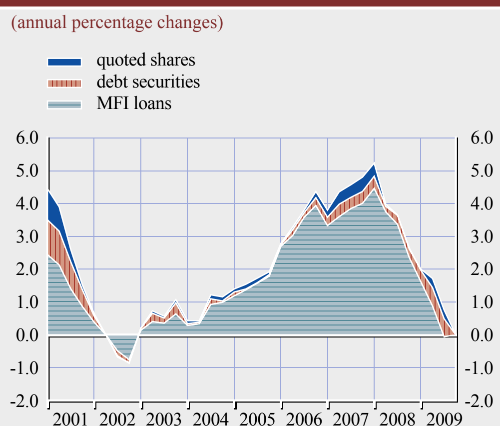
### THE PACE OF EXTERNAL FINANCING SLOWED

Despite the broad-based moderation in the real cost of external financing, the rate of growth of external financing by euro area non-financial corporations declined steadily in 2009 (see Chart 20). In the third quarter of 2009 the real annual growth rate of external financing of euro area non-financial corporations barely reached 0.1%, down from 2.6% in the last quarter of 2008. This was entirely driven by a collapse in the contribution of loans granted by MFIs, which turned negative in the third quarter of 2009. At the same time, the contribution of debt securities issuance in particular – used as an alternative source of financing by euro area firms – increased noticeably.

One of the main factors driving the rapid decline in external financing needs was the deteriorating economic environment and possibly the need for some balance sheet restructuring. The abrupt slowdown in economic activity dramatically affected corporate earnings and the availability of internal funds. Although information on corporate profitability derived from financial statements of listed firms has displayed some signs of a rebound since the beginning of 2009, profit ratios did not return to the levels prevailing before the crisis (see Chart 21). Most stock market-based indicators of euro area non-financial corporations' profitability continued to point towards an ongoing contraction during most of 2009. For example,

**Chart 20 Breakdown of the real annual growth rate of external financing to non-financial corporations[1)]**

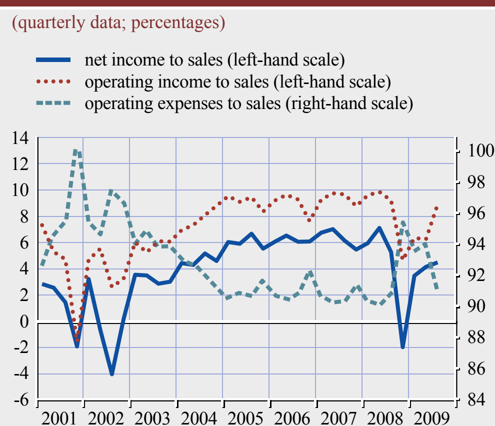
(annual percentage changes)




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.

**Chart 21 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. Compared with the operating income, which is defined as sales minus operating expenses, the net income refers to operating and non-operating income after taxation and extraordinary items.

the annual rate of change in earnings per share for listed non-financial corporations in the euro area remained on a declining trend and in negative territory throughout 2009.

The Eurosystem's bank lending survey also suggests that demand-side factors, such as the bleak economic outlook, lower fixed investment by firms and subdued merger and acquisition (M&A) activity, had a strong negative impact on the demand for loans by euro area non-financial corporations in 2009. Indeed, the annual rate of growth of MFI loans to non-financial corporations continued to slow down steadily throughout the year, turning negative in September, the first contraction since records began in 1999. While the decline in the annual growth rate of MFI loans to non-financial corporations was broadly based across all maturities, it was particularly pronounced for lending at shorter maturities, pointing to some substitution by firms of short-term loans for longer-term loans. All in all, this protracted deceleration is broadly consistent with cyclical regularities, considering the magnitude of the recent contraction in capital expenditure and the ongoing uncertainty surrounding economic prospects. Moreover, empirical evidence suggests that loans to non-financial corporations typically tend to lag the business cycle substantially.[4]

At the same time, while lower demand appears to be a major driver of the decline in MFI loan growth, survey evidence suggests that substantial weaknesses within the banking system may have adversely affected the supply of credit during the year. In 2009 the Eurosystem's bank lending survey continued to point to a net tightening of credit standards – albeit decreasing throughout the year – and a non-negligible share of euro area firms reported a deterioration in the availability of bank loans and in banks' willingness to provide loans in the first half of 2009. However, the effects of supply-side constraints on bank lending tended to be overshadowed by the exceptional deterioration in demand-related determinants in 2009.

As bank lending flows to non-financial corporations started to shrink, euro area firms in need of financing increasingly turned towards alternative sources of funding. In particular, the annual growth rate of debt securities issuance rose from 7.9% at the end of 2008 to 16.3% at the end of 2009, while the contribution of non-financial corporations to overall debt issuance growth surged from 10% before the financial crisis to more than 15% by the end of 2009. This was brought about by a renewed interest in the European corporate bond market, which, considering the continued slump in M&A activity, can mostly be explained by two factors. First, the rapid decline of corporate bond spreads substantially lowered the cost of market-based financing, which fell by more than the cost of bank-based financing. Second, a substitution of bank-based financing by market-based financing may have been fostered by tighter bank lending standards. As seen for bank loans, debt securities issuance activity was much stronger at longer maturities. The contribution of short-term debt issuance to the overall growth rate started to decline at the beginning of 2009 and continued to do so until the end of the year. This reflected the sharp contraction in net short-term debt securities issuance by non-financial corporations possibly linked to refinancing activities. Euro area companies took advantage of the very favourable market conditions to refinance debt with near-term maturities, pushing them forward in time.

Supported by the rebound in the stock markets in 2009, the annual growth rate of quoted shares issued by non-financial corporations also bounced back in 2009, turning positive in March 2009 and accelerating throughout the rest of the year, reaching nearly 2.0% in December.

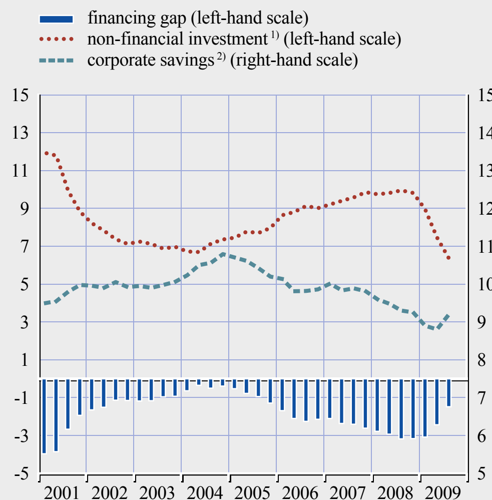
### A FURTHER INCREASE IN CORPORATE DEBT

Owing to a more rapid decline in investment than in corporate savings relative to GDP, the financing gap (broadly speaking, the extent to which non-financial corporations need to resort to external sources of funding to cover

4 See, for example, C. Kok Sørensen, D. Marqués Ibáñez and C. Rossi, "Modelling loans to non-financial corporations in the euro area", ECB Working Paper No 989, January 2009.

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

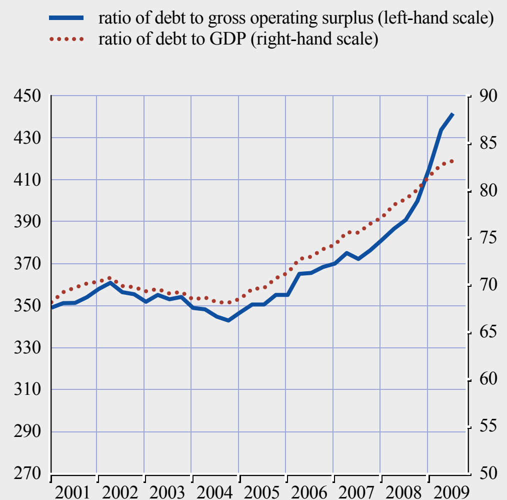
(as a percentage of GDP; four-quarter moving average)




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

## 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 up to the third quarter of 2009.

their investment) narrowed in 2009, for the first time since mid-2004 (see Chart 22). It remained quite substantial, however, pointing to the need for some balance sheet restructuring given the deterioration in corporate profitability.

The combination of moderate, but still positive, external financing flows and the slump in internal financing resulted in further increases and record high levels of non-financial corporate leverage ratios in terms of GDP and gross operating surplus (see Chart 23). In the third quarter of 2009 the debt-to-GDP and debt-to-gross operating surplus ratios rose to 83.1% and 441% respectively. This substantial amount of leverage in the non-financial corporate sector might explain the increased number of corporate defaults in 2009. At the same time, the significant declines in interest rates eased the net interest burden of non-financial firms in the course of 2009. Overall, the high level of debt and the associated interest burden signal a clear need for further balance sheet restructuring in the euro area non-financial corporate sector.

## 2.3 PRICE AND COST DEVELOPMENTS

Annual HICP inflation fell to 0.3%, on average, in 2009, after reaching 3.3% in 2008 (see Table 1). This swing contrasts sharply with previous years, when annual inflation rates clustered around 2.1% to 2.2%. In the period 1999-2009, average HICP inflation was 2.0%. The very low HICP inflation for 2009 resulted, largely, from the impact of substantially lower oil prices and other commodity prices, compared with the high levels seen in 2008 – thus reversing the inflationary shock of 2008. However, it also resulted from falling inflationary pressures in the context of a severe contraction in activity and rapidly deteriorating labour market conditions.

In the course of 2009 overall annual HICP inflation initially fell, turned negative in the middle of the year, and increased again in the second part of the year. These sharply contrasting developments were dominated by the dynamics in commodity prices (particularly oil prices), as was the case in 2008, and the associated base

## Table 1 Price developments

(annual percentage changes, unless otherwise indicated)

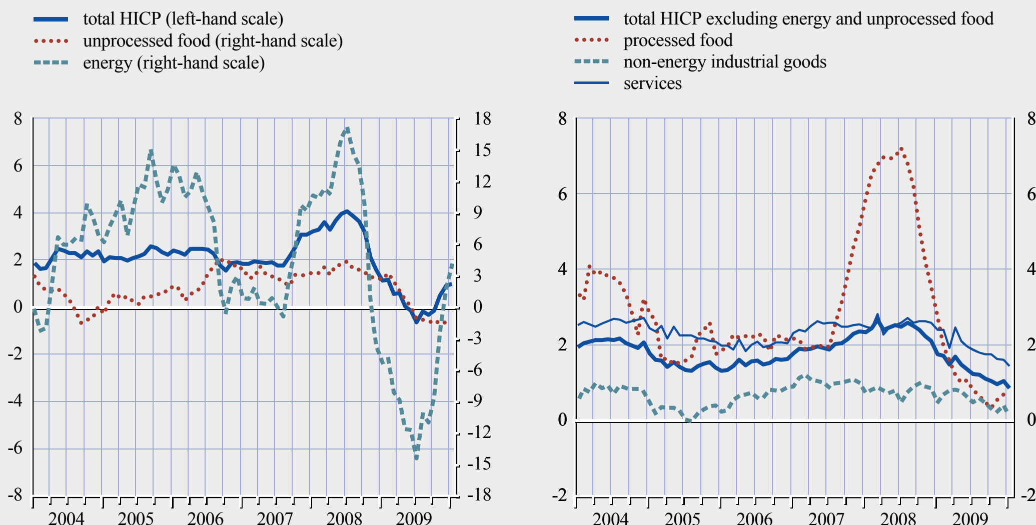
| | 2007 | 2008 | 2009 | 2008 Q4 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 | 2009 Dec. | 2010 Jan. |
|---|---|---|---|---|---|---|---|---|---|---|
| **HICP and its components** | | | | | | | | | | |
| Overall index | 2.1 | 3.3 | 0.3 | 2.3 | 1.0 | 0.2 | -0.4 | 0.4 | 0.9 | 1.0 |
| Energy | 2.6 | 10.3 | -8.1 | 2.1 | -6.1 | -10.7 | -11.9 | -3.2 | 1.8 | 4.0 |
| Unprocessed food | 3.0 | 3.5 | 0.2 | 3.0 | 2.8 | 0.8 | -1.2 | -1.5 | -1.6 | -1.3 |
| Processed food | 2.8 | 6.1 | 1.1 | 4.3 | 2.1 | 1.1 | 0.6 | 0.5 | 0.7 | 0.6 |
| Non-energy industrial goods | 1.0 | 0.8 | 0.6 | 0.9 | 0.7 | 0.7 | 0.5 | 0.3 | 0.4 | 0.1 |
| Services | 2.5 | 2.6 | 2.0 | 2.6 | 2.2 | 2.2 | 1.8 | 1.7 | 1.6 | 1.4 |
| **Other price and cost indicators** | | | | | | | | | | |
| Industrial producer prices [1] | 2.7 | 6.1 | -5.1 | 3.4 | -2.0 | -5.7 | -7.8 | -4.6 | -2.9 | . |
| Oil prices (EUR per barrel) [2] | 52.8 | 65.9 | 44.6 | 43.5 | 35.1 | 43.8 | 48.1 | 51.2 | 51.6 | 54.0 |
| Commodity prices [3] | 7.5 | 2.1 | -18.5 | -9.9 | -29.2 | -24.5 | -18.8 | 2.8 | 19.0 | 27.1 |

Sources: Eurostat, Thomson Financial Datastream, Hamburg Institute of International Economics and ECB calculations.
1) Excluding construction.
2) Brent Blend (for one-month forward delivery).
3) Excluding energy; in euro.

effects (see Chart 24). The global economic downturn in the second half of 2008 had rapidly pushed down commodity prices to generally low levels by the beginning of 2009, from the extremely high peaks reached in summer 2008. Thus, starting from an annual HICP inflation rate of 1.6% in December 2008, which had quickly receded starting from its mid-2008 peak of 4.0%, inflation continued to fall during the first part of 2009, mostly on account of negative base effects. Inflation entered into negative territory for the first time in June 2009, reaching a low of -0.7% in July 2009 and remaining negative until October. In the last quarter of the year annual HICP inflation rapidly recovered from its trough, as a result of the combined effect of increases in commodity prices and substantial base effects. The latter had meanwhile turned

## Chart 24 Breakdown of HICP inflation: main components

(annual percentage changes; monthly data)




Source: Eurostat.

positive, as the impact of the abrupt decline in commodity prices observed in autumn 2008 eventually dropped out of the annual inflation measures. The annual inflation rate regained positive values in November 2009, to stand at 0.9% in December 2009.

Wage growth slowed down in the course of 2009, as the rapid deterioration in labour market conditions started to exert downward pressure on wage settlements, resulting in a moderation in regular pay and lower bonuses. Furthermore, heavy reliance on reduced working time schemes helped limit the increases in compensation per employee. Despite the sharply declining rate of growth of compensation per employee, as productivity per employee fell, unit labour costs increased steeply, peaking in the first quarter of 2009. Margins therefore tightened, as sales prices charged by producers moderated, so that profits declined, on account of both volume and margin effects.

Consumers' inflation perceptions and short-term expectations, which had peaked in 2008, fell rapidly to very low levels in 2009. Nonetheless, long-term expectations, as measured by surveys, were very stable, demonstrating that expectations had remained firmly anchored to the ECB's objective of keeping inflation below, but close to, 2% over the medium term.

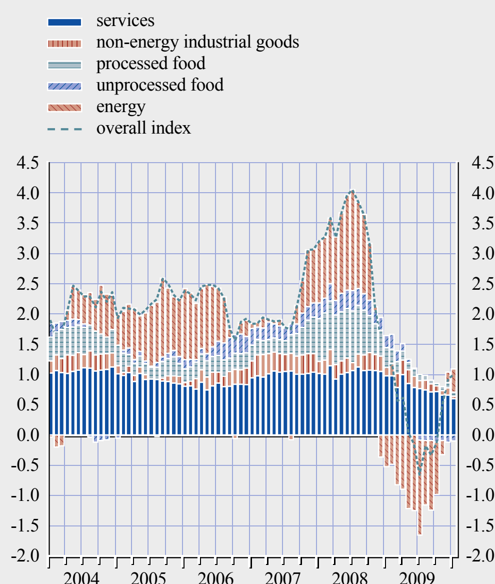
### HICP INFLATION TEMPORARILY NEGATIVE, OWING TO ENERGY AND FOOD PRICE DEVELOPMENTS

The wide swings in commodity prices were one of the main factors driving the pronounced movements in euro area HICP inflation in 2009. The rapid decline in euro area HICP inflation from a peak of 4.0% in July 2008 to a trough of -0.7% in July 2009, and the renewed increase to 0.9% by December 2009, were largely influenced by the unprecedented volatility in global prices observed over the course of 2008 and 2009. Energy, industrial and food commodity prices plummeted from their peak in summer 2008 to a trough in winter 2008-09, to rebound again – in most cases – towards the end of 2009. However, the general decline in HICP rates of change in 2009 was also affected by the clear disinflationary impact of a contracting economy, with gradual moderation observable across many of the HICP components (see Chart 25).

The pronounced movement in the energy component of the HICP – which has a weight of 9.6% in the overall HICP – closely reflected the changes in fuel prices (such as petrol, diesel and heating oil) driven by global oil prices, combined with the lagged response of non-oil energy components (such as electricity and gas) to the dynamics in crude oil prices. Oil prices (calculated in euro terms) reached a trough in December 2008, after falling from their June 2008 peak, to climb back halfway up again by December 2009. In this context, and taking into account the lagged effects in non-oil energy prices, the annual rate of change in HICP energy prices bottomed out at -14.4% in July 2009, when strong base effects came into play together with temporarily lower energy prices. It then recovered and turned positive in

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

(annual percentage point contributions; monthly data)




Source: Eurostat.
Note: Owing to rounding errors, the contributions may not add up exactly to the overall index.

December 2009, reaching 1.8%. Non-oil energy prices still exerted downward pressure in the second half of the year.

Euro area food price inflation slowed down steadily in the course of 2009, turning negative in the second half of the year – the lowest level since the start of the series in 1990. This disinflation process was driven by past falls in food commodity prices against the background of weak consumer demand. The annual growth rate of the processed food component of the HICP, which had reached a peak of 7.2% in July 2008 – affected by rapidly increasing global agricultural commodity prices, such as those of bread and cereals, dairy products, and oils and fats – continued on a downward trend in 2009. It reached 0.7% by the end of the year, as the prices of these commodities eased globally and transport costs declined. Overall, in 2009 processed food prices increased by 1.1%, on average, compared with the 6.1% increase in 2008. Unprocessed food price inflation also decelerated sharply in the first half of 2009, and turned negative in the last six months of the year. This downward trend can only be partly attributed to weather-related developments in fruit and vegetable prices. It also derives from a slowdown in the inflation rate of meat prices, following the reversal of the marked 2008 increase in feedstock prices on global markets.

Excluding energy and (processed and unprocessed) food prices, HICP inflation has followed a gradual downward trend since mid-2008. This is primarily a result of the dampening impact of domestic factors, with a slowdown in wage levels and a fall in profit mark-ups, but is also, to some extent, a consequence of the pass-through from falling commodity prices.

Non-energy industrial goods prices rose by, on average, 0.6% in 2009, showing a slight decline compared with 0.8% in 2008 and 1% in 2007. The ongoing moderation since the beginning of 2008 became more pronounced over the summer of 2009, with annual inflation in this HICP component standing at 0.4% by December 2009. This most recent decline in growth rates was attributable to a wider range of items than before. In addition to falling durable goods inflation, which reached a historical low of -1.1% in September 2009 – owing, in particular, to car dealers offering large discounts – non-durable goods inflation started to ease from the second half of 2009 onwards, as the pricing power of firms declined. This reversed the upward trend previously observed for more than three years.

Services price inflation, the stickiest of the HICP components, which had been broadly stable at relatively elevated levels of around 2.6% throughout much of 2008, also started to slow down in 2009 and reached 1.6% by end-2009. This moderation in services price inflation was related to weak demand and fierce competition among firms. At a more disaggregated level, the decline in inflation in services prices was largely driven by contributions from recreational services – particularly restaurants and cafés, package holidays and accommodation, with negative inflation during the second half of the year – and, to a lesser extent, transport services. Contributions from the latter were almost entirely in the passenger transport by air item. By contrast, the negative contribution from falling communication services prices observed over a long period has eased recently.

### PRODUCER PRICES FELL IN 2009

In the context of a worldwide contraction in activity and lower commodity prices, in the aftermath of a sizeable inflationary shock, severe downward price pressures developed along the supply chain. This led to a fall in producer prices for a wide range of products, affecting first – in late 2008 – early stages of production and then later stages of production in the second half of 2009. This sharp reversal of the very high producer price inflation seen in summer 2008 took place against a background of lower commodity prices and low levels of demand for production factors (both capital and labour). These downward price pressures

abated somewhat towards the end of the year, amid some upturn in activity and a recovery in global commodity prices.

The annual rate of change in industrial producer prices (excluding construction) in the euro area was -5.1%, on average, in 2009, a reversal of the increase of 6.1% recorded in 2008. After reaching a trough of -8.4% in July 2009, an almost identical reversal of the historical peak of 9.1% recorded in July 2008, the year-on-year rate of producer price inflation recovered to stand at -2.9% in December 2009, mainly on account of energy price developments. The annual rate of change in energy producer prices bottomed out at -20.0% in July 2009 and stood at -5.1% in December 2009.

Excluding construction and energy, the annual growth rate of industrial producer prices, which had reached a peak of 4.3% in July 2008, declined to -2.3% in December 2009. This movement was particularly pronounced for intermediate goods, with a lesser amplitude for consumer goods and also some lags in capital goods (see Chart 26).

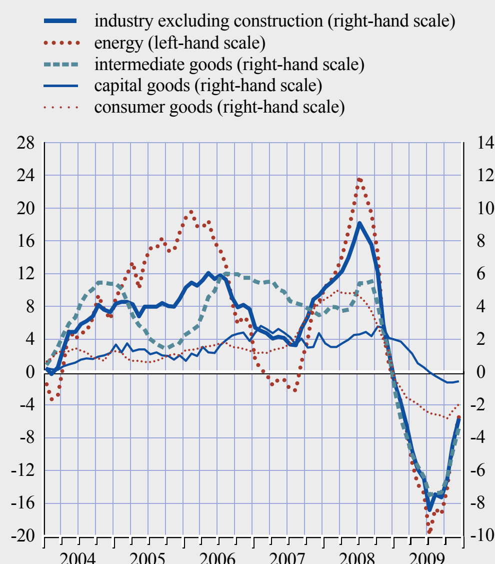
Intermediate goods price inflation decelerated from its peak of 5.5% in September 2008 to reach a low of -7.6% in July 2009. This reflected the (delayed) impact of falling industrial raw material and energy prices, as well as the effect of lower capacity utilisation rates and stiffer competition. During the second half of the year, the recovery in raw material and oil prices led to a stabilisation in the levels of intermediate goods prices, with falls in annual prices gradually diminishing on account of positive base effects.

Further down the production chain, the rapid downward movement of producer price inflation in the field of consumer goods continued. The rate of change in these prices had peaked at 5.0% in March 2008 (the highest rate since the beginning of EMU in 1999) on the back of the inflationary shock from global demand pressures on food prices. While the annual growth rate in producer prices of consumer goods was -1.9% in December 2009, it stood at -0.3% when tobacco and food are excluded. Movements in the annual growth rate of producer prices of capital goods were less pronounced and lagged behind other components in the index. Annual inflation rates for these goods declined to zero by the middle of 2009 and recorded a negative figure of -0.6% in December 2009, as costs moderated, order books became depleted in the context of a rapid fall in demand, and competition intensified.

Overall, the weak euro area and global demand resulted in considerably more competitive market conditions at various stages of production. This competitive environment, combined with lower global commodity prices, was reflected in widespread reports of falling producer prices, in input as well as output prices, for both manufacturing and services.

**Chart 26 Breakdown of industrial producer prices**

(annual percentage changes; monthly data)




Source: Eurostat.

## LABOUR COSTS DECELERATED MARKEDLY

Labour cost indicators for the euro area suggest a substantial moderation in the course of 2009, after an acceleration and a peak in 2008, which followed years of more modest wage developments. However, in the context of a sharp decline in hours worked, there were noticeable divergences across indicators with regard to the extent of this moderation.

Negotiated wages decelerated markedly in the course of 2009, to an annual growth rate of 2.1% in the fourth quarter of 2009. In past years they had fluctuated between 2.1% and 2.3% before peaking at 3.6% in the fourth quarter of 2008 (see Table 2). This indicator captures the main component of wages settled in advance through collective agreements. Its slowdown probably reflects the decreasing influence of workers' bargaining power, as a consequence of the sharp downturn in economic activity, the ensuing deterioration in euro area labour market conditions and the rapid increase in unemployment, as well as the significant drop in inflation. However, given that annual GDP growth for the euro area stood at -4.0% in the third quarter of 2009 (see Table 3 in Section 2.4 of this chapter), it appears that negotiated wages have adapted only partially to the economic slowdown.

The annual growth rate of compensation per employee reversed its upward path even earlier than negotiated wages. It peaked at 3.6% in the third quarter of 2008 before adjusting downwards more rapidly to stand at 1.4% in the third quarter of 2009, the lowest rate of growth recorded since the beginning of EMU. The more accentuated fall in this labour cost indicator, as compared with negotiated wages (known as "wage drift"), resulted from the fact that this indicator encompasses flexible pay elements such as bonuses – which, according to anecdotal evidence, were reduced significantly. In addition, compensation per employee was automatically affected by shorter working hours, a measure to which many firms resorted during the economic downturn.

While this slowdown in growth in compensation per employee was broad-based across countries, the sectoral breakdown points to substantial differences. Particularly steep falls were observed in industry excluding construction – which often resorted to shorter working hours – where growth in compensation per employee fell to zero by mid-year. By contrast, growth rates in compensation per employee in the construction sector remained elevated at 3.0% in the third quarter of 2009, notably reflecting some composition effects, with lay-offs concentrated on lower-paid workers in particular amid pronounced regional differences (see Chart 27).

In contrast to compensation per employee, the annual growth rate of hourly labour costs remained elevated, although easing noticeably from its peak of 4.4% in the fourth quarter of 2008. This stickier rate of increase essentially reflected the fact that hours worked per employee fell by nearly 2% in the year to

**Table 2 Labour cost indicators**

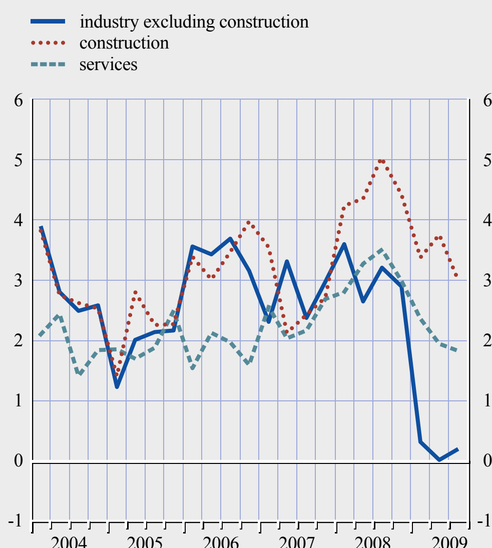
(annual percentage changes, unless otherwise indicated)

| | 2007 | 2008 | 2009 | 2008 Q4 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 |
|---|---|---|---|---|---|---|---|---|
| Negotiated wages | 2.1 | 3.2 | 2.6 | 3.6 | 3.2 | 2.8 | 2.3 | 2.1 |
| Total hourly labour costs | 2.5 | 3.5 | . | 4.4 | 3.8 | 4.3 | 3.2 | . |
| Compensation per employee | 2.5 | 3.2 | . | 3.0 | 1.9 | 1.6 | 1.4 | . |
| *Memo items* | | | | | | | | |
| Labour productivity | 1.0 | -0.2 | . | -1.7 | -3.8 | -3.1 | -2.0 | . |
| Unit labour costs | 1.6 | 3.5 | . | 4.8 | 5.9 | 4.8 | 3.5 | . |

Sources: Eurostat, national data and ECB calculations.

**Chart 27 Sectoral compensation per employee**

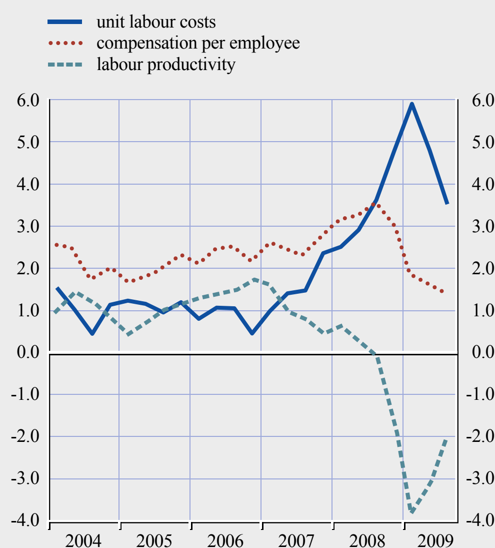
(annual percentage changes; quarterly data)




Sources: Eurostat and ECB calculations.

**Chart 28 Euro area labour costs**

(annual percentage changes; quarterly data)




Source: Eurostat.

the third quarter of 2009 and that cuts in hours worked are typically accompanied by less than proportional decreases in remuneration (see Box 5). Year-on-year growth in hourly labour costs therefore also exceeded that of negotiated wages, despite the impact of reductions in bonuses. Year-on-year increases in hourly labour costs were highest in the industrial sector, where flexible time schemes were used most liberally.

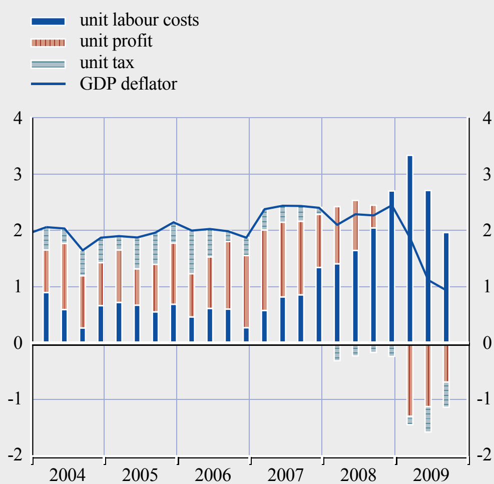
Given that the slowdown in activity was accompanied by labour hoarding in many parts of the euro area, there was a strong fall in labour productivity growth as measured by output per employee. As compensation per employee growth reacted much less strongly to the slowdown, unit labour costs accelerated rapidly, reaching a year-on-year peak of 5.9% in the first quarter of 2009. This rise had a severe impact on business margins. Unit labour cost growth fell back to 3.5% by the third quarter of 2009, as cyclical effects started to reverse. This pattern of unit labour cost growth was mainly affected by the annual growth rate of labour productivity, which, after declining to, on average, -0.2% in 2008 (compared with growth rates of around 1% to 1.5% in 2006-07), reached a floor in the first quarter of 2009, with a contraction of 3.8%, year on year. This rate moderated to a 2.0% contraction by the third quarter of 2009, on the back of expanding output, while redundancies continued (see Chart 28).

## PROFIT MARGINS

Operating margins started falling rapidly as unit labour costs surged. Global sales prices came under pressure, as reflected in the annual growth rate of the GDP deflator, which had fallen rapidly from 2.3% in mid-2008 to 0.9% in the third quarter of 2009 (see Chart 29). An indicator of overall profit mark-up, measured as the difference between the rate of growth of the GDP deflator and that of unit labour costs, points to a sharp fall in profit margins by 3.5 percentage points in the first three quarters of 2009, after having declined by 1.3 percentage points in 2008.

**Chart 29 Decomposition of the GDP deflator**

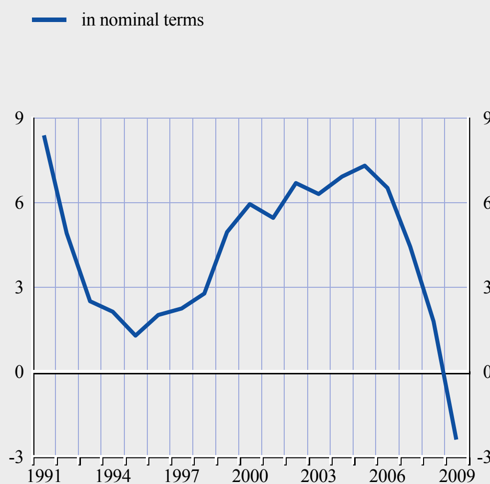
(annual percentage changes; percentage points)




Source: Eurostat.

**Chart 30 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 2009 refer to the first half of the year.

In this context, operating profits of companies, measured in gross terms, contracted by 11%, year on year, in the first three quarters of 2009. This was attributable to the volume effect of a fall in economic activity and to the margin effect of the decline in profit per unit of output, in roughly equal measure.

## RESIDENTIAL AND COMMERCIAL PROPERTY PRICES FELL

Residential property prices in the euro area, which are not included in the measurement of the HICP, fell in the first half of 2009, following a slowing trend observed since the second half of 2005. According to the latest estimates, residential property prices for the euro area, as a whole, fell by around 2.4%, year on year, in the first half of 2009. This drop followed an increase of 2.8% in the first half of 2008 and one of 0.8% in the second half of 2008 (see Chart 30). Country data confirm that the drop in house prices in the euro area was relatively broad-based, notwithstanding a substantial degree of heterogeneity both across countries and across regions within countries. House prices, which had started to fall in Ireland in the second half of 2007 and in Malta in the first half of 2008, again registered steep declines in Ireland and Malta in the first half of 2009. In addition, house prices also registered significant falls in Spain, France, Slovenia and Finland in the first half of 2009. By contrast, house prices increased in the first half of 2009 in Italy, Austria and Portugal. In Germany, data show only small decreases in house prices for 2009, following a period of subdued increases.

The capital values of commercial property in the euro area have been declining since the beginning of 2008. This decline is consistent with the notion that commercial property values in the euro area have been more cyclical than residential property prices during the last decade. The deterioration in euro area commercial property markets has been rather broad-based. All euro area countries for which data are available have recorded declines in the capital values of prime property since the fourth quarter of 2008. On average, year-on-year price declines have hovered between 10% and 13% in recent quarters. However, this varies across countries, with annual price decreases of 50% in some countries and modest price declines in others. In general, the countries that recorded

the steepest price increases between 2004 and 2007 are those that have been witnessing the largest corrections since the beginning of 2008.

### DEVELOPMENTS IN INFLATION EXPECTATIONS

Information derived from Consensus Economics, the Euro Zone Barometer and the ECB Survey of Professional Forecasters indicates that survey-based long-term inflation expectations (five years ahead) remained close to 2.0%. According to the ECB Survey of Professional Forecasters, the average point estimates of inflation for 2014 by forecasters polled by the ECB remained within a narrow corridor of 1.9% to 2% in the course of 2009. In addition, break-even inflation rates derived from inflation-linked bonds and comparable rates extracted from inflation-linked swaps in the euro area (using the implied five-year forward rate five years ahead) remained within a range of 2.2% to 2.7% in 2009. As noted in Section 2.2 of this chapter, these market-based measures can give a distorted signal at times, and distortions related to liquidity issues appear to have impacted significantly on these measures over the past year. All in all, both surveys and market-based indicators continued to suggest little risk of inflation expectations becoming unanchored.

## 2.4 OUTPUT, DEMAND AND LABOUR MARKET DEVELOPMENTS

### AN UNPRECEDENTED CONTRACTION IN EURO AREA GDP IN 2009

Euro area real GDP contracted by 4.0% in 2009, following the rapid slowdown in growth from 2.7% in 2007 to 0.5% in 2008 (see Table 3).

**Table 3 Composition of real GDP growth**

(percentage changes, unless otherwise indicated; seasonally adjusted)

| | Annual rates[1] | | | | | | | | Quarterly rates[2] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2008 Q4 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 | 2008 Q4 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 |
| Real gross domestic product | 2.7 | 0.5 | -4.0 | -1.8 | -5.0 | -4.8 | -4.0 | -2.1 | -1.9 | -2.5 | -0.1 | 0.4 | 0.1 |
| *of which:* | | | | | | | | | | | | | |
| Domestic demand[3] | 2.4 | 0.6 | . | -0.5 | -3.2 | -3.4 | -3.2 | . | -0.8 | -2.0 | -0.7 | 0.4 | . |
| Private consumption | 1.6 | 0.4 | . | -0.7 | -1.3 | -0.9 | -1.0 | . | -0.5 | -0.4 | 0.1 | -0.1 | . |
| Government consumption | 2.3 | 2.0 | . | 2.4 | 2.5 | 2.5 | 2.5 | . | 0.6 | 0.6 | 0.6 | 0.6 | . |
| Gross fixed capital formation | 4.7 | -0.7 | . | -5.8 | -11.5 | -11.7 | -11.4 | . | -4.0 | -5.4 | -1.6 | -0.8 | . |
| Changes in inventories[4] | 0.0 | 0.1 | . | 0.6 | -0.5 | -0.8 | -0.6 | . | 0.2 | -0.8 | -0.6 | 0.5 | . |
| Net exports[3] | 0.4 | 0.0 | . | -1.3 | -1.8 | -1.5 | -0.9 | . | -1.1 | -0.5 | 0.6 | 0.1 | . |
| Exports[5] | 6.3 | 0.8 | . | -6.9 | -16.6 | -17.2 | -13.5 | . | -7.2 | -8.6 | -1.2 | 3.1 | . |
| Imports[5] | 5.5 | 0.9 | . | -4.0 | -12.8 | -14.3 | -11.8 | . | -4.8 | -7.4 | -2.8 | 3.0 | . |
| Real gross value added | | | | | | | | | | | | | |
| *of which:* | | | | | | | | | | | | | |
| Industry excluding construction | 2.4 | -0.9 | . | -7.6 | -16.6 | -17.1 | -13.6 | . | -6.4 | -8.3 | -1.5 | 2.3 | . |
| Construction | 2.2 | -0.8 | . | -3.4 | -5.9 | -4.7 | -4.2 | . | -1.8 | -1.0 | -0.7 | -0.8 | . |
| Purely market-related services[6] | 3.9 | 1.2 | . | -0.7 | -2.9 | -2.9 | -2.7 | . | -1.1 | -1.5 | 0.0 | -0.0 | . |

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.
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; as a contribution to real GDP growth; in percentage points.
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 directly comparable with euro area balance of payments data.
6) Includes trade and repairs, hotels and restaurants, transport and communication, financial intermediation, real estate, renting and business activities.

This considerable contraction – by far the largest on record – was mainly brought about by the very steep fall in output that occurred in the last quarter of 2008 and the first quarter of 2009, in the midst of renewed financial turmoil, heightened uncertainty and an unprecedented decline in world activity and demand. Confronted with the sudden deterioration in business prospects, rapidly depleting order books and costlier and reduced access to financing, firms reacted by postponing expansion plans and cutting inventories. Households, faced with greater uncertainty, increased their savings in the context of a deterioration in short-term job prospects and portfolio losses. As a consequence, GDP fell by a cumulated 4.4% in the fourth quarter of 2008 and the first quarter of 2009. Thereafter, output broadly stabilised in the course of the second quarter of 2009 and returned to positive growth in the second half of the year – albeit at a moderate pace and from a very low base – as financial conditions gradually improved and external trade picked up again.

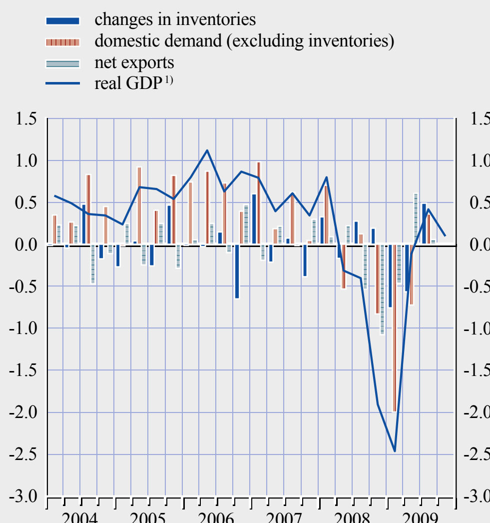
### THE FALL IN GDP WAS LARGELY DRIVEN BY DEVELOPMENTS IN PRIVATE CAPITAL EXPENDITURE AND EXTERNAL TRADE

The sharp contraction in demand in the fourth quarter of 2008 and the first quarter of 2009 emanated predominantly from developments in private capital expenditure and international trade. By contrast, government expenditure (both consumption and capital expenditure) continued to grow and the contraction in private consumption was more moderate. The deterioration in the external environment from mid-2008 developed into a severe downturn following the intensification of the financial crisis in the last quarter of the year, with weakening growth in advanced and emerging economies. The suspension of trades and the postponement of deliveries, as businesses tried to economise along the global supply chain, led to a particularly sharp contraction in exports in the fourth quarter of 2008 and the first quarter of 2009. Against that background, firms cut capital expenditure sharply in both fixed investment and inventories. With rapidly deteriorating housing markets, the decline in household investment also accelerated. At the same time, a number of government measures taken in the context of the European Economic Recovery Plan, together with accelerating disinflation, supported household income and moderated the fall in consumption (see Chart 31).

Private consumption decreased by about 1% in 2009 on the back of an increase in precautionary savings. At the same time, the growth of households' real disposable income remained relatively resilient, at close to 1% per annum, particularly when compared with the size of the contraction in output and, thus, in the total disposable income of the euro area. This relative resilience stemmed from four main factors. First, the growth of compensation per employee slowed less markedly than labour productivity, as wages continued to grow, largely as a result of the length of collective agreements (see Section 2.3 of this chapter). In addition, employment contracted much less than production, owing to labour hoarding by firms, notably using government-

**Chart 31 Contributions to quarterly real GDP growth**

(quarterly percentage point contributions; seasonally adjusted)




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

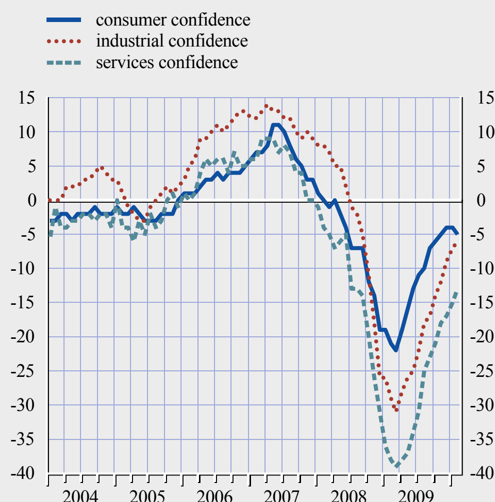
subsidised schemes. Third, fiscal stimulus measures, as well as automatic stabilisers in government budgets, lent considerable support to households' disposable income in the form of strong growth in social benefits, slower growth in social contributions and falling income taxes. Finally, the very low inflation recorded in 2009, on average, also contributed to this resilience.

However, against a background of increased uncertainty, worsening labour market prospects, falling financial wealth, tightening credit conditions and deteriorating housing markets, households increased their saving rate substantially. It rose by an estimated 1.6 percentage points in one year, from 14.1% in 2008, reaching levels in spring 2009 that were last seen at the time of its 2002-03 peak. In the third quarter of 2009 the seasonally adjusted saving rate decreased slightly. Consumer confidence indicators, which peaked in mid-2007, plummeted in autumn 2008 and reached historically low levels in spring 2009, before recovering in the rest of the year (see Chart 32). The deteriorating outlook for the labour market contributed to the decline in consumer confidence, inducing households to rein back expenditure and build up precautionary savings. Households' uncertainty about the economic outlook was also heightened by falling housing prices and a steep decline in financial wealth as stock markets slumped from their peak, despite a partial reversal that started in the second quarter of 2009. The fact that developments in saving rates differed widely across regions points to large variations in conditions and confidence, particularly with respect to labour markets, across the euro area.

After having fallen by 1.3% in the year to the first quarter of 2009, household spending tended to stabilise in the remainder of 2009, benefiting notably from government-sponsored subsidies for consumers who scrapped old cars and bought new ones. These temporary schemes led to a surge in car registrations from the low levels seen in the fourth quarter of 2008 and the first quarter of 2009, helping to clear excess car

**Chart 32 Confidence indicators**

(percentage balances; seasonally adjusted)




Source: European Commission Business and Consumer Surveys.
Note: 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.

inventories and paving the way for an upturn in automotive output.

Government consumption growth remained dynamic in 2009, accelerating slightly from a growth rate of 2% in 2008, as its main components (wages of government employees and social transfers paid in kind) were not affected by cyclical developments in the short run. Moreover, governments were generally keen to support the economy during the recession.

Total fixed investment fell very steeply, declining by an estimated 11% in 2009, following a slight decline in 2008 and two years of elevated growth (5.7% in 2006 and 4.7% in 2007), with particularly sharp quarter-on-quarter contractions in the fourth quarter of 2008 and the first quarter of 2009. In contrast to private investment, government investment remained dynamic, with growth even accelerating, owing to the gradual impact of the counter-cyclical spending decisions taken by governments since the end of 2008.

Looking at the components of private investment in more detail, housing investment contracted sharply in 2009, with a reduction of around 10%, against a background of falling house prices. This was around double the rate recorded in 2008 after the end of the expansionary phase of the residential construction cycle in 2007. The contraction was generally more pronounced in countries that had experienced very fast growth in housing prices in the middle of the decade and was particularly acute in some of them.

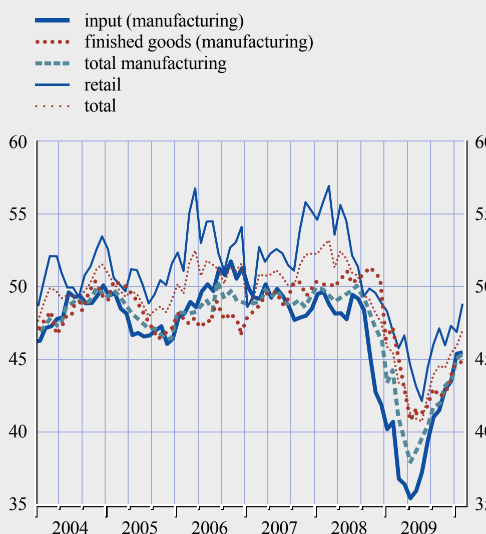
Corporate fixed investment fell even more rapidly than housing investment, declining by around 14%, year on year, in contrast to the modest growth seen in 2008, when it benefited from a dynamic first half of the year. Increased uncertainty about future prospects, collapsing demand, low capacity pressures and deteriorating profit margins, as well as initially tighter financing conditions, contributed to varying degrees to this particularly sharp contraction in corporate investment.

Inventories, which are another key variable explaining the dynamics of business non-financial investment, played an important role in accentuating the economic downturn. They contributed an estimated 0.7 percentage point to the decline in GDP for 2009 as a whole, with large negative quarterly contributions to GDP growth in the first half of 2009 (amounting to more than 1.4 percentage points of GDP) followed by some rebound in the second half of the year. Firms started to cut retail inventories and input inventories in manufacturing in the second half of 2008. By contrast, finished goods inventories in manufacturing built up at an accelerating pace, according to surveys, as companies initially underestimated the speed of the fall in demand. This, coupled with an expected further contraction in demand and an increase in the holding costs of inventories, led to a perception that the levels of inventories were much higher than they should be in autumn 2008. Falling output prices (for commodities and industrial goods) pushed the cost of holding inventories to record high levels in autumn 2008 and provided strong incentives to reduce them. Striving to maintain an optimal inventories-to-sales ratio, firms started to cut production sharply and, accordingly, the destocking of finished goods started to gain speed. Extensive destocking of all types of inventory took place in early 2009, reaching a peak in the second quarter. During the second half of the year destocking slowed, as inventories fell rapidly to their trend levels, thus supporting GDP growth (see Chart 33). At the end of 2009 surveys and other anecdotal evidence suggested that excess inventories had largely been cleared and that inventories were often perceived to be "lean".

Euro area exports of goods and services contracted by around 13% in 2009, after posting growth rates of 0.8% in 2008 and 6.3% in 2007 (these figures include intra-euro area trade). The worsening of the external environment as from mid-2008 developed into a severe downturn in the last quarter of the year, with the suspension of many trades and the deferment of deliveries leading to a particularly sharp contraction in exports.

**Chart 33 Inventories in the manufacturing and retail sectors (PMI surveys)**

(diffusion indices)




Sources: Markit and ECB.
Notes: Total manufacturing is a simple average of inputs and finished goods. "Total" is a simple average of total manufacturing and retail.

Consistent with the notion of a contracting supply chain, demand for intermediate goods was strongly affected, as was demand for capital goods. At the same time, the euro appreciated substantially in nominal effective terms, which may have weighed further on exports. Nevertheless, exports started to grow again in the second half of 2009, as economic activity bottomed out in major export markets, trading partners stopped destocking and the global supply chain began to function more normally again. In the last few months of the year, various surveys on industrial export orders and order books were showing a return to growth. In parallel, euro area imports contracted in 2009 (although less than exports), reflecting shrinking domestic demand. As the impact of falling exports dominated, net trade made a substantial negative contribution of close to 0.8 percentage point to GDP growth in 2009 as a whole. This reflected the impact (including the associated carry-over effects) of the large quarterly negative contributions reported in the second half of 2008 and the first quarter of 2009, despite positive contributions in the remainder of the year.

### A SHARP CONTRACTION IN INDUSTRIAL PRODUCTION

From a sectoral perspective, the contraction in output predominantly affected industry – to a greater extent than is warranted by the stylised fact that the industrial sector tends to display greater sensitivity to the economic cycle – with value added in industry excluding construction falling by 15.8%, year on year, in the first nine months of 2009. Market-related services and construction declined by 2.8% and 4.9% respectively.

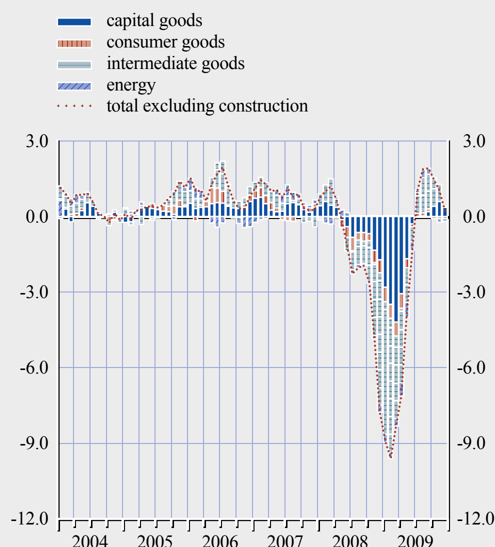
Manufacturing activity fell particularly quickly in the six months to February 2009, and reached its lowest point in April 2009, at a level 22% lower than its peak in January 2008. Thereafter, manufacturing production started to recover, albeit at a slow pace. Capacity utilisation in the manufacturing sector declined to a record low of 69.6% in July (according to survey data), well below its long-term average of 81.4%.

Output of intermediate goods contracted particularly sharply in reaction to the halting of deliveries and destocking along the supply chain. Production of capital goods declined as well, suffering from weaker external demand, shrinking domestic investment and the rapid depletion of order backlogs, as did output in the car industry. In the second half of 2009 output recovered more quickly in the intermediate goods sector and in the car industry (see Chart 34). Construction output continued to be particularly weak, with a further deterioration in residential construction. This was particularly severe in a number of countries, notably those where the weight of the construction sector in terms of GDP had increased significantly before the financial turmoil. Government measures aimed at accelerating infrastructure projects provided some compensation for this sector.

Although more resilient, market-related services output nonetheless fell year on year, by close to 3% in terms of value added. Business-to-business services came under growing pressure,

**Chart 34 Industrial production growth and contributions**

(growth rate and percentage point contributions; monthly data; seasonally adjusted)




Sources: Eurostat and ECB calculations.
Note: Data shown are calculated as three-month moving averages against the corresponding average three months earlier.

while companies cut purchases wherever possible and focused on essential expenditure. Transport was particularly affected by the slowdown in deliveries and disruptions in supply chain flows, and employment services, a very cyclical industry, fell dramatically. Evidence suggests that car rentals, advertising and advisory services suffered a substantial decline in output. By contrast, businesses connected to the restructuring of firms prospered and outsourcing remained relatively strong on the back of renewed cost-cutting efforts. In addition, computer services experienced less acute setbacks. Consumer-oriented services tended to fare better overall, although many branches reported contractions. Retail trade as a whole was affected by declining consumption, with a marked shift in the structure of demand towards cheaper, non-branded goods, which led to a steep decline in demand for more costly goods.

### DETERIORATION IN THE LABOUR MARKET

Conditions in the euro area labour market deteriorated sharply in 2009. This followed the reversal in 2008 of the sustained improvements registered in the two previous years, which had led to particularly tight labour markets and mounting wage pressures by end-2007. At the same time, the contraction in employment and the ensuing increase in unemployment were significantly less marked than could have been expected given the unprecedented size of the decline in output – even taking into account the stylised fact that employment lags the business cycle. In addition, the impact of these developments on various groups of workers, as well as countries, was rather heterogeneous (see Box 5).

Euro area employment (measured in number of persons) contracted by 2.1% in the year to the third quarter of 2009 (see Table 4). In addition, firms reduced working time sharply, often taking advantage of short-time working arrangements subsidised by the government, as was the case in Belgium, Germany and Italy. As a result, the average number of hours worked per person decreased by 2%. Productivity per hour worked fell sharply, thereby affecting profit margins. Many firms preferred to bear the limited cost of hoarding labour rather than face the higher costs associated with workers' dismissal (e.g. a loss of human capital or separation costs). Productivity growth recovered only slightly in the second half of the year. Apparent labour productivity, measured as GDP divided by total employment, contracted sharply, declining by, on average, close to 2.2% in 2009.

**Table 4 Labour market developments**

(percentage changes compared with the previous period; percentages)

| | 2007 | 2008 | 2009 | 2008 Q4 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 |
|---|---|---|---|---|---|---|---|---|
| Labour force | 0.8 | 0.8 | . | 0.1 | 0.1 | 0.1 | -0.1 | . |
| Employment | 1.8 | 0.7 | . | -0.4 | -0.7 | -0.5 | -0.5 | . |
| Agriculture[1] | -1.5 | -1.4 | . | 0.1 | -0.8 | -0.8 | -1.1 | . |
| Industry[2] | 1.3 | -0.8 | . | -1.4 | -1.7 | -1.7 | -1.7 | . |
| – excluding construction | 0.3 | -0.1 | . | -1.1 | -1.5 | -1.8 | -1.6 | . |
| – construction | 3.8 | -2.2 | . | -2.2 | -2.3 | -1.4 | -2.0 | . |
| Services[3] | 2.1 | 1.4 | . | 0.0 | -0.4 | -0.1 | -0.1 | . |
| **Rates of unemployment[4]** | | | | | | | | |
| Total | 7.5 | 7.5 | 9.4 | 8.0 | 8.8 | 9.3 | 9.6 | 9.9 |
| Under 25 years | 14.9 | 15.4 | 19.6 | 16.6 | 18.2 | 19.3 | 20.0 | 20.8 |
| 25 years and over | 6.6 | 6.6 | 8.2 | 7.0 | 7.7 | 8.1 | 8.4 | 8.7 |

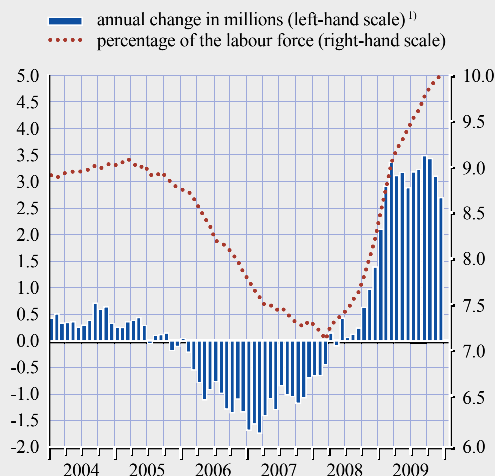
Sources: Eurostat and ECB calculations.
1) Includes fishing, hunting and forestry.
2) Includes manufacturing, construction, mining and quarrying, electricity, gas and water supply.
3) Excludes extra-territorial bodies and organisations.
4) Percentage of the labour force according to ILO recommendations.

Taking a sectoral perspective, employment in the construction sector continued to fall, declining at an annual rate of 7.9% in the third quarter of 2009. This was a result of increasing overcapacity, which was particularly acute in some countries, as well as the relatively high proportion of temporary workers employed in this sector. In a context of an accelerating decline in output, industry excluding construction started to reduce employment, albeit with a lag, by 6% in the year to the third quarter of 2009. Employment growth in the services sector fell more moderately, by 0.6%, year on year, in the third quarter of 2009. Some sectors were more affected, in particular financial intermediation, against a background of cost-cutting by banks, as well as trade and transport, work placement services and some other services.

In 2009 the average monthly increase in the number of unemployed persons stood at around 230,000, with a peak of around 450,000 in the first quarter of 2009 and monthly increases closer to 80,000 at the end of the year. The unemployment rate stood at 9.9% in the fourth quarter of 2009, after bottoming out at 7.2%, its lowest level in decades, in the first quarter of 2008 (see Chart 35).

## Chart 35 Unemployment

(monthly data; seasonally adjusted)




Source: Eurostat.
1) Annual changes are not seasonally adjusted.

## Box 5

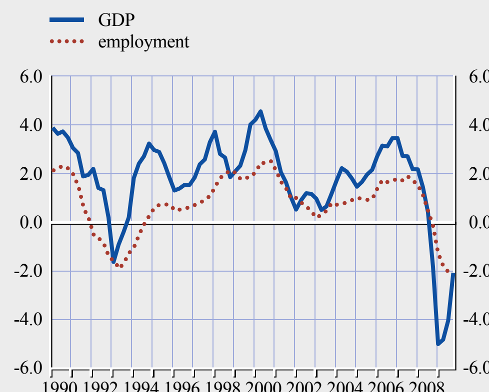
### EMPLOYMENT DEVELOPMENTS IN THE EURO AREA IN 2009

After a moderation of employment growth in 2008, euro area labour markets deteriorated in 2009, as economic growth contracted and unemployment began to rise more quickly. This box reviews euro area employment developments in 2009 and examines the differing experiences of some of the Member States, as well as of different groups within the labour market.

In general, developments in labour market variables tend to lag those in economic activity (see Chart A). By early 2009 there were increasing signs that the fallout from the economic downturn, which had initially led to a sharp and sudden contraction of employment in the construction sector, was beginning to

## Chart A Euro area GDP and employment growth

(annual percentage changes)




Sources: Eurostat and ECB calculations.

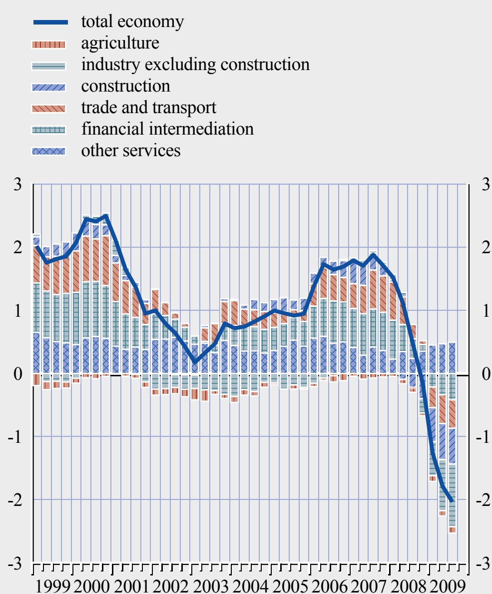
spread to the wider economy, particularly industry and, to a lesser extent, private sector services (see Chart B). By the summer of 2009 employment was contracting at the sharpest rate since the second quarter of 1993.

Several groups appear to have borne the brunt of the labour market downturn – in particular, younger workers, those with temporary contracts and the lower skilled (see Chart C). The sharp downturn in employment growth for young workers has led to a substantial increase in youth unemployment across the euro area, which now stands at its highest level since November 1997. While employment for workers on temporary contracts had already begun to decline substantially in 2008, this contraction intensified sharply at the beginning of 2009. Workers with permanent contracts have so far been less affected, reflecting, inter alia, the generally higher levels of employment protection afforded to them.[1] Lower-skilled workers also experienced a significant contraction in employment. To some extent, these patterns are typical of recessions, but raise important concerns about skill atrophy, possible hysteresis effects and, ultimately, potential output losses if unemployed workers become discouraged about employment prospects and withdraw from the labour market, or if human capital investments of young or lower-skilled workers are delayed or distorted.

1 See also the boxes entitled "Labour market adjustments during the current contraction of economic activity" and "The composition of the recent decline in employment in the euro area" in the June 2009 and September 2009 issues respectively of the ECB's Monthly Bulletin.

### Chart B Euro area employment growth and sectoral contributions

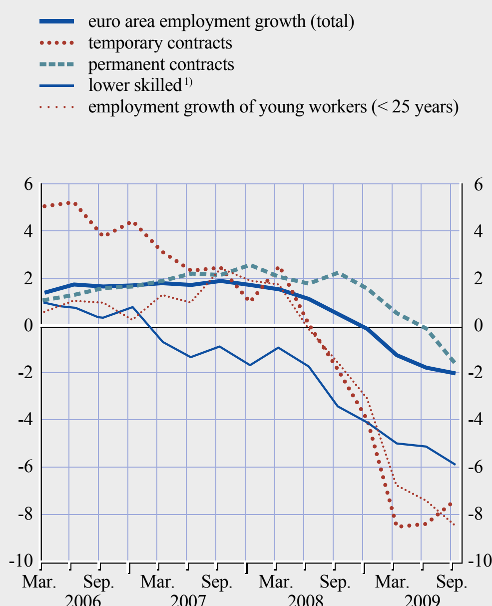
(annual percentage changes; percentage point contributions)




Sources: Eurostat and ECB calculations.

### Chart C Employment growth of selected groups

(annual percentage changes)



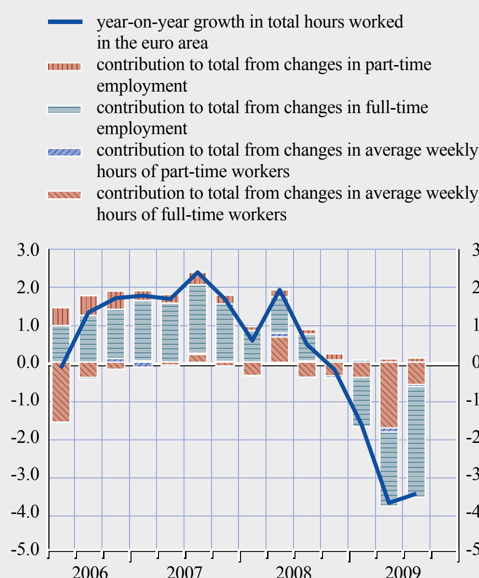

Sources: Eurostat and ECB calculations.
1) Lower skilled defined as those with a lower secondary school leaving certificate, or equivalent.

## Changes in total hours worked

The decline in employment was not the only manifestation of a sharp reduction in labour demand. In the second quarter of 2009 the euro area witnessed the largest year-on-year fall in total hours worked since the start of the series (2001). While a large part of this drop reflected sharp reductions in headcount employment (particularly losses of full-time jobs) across the euro area, in the middle of 2009 a similar proportion stemmed from a substantial reduction in the average weekly working hours of those in employment (see Chart D).[2] Schemes adjusting working hours have been extensively used by the private sector, supported by measures introduced or extended by governments designed to protect jobs during the downturn. Such measures may be beneficial in the short term since they help firms unsure as to the likely duration or depth of a perceived downturn to maintain headcount employment, thus avoiding costly losses of human capital and unemployment. But there are risks attached to the protracted use of such schemes over the longer term, particularly if such measures prevent an efficient sectoral reallocation of resources following long-standing imbalances.

**Chart D Growth in hours worked in the euro area and contributions**

(annual percentage changes; percentage point contributions)




Sources: Eurostat, European Labour Force Survey and ECB calculations.

## Unemployment developments

Already on the rise since the spring of 2008, unemployment began to increase more rapidly at the beginning of 2009, with record increases in the numbers of unemployed persons posted in the first quarter of the year. Despite some moderation in the rate of increase in subsequent months, job losses continued at quarterly rates previously unseen in the euro area. Thus, by the end of 2009 the euro area unemployment rate had reached 10.0% – the highest for a decade. Moreover, large cross-country disparities remained, with several euro area countries (in particular Ireland and Spain) experiencing relatively large increases in national unemployment rates, while others incurred rather modest increases, despite relatively large falls in output (particularly Germany and Italy).[3]

Undoubtedly, part of the marked cross-country disparity can be seen as the consequence of a sharp adjustment to previous bubbles in the construction industry, with Ireland and Spain suffering disproportionately from the acute contraction of their formerly large

2 The data reported are taken from the European Labour Force Survey, since no euro area aggregates are available at a quarterly frequency from national accounts sources. For changes in hours worked inferred from national accounts sources, on the basis of compilations of available data for the three largest euro area economies only, see the box entitled "Recent developments in euro area productivity" in the December 2009 issue of the ECB's Monthly Bulletin.

3 See also the box entitled "Links between output and unemployment in the euro area" in the October 2009 issue of the ECB's Monthly Bulletin. Since the euro area's unemployment rate low of 7.2% was recorded in March 2008, Spain alone has accounted for just over half of the euro area's stock of 4.3 million newly unemployed, with France and Italy contributing around one-fifth and one-tenth respectively. Despite its relatively small population, Ireland contributed some 3.9%, while the euro area's largest economy, Germany, contributed just 0.8%.

and buoyant construction sectors. It can also be explained by the very different institutional settings and divergent responses to the downturn of the governments of the euro area. Hence, the extensive use of increased flexibility in working-time arrangements, particularly in the industrial sectors in Germany and Italy, has helped to slow the rise in unemployment in these countries. By contrast, the higher incidence of temporary contracts and lower reliance on short-time working schemes in Spain have led to substantial labour shedding there, and thus to a considerable increase in measured unemployment – to around 20% of the total labour force.

**Policy implications**

The depth of the recession has been unprecedented in recent times. With unemployment likely to increase further for some time to come, labour market policy-makers will need to ensure that recent deteriorations do not translate into higher structural unemployment. Longer-term labour market improvements are likely to depend heavily on the euro area's ability to reorganise and restructure in the light of the turmoil. This process of creative restructuring is likely to require further reforms in both labour and product markets to help enhance long-term employment prospects and facilitate labour mobility during the transition process. These will include efforts to enhance wage flexibility – allowing for sufficient differentiation according to labour market conditions, the competitive situation of firms and the productivity of workers – in order to stimulate labour demand. In addition, a timely dismantling of crisis measures, including the current heavy reliance on short-time working schemes, will be required to enable the necessary reallocation of labour from less to more productive sectors. Further structural reforms will help ease labour market transitions and facilitate the reintegration of displaced workers into jobs. Reforms which enhance the efficiency and effectiveness of active labour market policies, including those which combine flexible working arrangements or social support with policies which foster human capital acquisition and lifelong learning, would help to ease the unemployed back into jobs. Similarly, easing employment protection legislation for permanent workers would help to alleviate some of the existing labour market dualism. It would also particularly benefit new entrants to the labour force who have so far been disproportionately hit by the recession and who are potential sources of dynamism and innovation. In product markets, enhanced competition would help to foster innovation and the implementation of efficient working practices.

## 2.5 FISCAL DEVELOPMENTS

### SHARP WORSENING IN BUDGETARY POSITIONS IN 2009

Against the backdrop of the financial crisis, a major economic contraction and counter-cyclical fiscal stimulus measures, budgetary positions in the euro area countries worsened drastically in 2009, following the fiscal deterioration of the previous year. According to the European Commission's autumn economic forecasts published on 3 November 2009, the average general government deficit ratio in the euro area increased from 2.0% of GDP in 2008 to 6.4% in 2009, marking the largest budget deterioration in a single year since the inception of EMU (see Table 5). The deterioration in the budgetary situation took place alongside a strong decline in GDP and was mainly driven by expenditure dynamics, as well as revenue shortfalls brought about in part by tax cuts and other stimulus measures. Accordingly, the euro area average revenue-to-GDP ratio fell by 0.8 percentage point to 44.0%, whereas the expenditure ratio jumped by 3.6 percentage points of GDP to the relatively high level of 50.4% of GDP.

The Commission's autumn 2009 forecasts are, on average, slightly less favourable than the

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

(as a percentage of GDP)

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

| | European Commission forecast | | | Stability programme |
|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2009 |
| Belgium | -0.2 | -1.2 | -5.9 | -5.9 |
| Germany | 0.2 | 0.0 | -3.4 | -3.2 |
| Ireland | 0.3 | -7.2 | -12.5 | -11.7 |
| Greece | -3.7 | -7.7 | -12.7 | -12.7 |
| Spain | 1.9 | -4.1 | -11.2 | -11.4 |
| France | -2.7 | -3.4 | -8.3 | -7.9 |
| Italy | -1.5 | -2.7 | -5.3 | -5.3 |
| Cyprus | 3.4 | 0.9 | -3.5 | n.a. |
| Luxembourg | 3.7 | 2.5 | -2.2 | -1.1 |
| Malta | -2.2 | -4.7 | -4.5 | -3.8 |
| Netherlands | 0.2 | 0.7 | -4.7 | -4.9 |
| Austria | -0.6 | -0.4 | -4.3 | -3.5 |
| Portugal | -2.6 | -2.7 | -8.0 | n.a. |
| Slovenia | 0.0 | -1.8 | -6.3 | -5.7 |
| Slovakia | -1.9 | -2.3 | -6.3 | -6.3 |
| Finland | 5.2 | 4.5 | -2.8 | -2.2 |
| Euro area | -0.6 | -2.0 | -6.4 | -6.2 |

**General government gross debt**

| | European Commission forecast | | | Stability programme |
|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2009 |
| Belgium | 84.2 | 89.8 | 97.2 | 97.9 |
| Germany | 65.0 | 65.9 | 73.1 | 72.5 |
| Ireland | 25.1 | 44.1 | 65.8 | 64.5 |
| Greece | 95.6 | 99.2 | 112.6 | 113.4 |
| Spain | 36.1 | 39.7 | 54.3 | 55.2 |
| France | 63.8 | 67.4 | 76.1 | 77.4 |
| Italy | 103.5 | 105.8 | 114.6 | 115.1 |
| Cyprus | 58.3 | 48.4 | 53.2 | n.a. |
| Luxembourg | 6.6 | 13.5 | 15.0 | 14.9 |
| Malta | 62.0 | 63.8 | 68.5 | 66.8 |
| Netherlands | 45.5 | 58.2 | 59.8 | 62.3 |
| Austria | 59.5 | 62.6 | 69.1 | 66.5 |
| Portugal | 63.6 | 66.3 | 77.4 | n.a. |
| Slovenia | 23.3 | 22.5 | 35.1 | 34.4 |
| Slovakia | 29.3 | 27.7 | 34.6 | 37.1 |
| Finland | 35.2 | 34.1 | 41.3 | 41.8 |
| Euro area | 66.0 | 69.3 | 78.2 | 78.7 |

Sources: European Commission's European Economic Forecast – autumn 2009, updated stability programmes 2009-10 and ECB calculations.
Notes: Data are based on ESA 95 definitions. The euro area average includes the 16 countries that were members of the euro area as at 1 January 2009.

estimates presented in the updated stability programmes that were submitted by most euro area countries between December 2009 and February 2010. The updated stability programmes point to a somewhat smaller deficit for the euro area as a whole, amounting to 6.2% of GDP in 2009 (see Table 5). Almost all euro area countries recorded a deficit above the 3% of GDP reference value, with three countries – Ireland, Greece and Spain – recording double-digit deficit ratios.

In the context of the autumn 2009 notification, following a change of government, Greece revised significantly upwards its notified deficit ratio for 2008 – by 2.1 percentage points, to 7.7% of GDP – and its deficit ratio planned for 2009 – by 6.5 percentage points, to 12.5%

of GDP – revealing a very serious fiscal imbalance. In the case of the deficit revision for 2008, the main reason was the inclusion of deliveries of medical products by public hospitals that had exceeded their budgets. For 2009, the revision reflected the fact that the original forecast was largely based on a budgetary target that had not been revised on the basis of the already available quarterly and monthly government finance statistics. The 2009 deterioration is mostly on account of expenditure overruns, particularly public investments and subsidies to social security funds, and revenue shortfalls in direct and indirect taxes. The revisions, which followed a pattern already observed in previous years, highlighted systemic deficiencies in the production of Greek fiscal statistics and forecasts. Eurostat expressed reservations regarding the quality of data reported by Greece, given the significant uncertainties surrounding the figures and did not validate the notified fiscal data.

By the end of February 2010, 13 euro area countries were subject to an excessive deficit procedure. In December 2009 the ECOFIN Council set a deadline of 2013 for the correction of excessive deficits in most countries, with a deadline of 2012 in the cases of Belgium and Italy and one of 2014 for Ireland (see Table 6). In February 2010 the ECOFIN Council took decisions regarding Malta and Greece. In the case of Malta, where the authorities had planned to reduce the 2009 deficit ratio below the reference value, a deadline of 2011 was set. With regard to Greece, following a decision under Article 126(8) of the Treaty that effective action had not been taken to correct the excessive deficit in 2009, the Council adopted a decision under Article 126(9) giving notice to the country to take action within the framework of the excessive deficit procedure. The decision set 2012 as the deadline for Greece to correct its excessive deficit and also invited the country to submit a detailed timetable for measures to be taken and to report on these regularly and publicly. Requirements for Greece followed the European Council's statement, made on 11 February 2010, that EU governments fully support the efforts of the Greek government and their commitment to do whatever is necessary to ensure that the ambitious consolidation targets are met.

**Table 6 Excessive deficit procedures in the euro area countries**

(as a percentage of GDP)

| | Budget balance 2009 | Start | Deadline | Recommended average structural adjustment p.a. |
|---|---|---|---|---|
| Belgium | -5.9 | 2010 | 2012 | ¾ |
| Germany | -3.2 | 2011 | 2013 | ≥0.5 |
| Ireland | -11.7 | 2010 | 2014 | 2 |
| Greece | -12.7 | 2010 | 2012 | ≥3½ in 2010-11, ≥2½ in 2012 |
| Spain | -11.4 | 2010 | 2013 | >1.5 |
| France | -7.9 | 2010 | 2013 | >1 |
| Italy | -5.3 | 2010 | 2012 | ≥0.5 |
| Cyprus | n.a. | - | - | - |
| Luxembourg | -1.1 | - | - | - |
| Malta | -3.8 | 2010 | 2011 | ¾ |
| Netherlands | -4.9 | 2011 | 2013 | ¾ |
| Austria | -3.5 | 2011 | 2013 | ¾ |
| Portugal | n.a. | 2010 | 2013 | 1¼ |
| Slovenia | -5.7 | 2010 | 2013 | ¾ |
| Slovakia | -6.3 | 2010 | 2013 | 1 |
| Finland | -2.2 | - | - | - |

Sources: Updated stability programmes 2009-10 (column 1) and ECOFIN Council recommendations of December 2009 and February 2010 (columns 2, 3 and 4).

Declining economic activity, increasing deficits and government interventions in response to the financial crisis contributed to rapidly growing government debt-to-GDP ratios. According to the Commission's autumn 2009 projections, the average general government gross debt ratio of the euro area increased sharply to 78.2% of GDP in 2009, from 69.3% of GDP in 2008. The updated stability programmes show a broadly similar euro area debt ratio for 2009 (see Table 5). Deficit-debt adjustments, which also capture the "below-the-line" impact of bank recapitalisations and loans to private enterprises (see Box 6), again added to the total debt ratio. In 2009 ten euro area countries recorded debt ratios of above the 60% of GDP reference value (compared with seven in 2007), with two countries (Greece and Italy) recording triple-digit debt ratios. In all countries, the trend in the debt ratio has been rising since 2007-08. Furthermore, government guarantees, which are recorded off balance sheet, substantially increased the level of general government contingent liabilities.

**Box 6**

### GOVERNMENT SUPPORT TO THE BANKING SECTOR DURING THE 2008-09 FINANCIAL CRISIS AND THE IMPACT ON EURO AREA PUBLIC FINANCES

In response to the intensification of the financial crisis in September 2008 (i.e. after the default of US investment bank Lehman Brothers), euro area governments adopted national measures to support their financial systems and ensure appropriate financing conditions for the real economy. Such measures were in accordance with the EU's common guiding principles[1], subsequent guidance provided by European Commission communications[2], and ECB recommendations[3].

Initially, public support targeted the liabilities side of bank balance sheets through: i) government guarantees for interbank lending and new debt issued by banks, ii) recapitalisation of financial institutions in difficulty, including capital injections and loans, and iii) increased coverage of retail deposit insurance schemes.

From early 2009 public support began to be directed at the assets side of bank balance sheets, given the high uncertainty regarding asset valuations and the risks from new asset write-downs. Asset relief schemes included: i) asset removal schemes (i.e. impaired assets are removed from balance sheets), and ii) asset insurance schemes (i.e. assets are kept on balance sheets but banks are insured against tail risk).

Although successful in restoring stability to the financial system, these interventions entailed substantial fiscal costs for the euro area governments. According to the statistical recording principles, as clarified by Eurostat, government support in the form of capital injections and asset purchases is to be recorded as a financial transaction affecting government debt but having no impact on the

1 At the ECOFIN Council meeting on 7 October 2008, it was agreed that national measures in support of systemic financial institutions would be adopted for a limited period and within a coordinated framework, while having due regard to the interests of taxpayers. On 12 October 2008 euro area countries adopted a concerted European Action Plan, whose principles were endorsed by the European Council a few days later and which guided the adoption of (additional) national measures to support the financial system.

2 The European Commission has adopted the following communications: i) the Banking Communication, OJ C 270, 25.10.2008, p. 8; ii) the Recapitalisation Communication, OJ C 10, 15.01.2009, p. 2; iii) the Commission Communication on impaired assets, OJ C 72, 26.03.2009, p. 1; and iv) the Commission Communication on the return to viability and the assessment of restructuring measures in the financial sector, OJ C 195, 19.08.2009, p. 9.

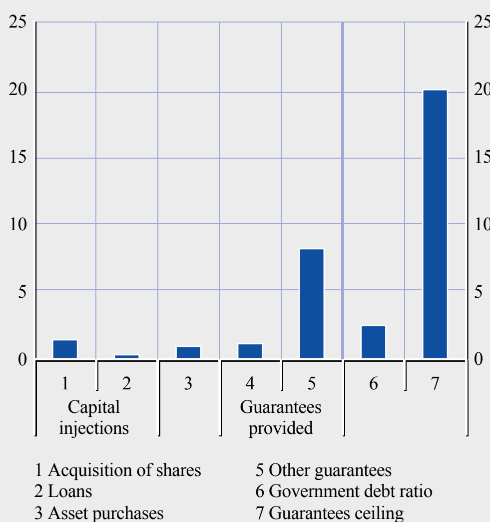
3 Recommendations of the Governing Council of the ECB on government guarantees for bank debt, 20 October 2008, and on the pricing of recapitalisations, 20 November 2008, both of which are available on the ECB's website.

government deficit/surplus, unless such capital injections and asset purchases are conducted at above/below market price. Depending on the government borrowing requirements to finance the rescue operations, there can be an impact on gross government debt. Government guarantees represent contingent liabilities and are recorded off balance sheet.

The chart provides an overview of the financial sector stabilisation measures carried out by euro area governments in 2008 and 2009 (to the left of the vertical blue line), including the creation of special-purpose entities (SPEs), which benefit from government guarantees. It also shows (to the right of the vertical blue line) the impact on the government debt ratio and on the amount of guarantees, including those covering the debt issued by SPEs, committed and to some extent provided by euro area governments by the end of 2009.

**Cumulated financial sector stabilisation operations: impact on government debt and contingent liabilities**

(2008-09; percentage of 2009 GDP)




Source: ESCB.
Note: Guarantees exclude retail deposit guarantees.

For the period 2008-09 the cumulative impact on euro area general government debt owing to stabilisation operations (also taking into account repayments of capital support in some countries) was 2.5% of GDP, whereas the impact on the general government deficit has been small.

In addition to the direct impact on deficits and debt, bank rescue operations have entailed broader fiscal risks, which may materialise with an adverse impact on government accounts over the medium to long term. Governments have assumed two types of fiscal risk. The first source is represented by contingent liabilities. These have increased substantially since the onset of the financial crisis, and the eventuality that further guarantees are required and/or that some guarantees are called in the future cannot be ruled out. As shown in the chart, by the end of 2009 the implicit contingent liabilities, as measured by the resources committed to guarantee schemes (excluding government guarantees on retail deposits), amounted to 20.1% of GDP for euro area governments, whereas the explicit contingent liabilities, as measured by the guarantees that were actually used by the banks, amounted to around 9.4% of GDP.

A second source of fiscal risk concerns the effect of government support to the banking sector (e.g. bank recapitalisations, asset purchases and loans) on the size and composition of the government balance sheet.[4] In principle, these interventions represent acquisitions of financial assets with no effect on a government's net debt. However, possible valuation changes, as well as uncertainty concerning the actual proceeds from the future sale of these assets, could have an impact on fiscal solvency.

4 See "Crisis-Related Measures in the Financial System and Sovereign Balance Sheet Risks", Fiscal Affairs and Monetary and Capital Markets Departments, IMF, July 2009.

Finally, the fiscal costs of supporting the banking sector are partially offset by dividends, interest payments and fees paid by banks to governments in exchange for financial support.

To conclude, an assessment of the net fiscal costs of government support to the banking sector should take a long-term perspective, which goes beyond the year in which such support was effectively provided, and should consider the broader implications of such support for the government balance sheet.

Reflecting these increasing risks to fiscal sustainability, the widening in euro area sovereign yield spreads, which had intensified in autumn 2008, continued well into 2009 (see Box 7). While a narrowing of sovereign bond yield spreads had been observed since March 2009, at the end of the year and in early 2010 sovereign risk spreads in some countries experiencing particularly adverse fiscal developments diverged strongly from the average trend, most notably in Greece.

An analysis of the factors underlying the budgetary deterioration is made particularly difficult at the current juncture because of the uncertainty regarding the identification of trend growth and the output gap in real time. Keeping this in mind, both the operation of automatic stabilisers and the expansionary fiscal stance adopted in the euro area countries are assessed to have had a sizeable negative impact on the budget balance.

In further detail, the economic downturn has caused a reduction in tax bases and an expansion in social benefits and transfer payments. In addition, revenue shortfalls beyond what could be expected on the basis of the estimated elasticities have put upward pressure on deficits. A large part of the deterioration reflects tax cuts and other fiscal stimulus measures implemented in many euro area countries, as well as a structural expenditure growth rate above that of trend GDP. The European Commission estimated that discretionary measures implemented in 2009 amounted to 1.3% of GDP, mostly reflecting the fiscal stimulus packages adopted in line with the European Economic Recovery Plan of end-2008. Notwithstanding uncertainty about the share of cyclical and structural effects on fiscal developments, all euro area countries face considerable fiscal consolidation needs to ensure the sustainability of public finances.

**Box 7**

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

The annual growth rate of the outstanding amount of euro area general government debt securities was 11.3% in 2009. This was somewhat higher than the already elevated growth rate of 8.1% in 2008 (see Table A) and the highest over the last decade.[1] Such growth reflected the significant fiscal imbalances in 2009 in most euro area countries. Together with the strongly negative growth in real GDP observed in 2009, new issuance contributed to a marked deterioration in the government debt-to-GDP ratio for the euro area, which rose from 69.3% in 2008 to 78.2% in 2009.

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 Sections 4.3 and 4.4 of the "Euro area statistics" section of the ECB's Monthly Bulletin.

**Table A Annual growth rates of debt securities issued by euro area governments**

(percentages; end of period)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Total general government | 5.5 | 5.8 | 4.7 | 2.4 | 2.8 | 8.1 | 11.3 |
| *Long-term* | *4.8* | *6.2* | *5.5* | *3.4* | *2.3* | *3.7* | *9.6* |
| Fixed rate | 5.7 | 6.4 | 5.4 | 3.4 | 2.0 | 3.5 | 9.6 |
| Floating rate | -1.6 | 7.0 | 8.4 | 3.0 | 5.4 | 5.2 | 6.4 |
| *Short-term* | *13.6* | *2.1* | *-4.0* | *-8.8* | *9.5* | *62.4* | *24.2* |

Source: ECB.

With regard to the composition of net issuance in 2009, the primary market activity of euro area short-term debt securities continued to grow strongly, albeit at a slower pace than in 2008. This partly reflected the fact that the yield curve steepened further during 2009, making short-term financing relatively more attractive in terms of near-term interest expenditure. In addition, the increased reliance on short-term financing may also have reflected some weakening of investor appetite for longer-dated government debt in the first half of the year, as well as higher risk spreads on long-term debt, relative to shorter-term debt, for some countries. As a result, the share of long-term debt declined further to 86.7% of outstanding debt securities in 2009, well below the average observed since the start of Stage Three of EMU (see Table B).

In 2009 interest payments relative to GDP remained broadly unchanged from 2008. Chart A breaks down changes in interest payments into: i) the effect stemming from changes in government debt, ii) the effect resulting from changes in interest rates, and iii) a residual cross effect.[2] Despite increasing debt, interest payments remained almost unchanged relative to GDP.

**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)

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Central government | 94.7 | 94.3 | 93.8 | 93.4 | 93.2 | 93.5 | 93.8 |
| *Long-term securities* | *85.9* | *85.8* | *86.0* | *86.5* | *86.1* | *82.8* | *80.9* |
| *Short-term securities* | *8.9* | *8.5* | *7.8* | *6.8* | *7.1* | *10.8* | *12.9* |
| Other general government | 5.3 | 5.7 | 6.2 | 6.6 | 6.8 | 6.5 | 6.2 |
| *Long-term securities* | *5.2* | *5.6* | *6.0* | *6.4* | *6.4* | *6.0* | *5.8* |
| *Short-term securities* | *0.1* | *0.1* | *0.2* | *0.2* | *0.4* | *0.5* | *0.3* |
| Total general government | | | | | | | |
| *Long-term* | *91.0* | *91.4* | *92.1* | *92.9* | *92.5* | *88.8* | *86.7* |
| Fixed rate | 82.2 | 82.6 | 83.2 | 84.0 | 83.3 | 79.7 | 77.6 |
| Floating rate | 7.5 | 7.6 | 7.9 | 8.0 | 8.2 | 8.1 | 7.8 |
| *Short-term* | *9.0* | *8.6* | *7.9* | *7.1* | *7.5* | *11.2* | *13.3* |
| Total general government in EUR billions | 4,151.8 | 4,386.8 | 4,604.8 | 4,706.6 | 4,836.7 | 5,261.1 | 5,809.9 |

Source: ECB.

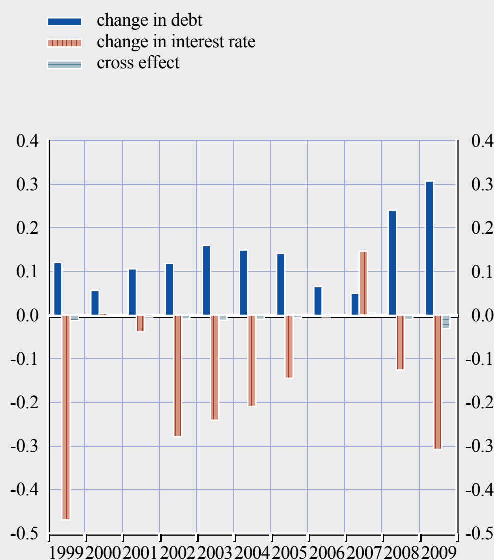
2 The change in nominal interest payments, $I$, can be broken down as follows:

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

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

**Chart A Breakdown of the change in interest payments for the period 1999-2009**

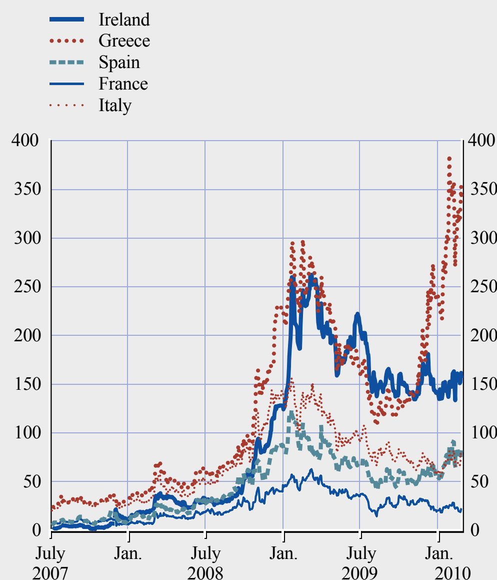
(as a percentage of GDP; annual data)




Source: European Commission (AMECO database).

**Chart B Yield spreads between selected sovereign bonds and German government bonds**

(daily data; basis points)




Source: Thomson Financial Datastream.
Note: Benchmark government bonds with a ten-year maturity.

This reflected the fact that the contribution from lower interest rates (0.3% of GDP) exceeded the upward contribution from the change in government debt by a small margin. The impact of the cross effect was small.

The upward trend in euro area sovereign bond yield spreads, which began in early 2008, continued well into 2009 (see Chart B). In the first quarter of 2009 ten-year sovereign spreads vis-à-vis Germany thus reached their highest levels since the start of Monetary Union. This peak coincided with the trough in equity and other risky asset prices, and reflected sharp increases in both liquidity and credit risk premia.[3] As market confidence gradually returned after March 2009, sovereign spreads of most euro area countries gradually narrowed to less than half of their peak levels. Some countries experienced a significant rewidening of spreads in late 2009 and early 2010, however. Similar developments were observed in sovereign credit default swap premia.

Throughout the financial crisis there has been a strong comovement across euro area sovereign risk premia suggesting that, for most of the time, spreads were driven mainly by common rather than country-specific shocks, including a more realistic appreciation of risk. However, sensitivity to these common shocks differed markedly across countries, reflecting primarily the strength of

3 For recent analyses of developments in euro area sovereign bond spreads, see the boxes entitled "New evidence on credit and liquidity premia in selected euro area sovereign yields" (September 2009), "A comparison of the developments in euro area sovereign bond spreads and US state bond spreads during the financial turmoil" (July 2009), "How have governments' bank rescue packages affected investors' perceptions of credit risk?" (March 2009) and "Recent widening in euro area sovereign bond yield spreads" (November 2008), as well as the article entitled "The impact of government support to the banking sector on euro area public finances" (July 2009), in the ECB's Monthly Bulletin.

actual and projected fiscal positions, with countries with less sound fiscal positions enduring higher increases in spreads. In addition, euro area governments assumed contingent liabilities as a consequence of national banking sector support measures, which also impinged on the spreads.[4]

4 For an analysis of the role of common shocks and the impact of banking sector support measures on sovereign risk exposure, see J. Ejsing and W. Lemke, "The Janus-headed salvation: sovereign and bank credit risk premia during 2008-09", ECB Working Paper No 1127, December 2009. For a recent study of the factors behind the overall increase in intra-euro area sovereign yield spreads, see M.G. Attinasi, C. Checherita and C. Nickel, "What explains the surge in euro area sovereign spreads during the financial crisis of 2007-09?", ECB Working Paper No 1131, December 2009.

#### LONG-TERM SUSTAINABILITY AND EUROPEAN AGREEMENTS

The budgetary risks related to the projected future costs of population ageing, associated with unfunded pension systems and health care, are made more acute by the current situation of severe fiscal imbalances and the prospect of a lower trend growth rate. Correspondingly, fiscal sustainability has gained centre stage in discussions in European fora.

The Eurogroup ministers of finance committed in June 2009 to put in place robust medium-term fiscal strategies that would lead to a timely correction of excessive deficits. In October 2009, aiming to strike a balance between stability and sustainability issues, the ECOFIN Council emphasised the need for a fiscal exit strategy from the broad-based stimulus policies to be coordinated across countries within the framework of a consistent implementation of the Stability and Growth Pact. Beyond the timely withdrawal of the fiscal stimulus measures, the Council stressed that ambitious fiscal consolidation of well beyond the benchmark of 0.5% of GDP per annum in structural terms was required.

In November 2009 the ECOFIN Council recognised that the deterioration of public finances triggered by the current crisis had added substantially to the sustainability challenges related to population ageing, the high level of public debt and lower long-term potential growth. Furthermore, the uncertainty in assessing structural budgetary positions and long-term projections owing to the current crisis was deemed to be greater than usual. The Council agreed that policy action to improve long-term fiscal sustainability had to be taken urgently. To this end, the Council underlined the key importance of a determined implementation of the three-pronged strategy agreed at the 2001 European Council in Stockholm. This strategy consists of measures geared towards reducing deficits and debt, increasing employment rates and reforming social protection systems. The reduction of debt ratios will have to come from a combination of fiscal consolidation and structural reforms to support potential growth.

The ECOFIN Council also endorsed, in May 2009, the updated long-term projections of ageing-related public expenditure. A new agreement for gauging the appropriateness of country-specific medium-term budgetary objectives was introduced. As called for in the 2005 revised Code of Conduct on the implementation of the Stability and Growth Pact, the new methodology will take into account not just debt levels but also implicit government liabilities stemming from population ageing. According to this agreement, medium-term budgetary objectives should ensure a stabilisation of the government debt ratio in the long run at the 60% of GDP reference value as a minimum, with a supplementary debt-reduction effort for countries with a debt ratio in excess of 60% of GDP and a partial frontloading of the budgetary costs of ageing. The updated Code of Conduct was applied as from the 2009-10 update of stability programmes.

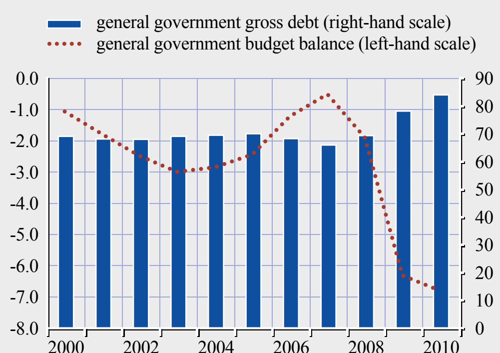
In February 2010, in its statement on Greece, the European Council recalled that all euro area members must conduct sound national policies in line with the agreed rules and that they have a shared responsibility for the economic and financial stability of the area. The statement also mentioned that euro area Member States will take determined and coordinated action, if needed, to safeguard financial stability in the euro area as a whole.

### FURTHER FISCAL DETERIORATION EXPECTED IN 2010

In 2010 the fiscal situation in the euro area is expected to deteriorate further. According to the European Commission autumn 2009 forecasts, the average general government deficit ratio in the euro area will increase further by 0.5 percentage point to 6.9% of GDP (see Chart 36). The euro area average revenue ratio is projected to decrease by 0.3 percentage point of GDP, whereas the primary expenditure ratio will remain broadly stable and the euro area average interest expenditure ratio will rise by 0.2 percentage point of GDP. All euro area countries are expected to breach the 3% of GDP reference value in 2010. The average government debt ratio in the euro area is projected to continue to rise in 2010, by 5.8 percentage points, to 84.0% of GDP. The weakening of budgetary positions will result from a moderately expansionary fiscal stance, while the additional effects of automatic stabilisers will be negligible.

**Chart 36 Fiscal developments in the euro area**

(2000-10; as a percentage of GDP)




Source: European Commission's European Economic Forecast – autumn 2009.
Notes: The euro area average includes the 16 countries that were members of the euro area as at 1 January 2009. Figures for budget balances exclude proceeds from the sale of UMTS licences.

### FOCUS ON FISCAL SUSTAINABILITY ESSENTIAL

Many euro area governments are faced with high and sharply rising fiscal imbalances, which may place an additional burden on the single monetary policy in maintaining price stability. The pressures on fiscal sustainability arising from the current financial and economic environment are exacerbated by the projected fiscal burden of population ageing, stemming from unfunded old age pension systems and healthcare costs. Moreover, the very large government borrowing requirements carry the risk of triggering rapid changes in market sentiment, leading to less favourable medium and long-term interest rates. This in turn would dampen private investment and thereby weaken the foundations for sustained growth.

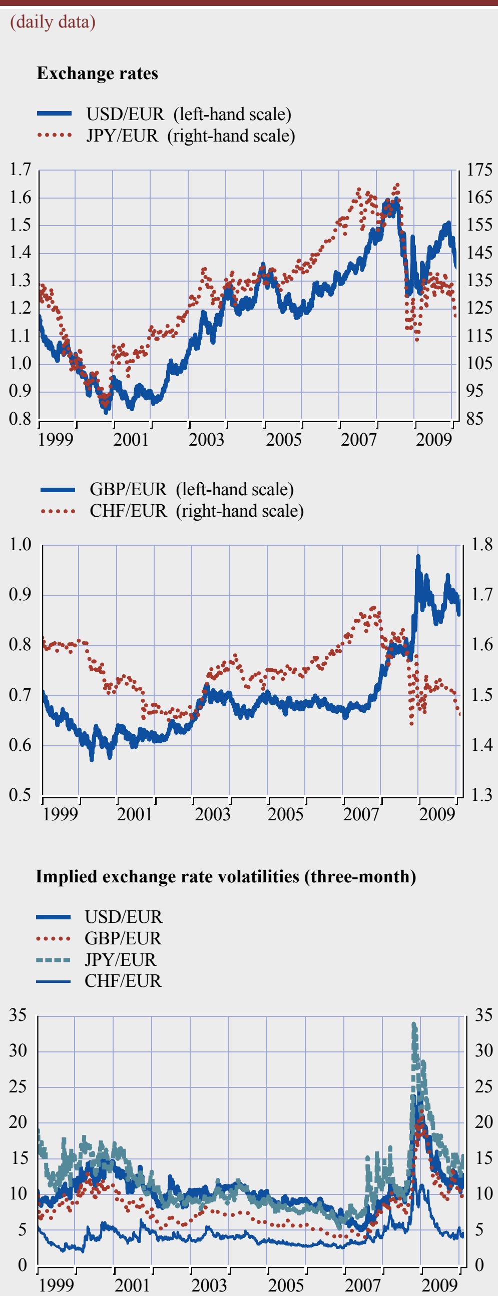
In the course of 2009, on several occasions the Governing Council of the ECB emphasised that a main challenge for policy-makers was to maintain public confidence in the sustainability of public finances and in the EU fiscal framework. The announcement and the determined implementation of timely and ambitious fiscal exit and consolidation strategies, based on realistic growth assumptions, will contribute to supporting public confidence in fiscal sustainability and the economic recovery.

The consolidation effort will necessarily have to focus on the expenditure side. The inelastic reaction of expenditure plans to a much lower than expected level and growth rate of potential output has caused an increase in the government expenditure-to-GDP ratio. Higher interest expenditure reflecting higher debt levels and higher effective interest rates is likely to put additional pressure on the spending side of the budget in many countries. By contrast, given the large tax burden in most euro area countries, increases in tax rates risk inducing distortions and impeding the much needed

recovery of economic growth potential. In this context, increasing the efficiency and effectiveness of public finances is highly desirable and should contribute to fostering potential output growth and debt reduction.

The success of fiscal adjustment strategies will also depend, crucially, on appropriate national budgetary rules and institutions and requires transparent budgetary procedures. An important dimension to confidence in the soundness of public institutions is furthermore the reliability and completeness of government finance statistics. The timely reporting of sound statistical information is vital for the proper implementation of the EU fiscal surveillance framework.

**Chart 37 Patterns in exchange rates and implied volatilities**




Sources: Bloomberg and ECB.
Note: Last observation refers to 26 February 2010.

## 2.6 EXCHANGE RATES AND BALANCE OF PAYMENTS DEVELOPMENTS

### THE EFFECTIVE EXCHANGE RATE OF THE EURO EXPERIENCED SOME FLUCTUATION DURING THE YEAR

Exchange rate developments in 2009 were to a large extent shaped by the evolution of global financial conditions and the prospects for economic recovery around the world. Tensions in global financial markets and very high uncertainty regarding the economic outlook prevailing in early 2009 resulted in an unwinding of carry trades (i.e. trades that consist of borrowing in a low-yielding currency and investing in a high-yielding currency) and global portfolio shifts, contributing to some large swings in the main bilateral exchange rates (see Chart 37). These factors, together with decreasing monetary policy rates and a more unfavourable outlook for growth in the euro area and the EU as a whole, contributed to a weakening of the euro, which – as measured against the currencies of 21 of the euro area's important trading partners – depreciated by over 3% in effective terms in the first two months of 2009. After some volatility in March and April, the euro started to rise in May 2009 amid improving financial market conditions, as reflected by gradually subsiding financial market spreads and decreasing implied volatilities (see Chart 37). After strengthening by almost 5% in effective terms by the end of October 2009, the euro stood close to the

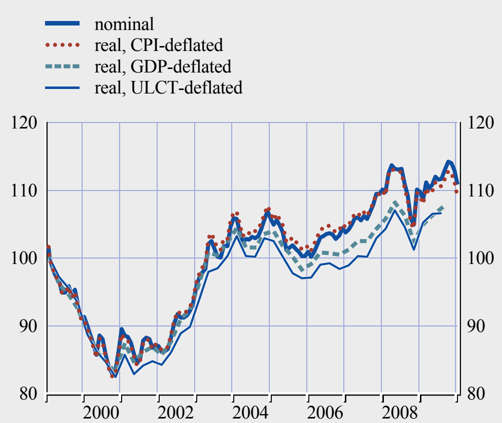
historical peaks recorded at the end of 2008. This appreciation resulted primarily from the strengthening of the euro against the US dollar and major Asian currencies linked to the US currency. Subsequently, the euro stabilised, before depreciating somewhat in effective terms in December.

Overall, the euro weakened in 2009. This reflected a depreciation against the pound sterling, which was partly offset by a strengthening vis-à-vis the US dollar, major Asian currencies linked to the US dollar and the Japanese yen. On 31 December 2009 the euro stood in nominal effective terms – as measured against the currencies of 21 important trading partners – 1% lower than at the beginning of the year and about 1.2% above its average level in 2008 (see Chart 38).

Against the US dollar, the euro initially depreciated by around 9% in the first two months of 2009 amid portfolio flows into some segments of the US market against the background of a decreasing transatlantic interest rate differential. After March 2009, as the tensions in the financial markets started to ease gradually, the euro rebounded against the US currency. At the same time, the re-emergence of carry trades, which may have been supported by the moderation of implied volatilities (see Chart 37), also appears to have contributed to the weakening of the US dollar. Between early March and the end of October the euro appreciated by almost 19%. In December the US dollar strengthened against the major currencies, rising against the euro by around 4%. On 31 December 2009 the euro traded at USD/EUR 1.44, around 3.5% higher than at the beginning of 2009 and about 2% weaker than its 2008 average.

**Chart 38 Euro nominal and real effective exchange rates (EER-21) [1]**

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




Source: ECB.
1) An upward movement of the EER-21 indices represents an appreciation of the euro. The latest observations for monthly data are for January 2010. ULCT stands for unit labour costs of the total economy. In the case of the GDP and ULCT-based real EER-21, the latest observation is for the third quarter of 2009 and is partly based on estimates.

Following a similar pattern to the EUR/USD exchange rate, in the first two months of 2009 the euro depreciated against the Japanese yen (see Chart 37). In March and April, when economic activity in Japan was reported to have deteriorated more than initially expected and financial market tensions started to ease, the euro rebounded. Throughout the remainder of 2009 the euro fluctuated within a range from JPY 128 to JPY 138. On 31 December 2009 the euro traded at JPY 133.16, around 5.6% higher than at the beginning of the year but around 12.5% lower than its average for 2008.

After reaching an all-time high vis-à-vis the pound sterling in December 2008, the euro depreciated in 2009 by around 7%, amid considerable volatility. The euro also experienced sizeable fluctuations against the currencies of several other EU trading partners, while remaining broadly unchanged vis-à-vis the ERM II currencies (for details on the currencies mentioned in this paragraph see Section 3 of Chapter 1).

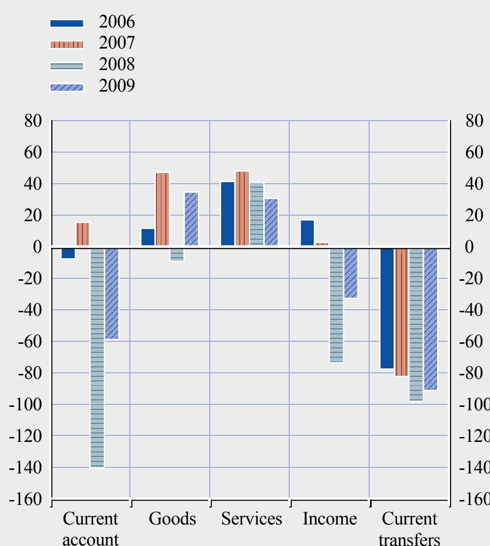
The euro remained broadly unchanged against the Swiss franc in 2009, experiencing increased volatility in the first three months of 2009 and subsequently stabilising amid reports of foreign exchange interventions by the Swiss National Bank. In 2009 the euro depreciated strongly against the currencies of many

advanced economies with positive interest rate differentials vis-à-vis the euro area. Thus, between early January and 31 December 2009, the euro weakened against the Canadian dollar (-11%), the Australian dollar (-21%) and the Norwegian krone (-14.9%). The appreciation of the euro against Asian currencies linked to the US dollar, namely the Chinese renminbi and the Hong Kong dollar (both 3.6%), was largely offset in effective terms by its depreciation vis-à-vis the Korean won (-9.4%).

The real effective exchange rate of the euro based on different cost and price measures declined in early 2009 and started to increase thereafter. Towards the end of 2009 it reached levels close to, or above, the historical heights recorded in the previous year, before falling slightly in December. The real effective CPI-deflated exchange rate was, on average, slightly stronger in 2009 than in 2008 (see Chart 38).

**Chart 39 Current account balance and its components**

(annual data; EUR billions)




Source: ECB.

### CURRENT ACCOUNT DEFICIT DECREASED SIGNIFICANTLY IN 2009

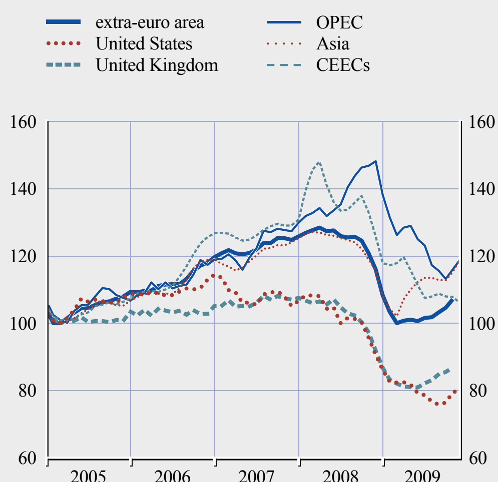
In 2009 the current account of the euro area recorded a deficit of €59.0 billion (or 0.7% of euro area GDP), compared with a deficit of €140.6 billion in 2008. This fall in the deficit largely resulted from a decrease in the deficit in the income balance (of €40.9 billion) and improvements in the goods balance (see Chart 39). Following the sharp contraction in euro area goods trade towards the end of 2008 and in early 2009, goods exports stabilised and rebounded faster than goods imports, shifting the goods balance back into a surplus of €34.7 billion in 2009, compared with a deficit of €9.5 billion in 2008. A lower deficit in current transfers also contributed to the overall narrowing of the current account deficit in 2009. These changes were only partly offset by a decrease (of €10.4 billion) in the surplus in services.

The stabilisation and gradual recovery of goods exports in the course of 2009 was supported by a pick-up in foreign demand and a gradual reactivation of international supply chains, as economic activity bottomed out in major export markets and firms started replenishing their inventories in the light of the improved economic outlook. In contrast to the synchronised downturn in trade around the turn of the year, export developments in 2009 were markedly less uniform across destinations. While exports to Asia and the United Kingdom rebounded, exports to the OPEC countries and the United States continued to decline until October 2009 (see Chart 40). Meanwhile, the broad-based appreciation of the euro and the associated negative impact on euro area export price competitiveness from March to October 2009 dampened somewhat the response of exports to the recovery in foreign demand.

Developments in euro area goods imports in 2009 lagged behind those observed for exports. Import volumes continued to decline, albeit at a moderating pace, in the first half of the year and stabilised in the third quarter of 2009, reflecting the weakness in euro area domestic demand and destocking activities by euro area firms over this period. Declining import prices also contributed to the decrease in import values in the first half of the year.

**Chart 40 Euro area export volumes to selected trading partners**

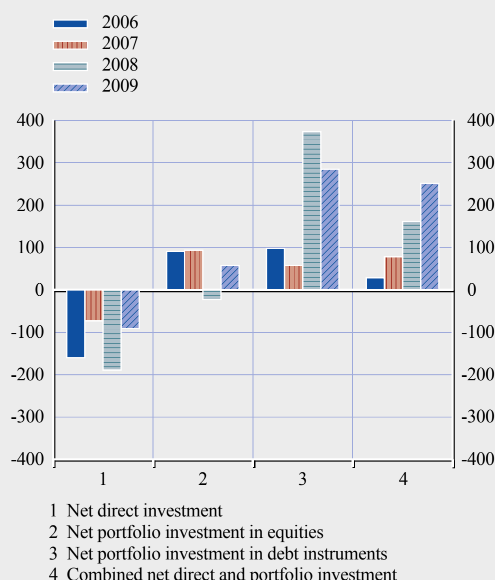
(indices: Q1 2005=100; seasonally adjusted; three-month moving average)




Source: ECB.
Note: Last observation refers to December 2009 except for extra-euro area and the United Kingdom (November 2009). CEECs stands for central and eastern European countries.

**Chart 41 Euro area direct and portfolio investment**

(annual data; EUR billions)




1 Net direct investment
2 Net portfolio investment in equities
3 Net portfolio investment in debt instruments
4 Combined net direct and portfolio investment

Source: ECB.

The lower import prices were partly due to the fall in oil prices that began in the summer of 2008, contributing to a decline to €126.6 billion in the oil trade deficit in the 12-month cumulated period up to November 2009, well below the very high level of more than €220 billion recorded at the end of 2008. Amid rebounding oil prices, energy import prices supported the stabilisation in import values in the second half of the year.

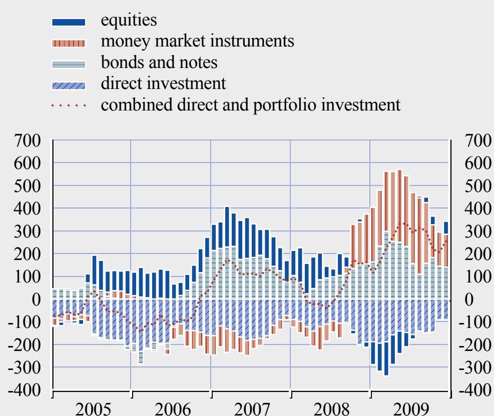
### NET INFLOWS IN COMBINED DIRECT AND PORTFOLIO INVESTMENT INCREASED IN 2009

In the financial account, the euro area experienced net inflows of €251.2 billion in combined direct and portfolio investment in 2009, compared with net inflows of €161.5 billion a year earlier. This increase reflected a shift from net outflows to net inflows in equity portfolio investment (a change of €80.5 billion) and a decrease in net outflows in foreign direct investment (of €98.1 billion). These developments were partly offset by lower net inflows in debt instruments (of €88.8 billion; see Chart 41).

Following the intensification of the financial crisis in the autumn of 2008, the euro area witnessed significant changes in its financial account that subsided only gradually in the second half of 2009. In the first half of the year investors' appetite for safe and liquid assets was very strong, as reflected in high net inflows in euro area money market instruments amounting to €311.6 billion in the 12-month period up to June 2009, which compares with net outflows of €74.0 billion a year earlier (see Chart 42). In parallel, both residents and non-residents repatriated funds invested in equities and foreign bonds and notes. From mid-2009, however, improved financial market conditions, subsiding risk aversion and the more favourable economic outlook appeared to have led investors to reassess their asset allocation, resulting in a renewed interest

**Chart 42 Main items of the financial account**

(EUR billions; 12-month cumulated net flows; monthly data)




Source: ECB.

in both foreign equities and long-term debt securities. Meanwhile, the euro area continued to record net inflows in money market instruments, despite a decrease in the second half of 2009.

Foreign direct investment activity, which had also fallen substantially in the wake of the financial crisis, remained relatively subdued in 2009. While euro area foreign direct investment abroad remained around the low level reached at the end of 2008, direct investment in the euro area increased slightly in 2009, resulting in lower net outflows in this category.

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 2009, indicate that the euro area recorded net liabilities of €1,558 billion vis-à-vis the rest of the world (representing 17.3% of euro area GDP), compared with net liabilities of €1,637 billion (equal to 17.7% of GDP) at the end of 2008.

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

## ECONOMIC ACTIVITY

In 2009 output contracted in most non-euro area EU Member States. However, the pace of output decline moderated in the second half of 2009 following a sharp fall in economic growth at the end of 2008 and a further deterioration in economic performance in the first half of 2009 (see Table 7).[5] While the general pattern of annual GDP growth was common to almost all of the countries, the severity of the economic slump and the strength of the subsequent gradual improvement varied considerably across individual countries, reflecting, in part, differences in initial cyclical positions, the openness of the economy, trade structure and external financing requirements.

The Baltic States experienced the most pronounced decline in economic activity, with a double-digit contraction in average annual growth, following negative growth already observed in 2008 in the case of Estonia and Latvia. The sharp slowdown reflects, to a large extent, the correction of significant macroeconomic imbalances built up before the global financial crisis, which increased the vulnerability of these countries to the effects of the global downturn.

In all non-euro area EU Member States, except the Baltic States, the decline in economic activity was very much driven by the collapse in foreign demand and tighter external financing conditions. Furthermore, the decline in consumer confidence and, in some cases, the negative wealth effects from falling asset prices resulted in a noticeable worsening of domestic demand in most countries. These factors moderated somewhat later in the year as a result of the gradual improvement in external demand and global financial markets and, in some countries with flexible exchange rates, as a result of the benefits deriving from their weaker currencies.

Poland was the only country to record positive economic growth (of 1.7%) in 2009, which may have partly reflected the lower degree of openness of the economy, the strength of the financial sector, the early depreciation of the currency, and the absence of large macroeconomic imbalances. In the three non-euro area EU Member States that joined the EU before 2004 (Denmark, Sweden and the United Kingdom), the decline in economic

5 The non-euro area EU Member States referred to in this section comprise the 11 EU Member States outside the euro area in the period up to the end of December 2009 (i.e. Bulgaria, the Czech Republic, Denmark, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Sweden and the United Kingdom).

**Table 7 Real GDP growth in the non-euro area EU Member States and the euro area**

(annual percentage changes)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 |
|---|---|---|---|---|---|---|---|---|---|
| Bulgaria | 6.2 | 6.3 | 6.2 | 6.0 | -5.1 | -3.5 | -4.9 | -5.4 | -6.2 |
| Czech Republic | 6.3 | 6.8 | 6.1 | 2.5 | -4.2 | -3.9 | -5.2 | -5.0 | -2.8 |
| Denmark | 2.4 | 3.4 | 1.7 | -0.9 | -5.1 | -4.0 | -7.3 | -5.5 | -3.4 |
| Estonia | 9.4 | 10.0 | 7.2 | -3.6 | -14.1 | -15.0 | -16.1 | -15.6 | -9.5 |
| Latvia | 10.6 | 12.2 | 10.0 | -4.6 | -18.0 | -17.8 | -18.4 | -19.0 | -16.9 |
| Lithuania | 7.8 | 7.8 | 9.8 | 2.8 | -15.0 | -13.3 | -19.5 | -14.2 | -12.8 |
| Hungary | 3.5 | 4.0 | 1.0 | 0.6 | -6.3 | -6.7 | -7.5 | -7.1 | -4.0 |
| Poland | 3.6 | 6.2 | 6.8 | 5.0 | 1.7 | 0.9 | 1.2 | 1.2 | 3.3 |
| Romania | 4.2 | 7.9 | 6.3 | 7.3 | -7.1 | -6.2 | -8.7 | -7.1 | -6.5 |
| Sweden | 3.3 | 4.2 | 2.5 | -0.2 | -4.9 | 6.5 | -6.8 | -5.2 | -0.9 |
| United Kingdom | 2.2 | 2.9 | 2.6 | 0.5 | -5.0 | -5.5 | -6.5 | -4.5 | . |
| EU8 1) | 4.7 | 6.6 | 6.1 | 3.9 | -3.5 | -3.6 | -4.4 | -3.9 | -2.0 |
| EU11 2) | 3.0 | 4.0 | 3.4 | 1.3 | -4.6 | -5.0 | -6.1 | -4.5 | . |
| Euro area | 1.7 | 3.0 | 2.7 | 0.5 | -4.0 | -5.0 | -4.8 | -4.0 | -2.1 |

Source: Eurostat.
Note: Quarterly data are non-seasonally adjusted for all countries.
1) The EU8 aggregate comprises the eight non-euro area EU Member States that joined the EU on 1 May 2004 or 1 January 2007.
2) The EU11 aggregate comprises the 11 non-euro area EU Member States as at 31 December 2009.

activity was around 5%. In 2008 economic output was already declining in Denmark and Sweden, whereas the United Kingdom was still registering weak growth. In 2009 economic activity in the Czech Republic declined considerably, by 4.2%, while the stronger decline of 6.3% in Hungary reflected, in part, the policies aimed at macroeconomic consolidation. In Bulgaria and Romania, economic output declined by 5.1% and 7.1% respectively, after having registered the highest growth figures among non-euro area EU countries in 2008.

As a result of the deterioration in overall economic activity, labour market conditions weakened markedly in most countries in 2009, reflected in developments in unemployment rates and compensation. While unemployment rates increased in all countries, the increase was particularly pronounced in the Baltic States, where wage growth turned negative owing to the considerable decline in demand and the need for fiscal consolidation.

### PRICE DEVELOPMENTS

Average annual inflation decreased in 2009 in all non-euro area EU Member States. However, the cross-country variation in annual inflation rates remains significant (see Table 8). The highest average inflation rates in 2009 were recorded in Romania and Lithuania, with 5.6% and 4.2% respectively, followed by Hungary, Poland and Latvia, where average annual HICP inflation ranged from 4.0% to 3.3%. In Bulgaria, the United Kingdom, Sweden, Denmark and the Czech Republic, inflation was between 2.5% and 0.6%. Finally, Estonia experienced an annual HICP inflation rate of 0.2%.

Most of the factors behind the decline in inflation were common to the non-euro area EU Member States and related to base effects linked to lower commodity prices and subdued domestic demand. As labour market conditions weakened in many countries, decelerating or even negative nominal wage growth contributed to the significant decline in inflation rates. Increasing annual inflation rates in Hungary and Poland in the first three quarters of 2009 were driven by recent VAT increases and higher administered prices respectively, as well as by currency depreciations in late 2008 and early 2009.

**Table 8 HICP inflation in the non-euro area EU Member States and the euro area**

(annual percentage changes)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2009 Q1 | 2009 Q2 | 2009 Q3 | 2009 Q4 |
|---|---|---|---|---|---|---|---|---|---|
| Bulgaria | 6.0 | 7.4 | 7.6 | 12.0 | 2.5 | 5.1 | 3.1 | 0.8 | 0.9 |
| Czech Republic | 1.6 | 2.1 | 3.0 | 6.3 | 0.6 | 1.5 | 1.0 | -0.1 | 0.0 |
| Denmark | 1.7 | 1.9 | 1.7 | 3.6 | 1.1 | 1.7 | 1.1 | 0.6 | 0.9 |
| Estonia | 4.1 | 4.4 | 6.7 | 10.6 | 0.2 | 3.7 | 0.2 | -0.9 | -2.0 |
| Latvia | 6.9 | 6.6 | 10.1 | 15.3 | 3.3 | 9.0 | 4.4 | 1.2 | -1.3 |
| Lithuania | 2.7 | 3.8 | 5.8 | 11.1 | 4.2 | 8.4 | 4.9 | 2.4 | 1.2 |
| Hungary | 3.5 | 4.0 | 7.9 | 6.0 | 4.0 | 2.7 | 3.6 | 4.9 | 4.9 |
| Poland | 2.2 | 1.3 | 2.6 | 4.2 | 4.0 | 3.6 | 4.3 | 4.3 | 3.8 |
| Romania | 9.1 | 6.6 | 4.9 | 7.9 | 5.6 | 6.8 | 6.1 | 5.0 | 4.5 |
| Sweden | 0.8 | 1.5 | 1.7 | 3.3 | 1.9 | 2.1 | 1.7 | 1.7 | 2.3 |
| United Kingdom | 2.1 | 2.3 | 2.3 | 3.6 | 2.2 | 3.0 | 2.1 | 1.5 | 2.1 |
| EU8 [1] | 3.8 | 3.3 | 4.4 | 6.6 | 3.7 | 5.8 | 4.7 | 3.7 | 3.1 |
| EU11 [2] | 2.6 | 2.6 | 2.9 | 4.7 | 2.7 | 3.4 | 2.7 | 2.1 | 2.4 |
| Euro area | 2.2 | 2.2 | 2.1 | 3.3 | 0.3 | 1.0 | 0.2 | -0.4 | 0.4 |

Source: Eurostat.
1) The EU8 aggregate comprises the eight non-euro area EU Member States that joined the EU on 1 May 2004 or 1 January 2007.
2) The EU11 aggregate comprises the 11 non-euro area EU Member States as at 31 December 2009.

## FISCAL POLICIES

According to the European Commission's autumn 2009 forecast, all non-euro area EU Member States, apart from Bulgaria, Denmark, Estonia and Sweden, are estimated to have posted deficits above the 3% of GDP reference value in 2009. The United Kingdom is estimated to have recorded a very large deficit of 12.1% of GDP, followed by Lithuania (9.8% of GDP) and Latvia (9% of GDP). Overall, in the majority of non-euro area EU Member States, the fiscal situation deteriorated strongly, reflecting significantly worsening macroeconomic conditions. As a consequence, budgetary outcomes for 2009 generally failed to meet the targets contained in the updated convergence programmes submitted at the end of 2008.

The budgetary developments in 2009 also reflected the non-euro area Member States' differentiated fiscal response to the crisis. In Latvia, Hungary and Romania – which receive

**Table 9 Fiscal positions in the non-euro area EU Member States and the euro area**

(as a percentage of GDP)

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

| % of GDP | 2006 | 2007 | 2008 | 2008 convergence programme update 2009 | 2009 European Commission forecast 2009 | 2009 convergence programme update 2009 |
|---|---|---|---|---|---|---|
| Bulgaria | 3.0 | 0.1 | 1.8 | 3.0 | -0.8 | -1.9 |
| Czech Republic | -2.6 | -0.7 | -2.1 | -1.6 | -6.6 | -6.6 |
| Denmark | 5.2 | 4.5 | 3.4 | 0.0 | -2.0 | -3.0 |
| Estonia | 2.3 | 2.6 | -2.7 | -1.7 | -3.0 | -2.6 |
| Latvia | -0.5 | -0.3 | -4.1 | -5.3 | -9.0 | -10.0 |
| Lithuania | -0.4 | -1.0 | -3.2 | -2.1 | -9.8 | -9.1 |
| Hungary | -9.3 | -5.0 | -3.8 | -2.6 | -4.1 | -3.9 |
| Poland | -3.6 | -1.9 | -3.6 | -2.5 | -6.4 | -7.2 |
| Romania | -2.2 | -2.5 | -5.5 | -5.1 | -7.8 | - |
| Sweden | 2.5 | 3.8 | 2.5 | 1.1 | -2.1 | -2.2 |
| United Kingdom | -2.7 | -2.7 | -5.0 | -8.1 | -12.1 | -12.6 |
| EU8 1) | -3.4 | -2.0 | -3.5 | -2.6 | -6.2 | -6.4 |
| EU11 2) | -1.8 | -1.4 | -3.2 | -5.0 | -8.7 | -9.2 |
| Euro area | -1.3 | -0.6 | -2.0 | -3.4 | -6.4 | -6.2 |

**General government gross debt**

| % of GDP | 2006 | 2007 | 2008 | 2008 convergence programme update 2009 | 2009 European Commission forecast 2009 | 2009 convergence programme update 2009 |
|---|---|---|---|---|---|---|
| Bulgaria | 22.7 | 18.2 | 14.1 | 15.4 | 15.1 | 14.7 |
| Czech Republic | 29.4 | 29.0 | 30.0 | 27.9 | 36.5 | 35.2 |
| Denmark | 31.3 | 26.8 | 33.5 | 27.9 | 33.7 | 38.5 |
| Estonia | 4.5 | 3.8 | 4.6 | 3.7 | 7.4 | 7.8 |
| Latvia | 10.7 | 9.0 | 19.5 | 32.4 | 33.2 | 34.8 |
| Lithuania | 18.0 | 16.9 | 15.6 | 16.9 | 29.9 | 29.5 |
| Hungary | 65.6 | 65.9 | 72.9 | 72.5 | 79.1 | 78.0 |
| Poland | 47.7 | 45.0 | 47.2 | 45.8 | 51.7 | 50.7 |
| Romania | 12.4 | 12.6 | 13.6 | 18.0 | 21.8 | - |
| Sweden | 45.9 | 40.5 | 38.0 | 32.2 | 42.1 | 42.8 |
| United Kingdom | 43.2 | 44.2 | 52.0 | 60.5 | 68.6 | 72.9 |
| EU8 1) | 37.9 | 35.8 | 38.0 | 38.0 | 43.9 | 47.2 |
| EU11 2) | 41.6 | 40.8 | 45.5 | 49.0 | 56.5 | 60.8 |
| Euro area | 68.3 | 66.0 | 69.3 | 71.5 | 78.2 | 78.7 |

Sources: European Commission's European Economic Forecast – autumn 2009, 2008 and 2009/2010 convergence programme updates and ECB calculations.
Notes: Data are based on ESA 95 definitions. The 2009 figures in the 2008 convergence programme updates were established by national governments as targets and hence could differ from the final outcomes.
1) The EU8 aggregate comprises the eight non-euro area EU Member States that joined the EU on 1 May 2004 or 1 January 2007.
2) The EU11 aggregate comprises the 11 non-euro area EU Member States as at 31 December 2009.

financial support from, inter alia, the EU and the IMF – the related adjustment programmes called for strict fiscal consolidation. Bulgaria, Estonia and Lithuania implemented comprehensive consolidation measures aiming to contain the rapid budgetary deterioration. By contrast, in the Czech Republic and Poland, fiscal policy was not tightened and automatic stabilisers were allowed to operate, although in Poland the fiscal impact of allowing the automatic stabilisers to operate was partly offset by spending cuts, while in the Czech Republic the loose fiscal policy was also a result of government stimulus measures. Finally, in Denmark, Sweden and the United Kingdom, significant fiscal stimulus packages were implemented in 2009.

At the end of 2009 all of the non-euro area EU Member States, apart from Bulgaria, Denmark, Estonia and Sweden, were the subject of an EU Council decision on the existence of an excessive deficit. Deadlines for correcting the excessive deficit situation were set at 2011 for Hungary, 2012 for Latvia, Lithuania, Poland and Romania, 2013 for the Czech Republic and 2014 to 2015 for the United Kingdom.

Government debt-to-GDP ratios are estimated to have increased in all non-euro area EU Member States. According to the European Commission's autumn 2009 forecast, the rise in the debt-to-GDP ratio was strongest in the United Kingdom (+16.6 percentage points), Lithuania (+14.3 percentage points) and Latvia (+13.7 percentage points), reflecting their large budget deficits as well as – for the United Kingdom and Latvia – financial transactions in support of the domestic banking sector. While the debt ratio remained above the 60% of GDP reference value in Hungary and exceeded this level in the United Kingdom, it remained below 60% in the other non-euro area EU Member States.

Overall, the general picture of developments in budget balances and general government gross debt in 2009 was broadly confirmed in the recent updates of the convergence programmes, which were submitted by the non-euro area EU Member States in January and February 2010.

### BALANCE OF PAYMENTS DEVELOPMENTS

In 2009 the combined current and capital account deficits of the non-euro area EU Member States narrowed. In particular, in all countries that joined the EU in 2004 or later, the current account deficits declined (both in nominal terms and as a percentage of GDP). In several countries, the contraction was very sharp and the current accounts shifted from a deficit to a surplus position (see Table 10). This was a result of sharply contracting domestic demand and lower capital inflows in the region as a result of the intensification of the global financial crisis. Accordingly, the adjustment was particularly pronounced in the countries with the highest deficits prior to the crisis – namely the Baltic States, Bulgaria and Romania – and turned the combined current and capital accounts of the Baltic States from very large deficits into surpluses. Hungary also experienced a sharp reversal in its combined current and capital account, moving from a deficit of 6% of GDP in 2008 to a surplus position in 2009. The countries which entered the crisis with lower external deficits, i.e. the United Kingdom, the Czech Republic and Poland, witnessed a narrowing of their deficits, the latter two registering a small surplus. Denmark and Sweden recorded a rise in their surplus positions.

These sharp adjustments in external deficits were accompanied by a tightening of financing conditions and some major changes in financing patterns. Net "other investment" flows reversed in the Czech Republic, Bulgaria, Latvia, Lithuania and Sweden, and declined in Estonia, Hungary, Poland and Romania. In some countries, such as Hungary, Latvia and Romania, the reduction in private credit flows was partly offset by international and European financial support programmes. In comparison with 2008, foreign direct investment inflows were further scaled down in central and eastern European countries that joined the EU in 2004

**Table 10 Balance of payments of the non-euro area EU Member States and the euro area**

(as a percentage of GDP)

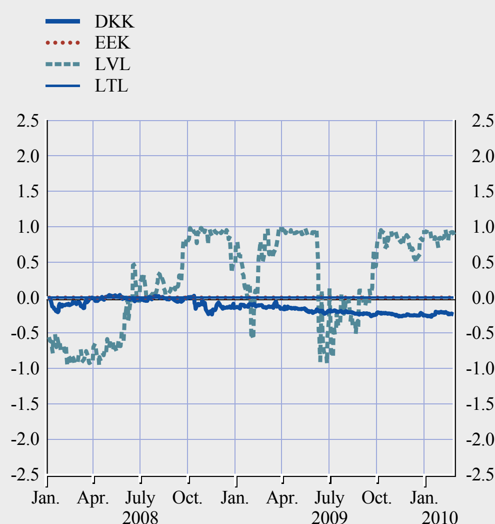
| | Current and capital account balance | | | Net direct investment flows | | | Net other investment flows | | | Net portfolio investment flows | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2007 | 2008 | 2009 | 2007 | 2008 | 2009 | 2007 | 2008 | 2009 |
| Bulgaria [1] | -27.2 | -24.6 | -14.0 | 29.0 | 17.8 | 10.7 | 17.8 | 17.5 | -1.3 | -1.8 | -1.7 | -0.9 |
| Czech Republic | -2.6 | -2.2 | 0.2 | 5.1 | 4.1 | 0.9 | 0.1 | 0.6 | -1.0 | -1.6 | -0.2 | 3.1 |
| Denmark | 1.5 | 2.2 | 4.0 | -2.8 | -3.3 | -2.6 | 3.4 | 2.1 | 3.6 | -1.9 | 3.5 | 6.3 |
| Estonia | -16.8 | -8.4 | 7.6 | 4.6 | 3.7 | -0.7 | 14.2 | 4.9 | 3.7 | -2.3 | 3.1 | -10.5 |
| Latvia | -20.4 | -11.5 | 11.1 | 6.8 | 3.0 | 1.5 | 19.3 | 7.5 | -10.8 | -2.3 | 1.1 | 1.5 |
| Lithuania | -12.8 | -10.1 | 6.5 | 3.6 | 3.2 | 0.3 | 13.0 | 5.0 | -10.7 | -0.8 | -0.3 | 3.5 |
| Hungary | -6.1 | -6.0 | 2.4 | 3.4 | 1.2 | 0.2 | 5.5 | 17.0 | 7.3 | -1.6 | -2.6 | -3.7 |
| Poland | -3.6 | -3.9 | 0.1 | 4.3 | 2.2 | 1.9 | 6.5 | 5.9 | 2.4 | -1.3 | -0.6 | 3.6 |
| Romania | -12.8 | -11.1 | -3.9 | 5.7 | 6.7 | 3.5 | 11.2 | 6.5 | 1.3 | 0.4 | -0.4 | 0.4 |
| Sweden | 8.7 | 6.1 | 7.2 | -2.4 | 2.8 | -5.0 | -3.1 | 8.8 | -10.4 | 3.5 | -6.2 | 9.9 |
| United Kingdom [1] | -2.5 | -1.3 | -0.9 | -2.7 | -2.6 | -1.6 | -1.5 | -15.3 | -8.0 | 8.0 | 21.4 | 10.7 |
| EU11 [2] | -1.4 | -0.9 | 0.8 | -0.9 | -0.5 | -1.4 | 0.3 | -5.6 | -5.3 | 4.5 | 11.2 | 8.2 |
| EU3 [3] | -0.1 | 0.4 | 1.0 | -2.7 | -1.7 | -2.3 | -1.3 | -9.2 | -7.3 | 6.2 | 14.6 | 10.1 |
| EU8 [4] | -6.4 | -5.7 | 0.1 | 5.4 | 3.6 | 1.7 | 5.9 | 7.4 | 1.9 | -1.3 | -0.9 | 1.1 |
| Euro area | 0.2 | -1.4 | -0.6 | -0.8 | -2.0 | -1.0 | -0.1 | 0.8 | -2.1 | 1.7 | 3.8 | 3.8 |

Source: ECB.
1) Data for 2009 refer to the four-quarter average up to the third quarter of 2009.
2) The EU11 aggregate comprises weighted contributions by the 11 non-euro area EU Member States.
3) The EU3 aggregate comprises weighted contributions by Denmark, Sweden and the United Kingdom.
4) The EU8 aggregate comprises weighted contributions by the non-euro area EU Member States that joined the EU on 1 May 2004 or later.

or later – although Bulgaria continued receiving net inflows of above 10% of GDP – while Denmark and the United Kingdom continued to be net exporters of foreign direct investment. Developments in net portfolio investment flows were fairly heterogeneous: Denmark, Sweden and the United Kingdom received very substantial inflows, while Bulgaria, Estonia and Hungary recorded an outflow. More specifically, the United Kingdom continued to record some large movements in the financial account, a phenomenon that largely reflected the global reallocation of investors' portfolios during the financial crisis.

**Chart 43 Developments in ERM II EU currencies**

(daily data; deviation from the central parity in percentage points)




Source: ECB.
Notes: A positive (negative) deviation from the central rate against the euro implies that the currency is on the weak (strong) side of the band. For the Danish krone, a fluctuation band of ±2.25% applies. For all other currencies, the standard fluctuation band of ±15% applies. However, as part of a unilateral commitment, the fluctuation band for the Latvian lats is ±1%; and for both the Lithuanian litas and the Estonian kroon a currency board arrangement is maintained. Last observation refers to 26 February 2010.

## EXCHANGE RATE DEVELOPMENTS

Exchange rate developments in the non-euro area EU Member States in 2009 were strongly influenced by the exchange rate regimes of the individual countries.

The currencies of Denmark, Estonia, Latvia and Lithuania participated in ERM II. They maintained a standard fluctuation band of ±15% around their central rates against the euro, except for the Danish krone, with a narrower band of ±2.25% (see Chart 43). ERM II participation

is, in some cases, accompanied by unilateral commitments on the part of the countries concerned to maintain narrower fluctuation bands. These unilateral commitments place no additional obligations on the ECB. In particular, the Estonian kroon and the Lithuanian litas joined ERM II with their existing currency board arrangements in place. The Latvian authorities decided to maintain the exchange rate of the lats at its central rate against the euro with a fluctuation band of ±1%. The agreements on participation for the countries whose currencies joined ERM II in 2004 or later (i.e Estonia, Latvia and Lithuania) were also 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 pursuit of prudent credit policies, and the implementation of further structural reforms.

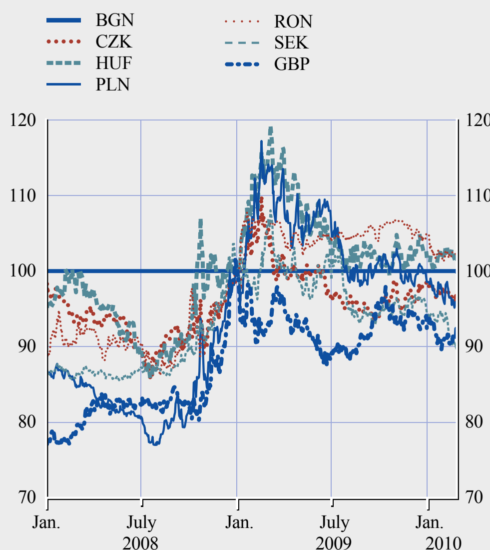
The Latvian lats fluctuated within the unilaterally set band of ±1% vis-à-vis the euro. This volatility apparently reflected investors' changing sentiment about the fulfilment of the conditions agreed under international support programmes. Pressures on the Latvian lats eased temporarily at the end of July 2009, following the disbursement of the second instalment of the EU's balance of payments assistance to Latvia. Problems surrounding the adoption of fiscal measures by the Latvian parliament in September 2009, seemingly related to international assistance programmes, again put downward pressure on the lats. As a result, in September the Latvian lats approached the weaker side of the ±1% unilaterally set band.

In 2009 developments took place with respect to currency swap arrangements among a number of NCBs. Eesti Pank entered into an agreement with Sveriges Riksbank, under which it can borrow up to SEK 10 billion against Estonian kroons as a preventive measure to safeguard financial stability in Estonia. Sveriges Riksbank also extended its agreement with Latvijas Banka – entered into together with Danmarks Nationalbank in December 2008 – which gives Latvijas Banka the right to borrow up to €500 million against Latvian lats. Furthermore, in June 2009 Sveriges Riksbank drew €3 billion on the existing line with the ECB in order to boost its foreign currency reserves.

Turning to the currencies of the non-euro area EU Member States that did not participate in ERM II, two phases of exchange rate developments can be identified. At the beginning of 2009 the Czech koruna, the Hungarian forint, the Polish zloty and the Romanian leu continued to depreciate sharply (see Chart 44). This took place against the background of heightened uncertainty in global financial markets following the collapse of Lehman Brothers in September 2008, the deteriorating economic outlook in Europe, and investors' concerns about external vulnerabilities in the region, which may also have led to some contagion effects across currencies. The sharp depreciations reached their peak in mid-February 2009 and prompted the authorities in some countries to intervene in foreign exchange markets.

**Chart 44 Developments in non-ERM II EU currencies vis-à-vis the euro**

(daily data; index: 2 January 2009 = 100)




Source: ECB.
Note: An increase (decrease) indicates a depreciation (appreciation) of the currency. Last observation refers to 26 February 2010.

A gradual normalisation of global financial market conditions subsequently contributed to a strong reversal of the Czech, Hungarian and Polish currencies against the euro and ultimately to relatively stable exchange rates in the fourth quarter of 2009, although at considerably weaker levels compared with their 2008 average. The Romanian leu remained broadly unchanged from March 2009. Reflecting its euro-based currency board arrangement, the Bulgarian lev remained unchanged against the euro.

The Swedish krona depreciated substantially against the euro at the beginning of 2009. Following its all-time low vis-à-vis the euro, reached at the beginning of March 2009, improvements in investors' perception concerning the Baltic States and the gradual normalisation of financial market conditions contributed to the rebound of the Swedish krona against the euro. However, the krona remained considerably weaker at the end of 2009 compared with its average 2008 level.

Following the record lows reached in December 2008, the pound sterling appreciated against the euro amid high volatility in 2009. The bilateral exchange rate dynamics continued to partly reflect developments in the medium-term interest rate differentials, with high volatility stemming from uncertainty over the economic outlook with regard to the United Kingdom and the euro area.

### FINANCIAL DEVELOPMENTS

In 2009 the long-term interest rates in the non-euro area EU Member States, as measured by ten-year government bond yields, continued to be affected by global market tensions, the downgrading of sovereign ratings, financial rescue packages and risk aversion by international investors. Compared with average euro area long-term interest rates, the interest rates of these countries remained, in general, at elevated levels.

In the majority of the non-euro area EU Member States, government bond yields rose from their end-2008 level, although a few countries witnessed a decline. The increase in the long-term interest rate was most pronounced in Latvia, as deteriorating economic growth and the subsequent lowering of credit ratings weakened investor sentiment and dampened foreign investors' demand for government bonds. In addition, bond markets in Latvia, Lithuania and Romania were almost illiquid owing to, among other things, investors' continued cautiousness. At the other end of the spectrum, the long-term bond yields for Bulgaria and Hungary decreased.

The negative market sentiment also had an impact on other financial instruments of non-euro area EU Member States at the beginning of 2009. Credit default swap (CDS) spreads for government bonds peaked and stock markets reached a low in March 2009. Thereafter, strong policy actions and signs of economic recovery in major markets supported global money market functioning and led to improved market sentiment. The favourable developments reversed the trend in non-euro area EU Member States' CDS spreads, money market rates and stock markets. CDS spreads decreased but were still at higher levels in December 2009 than before the intensification of the financial crisis in 2008. Money market rates declined in all non-euro area EU Member States, although spreads between the money market rates and the three-month EURIBOR remained positive. Stock market indices increased, on average, by 37% between December 2008 and December 2009, outperforming the euro area stock index.

### MONETARY POLICY

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

The key monetary policy challenge was in relation to the sharp economic slowdown following the intensification of the global financial turmoil, and the associated consequences for the inflation outlook. In addition, most countries experienced liquidity

**Table 11 Official monetary policy strategies of the 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 | Inflation 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 a central rate of DKK 7.46038 per euro. |
| Estonia | Exchange rate target | Estonian kroon | Participates in ERM II with a ±15% fluctuation band around a central rate of EEK 15.6466 per euro. Estonia is continuing with its currency board arrangement as a unilateral commitment. |
| Latvia | Exchange rate target | Latvian lats | Participates in ERM II with a ±15% fluctuation band around a central rate of LVL 0.702804 per euro. Latvia is continuing 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 a central rate of LTL 3.45280 per euro. Lithuania is continuing with its currency board arrangement as a unilateral commitment. |
| Hungary | Inflation target | Hungarian forint | Inflation target: 3% ±1 percentage point as a medium-term target since 2007. Free floating exchange rate. |
| 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: 3.5% ±1 percentage point for end-2009 and end-2010. 3% ±1 percentage point for end-2011. Managed floating exchange rate. |
| 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 the event of a deviation of more than 1 percentage point, the Governor of the Bank of England is expected to write an open letter on behalf of the Monetary Policy Committee to the Chancellor of the Exchequer. |

Source: ESCB.
1) The CPI is identical to the HICP.

constraints in their interbank and government bond markets, as well as tensions in their foreign exchange markets. As a consequence, the monetary policy transmission mechanism was affected in a number of countries. The respective NCB responses to these challenges varied depending on the economic conditions and the monetary policy frameworks in place.

With regard to monetary policy decisions between January 2009 and December 2009, most central banks participating in ERM II adopted monetary policy measures which often mirrored moves by the ECB. In the first half of 2009, the ECB cut the fixed rate on the main refinancing operations of the Eurosystem by a total of 150 basis points (in four steps in January, March, April and May) and since then has kept it unchanged at 1%.

Given their currency board arrangements, Българска народна банка (Bulgarian National Bank), Eesti Pank and Lietuvos bankas have no official policy rates; they automatically adjust to the rates set by the ECB. However, in order to ease liquidity pressures in the interbank

markets, Българска народна банка (Bulgarian National Bank) lowered its minimum reserve requirements.

Turning to the ERM II countries that are not operating under a currency board arrangement, Latvijas Banka, which maintains a ±1% fluctuation band around the central rate as a unilateral commitment, lowered its main interest rate to 4% in two steps of 100 basis points each, the first in March 2009 and the second in May 2009. Danmarks Nationalbank continued the easing cycle begun in November 2008 by lowering its main policy interest rate in nine further steps in 2009, by a total of 255 basis points. Following interest rate cuts of 175 basis points in total in the last two months of 2008, Danmarks Nationalbank twice cut its key policy interest rate by 75 basis points, in January and March 2009, followed by a series of smaller cuts between April 2009 and January 2010, bringing the main policy rate down to 1.05%. While some of the decisions followed similar moves by the ECB, others were taken when the ECB's interest rates remained unchanged, leading to a reduction in the spread of policy rates vis-à-vis the euro area. Danmarks Nationalbank also intervened in the foreign exchange market, replenishing the official currency reserves after the period of tension in the exchange rate markets and associated losses of reserves in late 2008.

All of the NCBs with inflation targets that are not participating in ERM II reacted to the increased impact of the financial crisis and the resulting rapid easing of inflationary pressures against the background of strongly negative output gaps by lowering interest rates in 2009. Actual inflation was below the respective inflation targets in the Czech Republic and Sweden, while in Hungary, Poland and Romania, it remained above. The size of the interest rate cuts depended on initial conditions such as inflation rates and perceived risk premia. In the course of 2009 Česká národní banka cut its policy rate in four steps, by a total of 125 basis points, to 1%, while Narodowy Bank Polski and the Bank of England both lowered their interest rates by 150 basis points, in several steps, to 3.5% and 0.5% respectively. Narodowy Bank Polski decided on an early redemption of NBP bonds in January 2009 and lowered the required reserve rate in May 2009. In March 2009 the Bank of England introduced the Asset Purchase Facility authorising the purchase of private sector assets and gilts, and extended it three times (in May, August and November) up to a total of GBP 200 billion. The Magyar Nemzeti Bank and Banca Naţională a României continued the policy easing by lowering their policy interest rates in a series of steps in the second half of 2009 and the beginning of 2010, by a total of 375 and 200 basis points respectively. These two NCBs maintained the highest policy rates in the EU in February 2010, at 5.75% and 7% respectively. Banca Naţională a României also cut the minimum reserve requirement for certain liabilities of credit institutions. Sveriges Riksbank cut interest rates by 175 basis points in 2009, bringing its policy rate to 0.25%. Furthermore, Sveriges Riksbank offered loans to commercial banks amounting to SEK 300 billion at a fixed interest rate and with a maturity of around 12 months (in three steps in July, September and October 2009), with a view to lowering interest rates on loans for households and companies.

The new ECB premises: simulated view of the atrium between the two office towers.

CHAPTER 2

# CENTRAL BANK OPERATIONS AND ACTIVITIES

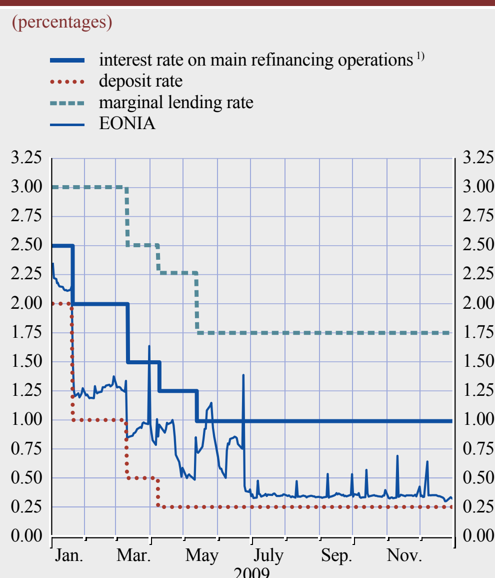
# 1 MONETARY POLICY OPERATIONS, FOREIGN EXCHANGE OPERATIONS AND INVESTMENT ACTIVITIES

## 1.1 OPEN MARKET OPERATIONS AND STANDING FACILITIES

The monetary policy instruments used by the Eurosystem in 2009 comprise open market operations, such as main refinancing operations (MROs), longer-term refinancing operations (LTROs), fine-tuning operations and the covered bond purchase programme, as well as standing facilities and the minimum reserve requirements. Within the operational framework for the implementation of monetary policy, open market operations and standing facilities are normally used to manage liquidity conditions in the interbank money market with a view to steering very short-term interest rates close to the ECB's key policy rate. The covered bond purchase programme is a temporary, non-standard measure.

**Chart 45 Key ECB interest rates and the EONIA**

(percentages)




Source: ECB.
1) Fixed rate from 15 October 2008.

During 2009 the Governing Council changed the key ECB interest rates on four occasions (see Chart 45). On 15 January the Governing Council decided to decrease the interest rate on the MROs by 50 basis points to 2.00%, followed by further cuts on 5 March, to 1.50%, and on 2 April, to 1.25%. In line with the decision taken by the Governing Council on 18 December 2008 to restore to 200 basis points the width of the corridor around the MRO interest rate formed by the rates on the standing facilities, these decisions meant that the interest rate on the marginal lending facility was set at 3.00%, 2.50% and 2.25% respectively, and the interest rate on the deposit facility was set at 1.00%, 0.50% and 0.25% respectively. On 7 May 2009 the Governing Council decided to decrease the interest rate on the MROs to 1.00%, to lower the interest rate on the marginal lending facility to 1.75% and to keep the interest rate on the deposit facility at 0.25%. The width of the corridor was thus reduced by 50 basis points, to 150 basis points, with effect from 13 May 2009.

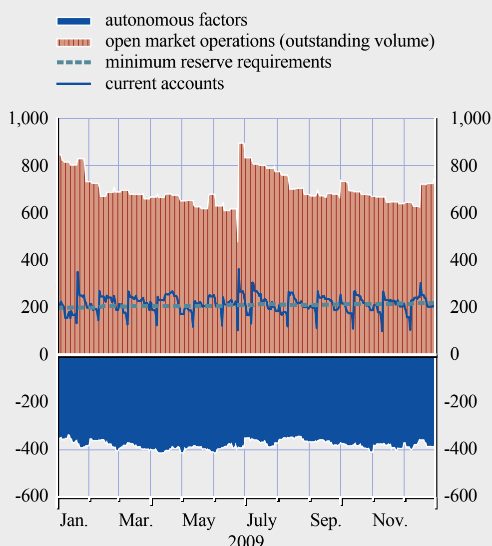
The implementation of monetary policy during 2009 continued to be driven by the Eurosystem's efforts to address the tensions in the money markets related to the financial turmoil. As well as conducting all refinancing operations with full allotment, the Eurosystem further extended the average maturity of open market operations by introducing LTROs with a maturity of one year. These measures aimed to ensure the continued access of solvent banks to liquidity, against adequate collateral, thus helping to improve the impaired functioning of the money market.

### 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 consolidated 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.

**Chart 46 Liquidity factors in the euro area in 2009**

(EUR billions)




Source: ECB.

All of the Eurosystem's refinancing operations in 2009 were conducted as full allotment procedures. As a consequence, the outstanding volume of refinancing operations was driven not by the supply considerations of the Eurosystem, but rather by demand from counterparties, reflecting their underlying liquidity preferences. The volumes allotted in the refinancing operations in fact significantly exceeded the liquidity needs of the consolidated euro area banking system as defined above. The overall level of excess reserves remained, however, very low in 2009, standing on average at €1.05 billion, which was in line with the experience of previous years (€1.07 billion in 2008 and €0.9 billion in 2007).

During 2009 the euro area banking system continued to borrow an aggregate surplus of liquidity and to deposit it back with the Eurosystem, paying the fixed rate on the MROs and receiving the rate on the deposit facility (which implied a spread of 100 basis points before 13 May 2009 and 75 basis points thereafter). This can be interpreted as clear evidence of counterparties' precautionary demand for liquidity from the Eurosystem. Looking at developments from this perspective, the "premium" for this liquidity insurance can be said to have decreased after 13 May, which may have contributed to sustaining and even increasing demand in the refinancing operations of the Eurosystem.

In 2009 the average daily liquidity needs of the euro area banking system amounted to €577 billion, 20% higher than in 2008. The main reason for the increase was the growth in autonomous factors, by 39%, to €380 billion. Minimum reserve requirements remained broadly unchanged on average in 2009, at €216 billion, compared with €210 billion in 2008 (see Chart 46). The growth in demand for banknotes decelerated significantly in 2009 (see Chart 53 in Section 3 of this chapter).

### 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 were equal to 2% of credit institutions' reserve base in 2009 and amounted to €216 billion on average, only 3% higher than the 2008 average. Since for any maintenance period the Eurosystem remunerates reserve holdings at a rate which is the average of the marginal rates of the MROs over the maintenance period (if conducted as variable rate tenders) or at the fixed MRO rate (in the case of fixed rate tenders), the minimum reserve system does not impose significant costs on the banking sector. At the same time, it fulfils two important functions in the operational framework for monetary policy implementation. First, it contributes to the stability of 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. Second, it enlarges the liquidity deficit of the banking system, i.e. banks' overall need for refinancing from the Eurosystem, thereby ensuring a smooth and predictable demand for refinancing from the Eurosystem which

facilitates the steering of short-term money market rates by 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 signalling the ECB's monetary policy stance. Regular LTROs are monthly liquidity-providing operations with a three-month maturity. A number of additional operations that were introduced in previous years continued to be used in 2009: supplementary LTROs with three-month and six-month maturities, and special-term refinancing operations, with a maturity equal to the length of the maintenance period. On 7 May 2009 the Governing Council decided that three liquidity-providing LTROs with a maturity of one year would be conducted. The first two operations (settled on 25 June and 1 October) were conducted as fixed rate tender procedures with full allotment and a zero spread over the rate on the MROs. The rate in the last operation (settled on 17 December) was fixed at the average minimum bid rate/fixed rate on the MROs over the life of the operation (a maturity of 371 days).

In 2009 all 52 MROs were conducted as fixed rate tenders in which all bids were satisfied. The number of eligible counterparties increased to 2,157, from 2,099 in 2008. On average, 401 counterparties participated in the MROs in 2009, compared with 443 in 2008. Before the settlement of the first LTRO with a one-year maturity, the average volume allotted in the MROs was €236 billion (see Chart 47), with a high number of counterparties (558 bidders on average). The MRO that was settled on 24 June, immediately before the allotment of the first one-year LTRO, saw a significant decline in the volume allotted, to €168 billion. This marked the beginning of a declining trend in both participation rates and MRO volumes, which continued throughout the second half of the year. In 2009 the lowest number of counterparties (109) to participate in an MRO was recorded in the operation that was settled on 23 December, and the lowest MRO volume (€46 billion) was allotted in the operation that was settled on 4 November.

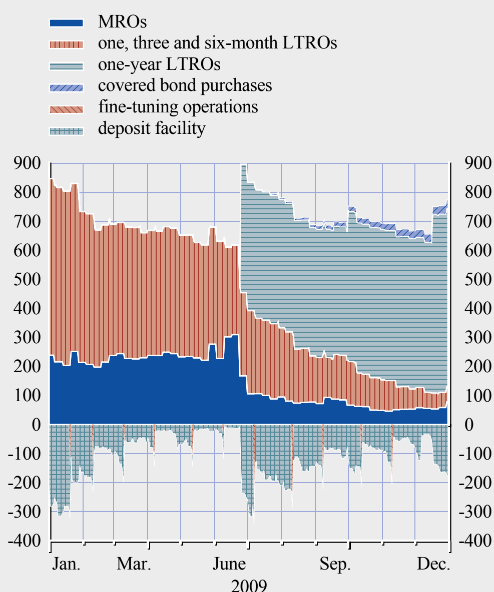
During the first half of the year the outstanding volume of liquidity allotted in the LTROs, supplementary LTROs and special-term refinancing operations declined steadily, from €617 billion on 1 January to €309 billion on 24 June (see Chart 47). This decline was accompanied by a parallel, gradual reduction in the daily recourse to the deposit facility of the Eurosystem. After the settlement of the first one-year LTRO, the total outstanding volume of special-term refinancing operations and LTROs more than doubled, to €729 billion. It remained at very high levels during the second half of the year (reaching €670 billion on 31 December). However, the total volume of refinancing operations other than one-year LTROs decreased significantly as counterparties lengthened the maturity of refinancing from the Eurosystem by making greater use of the one-year operations.

On 31 December one-year LTROs accounted for 82% of the total outstanding refinancing volume, MROs for 11%, operations with a three-month or six-month maturity for 3% and 4% respectively, and special-term refinancing operations for 0.4%. The covered bond purchase programme (see Section 1.3 of this chapter) constituted 4% of the liquidity provision. On 31 December the outstanding volume of one-year LTROs alone (€614 billion) exceeded by €23 billion the aggregate liquidity needs of the banking system.

Participation in the one-year LTROs was very high overall, but declined in the course of the year, with 1,121 counterparties participating in the first operation, 589 in the second and 224 in the third. Participation in the other operations also decreased significantly throughout 2009, in the three-month operations from a maximum of 133 (on 28 January) to a minimum of 8

**Chart 47 Outstanding volume of monetary policy operations**

(EUR billions)




Source: ECB.

(on 7 October and 7 December), and in the six-month operations from a maximum of 110 (on 10 June) to a minimum of 21 (on 11 November and 9 December). Participation in the special-term refinancing operations also declined, from a maximum of 147 (on 9 June) to a minimum of 8 (on 7 December).

The ECB may conduct 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 Governing Council's decision to widen access to fine-tuning operations as of 6 October 2008, by granting eligibility to all counterparties that are eligible to participate in Eurosystem open market operations based on standard tenders, and that additionally fulfil certain selection criteria specified by the respective NCBs, remained in effect in 2009.

In 2009 the ECB conducted fine-tuning operations only on the last day of the maintenance periods. 12 liquidity-absorbing operations were carried out, with a one-day maturity, conducted as variable rate tenders with a maximum bid rate equal to the fixed rate on the MROs. On average, €154 billion was absorbed via these operations, with 136 counterparties participating.

## STANDING FACILITIES

Counterparties may use the two standing facilities on their own initiative to obtain overnight liquidity against eligible collateral or to place overnight deposits with the Eurosystem. At the end of 2009, 2,401 counterparties had access to the marginal lending facility and 2,775 counterparties had access to the deposit facility.

The rates on these facilities in principle provide a ceiling and a floor for the overnight rate and therefore perform an important function for monetary policy implementation. On 15 January 2009, following a decision taken by the Governing Council on 18 December 2008, the width of the corridor formed by these two rates was increased from 100 to 200 basis points symmetrically around the MRO rate. On 7 May 2009 the width of the corridor was narrowed to 150 basis points when the rate on the MROs was reduced to 1.00%. This was done to ensure that the rate on the deposit facility remained above zero, thus maintaining an incentive to trade in the unsecured overnight market. At the same time, the corridor was kept symmetric around the fixed rate on the MROs.

The ample allotments in the fixed rate open market operations led to a significant increase in the use of the deposit facility, in particular after the settlement of the first LTRO with a one-year maturity. The average daily use of the deposit facility was €109 billion (compared with €0.5 billion in 2007 and €208.5 billion in the period from 9 October until 31 December 2008). In 2009 recourse to the deposit facility followed a broadly similar pattern during each reserve maintenance period: the deposit facility amounts were lower at the beginning of each period, but increased subsequently as more counterparties fulfilled their reserve requirements.

The average daily recourse to the marginal lending facility was €1 billion (compared with €6.7 billion in the period October-December 2008). This decline may be linked to a reduction in uncertainty about individual banks' liquidity needs, an improvement in the functioning of the unsecured overnight interbank market (as seen, for example, in the reopening of credit lines), and the ample allotments in the refinancing operations.

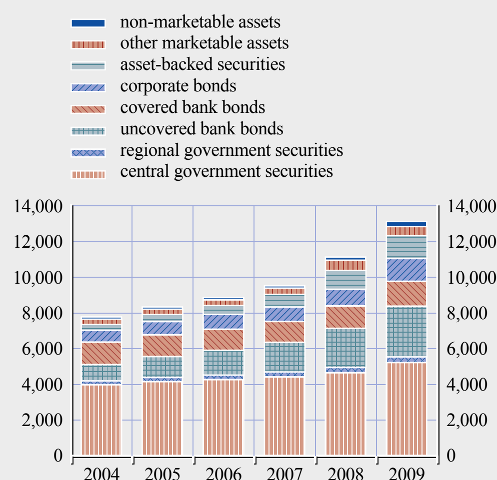
### ELIGIBLE ASSETS FOR MONETARY POLICY OPERATIONS

As required by the Statute of the ESCB, and in line with central bank practice worldwide, all credit operations of the Eurosystem are based on adequate collateral. The concept of adequacy implies, first, that the Eurosystem is to a large extent protected from incurring losses in its credit operations and, second, that sufficient collateral should be available to a wide set of counterparties, so that the Eurosystem can provide the amount of liquidity it deems necessary in its monetary policy operations and as intraday credit in payment system operations. To facilitate this, the Eurosystem accepts a broad range of assets as collateral in all its credit operations. This feature of the Eurosystem's collateral framework, together with the fact that access to Eurosystem open market operations is granted to a large pool of counterparties, has been key to supporting the implementation of monetary policy in times of stress. The inbuilt flexibility of its operational framework allowed the Eurosystem to provide the necessary liquidity to address the impaired functioning of the money market without encountering widespread collateral constraints during the financial crisis. At the end of 2008 the Governing Council decided to expand the list of eligible collateral, as a temporary measure which will remain in place until the end of 2010.

In 2009 the average amount of eligible collateral increased by 17.9%, compared with 2008, to a total of €13.1 trillion (see Chart 48). General government debt, at €5.5 trillion, accounted for 40% of the total, while the remainder of marketable collateral was in the form of uncovered bank bonds (€2.8 trillion, or 20%), covered bank bonds (€1.4 trillion, or 11%), asset-backed securities (€1.3 trillion, or 10%), corporate bonds (€1.3 trillion, or 10%), and other bonds (€0.5 trillion, or 4%), such as those issued by supranational organisations. The overall volume of marketable assets eligible as a result of the temporary measures to expand the list of eligible collateral amounted to around €1.4 trillion at the end of 2009. The list of eligible collateral also includes non-marketable assets, mostly credit claims (also referred to as bank loans). In contrast to marketable assets, non-marketable assets are assessed for eligibility only at the time of their acceptance. The volume of potentially eligible non-marketable assets therefore cannot easily be measured. Taking into account this caveat, the amount of non-marketable assets put forward by counterparties as collateral in Eurosystem credit operations is estimated to have reached €0.3 trillion in 2009, representing 2% of total eligible collateral in the Eurosystem. The lower credit threshold temporarily introduced to expand the list of eligible collateral was also applied to non-marketable assets.

**Chart 48 Eligible collateral by asset type**

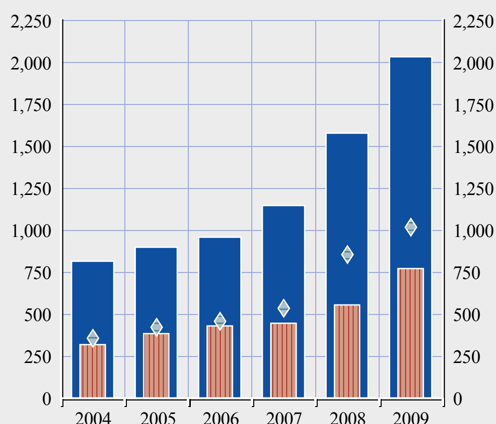
(EUR billions; annual averages)




Source: ECB.

## Chart 49 Collateral put forward in Eurosystem credit operations versus outstanding credit in monetary policy operations [1]

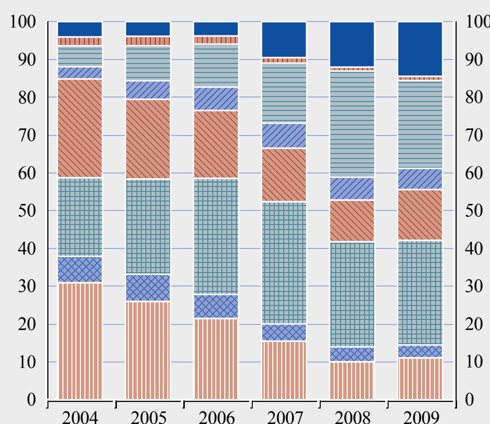
(EUR billions)




Source: ECB.
1) "Collateral put forward" refers to assets deposited as collateral in countries operating a pooling system and assets used as collateral in countries operating an earmarking system.

## Chart 50 Breakdown of assets (including credit claims) put forward as collateral by asset type

(percentages)




Source: ECB.

The average value of marketable and non-marketable assets put forward by counterparties as collateral in Eurosystem credit operations rose significantly, from €1,579 billion in 2008 to €2,034 billion in 2009. This increase was mainly due to the fact that counterparties submitted large additional amounts of collateral to the Eurosystem in response to the financial market turbulence (see Chart 49). As the comparison of collateral with outstanding credit to the Eurosystem's counterparties indicates, the share of collateral put forward that is not used to cover credit from monetary policy operations increased marginally on an aggregate basis. This suggests that insufficiency of collateral has not been a systemic constraint on the Eurosystem's counterparties, despite the increasing volume of liquidity received in the refinancing operations.

As regards the composition of collateral put forward (see Chart 50), the average share of asset-backed securities decreased from 28% in 2008 to 23% in 2009, which was due to reductions in market values and haircut increases, while the overall amount submitted remained stable. Uncovered bank bonds accounted on average for slightly less than 28% of the collateral put forward in 2009, thereby becoming the largest class of assets put forward as collateral in Eurosystem operations. The average share of non-marketable assets increased from 12% in 2008 to 14% in 2009. In addition, the average share of central government securities increased from 10% in 2008 to 11% in 2009. The new asset classes which are temporarily eligible accounted for around 3.8% of the total marketable collateral put forward.

### 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, the Eurosystem is

still exposed to a number of financial risks if a counterparty defaults, including credit, market and liquidity risk. In addition, the Eurosystem is exposed to currency risk in the context of liquidity-providing operations in foreign currencies against euro-denominated collateral, such as those conducted in 2009. 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.

As a matter of prudence, the Eurosystem has established buffers against potential shortfalls resulting from the eventual resolution of collateral received from counterparties that have defaulted. The level of the buffer is reviewed annually, pending the eventual disposal of the collateral and in line with the prospect of recovery. More generally, financial risks in credit operations are quantified and regularly reported to the ECB's decision-making bodies.

In 2009 the ECB added the technical refinements of the risk control framework which it had announced on 4 September 2008, introducing adjustments concerning the use of asset-backed securities and uncovered bank bonds eligible for Eurosystem credit operations. With regard to asset-backed securities, the Eurosystem announced on 20 January and 20 November 2009 additional requirements for the ratings of accepted external credit assessment institutions. Moreover, in order for asset-backed securities issued as of 1 March 2009 to be eligible for Eurosystem credit operations, it was decided that the underlying pool should not consist, in whole or in part, of tranches of other asset-backed securities. Asset-backed securities issued before 1 March 2009 are exempt from the latter requirement until 1 March 2010. With regard to uncovered bank bonds, the Eurosystem announced on 20 January 2009 the introduction of limits to their use as of 1 March 2009.

While preserving the key features of the Eurosystem's framework for credit operations, such as the wide range of eligible collateral and the broad access of Eurosystem counterparties to central bank liquidity, the above adjustments to the risk control framework were made with a view to maintaining an adequate level of risk protection for the Eurosystem. In addition, the changes with regard to the use of asset-backed securities aimed to contribute to the restoration of the proper functioning of these markets.

Furthermore, to ensure an adequate risk assessment of the asset-backed securities used in its credit operations, the Eurosystem has been investigating whether the existence of loan-by-loan information on the underlying assets backing such instruments should be taken into account in the risk management framework. To this end, the Eurosystem has engaged in discussions with rating agencies, investors, industry bodies and originators of such securities and launched a related public consultation on 23 December 2009. Such loan-level information would increase transparency with regard to asset-backed securities, thus making it possible to make more informed risk assessments for such assets and helping to restore confidence in the securitisation markets.

## 1.2 FOREIGN EXCHANGE OPERATIONS AND OPERATIONS WITH OTHER CENTRAL BANKS

In 2009 the Eurosystem did not undertake any interventions in the foreign exchange market. Furthermore, the ECB did not undertake any foreign exchange operations in the 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 nine occasions in 2009.

In order to address disruptions in the European US dollar funding markets triggered by the financial market turmoil, the ECB established a reciprocal currency arrangement (swap line) with the US Federal Reserve System in 2007, which was repeatedly extended, on the last occasion until 1 February 2010.

In connection with the US dollar Term Auction Facility of the Federal Reserve System, and in close cooperation with other central banks, the Eurosystem provided the US dollar funding received via this swap line to its counterparties against collateral eligible for Eurosystem credit operations. In the context of the financial market volatility in 2009, the Eurosystem continued to conduct operations as fixed rate tenders with full allotment with 7, 28 and 84-day maturity to provide US dollar liquidity to the Eurosystem's counterparties. In 2009 US dollar funding to euro area counterparties was provided via 69 reverse transactions against eligible collateral and six EUR/USD foreign exchange swap operations. Owing to the improved conditions in funding markets and limited demand, the operations in the form of EUR/USD foreign exchange swaps were discontinued at the end of January 2009, while US dollar repurchase operations with maturities of 28, 84 and 7 days were discontinued following the operations held on 28 July 2009, 6 October 2009 and 27 January 2010 respectively.

Following the conclusion in October 2008 of a swap line with the Swiss National Bank, the Eurosystem continued to provide Swiss franc liquidity to its counterparties in 2009. These operations were conducted in the form of EUR/CHF foreign exchange swaps at a fixed price and with a maximum allotment amount, determined by the ECB in coordination with the Swiss National Bank. In 2009 the Eurosystem carried out 51 Swiss franc-providing swap operations at a seven-day maturity. On 18 January 2010 the Governing Council decided, in agreement with the Swiss National Bank, to stop conducting one-week Swiss franc liquidity-providing swap operations after 31 January 2010, against the background of declining demand and improved conditions in the funding markets.

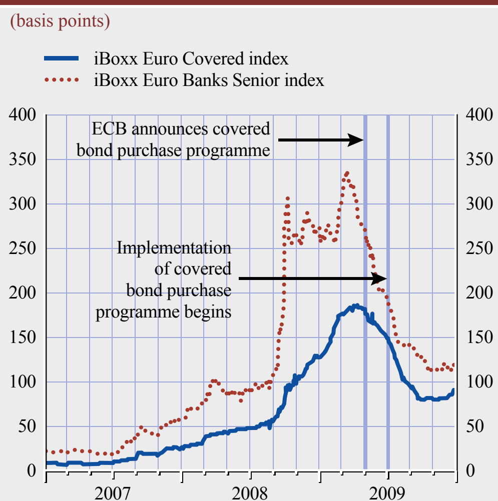
In April 2009 the Governing Council decided to establish a temporary reciprocal currency arrangement (swap line) with the Federal Reserve System to provide the latter with the capacity to offer euro liquidity of up to €80 billion. This swap line was repeatedly extended, on the last occasion until 1 February 2010. In addition, the ECB and Sveriges Riksbank announced in June 2009 that they would activate the temporary reciprocal currency agreement (swap line) concluded in 2007 for a maximum amount of €10 billion, with the aim of facilitating the functioning of financial markets and providing euro liquidity to Sveriges Riksbank if needed.

## 1.3 THE COVERED BOND PURCHASE PROGRAMME

The Governing Council decided in May 2009 to establish a programme of outright purchases of covered bonds for monetary policy purposes. This programme, which constituted a building block of the ECB's enhanced credit support approach, was launched with the aim of contributing to the revival of the covered bond

**Chart 51 Spreads between covered bond yields and swap rates and between senior unsecured bank bond yields and swap rates**

(basis points)




Source: Markit.
Notes: iBoxx indices are commonly used indices that track the movement of spreads in several bond markets versus swap interest rates. They are compiled by a subsidiary of the financial information services company Markit. The iBoxx Euro Covered index is an indicator of the difference between the yield on a basket of euro-denominated covered bonds and interest rate swaps with a similar maturity. The iBoxx Euro Banks Senior index is an indicator of the difference between the yield on a basket of senior unsecured bank bonds and interest rate swaps with a similar maturity.

market. It was announced that the Eurosystem intended to purchase euro-denominated covered bonds in the amount of €60 billion between July 2009 and the end of June 2010. These bonds, issued in the euro area, have to comply with certain criteria, which were made public to all market participants.

By 31 December 2009 the Eurosystem had purchased covered bonds for a total nominal value of around €28 billion, 24% of which was accounted for by purchases in the primary market and 76% by purchases in the secondary market. Since the announcement of the programme, new issuance in the covered bond market has picked up and spreads between yields on covered bonds and swap rates have narrowed significantly, which is also partly due to a general improvement of financial markets. This has also been accompanied by a general narrowing of other spreads, such as those on senior unsecured bank bonds (see Chart 51).[1]

## 1.4 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 ECB's Investment Division 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 those euro area NCBs which wish to take part in this activity as agents for the ECB. Since 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, or group of NCBs acting jointly for this purpose, is as a rule allocated a share in the US dollar or the Japanese yen portfolio.[2] Since January 2009, when Slovakia joined the euro area, Národná banka Slovenska has managed a US dollar portfolio as an agent for the ECB.

During 2009 the ECB sold 35.5 tonnes of gold in total. The proceeds of the gold sales were added to the US dollar portfolio. These sales were in full conformity with the Central Bank Gold Agreement of 8 March 2004, to which the ECB was a signatory and which was renewed on 7 August 2009.

The value of the ECB's net foreign reserve assets[3] at current exchange rates and market prices increased from €49.5 billion at end-2008 to €51 billion at end-2009, of which €38.3 billion was in foreign currencies – the Japanese yen and the US dollar – and €12.7 billion was in gold and SDRs. Applying the exchange rates of end-2009, US dollar-denominated assets represented 78.5% of the foreign currency reserves, while those denominated in Japanese yen accounted for 21.5%. The decrease in the euro value of the foreign currency portfolio, of 0.5%, mainly reflected the depreciation of the Japanese yen (by 5.3%) and the US dollar (by 3.4%) versus the euro over the year, while the capital gains and interest income generated

1 For further information on the covered bond purchase programme, see the ECB's website, in particular http://www.ecb.europa.eu/mopo/implement/omo.

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

3 Net foreign reserve assets are calculated as official reserve assets excluding the net, marked-to-market value of foreign currency swaps, plus deposits in foreign currency with residents, minus future predetermined net drains on foreign currency holdings owing to repurchase and forward transactions. For detailed information on the data sources, see the ECB's website.

by portfolio management activities and the investment of the proceeds of the gold sales mentioned above made positive contributions. The value of both the gold and SDR holdings increased by around 14.0%, despite the sales of gold. This increase was mostly due to the appreciation of gold by around 22.1% in 2009, as measured in euro terms.

In 2009 some government-guaranteed instruments were added to the list of instruments eligible for the investment of the ECB's foreign reserves. The start of an automatic securities lending programme for the ECB's US dollar-denominated assets, which had been finalised in 2008, was postponed as it was deemed opportune to wait for more favourable lending conditions.

### 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 fixed income assets.

The value of the portfolio at current market prices grew from €10.2 billion at end-2008 to €11.8 billion at end-2009. 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, as well as to investment returns and the contributions by Národná banka Slovenska to the capital and reserves of the ECB following the adoption of the euro by Slovakia.

The list of eligible instruments was extended during 2009 to include certain government-guaranteed securities which comply with the ECB's eligibility criteria for its own funds portfolio. A Chinese wall was set up by the ECB in the implementation of the covered bond purchase programme as the own funds portfolio and the purchasing activity for the above-mentioned programme were managed by the same unit.

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

In 2009 the ECB continued to enhance the IT infrastructure supporting the risk management framework for its investment operations. This framework was extended to cover the portfolio of covered bonds purchased by the ECB under the covered bond purchase programme.

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, including the covered bond purchase programme portfolio, on 31 December 2009, 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 €10,655 million. Computing the same indicator with a five-year instead of a one-year sample would result in a VaR of €7,975 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 in 2009.

# 2 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

The Eurosystem has the statutory task of ensuring efficient and sound clearing and payment systems. Its main instrument for carrying out this task – aside from the oversight function (see Section 4 of Chapter 3) – is the provision of payment and securities settlement facilities. 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 first-generation system was replaced by a second-generation system (TARGET2) in May 2008, when migration to the new system was completed. TARGET2 is based on a single technical infrastructure, the Single Shared Platform (SSP). Three Eurosystem central banks – the Banca d'Italia, the Banque de France and the Deutsche Bundesbank – jointly provide the SSP and operate it on behalf of the Eurosystem.

On the securities settlement side, the Eurosystem has made significant progress on its project of building a single IT platform – known as TARGET2-Securities (T2S) – for the settlement of virtually all securities in Europe, thereby removing any distinction between domestic and cross-border transactions. Work during 2009 focused on advancing the technical documentation for the platform, strengthening relations with central securities depositories (CSDs) and preparing for the development phase of the project, which started in early 2010. Progress has also been made on a number of strategic policy issues, such as governance and harmonisation.

With respect to the cross-border mobilisation of collateral, the correspondent central banking model has since 1999 enabled all euro area counterparties to use a common set of eligible assets as collateral in Eurosystem credit operations. In order to increase the efficiency of collateral management, the Eurosystem decided in July 2008 to launch the Collateral Central Bank Management system, or CCBM2, which will be built on a single technical platform and will lead to a further standardisation of procedures.

## 2.1 THE TARGET2 SYSTEM

TARGET2 plays an important role in the execution of the single monetary policy and the functioning of the euro money market. It offers a real-time settlement service in central bank money and broad market coverage. It processes large-value and urgent transactions without any upper or lower value limit and has also attracted a variety of other payments.

### TARGET2 OPERATIONS

The TARGET2 system functioned smoothly in 2009 and continued to settle a high number of euro payments. The system's market share was stable, with 89% of the total value of payments in euro large-value payment systems being executed via TARGET2. The average number of payments processed by the TARGET2 system each day decreased by 7%, to 345,771, while the average value fell by 19%, to €2,153 billion. On 30 September 2009 TARGET2 reached a peak of 508,368 transactions. Table 12 provides an overview of the payment traffic in the TARGET2 system in 2009, comparing it with the traffic in the previous year. The decrease observed in terms of volume and value is largely attributable to the effects of the financial crisis. In addition, statistical indicators are based on a new methodology which has been applied to TARGET2 statistics since January 2009. This should be taken into account when comparing 2009 figures with those from previous years, in particular with regard to the value settled.

The overall availability of TARGET2, i.e. the extent to which participants were able to use the system during their business hours without incident, reached 99.99% in 2009. The level of availability was affected only by incidents occurring in relation to national proprietary home accounts, while the SSP itself achieved 100% availability during the period under review. 99.96% of the payments in TARGET2 were processed within five minutes. The system's very positive performance met with the satisfaction of all participants.

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

| Value (EUR billions) | 2008 | 2009 | Change (%) |
|---|---|---|---|
| **TARGET overall** | | | |
| Total | 682,780 | 551,174 | |
| Daily average | 2,667 | 2,153 | -19 |

| Volume (number of payments) | 2008 | 2009 | Change (%) |
|---|---|---|---|
| **TARGET overall** | | | |
| Total | 94,711,380 | 88,517,321 | |
| Daily average | 369,966 | 345,771 | -7 |

Source: ECB.
1) There were 256 operating days in both 2008 and 2009.

By December 2009 822 direct participants maintained a real-time gross settlement account in the TARGET2 system. The overall number of banks (including branches and subsidiaries) that can be addressed worldwide through TARGET2 increased to around 55,000. In addition, TARGET2 settled the cash positions of 69 ancillary systems.

### COOPERATION WITH TARGET2 USERS

The Eurosystem maintains close relations with TARGET2 users and regular meetings were held between the euro area NCBs and national TARGET2 user groups in 2009. In addition, joint meetings of the Eurosystem Working Group on TARGET2 and the TARGET Working Group of the European credit sector associations took place on a quarterly basis to discuss TARGET2 business issues at the pan-European level. Strategic issues were addressed in the Contact Group on Euro Payments Strategy, a forum composed of senior representatives of commercial and central banks.

### MANAGEMENT OF NEW SYSTEM RELEASES

The Eurosystem endeavours to ensure that changes in the field of large-value payments are reflected in TARGET2. This continuous focus on the evolution of the system is necessary in order to enhance the level of service offered by TARGET2 and to meet the needs of its participants. To achieve this goal, all stakeholders are involved in the release management process in a timely manner.

In general, TARGET2 releases take place annually and coincide with the annual standard SWIFT releases in November. The development of the annual TARGET2 release takes place over a 21-month period in order that all parties have sufficient time for discussion, prioritisation, implementation and testing. Information is made available to participants at an early stage to allow for the proper planning and budgeting of all changes. In 2009 two releases took place: a first intermediate release on 11 May to enable the cross-CSD settlement functionality in the ancillary system interface, and a second on 23 November enhancing the system's real-time online monitoring tool and implementing the new message standard MT202COV, among other new features.

### COUNTRIES PARTICIPATING IN TARGET2

All euro area countries participate in TARGET2, as its use is mandatory for the settlement of payment orders resulting directly from or made in connection with Eurosystem monetary policy operations. When Slovakia adopted the euro on 1 January 2009, Národná banka Slovenska and its national user community joined the TARGET2 system. In 2002 the Governing Council of the ECB confirmed the right of the non-euro area NCBs to connect to TARGET on a "no compulsion, no prohibition" basis. TARGET2 is thus also available, on a voluntary basis, to non-euro area EU Member States to facilitate the settlement of euro-denominated transactions in these countries. From a legal and business point of view, each participating and connected central bank is responsible for managing its system component and maintaining the relationships with its participants.

In February 2010, having carried out the necessary preparations and testing activities, Българска народна банка (Bulgarian National Bank) and its national user community connected to TARGET2. 23 central banks of

the EU and their respective user communities are now connected to TARGET2: the 17 euro area central banks, including the ECB, and six central banks from non-euro area countries[4]. In addition, some financial institutions located in other EEA countries participate in TARGET2 via remote access.

#### FORTHCOMING DEVELOPMENTS

In November 2009 the Eurosystem finalised the contents of the new system release version 4.0, the implementation of which is envisaged on 22 November 2010. The release includes internet-based connection to TARGET2, in particular for small and medium-sized credit institutions, and various other enhancements requested by the user community. In addition, the contents of release 5.0 (to be implemented in November 2011) will be defined in 2010 in cooperation with the user community.

### 2.2 TARGET2-SECURITIES

T2S is the future Eurosystem service for securities settlement in central bank money. It will make the settlement of cross-border securities transactions as simple and efficient as that of domestic transactions. With T2S, it will be possible to settle almost all traded securities in Europe in a single settlement engine according to a harmonised timetable, using a common IT interface and a harmonised message format. T2S therefore represents a major breakthrough towards an integrated European capital market. Furthermore, although it is an initiative of the Eurosystem, T2S will settle securities transactions not only in euro, but also in other currencies if the relevant central bank, supported by its market, gives its consent.

The financial crisis has significantly increased awareness of the benefits of T2S. First, T2S will reduce market participants' back office costs, cutting settlement fees to one of the lowest levels in the world. Second, by using sophisticated settlement algorithms, recycling mechanisms and auto-collateralisation[5], T2S will greatly increase the efficiency of banks' collateral and liquidity management. Third, by extending real-time gross settlement in central bank money across Europe, T2S will reduce the financial risk exposure of market participants, particularly for cross-border transactions. Furthermore, T2S will apply the same state-of-the-art business continuity arrangements as TARGET2.

In 2009 the four NCBs charged with developing and operating the platform – the Deutsche Bundesbank, the Banco de España, the Banque de France and the Banca d'Italia – focused on translating the user requirements drawn up in close cooperation with market participants into a technical form that will act as the basis for the IT software development. In November 2009 the package of technical documents – the most important being the general functional specifications and the general technical design – was published.

To assist the ECB's decision-making bodies in ensuring the successful and timely completion of the T2S programme and to strengthen the internal management of the project, the Governing Council decided in March 2009 to establish the T2S Programme Board. The Programme Board was also entrusted with certain implementation tasks by the Eurosystem central banks so that it can be fully operational and act on behalf of the whole Eurosystem. Although the Governing Council will remain the ultimate decision-making body for strategic policy issues, the Programme Board will be responsible for developing proposals for the Governing Council on key policy issues, for managing the T2S programme on a daily basis and for maintaining relations with external stakeholders and the four NCBs building the platform.

The Programme Board is composed of eight members, appointed for a renewable term of 18 months. It is chaired by an ECB senior manager and includes two former CEOs of CSDs, as well as four representatives from

4 Bulgaria, Denmark, Estonia, Latvia, Lithuania and Poland.

5 Auto-collateralisation is an arrangement whereby securities being transferred (or securities held on stock) can be used as collateral to secure credit from the central bank in order to settle the transfer.

euro area NCBs and one representative from a non-euro area NCB. The members do not represent the views of their respective institutions, but act exclusively in the interests of the Eurosystem and the T2S programme. On 17 September 2009 the Governing Council approved the T2S Programme Board's Code of Conduct and Rules of Procedure.

One of the key factors in determining the success of the project will be the achievement of a "critical mass" in terms of the volume of transactions to be settled on the platform when it goes live. A major step forward was made in this respect in July 2009, when the T2S Memorandum of Understanding was signed between the Eurosystem and 27 CSDs from 25 countries in Europe. This included not only all CSDs located in the euro area, but also nine non-euro area CSDs (in Denmark, Estonia, Latvia, Lithuania, Romania, Sweden, the United Kingdom, Iceland and Switzerland). Subsequently, the Norwegian and Polish CSDs also announced that they would adhere to the Memorandum of Understanding, bringing the total number of CSDs to 29. In addition, the central banks of Denmark, Sweden and Norway have expressed an interest in settling their national currencies in T2S. Although signing the Memorandum of Understanding does not commit CSDs to use T2S when it becomes operational, it provides a strong basis for negotiation of a formal contractual agreement between the CSDs and the Eurosystem that is expected to be finalised during 2010.

The T2S project will make a significant contribution to the harmonisation of Europe's complex post-trading environment. Harmonisation will reduce costs, increase competition and reduce risk.[6] The common technical interface and single settlement schedule of T2S, as well as the adoption of industry standards on matching and messaging formats, will help considerably to promote harmonisation. During 2009 work on the harmonisation of T2S matching and settlement processes continued, and standards for the processing of corporate actions on unsettled transactions in T2S were approved. These standards were also endorsed by the European Commission's Clearing and Settlement Advisory Monitoring Expert Group II, which is the group responsible for the dismantling of the "Giovannini barriers" to efficient clearing and settlement.

## 2.3 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. Since the introduction of the euro, the use of cross-border collateral has grown continuously. In December 2009 the amount of cross-border collateral (including both marketable and non-marketable assets) held by the Eurosystem increased to €866 billion, from €861 billion in the same month of the previous year. Overall, at the end of 2009 cross-border collateral represented 38.2% of the total collateral provided to the Eurosystem.

The cross-border mobilisation of collateral in the euro area is mainly conducted via the correspondent central banking model (CCBM) and through eligible links between euro area securities settlement systems (SSSs). Whereas the first solution is provided by the Eurosystem, the latter is a market-led initiative.

### EUROSYSTEM COLLATERAL MANAGEMENT SERVICES

The CCBM has remained the main channel for transferring cross-border collateral in Eurosystem monetary policy and intraday credit operations. It accounted for 26.1% of the total collateral provided to the Eurosystem in 2009. Assets held in custody through the CCBM decreased from €713 billion at the end of 2008 to €569 billion at the end of 2009.

6 For further details, see the special feature article entitled "Harmonisation in the post-trading sector" in the ECB's forthcoming issue of "Financial integration in Europe".

Since its implementation in 1999, the CCBM has contributed to financial market integration by providing access to all eligible assets for all euro area counterparties, be it for use in monetary policy operations or to obtain intraday liquidity in TARGET2. However, the framework was set up as an interim solution based on the principle of minimum harmonisation. In order to introduce a more harmonised level of service and consequently deepen financial market integration, the Eurosystem decided in 2008 to launch CCBM2, based on a single platform. The development and operation of CCBM2 on behalf of the Eurosystem was assigned to the Nationale Bank van België/Banque Nationale de Belgique and De Nederlandsche Bank, with a view to commencing live operations before, or at the latest by the time of, the launch of T2S.

CCBM2 will enhance harmonisation and increase efficiency by optimising the costs of collateral mobilisation. Moreover, CCBM2 will process instructions via straight-through processing, permitting the delivery of all eligible collateral used on both a domestic and a cross-border basis to generate the release of related credit in TARGET2 on a real-time basis. In addition, this advanced system will bring about new opportunities for Eurosystem counterparties, particularly banks operating in multiple countries, to optimise their collateral use and improve their liquidity management. It will also allow central banks to monitor more closely the collateral used in credit operations.

Although CCBM2 aims to ensure the technically consolidated management of collateral, the system will be implemented in accordance with the principle of decentralised access to credit. The participation of the euro area NCBs in CCBM2 will be voluntary, and a modular approach will be adopted, allowing the NCBs to choose the CCBM2 modules that suit their own needs and those of their markets. The platform will be fully compatible with TARGET2 and T2S.

The Eurosystem is currently in the process of finalising the detailed specifications for users, which are based on the user requirements approved in 2008. The Eurosystem will maintain an open dialogue with market participants throughout the subsequent phases of the CCBM2 project.

### ELIGIBLE LINKS BETWEEN NATIONAL SECURITIES SETTLEMENT SYSTEMS

Cross-border collateral can also be mobilised by using links between national SSSs. Such arrangements allow the cross-border transfer of eligible securities between systems. Once the 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. The amount of collateral mobilised through links decreased from €148 billion in December 2008 to €116 billion at the end of 2009. This accounted for 5.1% of the total collateral (both cross-border and domestic) held by the Eurosystem in 2009. Links are thus used much less frequently than the CCBM.

Since August 2009 54 direct and 7 relayed links have been available to counterparties, but only a limited number are actively used. The decrease from 60 direct links in 2008 can be attributed to the rationalisation of links within the corporate network of one international CSD. Links only become eligible for Eurosystem credit operations if they meet the Eurosystem's user standards (see Section 4 of Chapter 3).

# 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 2009 the number of euro banknotes in circulation stood at 13.6 billion, with a value of €806.4 billion. This represented an increase of 4.0% in terms of volume and 5.7% in terms of value compared with the levels at the end of 2008 (13.1 billion banknotes with a value of €762.8 billion).

In 2009 the number of banknotes in circulation remained at the higher than usual level at which it had stabilised since October 2008. Following the bankruptcy of Lehman Brothers and the subsequent intensification of the financial crisis, assets on savings accounts were turned into cash, which boosted the value of euro banknotes in circulation by an additional €35 to €40 billion. Demand was particularly strong for high-denomination banknotes as a store of value. The demand for euro banknotes increased in particular in eastern European countries, where the national currencies depreciated against the euro. The additional banknotes in circulation had not been returned by the end of 2009, suggesting that they are being hoarded both inside and outside the euro area. Such hoarding is fostered by the current environment of low interest rates, which reduces the cost (in the form of lost interest income) of holding cash. As a result of the continued high volumes of €50, €100 and €500 banknotes in circulation, the average value of a banknote in circulation remained at a comparatively high level at the end of 2009 (€59.11 compared with €58.15 at the end of the previous year).

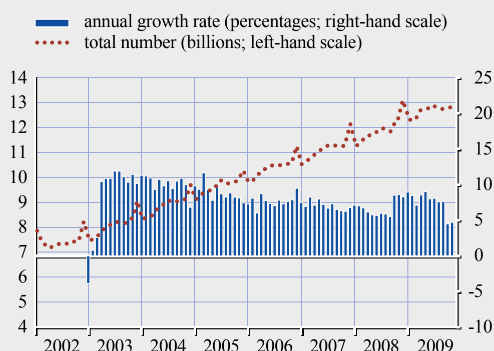
The statistics on net shipments of euro banknotes by euro area credit institutions to destinations outside the euro area suggest that, in value terms, between 20% and 25% of the euro banknotes in circulation are held by non-euro area residents.

Charts 52 and 53 illustrate developments in the total number and value of euro banknotes in circulation, together with the annual growth rates.

Looking at the breakdown by denomination, the €100 banknote showed the strongest growth in circulation, standing 6.6% higher at the end of 2009 than it did one year earlier. It was followed by the €500, €50 and €200 banknotes, which rose by 6.4%, 5.9% and 4.8% respectively. The number of the lower denominations in circulation rose at rates of between around 1% and 3% (see Chart 54).

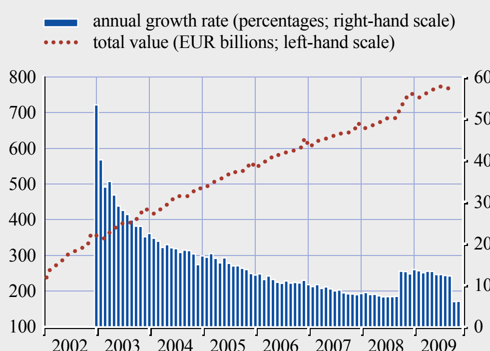
In 2009 the total number of euro coins in circulation (i.e. net circulation excluding stocks held by the NCBs) grew by 6.2%, to 87.5 billion, while their value rose by 4.5%, to €21.3 billion. The share of the low-value coins, the 1, 2 and 5 cent coins, in the total number of coins in circulation remained fairly stable, at 60%.

**Chart 52 Number of euro banknotes in circulation between 2002 and 2009**




Source: ECB.

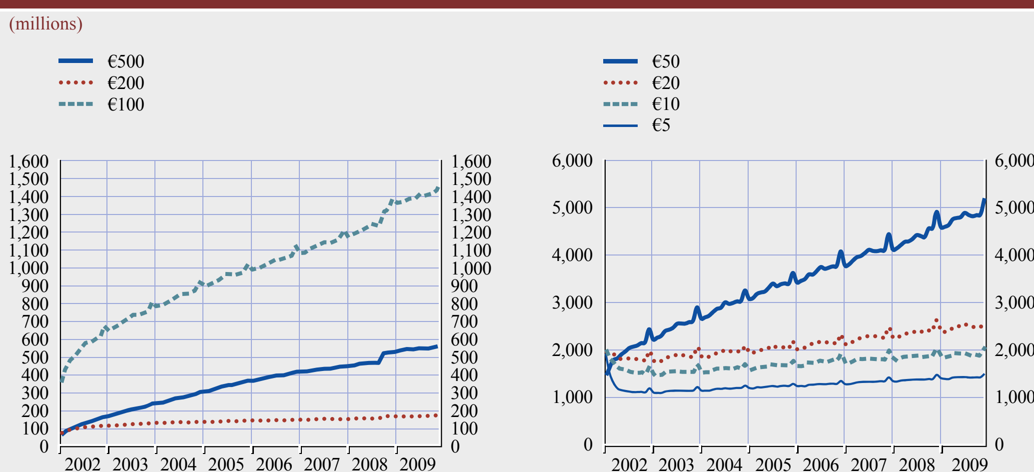
**Chart 53 Value of euro banknotes in circulation between 2002 and 2009**




Source: ECB.

**Chart 54 Number of euro banknotes in circulation between 2002 and 2009 by denomination**

(millions)




Source: ECB.

### BANKNOTE HANDLING BY THE EUROSYSTEM

In 2009 the euro area NCBs issued 33.5 billion banknotes, while 33.0 billion banknotes were returned to them. The average return frequency [7] of banknotes in circulation decreased slightly, to 2.59, meaning that, on average, a banknote was checked for authenticity and circulation fitness by the fully automated banknote processing machines of the euro area NCBs around once every four and a half months. The high-value banknotes, which are frequently hoarded, showed low return frequencies, of 0.38 (€500), 0.60 (€200) and 0.81 (€100), while the return frequencies of the denominations which are typically used for transactions were higher: 2.02 (€50), 3.85 (€20), 4.47 (€10) and 2.64 (€5). The NCBs identified some 5.4 billion banknotes as unfit for circulation and replaced them accordingly. The unfit rate,[8] at around 16.4%, remained close to the rate of around 17.0% recorded in the previous year.

## 3.2 BANKNOTE COUNTERFEITING AND COUNTERFEIT DETERRENCE

### COUNTERFEIT EURO BANKNOTES

During the course of 2009 the National Analysis Centres [9] received some 860,000 counterfeit euro banknotes. When compared with the number of genuine euro banknotes in circulation, the proportion of counterfeits remains at a very low level. Long-term developments in the quantity of counterfeits removed from circulation are shown in Chart 55. A closer analysis shows that the upward trend in quantity, which started to emerge in 2008, has been accompanied by a shift towards the lower denominations as the target of counterfeiters' activities. The €20 banknote was the most counterfeited denomination, accounting for almost half of the total. The second biggest target was the €50 banknote, which accounted for approximately one-third of counterfeits. Details of the denominational breakdown are shown in Chart 56.

Although confidence in the security of the euro is fully justified by the ongoing anti-counterfeiting measures of European and international authorities, it should not give rise to complacency. The ECB continues to advise the public to remain alert to the possibility of

7 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.

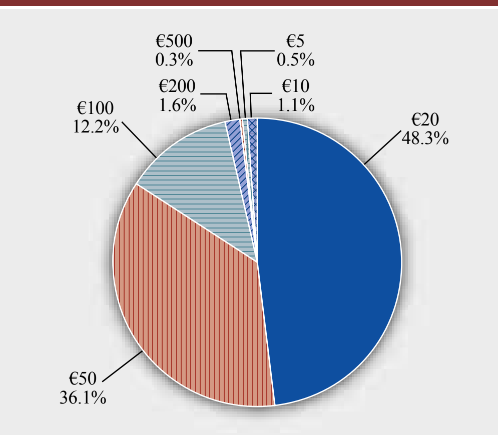
8 Defined as the number of banknotes identified as unfit in a given period divided by the total number of banknotes sorted during that period.

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

**Chart 55 Number of counterfeit euro banknotes recovered from circulation between 2002 and 2009**

Source: ECB.

**Chart 56 Distribution of counterfeit euro banknotes by denomination in 2009**




Source: ECB.

fraud and to remember the "feel-look-tilt" test described on the ECB's website, and never to rely on just one security feature.

The Eurosystem continues to invest considerable effort in ensuring that both the public and professional cash handlers are well-informed with regard to the recognition of counterfeit banknotes.

### COUNTERFEIT DETERRENCE

The Eurosystem continues to participate actively in the work of the Central Bank Counterfeit Deterrence Group (CBCDG), a working group of 31 central banks and banknote-printing authorities cooperating under the auspices of the G10. As in previous years, research into techniques designed to prevent the illicit reproduction of banknotes remains one of the group's main activities. 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[10] which provides information and guidance concerning the reproduction of banknote images as well as links to country-specific websites.

Training is offered on a continuous basis to professional cash handlers, both in Europe and beyond, and up-to-date information materials have been created to support the Eurosystem's fight against counterfeiting. The well-established cooperation with Europol and the European Commission also serves this goal.

### DEVELOPMENTS IN THE BANKNOTE RECYCLING FRAMEWORK

Council Regulation (EC) No 44/2009, which entered into force on 23 January 2009, modifies Council Regulation (EC) No 1338/2001 and obliges credit institutions, payment service providers and other institutions engaged in the processing of euro banknotes to check the authenticity of banknotes in accordance with the "Framework for the detection of counterfeits and fitness sorting by credit institutions and other professional cash handlers" (also known as the "banknote recycling framework").

## 3.3 BANKNOTE PRODUCTION AND ISSUANCE

### PRODUCTION ARRANGEMENTS

For 2009 the production of a total of 10.9 billion euro banknotes was allocated to the NCBs. This compares with a figure

10 For details, see http://www.rulesforuse.org

**Table 13 Allocation of euro banknote production in 2009**

| Denomination | Quantity (millions of banknotes) | NCB commissioning production |
|---|---|---|
| €5 | 1,118.1 | FR, NL |
| €10 | 1,352.9 | DE, GR, FR, AT |
| €20 | 4,228.3 | DE, IE, GR, ES, FR, IT, CY, LU, MT, NL, PT, SI, FI |
| €50 | 2,958.5 | BE, DE, ES, IT |
| €100 | 1,043.6 | DE, IT, AT |
| €200 | - | - |
| €500 | 240.0 | DE |
| **Total** | **10,941.4** | |

Source: ECB.

of 6.4 billion in 2008 and reflects stronger domestic demand, the growing role of the euro as an international currency and long-term production smoothing.

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. Table 13 summarises the 2009 production allocation.

## THE EXTENDED CUSTODIAL INVENTORY PILOT PROGRAMME

In 2009 euro banknotes worth €5.3 billion were purchased and banknotes worth €1.1 billion were sold under the Extended Custodial Inventory (ECI)[11] pilot programme in Asia. Under the current pilot programme, which will end in January 2012, ECI sites are located in Hong Kong (run by two commercial banks) and in Singapore (run as a joint venture between two other commercial banks). ECIs facilitate the international distribution of euro banknotes and provide statistical data on euro banknote circulation outside the euro area, as well as information on counterfeits found in their region.

## ROADMAP FOR GREATER CONVERGENCE OF NCB CASH SERVICES

Based on a medium-term roadmap adopted by the Governing Council in 2007, the Eurosystem continued its work to achieve greater convergence of the cash services offered by euro area NCBs.

In particular, the Eurosystem concentrated on further steps towards an electronic data exchange with credit institutions for cash lodgements and withdrawals and banknote packaging standards for the free-of-charge NCB cash services.

Collective efforts towards increased convergence and integration will allow stakeholders to reap greater benefits from the single currency and will ensure fair and competitive treatment.

## THE SECOND SERIES OF EURO BANKNOTES

The ECB continued work on a new series of euro banknotes in 2009. The design of the new series will be based on the "ages and styles of Europe" theme and will retain the most important design elements from the first series of banknotes. Thus, although certain design elements will be adjusted, the second series of euro banknotes will still be closely related to the first series. The new design aims to integrate security features which provide maximum protection against counterfeiting while at the same time making sure that the general public is easily able to distinguish a genuine banknote from a counterfeit. The cost of the banknote materials and production also has to be taken into account. The work on developing the origination materials (the master materials used for banknote production), which started in 2008, will continue into 2010.

The involvement of paper mills and printing works throughout the euro area is being coordinated to make sure that they will be able

11 An ECI is a cash depot maintained by a commercial bank that holds currency on a custodial basis.

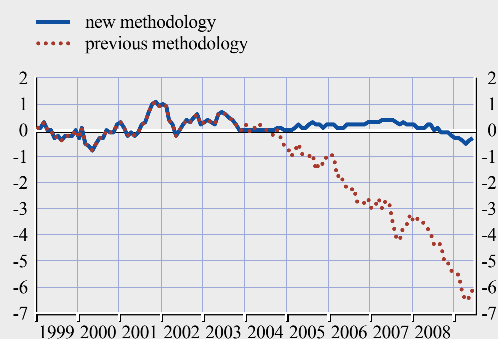
to produce the new banknotes in accordance with strictly defined technical specifications. At the same time, all major stakeholders involved in the cash cycle are being consulted and kept informed of the progress made during the development process. The new series will be launched over a period of several years, with the first denomination expected to be issued in a few years' time. The exact timing and sequence of issuance will be determined at a later stage. The Eurosystem will inform the public well in advance about the modalities of the introduction of the new banknotes. The NCBs will redeem euro banknotes from the first series for an unlimited period of time.

# 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. The statistics are also used extensively by public authorities, financial market participants, the media and the general public. In 2009 regular euro area statistics continued to be provided in a smooth and timely manner, with additional efforts required to incorporate a relatively high number of extraordinary transactions and other balance sheet changes as a result of the financial crisis. 2009 also saw the publication of enhanced and harmonised euro area and national investment fund statistics, as well as improved external statistics. In addition, the results of a new survey on the access to finance of euro area firms, in particular small and medium-sized enterprises (SMEs), were published. A further important development was the adoption by the EU Council of an improved legal framework concerning the collection of statistical information by the ECB. Finally, the ECB continued to contribute to the harmonisation of statistical concepts in Europe and to the review of global and European statistical standards.

**Chart 57 Net errors and omissions of the euro area balance of payments**

(cumulated sums; Q1 1999 to Q2 2009; as a percentage of euro area GDP)




Sources: ECB and ECB calculations.

## 4.1 NEW OR ENHANCED EURO AREA STATISTICS

In November 2009 new harmonised statistics on the assets and liabilities of euro area investment funds were released for the first time.[12] This new and comprehensive dataset shows detailed balance sheet information for investment funds broken down by investment policy, and is more timely and detailed than the previous version. A methodological manual on investment fund statistics was published in May 2009. Work also continued to prepare for the reporting, from early 2010, of new ESCB statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions. In addition, the ESCB complemented the list of all EU MFIs by publishing an additional list of 45,000 investment funds in November 2009. It is foreseen that a list of financial vehicle corporations will be published in the first quarter of 2010.

In the field of euro area balance of payments and international investment position statistics, a new methodology[13] was adopted, which largely eliminates errors and omissions as well as asymmetries at the euro area level (see Chart 57) and has led to significant improvements in these statistics.

In September 2009 the ECB published for the first time the results of a survey on euro area firms' access to finance, conducted in cooperation with the European Commission. The first wave of this survey provided predominantly qualitative evidence on the financing conditions faced by SMEs compared with those faced by large firms during the first half of 2009. The results of the survey are broken down by, for example, firm size, type of economic activity, euro area country and firm age.

The ECB further improved its Short-Term European Paper (STEP) statistics and started to publish daily statistics on aggregated outstanding amounts and new issues broken down by sector, maturity, rating and currency, in addition to daily yields and spreads (see also Section 3 of Chapter 3).

12 Implementing Regulation ECB/2007/8 concerning statistics on the assets and liabilities of investment funds (other than money market funds).

13 A note published on the ECB's website on 2 November 2009 provides details of the methodological changes implemented.

In 2009 work continued on enhancing the timeliness, completeness and consistency of the quarterly integrated non-financial and financial sector accounts for the euro area.[14] These accounts help, among other things, to identify interconnected risks and cross-sector exposures in the context of financial stability assessments and macro-prudential analyses.

### 4.2 OTHER STATISTICAL DEVELOPMENTS

In October 2009 the EU Council adopted a Regulation concerning the collection of statistical information by the ECB,[15] pursuant to an ECB recommendation issued in September 2008. The Regulation allows the collection of statistical information for the full range of ESCB tasks (including its contribution to financial stability) and for the entire euro area financial corporations sector (including insurance corporations and pension funds). Moreover, under strict confidentiality provisions, the new legal framework permits confidential data to be exchanged within the ESCB and between the ESCB and the European Statistical System. In the context of the introduction of the new Regulation, the ESCB's commitment with respect to its statistical function was extended by introducing definitions of the principles governing its statistical production. In addition, in line with this commitment, comprehensive quality reports on euro area statistics were published in accordance with the ECB Statistical Quality Framework and quality assurance procedures.

The ECB's legal framework was refined to enhance the efficiency of the production of statistics across the ESCB, by amending and recasting the ECB Guideline on the statistical reporting requirements in the field of government finance statistics.[16]

The dissemination of statistics was further improved, in particular by publishing additional tables of euro area statistics and all corresponding national data on the websites of the ECB and the NCBs, as well as by incorporating additional statistics into the ECB's Statistical Data Warehouse. Moreover, in the context of the ECB's enhanced communication strategy with regard to euro area statistics, more visualisation tools were made available, for example on nominal effective exchange rates, and new features were added to the existing inflation dashboard.

The ECB also continued to participate actively in the further development of international statistical standards, such as the System of National Accounts 2008 (published in August 2009),[17] the sixth edition of the IMF's Balance of Payments Manual[18] and the ongoing revision of the ESA 95. Together with the BIS and the IMF, the ECB also published the first part of a handbook on securities statistics.[19]

### 4.3 STATISTICAL NEEDS RESULTING FROM THE FINANCIAL CRISIS

In 2009 newly identified needs to enhance financial market transparency and to improve the statistical framework for financial stability analysis were addressed.

In addition to the improved statistical coverage of the financial sector, work focused on: i) providing more timely interest rate statistics, ii) making available more detailed securities statistics and developing securities holdings statistics, iii) improving the measurement of credit derivatives, including credit default swaps, in close cooperation with the BIS, iv) improving the compilation of statistics on insurance corporations and pension funds, and v) reconciling supervisory and

14 These have been published jointly by the ECB and Eurostat on a regular basis since 2007.
15 Council Regulation (EC) No 951/2009 amending Council Regulation (EC) No 2533/98.
16 Guideline ECB/2009/20 of 31 July 2009 on government finance statistics (recast).
17 The System of National Accounts 2008 is available on the website of the United Nations Statistics Division (http://unstats.un.org).
18 The sixth edition of the Balance of Payments Manual can be downloaded from the IMF's website (http://www.imf.org).
19 The handbook can be downloaded from the IMF's website.

statistical requirements for credit institutions, in cooperation with the Committee of European Banking Supervisors. All these preparations will also enable the ECB to provide the necessary statistical support to the European Systemic Risk Board (ESRB) as soon as it is established.

In the context of international cooperation, the ECB participates in the Inter-Agency Group on Economic and Financial Statistics, together with the BIS, the European Commission (Eurostat), the IMF, the OECD, the United Nations and the World Bank. The Inter-Agency Group has launched and is gradually enhancing the Principal Global Indicator website,[20] which focuses on the G20 economies. The ECB also supported IMF staff and the secretariat of the Financial Stability Board in the preparation of the report entitled "The Financial Crisis and Information Gaps" addressed to the G20 finance ministers and central bank governors in November 2009.[21]

20 See http://www.principalglobalindicators.org/
21 Available on the website of the Financial Stability Board (http://www.financialstabilityboard.org).

# 5 ECONOMIC RESEARCH

Consistent with the approach adopted throughout the Eurosystem, the purpose of research activities at the ECB is to: i) provide research results relevant for the formulation of policy advice on monetary policy and other Eurosystem tasks, ii) maintain and use econometric models in order to construct economic forecasts and projections and to compare the impact of alternative policy choices, and iii) communicate with the academic and research community, for example through the publication of research results in peer-reviewed scientific journals and by participating in and organising research conferences. In the light of the challenges posed by and lessons learned from the financial crisis, the ECB initiated a multi-year revision of its research agenda in 2008, which continued in 2009. Moreover, the prospect of assuming new responsibilities in supporting the work of the ESRB has prompted the ECB to formulate a new research agenda, focused on the development of tools for macro-prudential and systemic risk analysis for financial stability purposes.

## 5.1 RESEARCH PRIORITIES AND ACHIEVEMENTS

Economic research at the ECB is performed in a decentralised way: all business areas conduct research projects according to their needs and expertise. The Directorate General Research is charged with coordinating this research work, as well as producing high-quality research itself. The Director General Research chairs the Research Coordination Committee (RCC), which aligns research activities at the ECB with the requirements of the institution and the needs of its policy processes. The RCC establishes a set of priority areas each year and steers the focus of research activities towards these areas.

The research priorities established for 2009 were broadly unchanged from those for 2008, namely: forecasting and model development; enhancing the monetary analysis; understanding the transmission mechanism of monetary policy; financial stability; the efficiency of the European financial system; payment and settlement issues; international linkages; and fiscal issues. These priorities notwithstanding, given the context of the financial crisis, a greater focus was placed on research into financial issues than in previous years.

The priority on forecasting and model development encompasses all research work and tool development undertaken in support of economic analysis and forecasting, the latter in particular in the context of the Eurosystem/ECB projection exercises. In 2009 a variety of extensions to the New Area-Wide Model (NAWM) – which is now well-established as a central forecasting tool within the Eurosystem/ECB projection exercises – were explored, such as the incorporation of models of the financial sector and fiscal policy. The structure of the base model may be revised in the future in the light of the outcome of these projects. The Christiano-Motto-Rostagno (CMR) model was also further developed and used in a number of policy exercises focusing on the behaviour of financial markets. Both the NAWM and the CMR model are examples of the dynamic stochastic general equilibrium (DSGE) models that have been increasingly used to support the formulation of policy advice at central banks. In the course of 2009 a new DSGE model was developed by ECB staff in collaboration with the ESCB NCBs to address international policy issues. Among more traditional macro models, the Multi-Country Model – which models the largest countries in the euro area and their trade links – was revised to include explicit expectation mechanisms. This new version of the model was introduced into the policy process over the course of the year. Research work on short-term forecasting tools continued, with a focus on the further development of tools using dynamic-factor and Bayesian techniques. A project was also initiated to devise tools to measure potential output.

Research on monetary analysis concentrated on the development and use of quantitative tools to assess monetary developments, with an emphasis on providing high-quality analytical input into the preparation of policy decisions. Work focused on understanding the role of

money and credit in the economy. An internal research forum[22] discussed these topics throughout the year.

With regard to the monetary policy transmission mechanism, new projects were initiated in 2009 on a variety of topics: asset price dynamics and risk premia; the role of the banking sector; the financial decisions of non-financial firms; and the impact on the transmission mechanism of country-specific features. Projects which continued from the previous year included: the Wage Dynamics Network, an ESCB research network[23] which analyses wage behaviour in 17 EU countries; the Household Finance and Consumption Network, a Eurosystem research network which collects and analyses micro-level information on a wide range of household decisions related to the holding of real and financial assets, the taking of debt, risk attitudes, employment, income, pensions, intergenerational transfers, gifts, consumption and savings; and an ECB research forum on central bank communication policies.

The links between financial stability and monetary policy were also explored, with a focus on the development of financial stability indicators and the impact of financial stability concerns on the conduct of monetary policy. In particular, work was completed on the analysis of credit dynamics and money markets. This line of research reviewed the desirability and feasibility of the policy principle of "leaning against the wind", i.e. of countering potentially costly asset price booms, as well as the optimal liquidity response during times of financial crisis.

Research on the efficiency of the financial system included two joint networks with the Center for Financial Studies (CFS), an independent research institute affiliated to the University of Frankfurt am Main. These networks focus on the integration and development of retail financial services and on financial modernisation.

Regarding payment and settlement systems, the ECB began research work on the Single Euro Payments Area and TARGET2 under the umbrella of the Payment Economics Network. This network comprises the Bank of England, the Reserve Bank of Australia, the Federal Reserve Bank of New York, the Federal Reserve Bank of Chicago, the Bank of Canada, De Nederlandsche Bank and external academics, and is charged with promoting awareness of research undertaken on payment and securities settlement systems. The network's website[24] provides links to working papers, relevant policy documents, details on upcoming and past conferences, and information on research projects in this area.

Under the research priority related to international issues, the main areas of interest were globalisation and financial and trade linkages, and the international role of the euro. Globalisation and financial and trade linkages were the focus of two ECB research forums. Work on the international role of the euro focused on the analysis of the composition of foreign reserves across countries, the effect of international currencies on income differentials and the exchange rate pass-through, and the relationship between the exchange rate and world commodity prices. Furthermore, work continued on an international extension to the NAWM.

On the fiscal front, further work was undertaken on the development of tools for the monitoring and analysis of public finances and their efficiency and sustainability.

### 5.2 RESEARCH DISSEMINATION: PUBLICATIONS AND CONFERENCES

As in previous years, ECB staff research was published in the ECB's Working Paper Series and Occasional Paper Series. 156 Working Papers and 8 Occasional Papers

22 Research forums are formal internal channels for sharing experiences and results from ECB research projects on a specific topic.

23 Research networks coordinate the research activities of Eurosystem/ESCB researchers and help to disseminate the results. They may also involve external researchers.

24 http://www.paymenteconomics.org

were published in 2009. A total of 116 Working Papers were written or co-written by ECB staff, a large number together with Eurosystem economists, with the remainder written by external visitors attending conferences and workshops, working in the context of research networks or spending a prolonged period 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 2009 ECB staff published 92 articles in academic journals.

The Research Bulletin is a regular ECB publication which is used to disseminate research work of general interest to a wide audience. The March 2009 issue focused on the influence of the banking sector and credit on the transmission mechanism of monetary policy, the business cycle properties of the euro area and the use of global liquidity as an early warning indicator of boom/bust cycles.

The ECB organised or co-organised a number of conferences and workshops on research topics. Co-organised conferences involved the Centre for Economic Policy Research (CEPR), the BIS, 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. As in previous years, most of the conferences and workshops were related to specific research priority areas; the programmes for these events and the papers presented are available on the ECB's website.

The conferences and workshops covered a wide range of subjects. The links between financial stability and monetary policy were the focus of three of them, one of which was co-organised with the BIS and another with the CFS. Two additional conferences addressed different aspects of the workings of the money markets and the retail payment markets. A conference on exchange rates was co-organised with the Bank of Canada in June 2009. Finally, an ECB/CEPR conference on labour market issues was held in December. The Federal Reserve Board and the ECB co-hosted two conferences in October, one in Washington and the other in Frankfurt, in preparation for an update of the "Handbook of Monetary Economics".

An additional, long-standing mechanism for the dissemination of research is the organisation of seminar series, of which two are of particular relevance: the Joint Lunchtime Seminars, co-organised with the Deutsche Bundesbank and the CFS, and the Invited Speaker Seminars. The two series comprise weekly seminars at which external researchers are invited to present their recent work at the ECB. 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 271(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 123 and 124 of the Treaty and Council Regulations (EC) Nos 3603/93 and 3604/93. Article 123 prohibits the ECB and the NCBs from providing overdraft facilities or any other type of credit facility to governments and EU institutions or bodies, as well as from purchasing debt instruments directly from them. Article 124 prohibits any measure, not based on prudential considerations, which establishes privileged access by governments and EU 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 EU 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 123 of the Treaty. Such purchases should not become a form of indirect monetary financing of the public sector.

The monitoring exercise conducted for 2009 confirmed that the provisions of Articles 123 and 124 of the Treaty and the related Council Regulations were in general respected.

## 6.2 ADVISORY FUNCTIONS

Article 127(4) of the Treaty requires that the ECB be consulted on any proposed EU or national legislation falling within its fields of competence.[25] All ECB opinions are published on the ECB's website. ECB opinions on proposed EU legislation are also published in the Official Journal of the EU.

The ECB adopted 100 opinions in 2009: 11 were in response to consultations by the EU institutions and 89 were in response to consultations by national authorities. This compares with 92 consultations in 2008. A list of the opinions adopted in 2009 and early 2010 is annexed to this Annual Report.

The following two ECB opinions issued at the request of the EU Council are particularly noteworthy. They concern the legislative package on European financial supervisory reform implementing the recommendations of the de Larosière Group.

As part of this package, the European Commission adopted a proposal for a regulation on Community macro-prudential oversight of the financial system and the establishment of a European Systemic Risk Board (ESRB), as well as a proposal for a Council decision entrusting the ECB with specific tasks concerning the functioning of the ESRB. In its opinion on these proposals,[26] the ECB expressed its broad support for the proposed legal framework for the ESRB and indicated that it stood ready to ensure the performance of the secretariat function for the ESRB and to provide analytical, statistical, administrative and logistical support, drawing on technical advice from NCBs and supervisors. As stated in the opinion, the involvement of the ECB and the ESCB in the ESRB will not alter the primary objective of the ESCB under Article 127(1) of the Treaty, which is to maintain price stability. The ECB also expressed its support in the opinion for the Commission's approach on a number of topics, namely the procedure for the issuance of and follow-up to risk warnings and recommendations, the composition of the ESRB's Steering Committee, the adoption of the

25 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, OJ C 115, 9.5.2008, p. 284.

26 CON/2009/88.

same procedures for the election of the ESRB's Chair and Vice-Chair, the participation of the ECB's President and Vice-President as voting members in the ESRB's General Board, and the issue of inviting non-EU countries to attend certain ESRB and technical committee meetings (for more details on the ESRB, see Box 8).

The second part of the above package relates to the Commission's proposals for regulations establishing three new micro-prudential European Supervisory Authorities (ESAs): the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority. In its opinion on these proposals,[27] the ECB welcomed the proposed institutional framework as well as the planned establishment of a single European rule book applicable to all financial institutions. The ECB expressed its strong support for efficient institutional arrangements for cooperation between the ESAs and the ESRB and the close involvement of the ESRB within the new micro-prudential institutional framework. The ECB suggested a few amendments with a view to removing any obstacles to smooth flows of information between the ESRB and the European System of Financial Supervisors and ensuring the adequate institutional involvement and participation of the ECB and, where appropriate, the NCBs of the ESCB with regard to the ESAs and the newly established committees. The ECB also concluded that, when an NCB is a competent supervisory authority under national law, the performance of this task cannot constitute prohibited monetary financing. Insofar as the financing of each ESA consists in particular of obligatory contributions from competent national supervisory authorities, this conclusion also applies in the case of an NCB contributing to the revenues of the ESA, which, in such circumstances, would only involve the financing by the NCB of the performance of its own supervisory tasks.

Prior to its opinions on the above reform, the ECB issued an opinion[28] on a proposal for a directive amending Directives 2006/48/EC and 2006/49/EC as regards banks affiliated to central institutions, certain own funds items, large exposures, supervisory arrangements and crisis management. In its opinion, the ECB called for caution, in connection with the implementation of monetary policy, when designing measures to limit interbank exposures in order to ensure that such measures did not impair the smooth flow of liquidity within the interbank market. In addition, the ECB examined various issues relating to the implementation of European banking legislation, liquidity management, the exchange of information between central banks and supervisory authorities, colleges of supervisors and the European mandate of national supervisory authorities with regard to financial stability, as well as the proposed measures on capital requirements and risk management for securitisation.

The ECB also issued an opinion[29] on a proposal for a regulation on credit rating agencies. While welcoming the proposed regulation, the ECB made a number of detailed comments, relating inter alia to the existing right of the Eurosystem under the Statute of the ESCB to define the requirements of high credit standards for assets eligible for monetary policy operations and to determine the conditions for the use of credit ratings in central bank operations. The ECB also suggested exempting NCBs' in-house credit assessment systems from the proposed regulation, and stated that there was a need to properly address the interaction between the regime for credit rating agencies under the proposed regulation and the process for recognising External Credit Assessment Institutions under Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast)[30]. The ECB stressed the importance of appropriate gateways between competent authorities and central banks and made a number of recommendations on the proposed

27 CON/2010/5.
28 CON/2009/17.
29 CON/2009/38.
30 OJ L 177, 30.6.2006, p. 1.

establishment of a central repository by the Committee of European Securities Regulators. As regards the responsibility for the licensing and direct supervision of credit rating agencies, the ECB noted that the role of the Committee of European Securities Regulators should be reviewed in the light of the implementation of the de Larosière Group's recommendations.

The ECB responded to a record number of consultations by national authorities in 2009, which was to a large extent attributable to the financial crisis and to increased legislative activity in relation to financial markets. Some opinions concerned issues pertaining to the NCBs, such as amendments to the statutes of the Belgian, Bulgarian, Irish, Latvian, Lithuanian, Hungarian, Polish, Slovak and Spanish NCBs.[31] Some of these consultations related to profit distribution rules,[32] in which context the ECB emphasised that Member States were obliged to safeguard the institutional and financial independence of their NCB. As noted in the opinion on amendments to the statute of Lietuvos bankas, this safeguard is particularly important in periods of crisis and, although the aim of the draft law may be to enhance the stability and credibility of the financial system, ad hoc changes reflecting particular needs of certain shareholders would not be compatible with the Treaty or the Statute of the ESCB. Furthermore, in relation to central bank independence, the ECB issued two opinions concerning an Italian decree-law on the taxation of the Banca d'Italia's gold reserves.[33] The ECB noted that the provisions would result in transfers of the Banca d'Italia's financial resources to the state budget and that any such transfers, either in the form of a profit distribution scheme or in any equivalent form, would need to comply with the limitations imposed by the Treaty and, in particular, with the principle of central bank independence under Article 130 and with the prohibition of monetary financing under Article 123(1).

With regard to staff matters, the ECB provided opinions on a draft order applying to Deutsche Bundesbank staff[34] and on Irish and Latvian draft laws applicable to public employees, including NCB staff[35]. In line with earlier opinions, the ECB stressed the importance of NCB autonomy, meaning, inter alia, that an NCB may not be put in a position where the government could influence the NCB's policy over staff matters. While the very difficult economic circumstances and the need to stabilise public finances were recognised in the Irish and Latvian cases, the ECB also stated that Member States may not impair an NCB's ability to employ and retain the qualified staff necessary to perform independently the tasks conferred on it by the Treaty and the Statute of the ESCB.

In the area of payment and settlement systems, the ECB was consulted on several draft laws pertaining, inter alia, to payment institutions, the oversight of payment and settlement systems, operating requirements for clearing service providers and rules for clearing and settlement system operators.[36] In the context of a Finnish draft law amending securities market legislation,[37] in particular with regard to the licensing and operations of foreign clearing organisations, the ECB referred to its location policy, which is based on the premise that the Eurosystem needs to retain, in any event, ultimate control over the euro. Therefore, from both a general policy and a systemic risk perspective, the Eurosystem could not, as a matter of principle, accept that infrastructures located outside the euro area had the potential to develop into major infrastructures processing the euro. The ECB repeated this view on its location policy in an own-initiative opinion on a Dutch draft law concerning the supervision of clearing and settlement institutions.[38]

31 CON/2009/4, CON/2009/90, CON/2009/13, CON/2009/89, CON/2009/53, CON/2009/26, CON/2009/40, CON/2009/83, CON/2009/44, CON/2009/67, CON/2009/75, CON/2009/85 and CON/2009/96.
32 CON/2009/4, CON/2009/26, CON/2009/53, CON/2009/83 and CON/2009/85.
33 CON/2009/59 and CON/2009/63.
34 CON/2009/45.
35 CON/2009/15 and CON/2009/47.
36 See, for instance, CON/2009/9, CON/2009/21, CON/2009/27, CON/2009/36, CON/2009/40, CON/2009/43, CON/2009/46, CON/2009/55, CON/2009/75 and CON/2009/98.
37 CON/2009/66.
38 CON/2009/84.

In the area of banknotes, the ECB was consulted on a Czech draft law on, inter alia, the circulation of banknotes and coins. In its opinion,[39] the ECB provided clarifications regarding hidden charges for the acceptance of cash. The ECB stated that banknotes and coins which are defined as "legal tender" must be accepted at full face value for the payment of goods and services, and that imposing a fee for the use of cash would put it at a disadvantage vis-à-vis other payment instruments.

The ECB was consulted on the Luxembourg legal framework for the compilation of statistics and the role of the NCB in the fields of balance of payments and financial accounts statistics[40] and on the organisation and functioning of official statistics in Romania[41]. The ECB stressed that the statistical framework should aim to optimise the quality and availability of official statistics while preserving the independence of the NCB.

In connection with the global financial crisis, the ECB issued a large number of opinions,[42] as it did in 2008, on proposed national rescue measures concerning state guarantees to financial institutions, the recapitalisation of banks, special support to deposit guarantee schemes and, in particular in the course of the second half of the year, the establishment of impaired asset schemes (such as those in Germany and Ireland[43]). The ECB concluded that the proposed new schemes, or the extension of earlier schemes introduced in 2008, permitted the implementation of the single monetary policy and safeguarded the NCBs' independence. Furthermore, the schemes were found to comply with the monetary financing prohibition, in particular in all cases where the proposed rescue operations foresaw a role for the respective NCB.

At the end of 2009 the ECB was consulted on Belgian, French and Hungarian[44] draft laws[45] which included provisions on the establishment of national financial stability and/or systemic risk committees. The ECB noted that such committees could enhance the ability of NCBs and supervisory authorities to provide analytical support to the ESRB. The ECB also pointed out that it would be necessary to develop appropriate synergies and to avoid such national committees being entrusted with tasks and powers that potentially conflict with those of the ESRB. Moreover, the legal frameworks of these committees should appropriately reflect the roles of central banks and should not constrain the independence of the NCB governors or unduly affect the quality and impartiality of their contributions as members of the ESRB. Finally, in view of the importance of ensuring the effectiveness of macro-prudential supervisory arrangements at the EU level, the ECB concluded that it would be essential to safeguard the ability of the ESRB to perform its tasks independently and to guarantee an authoritative and effective channel for transmitting the warnings and recommendations issued by the ESRB.

As of 2008 information regarding clear and important cases of non-compliance with the obligation to consult the ECB on draft national and EU legislation is also included in the Annual Report. The ECB understands "clear" to mean cases in which there is no legal doubt that the ECB should have been consulted, and "important" to mean cases i) in which, if consultation had taken place, the ECB would have made significant critical comments on the substance of the legislative proposal; or ii) which are of general significance to the ESCB.

39 CON/2009/52.
40 CON/2009/7.
41 CON/2009/42.
42 CON/2009/2, CON/2009/3, CON/2009/6, CON/2009/10, CON/2009/11, CON/2009/12, CON/2009/16, CON/2009/18, CON/2009/19, CON/2009/20, CON/2009/22, CON/2009/24, CON/2009/25, CON/2009/26, CON/2009/28, CON/2009/29, CON/2009/30, CON/2009/31, CON/2009/32, CON/2009/34, CON/2009/39, CON/2009/48, CON/2009/49, CON/2009/51, CON/2009/53, CON/2009/54, CON/2009/56, CON/2009/58, CON/2009/62, CON/2009/65, CON/2009/68, CON/2009/73, CON/2009/78, CON/2009/79, CON/2009/82, CON/2009/83, CON/2009/86, CON/2009/92, CON/2009/93 and CON/2009/99.
43 CON/2009/54 and CON/2009/68.
44 In the opinion on the draft Hungarian legislation (CON/2010/10), the ECB also reminded the Hungarian authorities to consult the ECB at an appropriate stage in the legislative process in order to afford the ECB sufficient time to examine the draft legislative provisions and to adopt its opinion, also enabling the relevant national authorities to take the ECB's opinion into consideration before the provisions are adopted.
45 CON/2010/7, CON/2010/3 and CON/2010/10.

In 2009 the ECB recorded 12 cases of non-consultation on proposed national legislation, including two cases in which the ECB issued an own-initiative opinion. Of these 12 cases of non-consultation, the following 11 were considered clear and important.

First, the ECB decided to submit an own-initiative opinion on the proposed Irish Financial Emergency Measures in the Public Interest Bill 2009,[46] since the draft law had direct implications for the Central Bank and Financial Services Authority of Ireland and also raised serious concerns regarding central bank independence, especially personal independence, an issue of general significance to the ESCB.

The second own-initiative opinion related to the Dutch draft law on the introduction of prudential supervision of clearing and settlement institutions. The ECB had been consulted on an earlier draft in 2007 which, however, did not include provisions concerning clearing and settlement institutions established in another state. Since these new provisions were substantial and pertained to, inter alia, the ECB's location policy, which is referred to above, the ECB decided to issue an own-initiative opinion.

The Hungarian draft law relating to payment service providers and payment services primarily concerned the implementation of Directive 2007/64/EC. However, it also contained provisions relating, in particular, to the Magyar Nemzeti Bank and the principle of central bank independence, and thus remained of general significance to the ESCB. Although the ECB was not consulted, the draft law was amended in the legislative process with regard to the issues on which the ECB would have been likely to make critical comments. In another Hungarian case, the draft law concerning, inter alia, the Magyar Nemzeti Bank's tasks, the structure and legal status of the Hungarian Financial Supervisory Authority and the establishment of the Financial Stability Council was submitted for consultation but enacted before the ECB had an opportunity to respond to the consultation request.[47]

The ECB was not consulted on a Slovak draft law relating to currency matters and introducing, inter alia, for a limited period of time, a prohibition on any fees or other similar measures for credit institutions applicable to cash deposits. Since the draft law raises issues with regard to euro coins in the context of the introduction of the euro, it is of general significance to the ESCB.

Finally, with regard to rescue measures undertaken by Member States during the financial market crisis, the ECB was not consulted in six cases, namely by the Belgian, Finnish, Latvian, Swedish, Hungarian and Greek authorities. The ECB considers such crisis-related legislation to be of general significance to the ESCB. The ECB was, however, consulted on the vast majority of rescue measures, thus the failure to consult concerned only relatively few cases, which mainly related to legislation amending or extending measures on which the ECB had already been consulted.

### 6.3 ADMINISTRATION OF THE BORROWING AND LENDING OPERATIONS OF THE EUROPEAN UNION

In accordance with Article 21.2 of the Statute of the ESCB, together with Article 9 of Council Regulation (EC) No 332/2002 of 18 February 2002 as last amended by Council Regulation (EC) No 431/2009 of 18 May 2009, the ECB continues to have responsibility for the administration of the borrowing and lending operations of the EU under the medium-term financial assistance mechanism as set out in Decision ECB/2003/14 of 7 November 2003 as amended by Decision ECB/2009/17 of 19 June 2009. In 2009 the ECB received five disbursement payments on behalf of the EU and transferred these amounts to the borrower countries (Romania, Hungary and Latvia). For two of the loans, interest payments became due and were processed by the ECB accordingly.

46 CON/2009/15.

47 See CON/2010/10 and footnote 44 above.

The total amount of outstanding EU lending operations under the medium-term financial assistance mechanism as at 31 December 2009 was €9.2 billion.

## 6.4 EUROSYSTEM RESERVE MANAGEMENT SERVICES

In 2009 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). 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 remained stable over 2009. With respect to the services themselves, there was a sizeable increase in customers' total cash balances and securities holdings, mainly due, in the second part of the year, to the inclusion in the framework of investments in fixed-term euro-denominated deposits on a principal basis. The enhanced framework is reflected in Guideline ECB/2006/4 as amended on 28 May 2009 (ECB/2009/11).

The new ECB premises: simulated view of the former Grossmarkthalle with the new conference centre to the left.

CHAPTER 3

# FINANCIAL STABILITY AND INTEGRATION

# 1 FINANCIAL STABILITY

The ESCB contributes to the smooth conduct of policies pursued by the competent national authorities relating to the prudential supervision of credit institutions and the stability of the financial system. It also offers advice to these authorities and the European Commission on the scope and implementation of EU 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. At the same time, the increasing importance of financial markets and other financial institutions and their linkages with banks means that vulnerabilities in these components of the financial system are also monitored by the ESCB.

In early 2009 the further deterioration in the macro-financial environment and reduced growth prospects added to the stresses on the euro area financial system. In this period, high uncertainty about the severity of the credit cycle downturn and a weakening outlook for bank earnings weighed on investor confidence in the resilience of banks and other financial institutions. However, the extraordinary remedial measures taken by governments and central banks worldwide from late 2008 onwards contributed to lowering systemic risk, which in turn led to a significant recovery in financial markets, characterised by falling risk premia across most asset classes. The rebound in financial markets was further supported by signs of economic recovery as of the second half of 2009. Overall, these developments have contributed favourably to the outlook for financial stability in the euro area since the second quarter of 2009, although, as noted below, there remain grounds for caution in assessing the outlook.

The substantial recovery in financial markets also provided a boost to the performance of large and complex banking groups (LCBGs) in the euro area in 2009. Banks' trading results recovered after the heavy losses suffered in 2008, while the resurgence of capital market issuance activity helped banks to keep their net fee and commission income relatively stable. Another important factor contributing to the recovery in earnings was the increase in net interest income boosted inter alia by the steeper yield curve, euro area LCBGs' strong public debt purchases and wider lending margins, despite the compression in deposit margins. Furthermore, most LCBGs continued their efforts to cut costs and to streamline and restructure their business models. At the same time, this improvement in income was partially offset by an increase in loan-loss provisions, which was substantial and broad-based across institutions. The recovery in euro area LCBGs' earnings, together with a slowdown in the growth rate of assets and increases in capital, from both public and private sources, contributed to raising median regulatory capital ratios above pre-crisis levels. It is, however, noteworthy that the dispersion between the strongest and the weakest performing banks among the group of LCBGs increased.

The extraordinary remedial actions taken by central banks and governments from late 2008 onwards were successful in restoring confidence in and improving the resilience of euro area and global financial systems. With the exception of extended deposit insurance coverage, the measures taken by euro area governments fall into three main categories: i) guarantees for bank liabilities, ii) capital injections, and iii) asset support schemes. In total, euro area governments provided around

1 Since the end of 2004 the ECB has published its Financial Stability Review, a semi-annual report on the stability of the euro area financial system. In 2009 it also published its annual report on EU banking sector stability, as well as ad hoc reports on "Credit default swaps and counterparty risk" and "EU banks' funding structures and policies". In January 2010 it published structural indicators for the EU banking sector. These publications present the main findings of the monitoring by the BSC of the structure and stability of the banking sector, and are available on the ECB's website.

€2.4 trillion, or 26% of euro area GDP, over the period from October 2008 to November 2009 to support their domestic financial systems. The overall take-up rate has generally been low, but with substantial variation across the different measures and across countries. The use of recapitalisation measures has been relatively widespread, while the effective issuance of bank bonds with government guarantees has been considerably lower than the guarantees made available by governments. However, the volume and use of liability guarantees in absolute figures are much higher than those of capital injections. Asset support measures have only been adopted by a few countries. Furthermore, it seems that some of the largest euro area banks have received the most considerable share of the financial support measures. About half of the support extended across each type of measure for the entire euro area has been absorbed by the three largest recipient institutions. For each individual support measure, the largest three recipients together represent between 6% and 9% in terms of total euro area banking assets.

Notwithstanding the improvement in euro area LCBGs' earnings in 2009, the outlook for euro area banking system stability is clouded by significant risks. First, the continued deterioration in the quality of bank loans and the prospect of increasing loan losses imply that the net profits of many euro area banks are likely to remain under pressure for some time to come. Furthermore, there are reasons to be cautious about the durability of the recent recovery in banks' profitability, since the extraordinarily supportive environment for investment banking activities is unlikely to persist as market conditions begin to normalise. At the same time, net interest income is vulnerable to a flattening of the yield curve.

In addition, the interdependence of prospects for financial stability and those for fiscal sustainability, created by government measures to support the financial sector, fiscal stimulus measures and weak economic activity, is also a source of risk. Overall, the challenges facing the euro area banking sector in the period ahead call for caution with regard to the timing of the withdrawal of public support. In particular, exit decisions by governments will need to carefully balance the risks of exiting too early against those of exiting too late. Exiting before the underlying strength of key financial institutions is sufficiently well established runs the risk of leaving some of them vulnerable to adverse disturbances, possibly even triggering renewed financial system stress. Late exits, on the other hand, can entail the risk of distorting competition, creating the moral hazard risks that accompany downside protection – including the possibility of excessive risk-taking – and exacerbating the risks for public finances. Finally, some banks, especially those which have received state support, may need fundamental restructuring in order to confirm their long-term viability when such support is no longer available. Such restructuring is already under way for some large banks of the euro area.

Turning to other financial institutions, the euro area insurance sector continued to face challenging conditions during 2009. Financial performance remained subdued, as premium growth was flat on average in the first half of 2009 and some insurers continued to report large reductions in premiums written. The continued uncertainty in equity and credit markets reduced demand for life insurance products, in particular unit-linked products – where the investment risk is borne by the policyholder – and contributed to lower premiums written. On the other hand, investment income benefited from the improvements in capital markets after mid-March 2009, and in the first half of 2009 was higher on average than in the previous year. The improvements in investment income were, however, not enough to avoid a broad-based decline in profitability. Nevertheless, the capital positions of insurers improved in the first half of 2009, owing in part to the rebound in capital markets which led to a recouping of some of the unrealised losses incurred in 2008. Looking ahead, while some risks facing insurers – in particular investment risks – have decreased somewhat, other risks remain, in particular those associated with low

government bond yields and a weak economic environment. This risk outlook notwithstanding, available information on the solvency positions of euro area insurers suggests that they have, on average, a reasonable amount of remaining shock-absorption capacity.

Following broad-based losses in the hedge fund sector across most investment strategies in 2008, the strength of investment returns in 2009 meant that a substantial fraction of the losses incurred by the sector in 2008 were recouped. Furthermore, funding liquidity pressures and the associated risk of forced asset sales seem to have abated in the hedge fund sector. Strong average investment performances contributed to a gradual reversal of investment outflows, which decreased in the second and third quarters of 2009 as compared with the first quarter. In addition, some preliminary data suggest that the third quarter of 2009 may mark the end of sector-wide investment outflows. The recovery in financial markets has also led to higher levels of leverage, which, however, rose from very low levels and at the end of 2009 still appeared to be lower than at the end of 2007.

### 1.2 FINANCIAL STABILITY ARRANGEMENTS

In December 2008 the Economic and Financial Committee (EFC) mandated a High-Level Working Group on Cross-Border Financial Stability Arrangements, in which the ECB participated, to identify the lessons to be learned from recent developments for financial stability arrangements in the EU. The report issued by the group in July 2009 made a number of recommendations regarding EU policy coordination, the sharing of fiscal costs, and cooperation between home and host country authorities in crisis situations.[2] In addition, the European Commission initiated reviews and put forward proposals for enhancing EU legislation in areas such as banking supervision, bank resolution regimes and deposit guarantee schemes.

The ECB contributed to the European Commission's public consultation on the review of Directive 94/19/EC on deposit guarantee schemes in August 2009. The Eurosystem's stance is based on two main principles. First, deposit guarantee schemes are an important part of the safety net, and their role in promoting financial stability and public confidence in the financial system should therefore be strengthened. Second, they play a role in achieving a single market for financial services, including the promotion of a level playing field for internationally active banks, which calls for a higher level of harmonisation of such schemes in the EU.

On 20 October 2009 the ECOFIN Council adopted broad conclusions[3] on the strengthening of EU arrangements to ensure financial stability and provide crisis management in the event of a future financial crisis. It also endorsed a roadmap which sets out the priorities for further work on strengthening EU financial supervision, stability and regulation. These priorities include action on: i) the supervisory framework, ii) the framework for crisis prevention, management and resolution, iii) the regulatory framework, and iv) the promotion of the integrity of financial markets. In addition, the ECOFIN Council requested that the EFC consider the development of practical arrangements to enhance EU-wide policy coordination in cross-border crisis prevention, management and resolution, and that it carry out further work to explore the pros and cons of ex ante and ex post burden-sharing arrangements, as well as possible principles, criteria and procedures that could be applied in a crisis in the event that government support becomes necessary.

On 2 December 2009 the ECOFIN Council recalled these broad conclusions and on that basis welcomed the preparatory analysis carried out by the European Commission in its communication on an EU framework for cross-border crisis management in the banking sector, which covers the three main areas of early intervention, bank resolution measures and insolvency proceedings. The ECOFIN Council also agreed on a number of directions for further work to be conducted by the

2 Available on the EU Council's website (http://www.consilium.europa.eu).
3 Available on the EU Council's website (http://www.consilium.europa.eu).

Commission in these three areas, and took stock of the preparatory work undertaken in relation to cooperation and increased preparedness for ex post burden-sharing, as appropriate. It invited the European Commission, the Financial Services Committee and the EFC to present concrete proposals on these topics in the first half of 2010.[4]

4 The conclusions of the ECOFIN Council meeting of 2 December 2009 are available on the EU Council's website (http://www.consilium.europa.eu).

# 2 FINANCIAL REGULATION AND SUPERVISION

## 2.1 GENERAL ISSUES

Following the deepening of the financial crisis in autumn 2008, concrete steps were taken in 2009 to identify improvements that should be made to the institutional supervisory framework. At the EU level, the report of the de Larosière Group, published in February 2009, put forward proposals to improve the arrangements for financial supervision in the EU. On the basis of the report, the European Commission in May 2009 issued a communication on European financial supervision, which set out the proposed steps for enhancing EU supervisory arrangements. These were broadly endorsed by the ECOFIN Council on 9 June 2009 and the European Council on 18-19 June. On 23 September the European Commission published legislative proposals[5] on the setting-up of a new institutional supervisory framework in the EU, composed of the following two pillars.[6]

First, a European Systemic Risk Board (ESRB) is to be established. Under the Commission's legislative proposals, the ESRB will be responsible for the macro-prudential oversight of the financial system within the EU, thus contributing to the prevention or mitigation of systemic risks within the financial system (for more details, see Box 8).

Second, a European System of Financial Supervisors (ESFS) will be established. Under the Commission's proposals, the ESFS will be an integrated network comprising the national financial supervisors and three new European Supervisory Authorities (ESAs): the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA). The latter will be created by transforming the existing supervisory committees (established in the context of Level 3 of the Lamfalussy framework for financial regulation and supervision) into ESAs. The tasks of the three ESAs will include: i) contributing to the establishment of high-quality common regulatory and supervisory standards, in particular by developing draft technical standards to be endorsed by the European Commission to make them legally binding, ii) contributing to a consistent application of EU legislation, inter alia by engaging in mediation[7] between national supervisory authorities, promoting the coherent functioning of colleges of supervisors and taking actions in emergency situations, iii) cooperating closely with the ESRB, iv) conducting peer reviews of supervisory authorities to strengthen consistency in supervisory outcomes, and v) monitoring and assessing market developments. The European Commission also proposed to make targeted changes to existing financial services legislation to ensure that the new supervisory authorities can work effectively.[8]

The European Commission's legislative proposals, on which the ECB was consulted,[9] will have to be adopted by both the European Parliament and the EU Council through the co-decision legislative procedure. At its meeting on 18-19 June 2009, the European Council urged the ECOFIN Council to adopt the legislative proposals swiftly so that the new EU supervisory structures could be put fully in place in the course of 2010.

5 Available on the European Commission's website (http://ec.europa.eu).

6 For more detailed information on the institutional genesis of the proposals for the establishment of the new supervisory framework, see Chapter 4.

7 This mediation will be binding, subject to the qualification in the ECOFIN Council's general approach that the decisions taken by the ESAs should not have any effect on the fiscal responsibilities of the Member States.

8 Proposal for a directive of the European Parliament and of the Council amending Directives 1998/26/EC, 2002/87/EC, 2003/6/EC, 2003/41/EC, 2003/71/EC, 2004/39/EC, 2004/109/EC, 2005/60/EC, 2006/48/EC, 2006/49/EC and 2009/65/EC in respect of the powers of the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority.

9 See the opinion of the ECB of 26 October 2009 on a proposal for a regulation of the European Parliament and of the Council on Community macro-prudential oversight of the financial system and establishing a European Systemic Risk Board and a proposal for a Council decision entrusting the European Central Bank with specific tasks concerning the functioning of the European Systemic Risk Board (CON/2009/88); and the opinion of the ECB of 8 January 2010 on three proposals for regulations of the European Parliament and of the Council establishing a European Banking Authority, a European Insurance and Occupational Pensions Authority and a European Securities and Markets Authority (CON/2010/5).

On 20 October 2009 the ECOFIN Council reached a broad agreement on the two legislative texts concerning the ESRB. Subsequently, on 2 December 2009, the ECOFIN Council agreed on a compromise proposal on the draft regulations concerning the establishment of the three ESAs, which also include certain provisions that are of relevance for the establishment of the ESRB (for example, relating to the collection of information from the ESAs). The Presidency of the EU Council started negotiations with the European Parliament, with a view to reaching an agreement in 2010.

**Box 8**

## THE CREATION OF THE EUROPEAN SYSTEMIC RISK BOARD AND ITS IMPLICATIONS FOR THE ECB

### 1 Macro-prudential oversight and systemic risk

A number of central banks throughout the world have a role in safeguarding the stability of the financial system in their respective jurisdictions. In the EU, the ESCB contributes to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system. The financial crisis has clearly illustrated the need for a better understanding and monitoring of systemic risk, especially with regard to financial system interdependencies, and has exposed significant shortcomings with regard to the effective analysis of available information and awareness of the key financial vulnerabilities.

Macro-prudential oversight focuses on the financial system as a whole, by contrast with the supervision of individual financial institutions. Macro-prudential oversight is thus very closely related to the concept of systemic risk, which may arise from the collective behaviour of financial institutions, from their interaction and from interlinkages between the financial sector and the real economy.

### 2 Tasks of the ESRB

Under the European Commission's legislative proposals, the European Systemic Risk Board (ESRB), a new independent body, will be responsible for the macro-prudential oversight of the financial system in the EU. It will have the following tasks: i) to determine, collect and analyse all the information relevant for its mission, ii) to identify and prioritise systemic risks, iii) to issue warnings where such systemic risks are deemed to be significant, iv) to issue recommendations for remedial action in response to the risks identified, and v) to monitor the follow-up to warnings and recommendations.

In pursuing its mandate, the ESRB will be expected to cooperate closely with the European System of Financial Supervisors (ESFS). In particular, it will provide the European Supervisory Authorities (ESAs) with the information on systemic risks that they need to fulfil their tasks. Conversely, the ESAs are required to cooperate closely with the ESRB, in particular by providing the necessary information for the fulfilment of the tasks of the ESRB and by ensuring a proper follow-up to its warnings and recommendations. Cooperation between the ESRB and international institutions such as the IMF and the Financial Stability Board will also take place, as well as with the relevant bodies outside the EU on matters related to macro-prudential oversight.

### 3 Involvement of the ECB

Under the Commission's legislative proposals, the ECB is entrusted with the task of ensuring the performance of the secretariat function for the ESRB, and thereby of providing analytical, statistical, administrative and logistical support to the ESRB. In accordance with the draft legislation, the mission of the secretariat of the ESRB will include, in particular, preparing for ESRB meetings; collecting and processing information in support of the tasks of the ESRB; preparing the necessary analyses, also drawing on the technical advice of NCBs and supervisors; supporting the ESRB at the administrative level in its international cooperation with other relevant bodies on macro-prudential issues; and supporting the work of the General Board, the Steering Committee and the Advisory Technical Committee.

The ESRB will benefit from the expertise of NCBs and supervisory authorities, in particular through their participation in the Advisory Technical Committee to be established as part of the ESRB structure. The committee will provide advice and assistance on technical issues related to the work of the ESRB.

In its opinion on these proposals,[1] the ECB expressed its broad support of the proposed legal framework for the ESRB and indicated its readiness to support the ESRB and to ensure the performance of its secretariat function. Moreover, the ESRB will benefit from the macroeconomic, financial and monetary expertise of all EU central banks, through the participation of the members of the General Council of the ECB in the General Board of the ESRB. The involvement of the ECB and the ESCB in the functioning of the ESRB will not alter the primary objective of the ESCB under Article 127 of the Treaty, which is to maintain price stability.

In order to support the work of the ESRB, the ECB shall ensure sufficient human and financial resources for the fulfilment of its task of ensuring the secretariat. The ECB will also enhance its existing capabilities for monitoring and assessing risks to financial stability. The ECB will moreover support the ESRB by developing and maintaining new analytical tools and methodologies for the identification and assessment of systemic risks and the issuance of early risk warnings.

1 For more details on this opinion (CON/2009/88), see Section 6.2 of Chapter 2.

## 2.2 BANKING

The London summit of the G20 Heads of State or Government in April 2009 was a milestone for financial regulation and supervision as it reflected the commitment of the G20 leaders to strengthen regulatory standards as soon as economic recovery is assured. To this end, the G20 agreed to increase banks' capital buffers above regulatory minima, to enhance the quality of capital, and to develop recommendations to mitigate pro-cyclicality.[10] Furthermore, they agreed to introduce a non-risk-based capital ratio to contain leverage and a global framework for promoting stronger liquidity buffers. Finally, they decided to refine the incentives for the management of securitisation risks.

Against this background, the Basel Committee on Banking Supervision (the Basel Committee), in which the ECB participates as an observer,

10 Defined as the capacity of the system to amplify economic fluctuations.

adopted an ambitious and comprehensive plan with the aim of further strengthening banking regulation and supervision. In July 2009 the Committee published its enhancements to the Basel II capital framework. These enhancements concern increased capital requirements for trading book exposures and resecuritisations as well as for liquidity lines and credit lines provided to off-balance-sheet entities. In addition, standards are raised regarding the internal analysis and disclosure of securitisation exposures, and compensation and risk management practices. Finally, in December 2009 the Basel Committee, in line with the mandate of the G20, published consultation documents on raising the quality of capital, introducing a non-risk-based leverage ratio to supplement the Basel II framework, as well as frameworks for liquidity risk and counter-cyclical capital buffers.

In line with the work of the Basel Committee, the European Commission adopted in July 2009 a proposal amending the Capital Requirements Directive.[11] The ECB was consulted on this proposal and published an opinion on it on 12 November 2009.[12] Overall, in its legal opinion the ECB supported the proposed amendments and suggested that the requirements of the proposed directive be even more closely aligned with the revised Basel II market risk framework, in order to ensure fair international competition in this area. Furthermore, the ECB proposed incorporating in the provisions for remuneration policies the guidance developed by the Financial Stability Board.[13] Finally, the ECB recommended applying the provisions for remuneration policies at the banking group level to ensure that risk-taking employees of EU banks are treated consistently.

## 2.3 SECURITIES

The financial crisis raised concerns as to the reliability and transparency of ratings provided by credit rating agencies and potential conflicts of interest associated with their activities. The G20 therefore agreed in April 2009 to extend regulatory oversight and registration to rating agencies to ensure that they meet the Code of Conduct Fundamentals for Credit Rating Agencies of the International Organization of Securities Commissions. In the EU, the European Parliament and the EU Council approved on 23 April 2009 a Regulation on rating agencies,[14] which establishes that all rating agencies must be registered with and supervised by the competent authorities of the relevant Member States. It also introduces requirements related to dealing with conflicts of interest, ensuring the quality of ratings and increasing transparency for the users of ratings. The ECB broadly welcomed the Regulation in its opinion of April 2009,[15] stating as a general comment that more clarity regarding the exact scope of the Regulation and its regulatory purposes was needed.

The G20 also agreed that hedge funds should be subject to mandatory registration and information disclosure. To this end, the European Commission put forward in April 2009 a proposal for a directive on alternative investment fund managers (AIFMs), including those of hedge funds, which would require AIFMs above a certain size to be authorised and subject to ongoing supervision and to comply with a set of regulatory standards contained in the proposed directive. Only if these conditions were fulfilled could an AIFM market funds to professional investors across the EU. In its opinion on the proposed directive,[16] the ECB supported the

11 Proposal for a directive of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for resecuritisations, and the supervisory review of remuneration policies.

12 Opinion of the European Central Bank of 12 November 2009 on a proposal for a directive of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for resecuritisations, and the supervisory review of remuneration policies (CON/2009/94).

13 See "Principles for Sound Compensation Practices" and the related "Implementation Standards", Financial Stability Board, April and September 2009 respectively.

14 Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies, OJ L 302, 17.11.2009, p.1.

15 Opinion of the European Central Bank of 21 April 2009 on a proposal for a regulation of the European Parliament and of the Council on credit rating agencies (CON/2009/38).

16 Opinion of the European Central Bank of 16 October 2009 on a proposal for a directive of the European Parliament and of the Council on Alternative Investment Fund Managers (CON/2009/81).

establishment of a harmonised framework covering AIFMs in the EU, but at the same time stressed the importance of establishing a globally coordinated framework. The opinion also suggested that some provisions could be further tailored to reflect the differences between the funds that fall within the scope of the proposed directive. Furthermore, the ECB proposed that, when implementing measures were adopted, further thought be given to reporting requirements vis-à-vis the competent authorities and leverage limits that take the full risk profile of the hedge funds into account while not excessively hindering their investment flexibility.

## 2.4 ACCOUNTING

The main developments with regard to accounting in 2009 related to the international convergence of accounting standards and improvements to address weaknesses identified in the wake of the financial crisis. Action was taken in these areas with a view to making significant progress towards a single set of harmonised standards.

In response to the financial reporting-related issues raised by the financial crisis, the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) set up the Financial Crisis Advisory Group in December 2008, to the work of which the ECB contributed in the course of 2009. The group will advise the two boards on the standard-setting implications of the global financial crisis and potential changes to the global regulatory environment.

In April 2009 the FASB amended the accounting rules applicable to the non-temporary impairment of debt securities such that, by contrast with the approach of the International Financial Reporting Standards (IFRSs), only credit-related impairment losses would be recognised in earnings. This would mean that US banks and EU banks would account differently for losses on these securities in their net income. The ECB and the European Commission voiced concerns that this divergent treatment compromised the level playing field and called on the IASB to resolve the issue before the end of 2009.

In March 2009 the IASB published an exposure draft on derecognition, with proposed amendments to IAS 39 and IFRS 7,[17] which would have a significant impact on the accounting treatment of repurchase agreements (repos). Given the importance of this market for central banks and the banking industry, the Eurosystem highlighted that the amendments would raise issues related to the level playing field between EU and US banks and could have a negative impact on banks' business models and the European market for repos. The IASB was thus invited to reassess the proposed amendments concerning repos.

The Eurosystem also provided comments to the IASB on the latter's exposure draft on the classification and measurement of financial instruments. Issues raised by the Eurosystem included the need for the IASB to give greater prominence to the institution's business model, to allow for the possibility of reclassifying financial instruments in exceptional circumstances and to intensify collaboration with the FASB with a view to achieving consistent treatment.

The IASB also issued for public consultation an exposure draft on impairment with a view to implementing the G20 recommendation that accounting standard-setters strengthen the accounting recognition of loan-loss provisions by incorporating a broader range of available credit information.

Another important development was the establishment of the IASB dialogue with prudential authorities and market regulators, including the ECB, under the aegis of the Financial Stability Board, on financial institution reporting issues. This was a direct response to the G20 call for the IASB to improve the involvement of stakeholders.

17 Available on the IASB's website (http://www.iasb.org).

A high-level working group on the G20 accounting recommendations was set up by the Basel Committee in April 2009. The group, in which the ECB participates, issued guiding principles in August 2009 for the revision of accounting standards for financial instruments, to assist the IASB in addressing issues relating to provisioning, fair value measurement and related disclosures.

# 3 FINANCIAL INTEGRATION

The Eurosystem contributes to enhancing European financial integration by 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 foster financial integration.

### RAISING AWARENESS OF AND MONITORING FINANCIAL INTEGRATION

In April 2009 the ECB published its third annual report on "Financial integration in Europe". The main purpose of the report is to contribute to the advancement of European financial integration and to raise public awareness of the Eurosystem's role in supporting this process, providing information about the state of integration and therefore an empirical basis for policy measures to further foster financial integration. The report first assesses the state of financial integration, based on a set of indicators that are also published semi-annually on the ECB's website. In 2009 these indicators were further developed to include indicators of financial development. The report then analyses in detail three selected issues: i) the impact of the financial crisis on euro area financial integration, ii) institutional investors and financial integration, and iii) the financing of small and medium-sized enterprises and young innovative companies in Europe. The report concludes with an overview of the Eurosystem's contribution towards the achievement of more integrated and developed financial markets in Europe.

The ECB continued its involvement in the Research Network on Capital Markets and Financial Integration in Europe, which brings together academics, market participants and policy-makers and is run in cooperation with the Center for Financial Studies at the University of Frankfurt. The network's 12th conference on "Learning from the crisis: Financial stability, macroeconomic policy and international institutions" was hosted by the Einaudi Institute for Economics and Finance in Rome on 12-13 November 2009. As in previous years, the ECB awarded five "Lamfalussy Fellowships" to young researchers in the context of the network. The network's current priorities are: i) financial systems as risk managers, risk distributors and risk creators, ii) the integration and development of retail financial services and the promotion of innovative firms, and iii) financial modernisation and governance and the integration of the European financial system into global capital markets.

### ACTING AS A CATALYST FOR PRIVATE SECTOR ACTIVITIES

The Eurosystem continued to support the Single Euro Payments Area (SEPA) initiative, which allows individuals, corporations and public administrations to make cashless payments in euro throughout the participating countries from a single account using a single set of payment instruments as easily, efficiently and safely as in national payments. The SEPA direct debit was launched successfully in November 2009, by which time more than 2,500 banks had signed up to offer this first truly European direct debit payment service. This marked the second milestone after the launch of the SEPA credit transfer in January 2008. A joint statement [18] by the European Commission and the ECB provided the industry with further clarity on the future business model for the SEPA direct debit scheme. The Eurosystem monitors migration towards the use of SEPA payment instruments on the basis of "SEPA indicators" [19]. The SEPA credit transfer accounted for 6.2% of total euro credit transfer payments in January 2010, which indicates that it is now being used not only for cross-border payments [20] but also for domestic transactions.

The introduction of the SEPA credit transfer and direct debit has laid the foundations on which further innovations can build. Work is currently ongoing on the development of a

18 Published on the ECB's website on 24 March 2009.
19 Available on the ECB's website.
20 Cross-border payments are estimated to account for 2-3% of overall payments.

pan-European online payment solution,[21] as well as on mobile payments and electronic invoicing. The Eurosystem organised two meetings with market participants to discuss the status of initiatives related to electronic SEPA payment solutions and will continue to monitor work in this area.

Progress was achieved in the SEPA framework for cards, put in place in 2008. The Eurosystem expects at least one additional European card scheme to emerge which meets its requirements and those of the other stakeholders, and several market initiatives are already under way. The migration to chip cards with a personal identification number and to automated teller machines and point-of-sale terminals equipped according to the EMV standard advanced well.[22] The SEPA framework for cards is expected to increase choice and efficiency, but more effort is still needed to promote it. In May 2009 the Eurosystem organised a meeting with stakeholders on a SEPA certification framework for cards and terminals, with the aim of achieving a single evaluation and certification process for card and terminal manufacturers.

The sixth SEPA progress report of the Eurosystem suggested that improvements may be needed to the overall governance of SEPA, concerning mainly stakeholder involvement, transparency and progress in migration. The Eurosystem and the European Commission are currently investigating how to improve SEPA governance.

In December 2009 the ECOFIN Council confirmed the importance of establishing definitive deadlines for migration to the SEPA direct debit and credit transfer, in order to provide the clarity and the incentives needed by the market to adopt the SEPA instruments, as well as to eliminate the costs of running both older products and the SEPA products in parallel. The ECOFIN Council therefore invited the European Commission and the ECB, in close cooperation with all the parties concerned, to carry out a thorough assessment to establish whether legislative measures are needed to set binding deadlines for introducing the SEPA direct debit and credit transfer, and to put forward a legislative proposal in the event that such measures are deemed necessary.

The market for short-term paper in Europe is of a largely domestic nature. The STEP initiative, pursued by market participants under the auspices of the European Banking Federation and ACI – the Financial Markets Association, and steered by the STEP Market Committee, has promoted the integration of the short-term debt securities market through a voluntary core set of market standards and practices since 2001. The Eurosystem has supported the STEP initiative since its inception.

Following the successful launch of the STEP market in June 2006, the Eurosystem has continued its support in two ways. First, the ECB provides statistics on the STEP market, which include monthly outstanding amounts and daily yields and spreads on new issues. Since end-November 2009 the ECB has also published daily statistics on aggregated outstanding amounts and new issues broken down by sector, maturity, rating and currency. Second, the Eurosystem will continue to assist the STEP Secretariat in the labelling of STEP paper until June 2010. The ultimate responsibility for granting and withdrawing the STEP label rests fully with the STEP Secretariat.

Notwithstanding the distressed market conditions, the total outstanding amount of STEP debt securities increased by 6.4% year on year in the third quarter of 2009, reaching €404.8 billion in December 2009. The increase was partly driven by the decision of the Governing Council in October 2008 to expand the list of assets eligible to be used as collateral in Eurosystem credit operations, including STEP-labelled paper issued by banks. Following

21 An online payment (or e-payment) is based on an internet banking payment, but has the additional feature that the web merchant receives a payment confirmation in real time, so that the goods can be released immediately.

22 For more information, see the SEPA pages on the ECB's website.

the introduction of the STEP label in 2006, there were 149 active STEP label programmes in place by December 2009.

To increase transparency in the area of asset-backed securities, the Eurosystem launched a project together with rating agencies, issuers and investors to provide loan-level data on the assets underlying such instruments. A well-functioning securitisation market, backed by standardisation and enhanced transparency, contributes to the completeness of the European financial system and fosters integration through the improved comparability of instruments across borders.

### ADVICE ON THE LEGISLATIVE AND REGULATORY FRAMEWORK FOR THE FINANCIAL SYSTEM AND DIRECT RULE-MAKING

In 2009 the Eurosystem's advice on the legislative and regulatory framework focused in particular on the follow-up to the report of the de Larosière Group in terms of creating a new institutional supervisory framework in the EU (see Section 2.1 of this chapter). Furthermore, as part of its advisory role in accordance with the Treaty, the ECB regularly provides advice on initiatives that are directly or indirectly relevant from a financial integration point of view (see Section 2 of this chapter and Section 6.2 of Chapter 2).

The ECB provided advice on the integration of securities settlement and payment systems. The ECB continued to be closely involved in the work on the "Code of Conduct for Clearing and Settlement", which aims to foster competition on the basis of price transparency, access and interoperability, and service unbundling and accounting separation. The ECB also conducted analysis on the use of price examples by central securities depositories as a way of improving price comparability.

The ECB continued to participate in the Clearing and Settlement Advisory Monitoring Expert Group II (CESAME II), which addresses the removal of the "Giovannini barriers" to efficient clearing and settlement (named after the group that identified them in 2001) resulting from differences in technical standards and business practices. This work is closely linked to the implementation of TARGET2-Securities (T2S) and aims to foster harmonisation in the post-trade environment.

Since harmonisation of the European legal framework for payments forms the basis for SEPA, the Eurosystem takes a strong interest in EU legislation in this area. The Payment Services Directive[23] had been transposed into national law and had entered into force in the majority of Member States by November 2009. The ECB participated as an observer in the European Commission's transposition working group, in which the NCBs were also represented by delegates accompanying their respective government representatives. Furthermore, the ECB was involved in and consulted on the Commission's work on the review of Regulation (EC) 2560/2001 (now Regulation (EC) 924/2009 on cross-border payments in the Community). With regard to cross-border direct debits, the revised Regulation requires all banks that currently offer direct debits in euro at the national level also to be able to receive and process cross-border direct debit instructions in euro by November 2010. It further prescribes temporary arrangements for cross-border and national SEPA direct debit interchange fees, as set out by the ECB and the European Commission in joint press releases.[24] Finally, the ECB has been involved in, and consulted on, the review of the E-Money Directive.

In December 2008 two academic groups – the Study Group on a European Civil Code and the Research Group on EC Private Law – submitted to the European Commission the final version of a joint draft common frame of reference, which provides a set of "model rules" covering core

23 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.

24 Published on 4 September 2008 and 24 March 2009, the two joint press releases provided clarity on the expectations of European authorities concerning the interim and long-term interchange fees for SEPA direct debits.

areas of civil law. The ECB has contributed to the work of the European Financial Markets Lawyers Group (EFMLG) on issues in this area that are particularly relevant for the financial services industry.[25] The ECB was also involved in the EFMLG dialogue with leading industry organisations that sponsor standard market documentation. The aim of the dialogue was to discuss the lessons to be learned from the recent market turmoil regarding provisions commonly used in financial transaction documentation, to look at the differences between various master agreements and to start a process of convergence towards standard market documentation.

### PROVIDING CENTRAL BANKING SERVICES WHICH FOSTER FINANCIAL INTEGRATION

TARGET2, the second generation of the Eurosystem's large-value payment system, is the first market infrastructure to be completely integrated and harmonised at the European level. It allows institutions operating in several European countries to rationalise their back office functions and to consolidate their euro liquidity management. The Eurosystem strives to enhance TARGET2 on a regular basis in order to better address users' needs, and implemented two new releases of the system in the course of 2009.

T2S – the Eurosystem's planned platform for core, borderless and neutral securities settlement services – will have an important impact on the harmonisation and integration of the post-trading environment in Europe. T2S will remove many of the "Giovannini barriers" to cross-border clearing and settlement by providing a single IT platform with common interfaces and a single messaging protocol, introducing a harmonised timetable for all connected markets and extending a single harmonised settlement model comprising delivery versus payment in central bank money to all national and cross-border transactions. In 2009 several T2S sub-groups of industry experts developed standards for the harmonisation of instructions and processes. As work on implementing T2S has progressed, new areas have regularly been identified in which harmonisation is required and these have either been tackled directly within the scope of the project or referred to the European Commission's CESAME II group (for more details, see Section 2.2 of Chapter 2).

Finally, in the area of collateral management, work continued in 2009 on the establishment of a single shareable platform (CCBM2) for euro area NCBs with a view to consolidating and increasing the efficiency of the Eurosystem's internal systems and enhancing counterparties' liquidity and collateral management (see Section 2.3 of Chapter 2).

25 The EFMLG's position paper was published in September 2009 and is available on the EFMLG's website (http://www.efmlg.org).

# 4 OVERSIGHT OF PAYMENT SYSTEMS AND MARKET INFRASTRUCTURE

Payment and securities clearing and settlement systems are basic infrastructures which are necessary for the proper functioning of market economies. They are indispensable for the efficient flow of payments for goods, services and financial assets, and their smooth functioning is crucial for the implementation of the central bank's monetary policy and for maintaining the stability of and confidence in the currency, the financial system and the economy in general. Promoting the smooth operation of payment systems is a key task of the Eurosystem. For the performance of this task, the Eurosystem applies three approaches: it takes an operational role, conducts oversight activities and acts as a catalyst.

Through its oversight function, the Eurosystem aims to ensure the safety and efficiency of payment and securities settlement systems and of central counterparties processing the euro, by monitoring them, assessing them and, where necessary, inducing change.

Like most other overseers, the Eurosystem focuses in its oversight activities both on individual payment and securities settlement systems and – given the interdependencies between these systems – on the market infrastructure as a whole.

Payment instruments also fall within the scope of the Eurosystem's oversight, which focuses in particular on their safety and efficiency. As a consequence of both the creation of SEPA and the increasing harmonisation of the European legal framework, the retail payment landscape is changing significantly, and the importance of a consistent approach with regard to the oversight of payment instruments is increasing. The Eurosystem has therefore developed a "Harmonised oversight approach and oversight standards for payment instruments", published in February 2009. These standards create a common ground for all payment instrument frameworks, representing foundations on which the oversight of payment instruments in general can be built.

In order to provide a comprehensive overview of the methods, policies and instruments that the Eurosystem applies in its oversight activities, in February 2009 the Eurosystem issued a "Eurosystem oversight policy framework". The framework is a central reference point on oversight matters for systems, market participants and other interested parties, as well as for the Eurosystem itself.

## 4.1 LARGE-VALUE PAYMENT SYSTEMS AND INFRASTRUCTURE SERVICE PROVIDERS

Large-value payment systems form the backbone of the euro area market infrastructure and play an important role for the stability and efficiency of the financial sector and the overall economy. The Eurosystem applies a well-defined oversight policy framework to all large-value payment systems which settle euro-denominated transactions, both to its own systems and to those that are privately operated. It is based on the internationally accepted Core Principles for Systemically Important Payment Systems, defined by the Committee on Payment and Settlement Systems (CPSS) and adopted by the Governing Council in 2001. The Core Principles are complemented by the business continuity oversight expectations for systemically important payment systems (SIPS) which the Governing Council adopted in 2006, giving the industry a deadline for implementation by June 2009. In the second half of 2009 the Eurosystem started assessing the degree of compliance of the SIPS with the business continuity oversight expectations.

The overall operational performance and provision of services of the key payment infrastructures settling euro-denominated transactions (TARGET2, EURO1 and the Continuous Linked Settlement system) and infrastructure service providers (such as SWIFT) were stable and resilient over 2009, in a period characterised by gradually moderating financial market tensions.

#### TARGET2

In early 2009 the Eurosystem TARGET2 overseers completed their comprehensive oversight assessment (which had been initiated in late 2006) of the design of TARGET2 against the Core Principles for Systemically Important Payment Systems. On the basis of this assessment, which was published in May 2009, the Governing Council concluded that the design of TARGET2 observed all applicable Core Principles.

Following the June 2009 deadline for the implementation of the business continuity oversight expectations for SIPS, an assessment of TARGET2 against these expectations started in the second half of 2009. The assessment results will become available in the course of 2010.

In addition, before the new TARGET2 software release went live on 23 November 2009, the overseers assessed the new functionalities against the applicable Core Principles. The overseers concluded that, overall, the new release would have a positive impact on the management of liquidity and credit risk by TARGET2 participants.

#### EURO1

EURO1 is a large-value payment system for cross-border and domestic transactions in euro between banks operating in the EU. 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 TARGET2 system, with the ECB acting as settlement agent.

No changes were made to EURO1 in 2009 that could have affected the risk situation of the system and thus would have required an assessment from the oversight perspective. The system operated smoothly throughout the year.

In the second half of 2009 the EURO1 system was assessed against the business continuity oversight expectations for SIPS. The assessment process is still ongoing, and the assessment results will become available in the course of 2010.

#### CONTINUOUS LINKED SETTLEMENT SYSTEM

The Continuous Linked Settlement (CLS) system was launched in September 2002 and is operated by CLS Bank International (CLS Bank). The system provides a multi-currency service for the synchronous, i.e. payment-versus-payment (PvP), settlement of payment instructions relating to foreign exchange transactions. Through its PvP mechanism, CLS virtually eliminates the credit risks associated with the settlement of foreign exchange transactions. CLS currently settles in 17 of the world's most traded currencies, including the euro, the US dollar, the Japanese yen, the pound sterling and the Swiss franc.

Given that CLS Bank is established in the United States, the Federal Reserve System accepts primary oversight responsibility for CLS under a cooperative oversight arrangement involving the G10 central banks and the central banks of CLS-settled currencies. This arrangement is laid down in a protocol that was established by the participating central banks in November 2008.[26] The ECB, in close cooperation with the euro area NCBs, is part of this cooperative oversight arrangement and has primary oversight responsibility for the settlement in euro by CLS.

In 2009 CLS cooperative oversight activities mainly focused on the review of new services, initiatives and changes to the rules introduced by CLS Bank. These included the proposal for a new aggregation service, which aims to provide a safer and more efficient handling of high-volume but low-value foreign exchange transactions; proposals for a new pricing policy; and changes to the CLS rules and member handbook to reflect the lessons learned following the bankruptcy of Lehman Brothers.

26 The "Protocol for the Cooperative Oversight Arrangement of CLS" is available on the website of the Board of Governors of the Federal Reserve System (http://www.federalreserve.gov).

### SWIFT

SWIFT is important from a financial stability perspective as it provides secure messaging services to the financial community in more than 210 countries around the world. SWIFT is a limited liability cooperative company which is established in Belgium. The ECB participates in the G10 cooperative oversight of SWIFT, with the Nationale Bank van België/Banque Nationale de Belgique being the overseer with primary responsibility. The oversight focuses on SWIFT's resilience to crises, operational reliability, security, business continuity, internal risk management processes and major projects undertaken. The oversight activities performed by central banks aim to ensure that SWIFT has in place appropriate governance arrangements, structures, processes, risk management procedures and controls to enable it to manage effectively the risks it may pose for financial stability and the soundness of financial infrastructures.

In 2009 the SWIFT oversight activities mainly focused on:

i) the implementation of the distributed architecture programme aimed at redesigning SWIFT's technical architecture, including monitoring of the progress made on operational readiness testing and customer migration, as well as on the establishment of the new Asia Pacific command and control centre;

ii) the evolution of the SWIFT connectivity that is offered to customers;

iii) the monitoring of new projects with a potential impact on the confidentiality, integrity and availability of SWIFT's critical services; and

iv) the risk-based evaluation of SWIFT's cyberdefence focusing on organisational and operational security practices.

In 2009 SWIFT announced an internal initiative entitled Lean@SWIFT, which aims to reduce operating costs within the organisation by streamlining certain processes. The overseers are closely monitoring SWIFT's actions in relation to this initiative to ensure that due attention is paid to the continued resilience and availability of the SWIFT services.

## 4.2 RETAIL PAYMENT SYSTEMS AND INSTRUMENTS

The Eurosystem's oversight also covers retail payment systems and payment instruments. In 2009 the ECB continued to lead the monitoring of the smooth functioning of STEP2, which is a payment system for cross-border, and increasingly also for domestic, retail payments in euro, operated by EBA CLEARING.

On 2 November 2009 EBA CLEARING launched two additional STEP2 services (CORE and B2B) supporting the SEPA direct debit scheme. The two services are considered to be compliant with the respective European Payments Council rulebooks, and their introduction did not alter the level of compliance of STEP2 with the applicable oversight standards.

In 2009 the Eurosystem continued its oversight assessment of card payment schemes operating in the euro area against its oversight standards for such schemes adopted in January 2008. The assessment covers 26 schemes, four of which are international. Certain card payment schemes have been exempted from the application of the oversight standards. International schemes are assessed by cooperative assessment groups consisting of a lead overseeing central bank and other volunteering central banks.

For the purpose of this assessment, the ECB, as the lead overseer within the Eurosystem for VISA Europe, Diners/Discover and American Express, signed Memoranda of Understanding with these card schemes, while the Nationale Bank van België/Banque Nationale de Belgique signed a similar Memorandum of Understanding with MasterCard Europe, for which it acts as lead overseer.

The assessments of national and international card schemes will be subject to peer reviews in order to ensure equal application of the oversight standards. This process will start at the beginning of 2010. It is envisaged that a report describing the main results of the assessment at the aggregate level will be published around end-2010.

On the basis of the "Harmonised oversight approach and oversight standards for payment instruments", the Eurosystem developed draft oversight frameworks for credit transfer schemes and for direct debit schemes and invited all interested parties to provide comments on them by November 2009. Once the comments received in the public consultation have been considered, the oversight frameworks will be finalised in 2010.

## 4.3 SECURITIES AND DERIVATIVES 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, against the Eurosystem user standards.[27] SSSs and links are eligible for Eurosystem credit operations if they fulfil these user standards, which also provide the basis against which the Eurosystem assesses any new SSSs and links or significant updates of those systems already eligible.

In August 2009 the Eurosystem finalised its comprehensive assessment of all SSSs, links and relayed links. The assessment confirmed that the overall level of compliance of the SSSs and their direct and relayed links was high and that, where necessary, the SSSs had continued their efforts to enhance compliance. In addition, one new relayed link and its underlying direct link were assessed and found to be compliant with the Eurosystem user standards.

### ESCB-CESR RECOMMENDATIONS FOR SECURITIES CLEARING AND SETTLEMENT IN THE EUROPEAN UNION

In June 2009 the ESCB and the Committee of European Securities Regulators (CESR) published "Recommendations for securities settlement systems and recommendations for central counterparties in the European Union"[28] that aim to increase the safety, soundness and efficiency of securities clearing and settlement systems and of central counterparties (CCPs) in the EU. They are based on, and are at least as stringent as, the recommendations for SSSs and the recommendations for CCPs issued by the CPSS and the Technical Committee of the International Organization of Securities Commissions (IOSCO).

The adoption and publication of the final ESCB-CESR recommendations is an important step towards a set of minimum requirements to ensure safety and soundness in the post-trading infrastructure in the EU. The recommendations are addressed to regulators and overseers, who will use them as a regulatory tool and will strive to achieve their consistent implementation and a level playing field for SSSs and CCPs in the EU. It is envisaged that SSSs and CCPs will publish their answers to the key questions of the ESCB-CESR report and that by the end of 2011 they will have been assessed against these recommendations.

The European Commission, the Committee of European Banking Supervisors (CEBS) and relevant market participants and associations were consulted throughout the process of drawing up these recommendations, and

27 "Standards for the use of EU securities settlement systems in ESCB credit operations", January 1998.
28 Available on the ECB's website.

all interested parties were asked to provide comments in two public consultations. The review took into account all recent regulatory and legal developments and other initiatives that had taken place since the initial work, which started in 2001, was frozen in 2005. In view of the financial stability risk posed by the growing scale of over-the-counter (OTC) derivatives exposures, the risks relating to OTC derivatives were also taken into account when reviewing and finalising the recommendations for CCPs.

### MARKET INFRASTRUCTURES FOR OTC DERIVATIVES

The development of adequate market infrastructures for OTC derivatives markets is a key priority for enhancing the transparency and resilience of these markets. While this work initially focused on credit default swaps, where immediate policy concerns had emerged during the financial crisis, it has subsequently been extended to OTC derivatives more generally.

One major strand of work has aimed to promote the use of CCP clearing for OTC derivatives. Fostered by strong EU public sector support and corresponding industry initiatives, two EU CCPs for credit default swaps were established in July 2009, Eurex Credit Clear (located in the euro area) and ICE Clear Europe (located in the United Kingdom). The Governing Council welcomed this progress in its decision of 16 July 2009. At the same time, the Governing Council emphasised that it gave particular priority to the use of euro area infrastructures for the clearing of euro-denominated credit default swaps, which it would closely monitor. The importance of the availability of euro area infrastructures for OTC derivatives was also underlined in recent analytical work of the Eurosystem, which highlighted the particular systemic risk implications of OTC derivatives markets for the euro area, owing to the fact that the euro is a major currency of denomination for OTC derivatives contracts.[29]

Given the increased importance of CCPs and other market infrastructures, such as trade repositories, in OTC derivatives markets, an adequate regulatory and oversight framework is required to ensure the safe and efficient functioning of these entities. Against this background, the ESCB-CESR recommendations for SSSs and CCPs issued in June 2009, which are discussed in the previous section, took into account a number of specific risks inherent in the clearing of OTC derivatives. Work to ensure a consistent interpretation and implementation of the relevant oversight standards for CCPs with specific regard to OTC derivatives is now also under way at the international level. A review of the 2004 CPSS-IOSCO recommendations for CCPs with regard to OTC derivatives was launched in July 2009,[30] which will also include considerations relating to trade repositories. Furthermore, with the establishment of the OTC Derivatives Regulators' Forum, a framework for ongoing global coordination and information-sharing among the authorities competent for or with a legitimate interest in OTC derivatives infrastructures has been put in place.[31]

In principle, the markets for OTC derivatives should meet the same standards in terms of transparency, efficiency and safety as those deemed appropriate in the markets for other financial products, while reflecting the specific characteristics of the different products.

On 20 October 2009 the European Commission outlined its proposed future actions regarding OTC derivatives markets.[32] The Eurosystem contributed to the development of this roadmap with its contribution to the European Commission's July 2009 consultation on possible measures to enhance the resilience of OTC derivatives markets[33] and will continue to

29 The report entitled "OTC derivatives and post-trading infrastructures" was published on the ECB's website in September 2009.
30 For more details, see the BIS press release of 20 July 2009 (http://www.bis.org).
31 For more details on this forum, see the press release of the Federal Reserve Bank of New York of 24 September 2009 (http://www.newyorkfed.org).
32 The communication entitled "Ensuring efficient, safe and sound derivatives markets: Future policy actions" is available on the European Commission's website (http://ec.europa.eu).
33 The Eurosystem's contribution was published on 4 September 2009 on the ECB's website.

provide advice and input with regard to the development of the envisaged regulatory measures.

### OVERSIGHT OF TARGET2-SECURITIES

TARGET2-Securities (T2S) is an infrastructure that aims to provide a single, borderless pool of securities and a core, neutral settlement process, thus reinforcing the Lisbon strategy. The ECOFIN Council underlined in 2007 that the supervisory arrangements applicable to central securities depositories (CSDs) should remain safe and efficient, and that the implications of T2S for these arrangements should therefore be analysed to that end.

As information has been published on a number of key elements regarding the design and operational/legal framework of T2S, the Eurosystem held workshops on 18 June and 26 August 2009 with relevant central banks and supervisors to explore the criticality of T2S for central banks and CSDs which will use its services. Moreover, since T2S will offer cross-border services to both euro area and non-euro area CSDs and central banks, a high number of competent supervisors and overseers will have an interest in receiving information from T2S so that they can exercise their regulatory duties under the respective statutory rules. So far, all competent authorities have supported the idea of establishing a cooperative framework in relation to T2S services. The cooperative framework under discussion would not touch upon the statutory powers of individual authorities over domestic systems under national rules, or on the enforcement of such powers. T2S stakeholders will be informed as soon as the cooperative framework has been agreed upon. A preliminary review of the T2S design from an oversight perspective during the development phase is deemed necessary by all competent authorities.

## 4.4 OTHER ACTIVITIES

In November 2009 the Eurosystem published an oversight report for the first time.[34] With this new publication, the Eurosystem aims to provide public authorities and market infrastructure providers and participants, as well as the general public, with information on the performance of the Eurosystem's oversight function and its assessment of the safety and soundness of euro area payment, clearing and settlement infrastructures.

The oversight report included an overview of the institutional framework, oversight standards and requirements, and the cooperation and practical arrangements for conducting system oversight that provide the basis for the Eurosystem's oversight function. In addition, the report included information about the Eurosystem's oversight activities during 2008, as well as on major developments during 2009. Finally, the report provided an overview of the Eurosystem's future priorities in the field of oversight.

The ECB published a "Glossary of terms relating to payment, clearing and settlement systems". These terms are defined in a user-friendly manner to promote their acceptance by market participants and the public. The glossary is expected to ensure the consistent use of terms in publications produced within the ESCB and may also be used by other EU institutions for reference purposes. The glossary was compiled by a committee of experts and was the subject of a three-month public consultation. All comments received were published on the ECB's website.

In 2009 the Hong Kong Monetary Authority conducted an oversight assessment of the Euro CHATS system. The overall outcome of the assessment was positive, as the Euro CHATS demonstrated a high level of compliance with all relevant Core Principles. The Eurosystem has an interest in the security of the settlement procedures of offshore systems processing the euro, such as the Euro CHATS. Under the principles of international cooperative oversight, the Hong Kong Monetary Authority consulted and shared information with the ECB in the

34 "Eurosystem oversight report 2009", November 2009.

process of assessing the Euro CHATS system, and the ECB provided comments on the Hong Kong Monetary Authority's report.

Finally, the ECB publishes statistical data on payments and securities trading, clearing and settlement on an annual basis. Data are broken down by country and, as of 2007, are made available solely in electronic form via the Statistical Data Warehouse on the ECB's website. The data for 2008 were published on 11 September 2009.

Interior view of the former Grossmarkthalle, a listed building (February 2008). The Grossmarkthalle, designed by Martin Elsaesser, was the largest free-spanning reinforced concrete structure hall in the world when it was completed in 1928.

CHAPTER 4

# EUROPEAN AND INTERNATIONAL RELATIONS

# 1 EUROPEAN ISSUES

In 2009 the ECB continued to have regular contacts with European institutions and fora, particularly with the European Parliament (see Chapter 5), the Eurogroup, the ECOFIN Council and the European Commission. The President of the ECB regularly participated in meetings of the Eurogroup, as well as in meetings of the ECOFIN Council when matters relating to the objectives and tasks of the ESCB were discussed. In addition, the President of the ECB was invited to participate in meetings of the European Council when issues related to the economic and financial crisis were addressed. 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

### EU POLICY RESPONSE TO THE FINANCIAL CRISIS

The economic and financial crisis continued to dominate the European policy agenda in 2009. The EU bodies and Member States continued to implement the European Economic Recovery Plan agreed by the European Council in December 2008. The ECB contributed to the design of various support measures for the financial sector, for example by issuing recommendations on government guarantees for bank debt and on the pricing of recapitalisations, as well as guiding principles for bank asset support schemes.

As a more long-term and structural response to the crisis, the High-Level Group on Financial Supervision in the EU, chaired by Jacques de Larosière, presented its report on 25 February 2009, setting out proposals and recommendations for a new regulatory agenda, stronger coordinated supervision and effective crisis management procedures.

The recommendations contained in the report, together with the European Commission's communication of 27 May 2009 on European financial supervision and the conclusions of the ECOFIN Council of 9 June 2009, were considered by the European Council. At its meeting on 18-19 June 2009 the European Council reached an understanding on a number of issues relating to the establishment of a new EU financial supervisory architecture. More specifically, the European Council expressed its support for the creation of a European Systemic Risk Board (ESRB), which will monitor and assess potential threats to financial stability and, where necessary, issue risk warnings and recommendations for action and monitor their implementation. The conclusions adopted by the ECOFIN Council on 9 June 2009 specify that the ECB should provide analytical, statistical, administrative and logistical support to the ESRB, also drawing on technical advice from NCBs and supervisors. To ensure accountability, the ESRB should report, at least biannually and more often if necessary, to the EU Council and to the European Parliament.

The European Council also recommended the establishment of a European System of Financial Supervisors (ESFS). The aim of the ESFS is to enhance the quality and consistency of national supervision and to strengthen the oversight of cross-border groups by setting up supervisory colleges and establishing a single rule book for all financial institutions in the Single Market. The European Council also agreed that the ESFS should have binding and proportionate decision-making powers when assessing the compliance of supervisors with the single rule book and relevant EU law, as well as in the event of disagreements between home and host supervisors, including within colleges of supervisors. At the same time, the decisions of the ESFS should not impinge in any way on the fiscal responsibilities of Member States.

Taking into account the conclusions of the European Council, the European Commission adopted on 23 September 2009 a package of legislative proposals to strengthen financial supervision in the EU, which are currently being considered by the European Parliament and the EU Council. At its meeting on 20 October 2009, the ECOFIN Council reached broad agreement on the substance of the proposals related to the

creation of the ESRB. The ECB was consulted on these proposals and adopted, on 26 October 2009, an opinion on the proposed legal acts related to the establishment of the ESRB.[1] A general approach to the proposals for regulations establishing the new European micro-prudential supervisory authorities was agreed by the ECOFIN Council on 2 December 2009. The ECB adopted an opinion on these proposals on 8 January 2010.[2] For a more in-depth explanation of the legislative proposals, the institutional set-up of the ESRB and the role of the ECB in this new supervisory framework, see Box 8.

Finally, following an increase from €12 billion to €25 billion in 2008, the ECOFIN Council agreed on 18 May 2009 to further double the amount of funds available under the facility providing medium-term financial assistance for Member States' balances of payments to €50 billion.

### THE STABILITY AND GROWTH PACT

In April 2009 the ECOFIN Council concluded that excessive deficits existed in four euro area countries, Ireland, Greece, Spain and France, as well as in one non-euro area country, the United Kingdom, and recommended that they be corrected. In July the Council determined that an excessive deficit existed in Malta, as well as in the non-euro area countries Latvia, Lithuania, Poland and Romania, and issued recommendations on the correction of these deficits. In December eight further euro area countries, Belgium, Germany, Italy, the Netherlands, Austria, Portugal, Slovenia and Slovakia, as well as one non-euro area country, the Czech Republic, were considered to have excessive deficits, and the ECOFIN Council issued recommendations for their correction. At the end of 2009 a total number of 20 EU countries were in excessive deficit, 13 of them in the euro area.

With regard to ongoing excessive deficit procedures, in July the ECOFIN Council judged that Hungary had taken effective action to correct its excessive deficit in line with previous recommendations. Finding that unexpected adverse economic events with major unfavourable consequences for government finances had occurred after the adoption of the recommendation, the Council decided to adopt a revised recommendation under Article 104(7) of the Treaty establishing the European Community,[3] extending the original deadline for correcting the excessive deficit by two years. In December 2009 the Council took similar decisions with regard to the ongoing excessive deficit procedures for Ireland, Spain, France and the United Kingdom, in these cases extending the original deadlines for correcting the excessive deficits by one year. At the same time, the ECOFIN Council decided that Greece had not taken effective action in response to the Council recommendation of April 2009 under Article 104(8) of the Treaty establishing the European Community.[4]

In the spring 2009 orientations for fiscal policies agreed by euro area finance ministers in June, it was acknowledged that the Stability and Growth Pact provided the appropriate framework for conducting and coordinating budgetary policies. Governments committed themselves to put in place robust medium-term fiscal exit strategies that would lead to a timely correction of excessive deficits.

In October 2009 the ECOFIN Council issued its conclusions on fiscal exit strategies. It called for fiscal consolidation in all EU Member States to start, assuming that a strengthening and self-sustaining recovery is under way, in 2011 at the latest and stated that a number of countries would need to begin earlier. Moreover, it considered that the pace of fiscal consolidation would have to go well beyond the benchmark of 0.5% of GDP per annum, in structural terms, in most Member States. The ECOFIN Council also called for fiscal exit strategies to be reinforced by measures to strengthen national budgetary frameworks and to support long-term sustainability,

1 CON/2009/88.
2 CON/2010/5.
3 Now Article 126(7) of the Treaty.
4 Now Article 126(8) of the Treaty. Further information can be found in Section 2.5 of Chapter 1.

and for them to be coordinated across countries within the framework of the Pact.

In July 2009 Eurostat published a decision on the statistical recording of public interventions to support financial institutions and financial markets during the financial crisis, accompanied by technical guidance on the subject. Following this decision, information on the impact of such interventions on government deficits and debt, as well as on contingent liabilities, will now be reported and published by Eurostat on a regular basis in the context of the excessive deficit procedure.

In November 2009 the ECOFIN Council issued its conclusions regarding the European Commission's 2009 sustainability report, which assessed the sustainability of public finances in the EU countries. According to the report, 13 EU Member States have a high risk with regard to the sustainability of their public finances (the euro area countries Ireland, Greece, Spain, Cyprus, Malta, the Netherlands, Slovenia and Slovakia, and the non-euro area countries the Czech Republic, Latvia, Lithuania, Romania and the United Kingdom), while nine countries are considered to have a medium risk (Belgium, Germany, France, Italy, Luxembourg, Austria and Portugal in the euro area, as well as Hungary and Poland outside the euro area). Finland is the only euro area country considered to have a low risk regarding the sustainability of its public finances. Compared with the 2006 sustainability report, ten countries have been moved into a higher risk category (Ireland, Spain, Latvia, Lithuania, Malta, the Netherlands, Austria, Poland, Slovakia and the United Kingdom), mainly owing to the deterioration in their current budgetary positions. Notwithstanding the higher than usual uncertainty surrounding structural budgetary positions and long-term budgetary projections as a result of the economic and financial crisis, the ECOFIN Council concluded that the crisis-related deterioration of public finances added "substantially to sustainability challenges". The Council therefore called for these challenges to be addressed by a determined implementation of the three-pronged strategy agreed at the 2001 European Council in Stockholm, including i) deficit and debt reduction, ii) increasing employment rates, and iii) reforming social protection systems.

#### FROM THE LISBON STRATEGY TO THE EU 2020 STRATEGY

The Lisbon strategy – the EU's wide-ranging programme of economic, social and environmental reform – entered the second year of the 2008-10 policy cycle in 2009.

In spring 2009 the European Council confirmed the existing Integrated Guidelines and endorsed the updated country-specific recommendations for the economic and employment policies of the Member States. It called for the swift implementation of these recommendations and stressed the contribution that structural reforms could make in overcoming the effects of the economic crisis.

In October 2009 Member States submitted reports on the implementation of their national reform programmes. These reports set out the progress made by Member States in implementing their structural reform strategies. These strategies include measures to ensure the sustainability and quality of public finances, to improve the regulatory environment of businesses, to invest in research and development and innovation, to boost labour participation and to enhance labour market flexibility. In December 2009 the ECOFIN Council adopted conclusions on the post-Lisbon strategy, the EU 2020 strategy, calling for efficient arrangements for the surveillance of structural reforms at both the national and the EU level, making use of all available Treaty instruments, and invited the European Commission to come forward with concrete proposals before the adoption of a new strategy. In response, the Commission launched a public consultation in November 2009, prior to formulating concrete proposals on the new EU 2020 strategy in early 2010.

The Eurosystem has repeatedly stressed the importance of implementing structural reforms

aimed at enhancing growth and employment, maintaining sound and sustainable fiscal positions and improving the efficiency of public spending and revenues. Euro area countries in particular should continue to implement comprehensive reform measures aimed at fostering the smooth functioning of EMU and avoiding imbalances. The ECB has contributed actively to the discussion on the EU 2020 strategy and will continue to do so in 2010.

#### OTHER EU POLICIES

In the areas of energy and climate change, the ECB continued to monitor developments at the EU level given their implications for the economy as a whole and price developments in particular.

### 1.2 INSTITUTIONAL ISSUES

In June 2009 EU citizens elected a new European Parliament, which held its inaugural session on 14 July 2009. On 1 December 2009, upon the entry into force of the Lisbon Treaty, the first permanent President of the European Council, Herman van Rompuy, and the new High Representative of the Union for Foreign Affairs and Security Policy, Catherine Ashton, took office. 2010 saw the appointment of a new European Commission, under the Presidency of José Manuel Barroso, who was nominated by Heads of State or Government for a second term. Following approval by the European Parliament, the new college of commissioners took office on 10 February 2010 for a term that is to expire on 31 October 2014.

#### THE TREATY OF LISBON

Following ratification by the remaining EU Member States in 2009, the Treaty of Lisbon entered into force on 1 December 2009. The ECB welcomes the successful conclusion of the ratification process.

The Lisbon Treaty makes no fundamental changes to the existing Treaty provisions on EMU. As regards the changes of particular relevance to the ESCB/Eurosystem, the Lisbon Treaty reinforces the Eurosystem's mandate by making its primary objective, the maintenance of price stability, an objective of the EU as a whole.

Moreover, the ECB, formerly a sui generis Community body, becomes a Union institution. While this provision was introduced to enhance the transparency of the EU's institutional framework, it has no operational consequences of significance for the ECB or the ESCB/Eurosystem. Most importantly, the ECB retains all its institutional features, including its independence, regulatory powers and legal personality. The Lisbon Treaty strengthens the ECB's independence by explicitly anchoring its financial independence in primary law.

Furthermore, for the first time, the terms "euro", "Eurosystem" and "Eurogroup" are formally mentioned in EU primary law.[5] The Statute of the ESCB was also adjusted accordingly. Another change pertains to the appointment of the members of the ECB's Executive Board, who will be appointed by the European Council acting by a qualified majority, bringing the appointment procedure into line with those for other key EU policy positions, such as the President of the European Council. Only representatives of the euro area countries will vote on these appointments.

### 1.3 DEVELOPMENTS IN AND RELATIONS WITH EU CANDIDATE COUNTRIES

The ECB continued its policy dialogue with the central banks of the EU candidate countries through bilateral meetings and within the overall institutional framework for the enlargement process set up by the EU.

Accession negotiations with Croatia began in October 2005. Negotiations on the individual

5 For further information about the institutional changes introduced by the Lisbon Treaty, see the article entitled "The ECB's relations with European Union institutions and bodies: trends and prospects" in the January 2010 issue of the ECB's Monthly Bulletin.

chapters of the *acquis communautaire* were opened in June 2006 and continued to advance in the course of 2009. By the end of the year, negotiations had been opened on 28 chapters and provisionally closed on 15. The ECB continued its fruitful bilateral relations with the Croatian National Bank, for example in the context of a high-level policy dialogue.

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, and one chapter was provisionally closed in the same month. In December 2006 the European Council decided, owing to the lack of progress in the extension of the customs union to the EU Member States, to suspend talks for 8 out of the 35 chapters and not to provisionally close any other chapters. At the end of 2009 negotiations were open on 12 and provisionally closed on one chapter. The ECB continued its long-standing high-level policy dialogue with the Central Bank of the Republic of Turkey.

The former Yugoslav Republic of Macedonia was granted candidate status in 2005. In October 2009 the European Commission recommended the opening of accession negotiations, but the European Council will not reconsider this issue until March 2010. Staff level contacts between the ECB and the National Bank of the Republic of Macedonia remained strong.

In October 2009 the ECB hosted a regional economic conference on emerging Europe, which focused on the impact of the global economic and financial crisis on non-EU countries. Despite the high degree of heterogeneity in the region, a few common trends were identified. Overall, the region was hit strongly by the crisis, with countries with large internal and external vulnerabilities being affected particularly badly. While a systemic crisis has so far been avoided, vulnerabilities and risks remain, with most countries facing a strong need for structural reform.

# 2 INTERNATIONAL ISSUES

## 2.1 KEY DEVELOPMENTS IN THE INTERNATIONAL MONETARY AND FINANCIAL SYSTEM

### SURVEILLANCE OF MACROECONOMIC POLICIES IN THE GLOBAL ECONOMY

Given the high degree of economic and financial integration, the global economic environment is extremely 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. The ECB 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 meetings of the G7 and, increasingly, the G20 finance ministers and central bank governors.

The international economic environment in 2009 was characterised by a gradual stabilisation of global economic activity. Large external imbalances – considered a symptom of escalating systemic risks in the global economy – narrowed over the course of the year, although they remain substantial and the narrowing appears to have been based to a significant extent on temporary factors. The US current account deficit narrowed from 4.9% of GDP in 2008 to 2.9% of GDP in 2009, half the level reached in 2006 (the year with the largest imbalances in absolute terms), while Japan's surplus remained close to 3% of GDP in both years. China's merchandise trade surplus also started to decrease, falling from around 10% of GDP in 2006 to less than 6% in 2009. As in recent years, the euro area's current account was close to balance in 2009.

However, the unwinding of global imbalances largely reflected cyclical and temporary factors linked to the crisis – such as a global deleveraging, a fall in private demand, lower oil prices and corrections in financial asset prices – rather than structural factors.

In terms of structural factors related to global imbalances, net borrowing by US households was one of the key drivers of the widening US current account deficit in the years prior to the crisis. From the early 2000s until the summer of 2007, portfolio inflows – mostly from private sector investors – fully covered the US trade deficit. Such portfolio inflows, notably into government debt securities, increased strongly in the wake of the intensification of the crisis in late 2008, before moderating from March 2009 as global risk appetite recovered, while net borrowing by US households decreased considerably between July 2007 and August 2009. Meanwhile, limited social safety nets and financial underdevelopment in emerging Asia continued to encourage the channelling of the region's considerable savings abroad, while these countries remained strongly export-oriented.

Notwithstanding the encouraging signs of stabilisation and recovery, in 2009 several countries continued to receive assistance from the IMF (see the section below on the international financial architecture). Major central banks continued to provide liquidity assistance to central banks of other countries in order to facilitate the functioning of money markets in emerging economies. Such assistance included extended liquidity swap facilities with the central banks of four large and systemically important economies.

On various occasions in 2009, the Eurosystem stressed the risks and distortions that would ensue if global imbalances were to re-emerge, and expressed support for a rebalancing of global demand patterns. In particular, the Eurosystem repeatedly called for policies aimed at increasing private and public savings in countries with current account deficits, the implementation of further structural reforms in mature economies with relatively low potential growth, measures to increase domestic demand in emerging market economies, improved capital allocation in these countries, and a better appreciation of risks more generally. In the context of the ongoing reflections

on improving the international financial architecture (see below), the Eurosystem underlined that such an improvement should not only foster financial market discipline but also enhance macroeconomic policy discipline. A strengthened multilateral economic surveillance framework should be able to ensure that economic policies, especially in systemically important countries, are stability-oriented and sustainable. Support for a rebalancing of the global economy also came from the G20, as stated in the Pittsburgh communiqué on a framework for strong, sustainable and balanced growth.

Finally, the euro area itself is subject to international policy surveillance exercises. In 2009 the IMF conducted its regular review of the monetary, financial and economic policies of the euro area, as a complement to its reviews of the individual euro area countries. The Article IV consultations of the IMF provided an opportunity for useful discussions between the IMF and the ECB, the Eurogroup presidency and the European Commission. Following these discussions, the IMF produced a report assessing the euro area policies.[6]

### INTERNATIONAL FINANCIAL ARCHITECTURE

The global financial crisis led to a wide-ranging debate on the set-up and functioning of the international monetary and financial system. Following their first summit on financial markets and the world economy in Washington, D.C. in November 2008, G20 leaders convened in London in April 2009 for their second meeting. They reiterated their earlier calls for action in the areas of financial regulation and macroeconomic policies and underlined their commitment to open markets and free trade. The G20 leaders also agreed to establish a new Financial Stability Board, with a strengthened mandate and an expanded membership as a successor to the Financial Stability Forum. In addition, they agreed to modify the financial regulatory framework to address the pro-cyclicality of capital requirements and macro-prudential risks, and to extend financial regulation to all systemically important financial institutions, instruments and markets. They also agreed on steps to fund and reform the international financial institutions. At their Pittsburgh summit in September 2009, the G20 leaders reviewed progress with regard to the fulfilment of previous commitments and confirmed their continued support for international cooperation in dealing with the global policy challenges. Underlining the role that the G20 had played in shaping the responses to the global financial crisis, the leaders designated the G20 as “the premier forum for our international economic cooperation”. The G20 also launched a “Framework for strong, sustainable and balanced growth”, which aims to help manage the transition from crisis response to a strong, sustainable and balanced pattern of global growth, as well as to address the global imbalances that contributed to the financial crisis. The framework foresees a process of mutual assessment of how national and regional policies and policy frameworks of G20 members fit together and whether they are consistent with the objective of strong, sustainable and balanced growth. In the area of financial regulation, the G20 identified four priority areas for further work, with specific deliverables and deadlines under each heading: i) building high-quality capital and mitigating pro-cyclicality, ii) reforming compensation practices to support financial stability, iii) improving over-the-counter derivatives markets, and iv) addressing cross-border resolutions and systemically important financial institutions.

As IMF lending increased significantly following the onset of the global financial crisis, discussions intensified about the appropriate size of IMF resources. At the London summit on 2 April 2009, the G20 agreed to increase the resources available to international financial institutions by a total of USD 1.1 trillion, with measures including a commitment to treble IMF resources from USD 250 billion prior to the crisis to USD 750 billion, and support for a

6 “Euro area policies: 2009 Article IV consultation – staff report”, IMF, August 2009.

new special drawing right (SDR) allocation of USD 250 billion. The G20 also called for the urgent ratification of the Fourth Amendment of the Articles of Agreement and the 2008 quota and voice reform.

By autumn 2009 bilateral pledges to the IMF from various member countries, including around USD 175 billion from EU Member States,[7] had reached the target of USD 500 billion, taking the form of loan agreements, purchases of IMF notes or direct pledges to expanded and reformed New Arrangements to Borrow (NAB).[8] Emphasising that the IMF is and should remain a quota-based institution, the members of the IMF also agreed that the appropriate size of Fund resources as well as their composition, i.e. the balance between quota-based and borrowed resources, would have to be examined in the near future, i.e. on the occasion of the next quota review (which has been brought forward from 2013 to January 2011) or the review of the NAB. In line with the comprehensive quota and voice reform package agreed in 2008, one key objective of the next quota review will be to further align quota shares with members' relative weight and role in the global economy. At the summit in Pittsburgh, the G20 expressed its commitment "to a shift in quota shares to dynamic emerging markets and developing countries of at least 5% from over-represented countries to under-represented countries". The G20 also agreed that there was a need to address issues such as the size and composition of the IMF's Executive Board, ways of enhancing the Board's effectiveness and the involvement of Fund governors in the strategic oversight of the IMF.

The general SDR allocation equivalent to USD 250 billion entered into force on 28 August 2009 and the special SDR allocation of around USD 32 billion on 9 September 2009, following the consent of the United States to the Fourth Amendment of the Articles of Agreement pending since 1997. With the two allocations totalling roughly USD 282 billion, the outstanding stock of SDRs increased nearly tenfold to around USD 316 billion. The cumulative allocations of all euro area countries amount to SDR 47 billion (equivalent to around USD 74 billion).

In response to the financial crisis, among other things, the IMF undertook a major overhaul of its lending framework in March 2009. Key changes included i) the introduction of a new facility (Flexible Credit Line) designed for countries with very strong fundamentals, policies and track records with regard to policy implementation, ii) a doubling of member countries' access to Fund resources, iii) the streamlining of programme conditionality, including the elimination of hard structural performance criteria in Fund-supported programmes, iv) the simplification of procedures for "high access" arrangements that can be treated in a precautionary manner by borrowing members, and v) the simplification of cost and maturity structures, as well as the elimination of rarely used financing facilities, such as the Supplemental Reserve Facility.

The use of Fund resources remained significant in 2009. Within the framework of regular standby programmes, agreements were concluded with, among others, Romania, Serbia, Bosnia and Herzegovina, Sri Lanka and Belarus. In the context of the newly established facilities, the participation of Mexico, Poland and Colombia in the Flexible Credit Line was approved, while a number of Central American economies (Costa Rica, El Salvador and Guatemala) as well as Gabon secured High Access Precautionary Arrangements.

In the course of 2009 the IMF focused heavily on improving its surveillance of macro-financial and financial issues. The G20 mandated the IMF and the newly established Financial Stability

7 The European Council on 19-20 March 2009 announced that the EU Member States were ready to provide fast temporary support to the Fund totalling €75 billion. At its meeting on 2 September 2009, the ECOFIN Council increased the aggregated EU contribution to up to €125 billion (i.e. around USD 175 billion at the time).

8 Credit arrangements between the IMF and a group of member countries and institutions to provide supplementary resources to the IMF to forestall or cope with an impairment of the international monetary system or to deal with an exceptional situation that poses a threat to the stability of that system.

Board to conduct a joint early warning exercise to flag key macro-financial vulnerabilities. In addition, the joint World Bank/IMF Financial Sector Assessment Program (FSAP) was overhauled to improve its effectiveness and to allow FSAP findings to be better integrated into bilateral surveillance. The FSAP fulfils a dual role, assessing both financial stability and developmental needs. In view of the changes to the global environment since October 2008, the IMF also revisited its Statement of Surveillance Priorities, which guides the IMF's work until 2011. The economic priorities continue to include the strengthening of the global financial system, but now also focus on bringing about an orderly unwinding of crisis-related policy measures to secure a sustained recovery and on promoting a rebalancing of global demand to support world growth while keeping global imbalances in check. Looking ahead, the IMF is to embark on a new role, providing analytical input into the G20's mutual assessment process under the new framework for "strong, sustainable and balanced growth". Finally, in recognition of the need for the IMF to expand the scope of its surveillance, the IMF's mandate is now under review to consider coverage of the full range of macroeconomic and financial sector policies that have an impact on global stability.

The international financial community also continued to promote mechanisms for crisis prevention and orderly crisis resolution. In this context, further progress was made by sovereign debtors and their private creditors and investors in implementing the principles for stable capital flows and fair debt restructuring in emerging markets, which had been endorsed by G20 finance ministers and central bank governors in 2004. The aim of these principles, which are market-based and voluntary, is to provide guidelines 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. At its last meeting in Istanbul in October 2009, the Group of Trustees of the Principles, a body comprising senior leaders in global finance established to guide the implementation of the principles, reviewed the progress being made within the framework of the international financial architecture and gave guidance for future work.

## 2.2 COOPERATION WITH COUNTRIES OUTSIDE THE EU

As in previous years, the Eurosystem organised seminars and workshops with non-EU central banks. In addition, the technical assistance provided by the Eurosystem remained an important tool for strengthening the administrative capacity of central banks outside the EU, especially in the EU's neighbouring regions, and enhancing compliance with European and international standards. The ECB also actively participated alongside the European Commission in the EU's macroeconomic dialogue with key emerging market economies (e.g. Russia, India and Egypt) and EU neighbouring countries.

The ECB continued to deepen its relations with countries in the western Balkans. On 1 September 2008 the ECB and 17 EU NCBs[9] began a nine-month programme of technical assistance with the National Bank of Serbia. The programme, funded by the European Agency for Reconstruction, provided the National Bank of Serbia with a needs analysis report on progress to be made in selected central banking areas in preparation for EU accession.[10] The areas covered were the supervision of banks, the harmonisation with the *acquis communautaire* of legislation under the competence of the National Bank of Serbia, the liberalisation of capital movements, the conduct of monetary policy and the exchange

9 The NCBs of Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Greece, France, Italy, Cyprus, Latvia, Hungary, the Netherlands, Austria, Poland, Romania and the United Kingdom.

10 In December 2008 the European Agency for Reconstruction officially ceased operations and transferred its rights and obligations to the Delegation of the European Commission (since 1 December 2009 "the Delegation of the European Union") to the Republic of Serbia.

rate regime, monetary, financial and balance of payments statistics, and financial services consumer protection.

Continued cooperation with the Central Bank of Egypt led to the launch of a new three-year programme on 1 January 2009, funded by the European Commission. The programme involves experts from the ECB, Българска народна банка (Bulgarian National Bank), Česká národní banka, the Deutsche Bundesbank, the Bank of Greece, the Banque de France, the Banca d'Italia and Banca Naţională a României. The aim of the programme is to gradually strengthen banking supervision in Egypt to achieve basic compliance with the Basel II framework, in line with the strategy devised by the Central Bank of Egypt. The central bank technical cooperation programme with the Bank of Russia, which is funded by the European Commission, continued in 2009. The Eurosystem (the ECB in partnership with the Deutsche Bundesbank, the Bank of Greece, the Banco de España, the Banque de France, the Banca d'Italia, De Nederlandsche Bank, the Oesterreichische Nationalbank and Suomen Pankki – Finlands Bank in cooperation with the Financial Supervisory Authority of Finland) provides technical assistance in the areas of banking supervision and internal audit. In the first area, the aim is to support the gradual implementation of the Basel II framework in Russian banking supervision, while in the field of internal audit, support is provided with regard to risk-based internal audit, IT audit and the audit of foreign exchange reserve management. The programme, which began in 2008, is expected to end on 31 December 2010.

The Eurosystem and the Bank of Russia held their fifth high-level seminar on 11 and 12 March 2009 in Vienna. The seminar, hosted by the Oesterreichische Nationalbank, was attended by governors and high-level representatives of the Eurosystem and the Bank of Russia. The purpose of the seminar was to further strengthen the dialogue and enhance relations between the two bodies, which have intensified in recent years. The main issues addressed at the seminar related to recent macroeconomic developments, the impact of commodity price developments on inflation and financial stability in Russia and the euro area.

The fourth high-level Eurosystem seminar with Latin American central banks took place on 23 March 2009 in Mexico City, co-organised by the ECB, the Banco de España and the Banco de México. The main topics discussed were the economic implications of and the policy responses to both the global financial crisis and the rise and fall of commodity prices.

On 2-3 November 2009 the ECB held a workshop to prepare the sixth high-level Eurosystem seminar with the central banks of Mediterranean countries, which will take place in Cyprus in 2010. The workshop was attended by central bank representatives from the Eurosystem, the EU's southern and eastern Mediterranean partner countries, the European Commission and the European Investment Bank. Workshop discussions focused on the impact of the global financial crisis and the ensuing recession in the economies and financial sectors of Mediterranean countries and on exchange rate regimes in the region.

In 2009 the ECB also intensified its relations with the Chinese authorities. On 29 November the President of the ECB, the President of the Eurogroup and the Commissioner for Economic and Monetary Affairs met the Chinese authorities in Nanjing. This was the second such meeting to be held between these parties, and the forum is considered an important part of the dialogue between China and the EU. Several economic and financial issues were addressed, including exchange rate policies, and the discussion contributed to a greater mutual understanding of the policies of the respective areas. The ECB also strengthened its relations with the People's Bank of China in 2009. The main forum for discussion is the ECB-People's Bank of China

Working Group, which holds three meetings annually. In 2009 the group discussed issues related to economic growth, stimulus policies and financial stability, from the perspective of both the euro area and China.

At the beginning of 2010 the ECB and 14 euro area NCBs started a two-year programme to strengthen macro- and micro-prudential supervision in EU candidates and potential candidates.[11] The beneficiaries of the programme are the central banks and supervisory authorities of the western Balkans and Turkey. The readiness of the IMF and the World Bank to be active partners in the programme and the interest expressed by numerous international and European institutions and bodies testify to the fact that this programme is perceived as being timely and necessary by the international community. The programme, which is funded by the EU, aims to strengthen the medium-term resilience to financial stress of EU candidates and potential candidates by supporting the adjustment of macro- and micro-prudential supervision in line with the most recently agreed international and EU standards.

11 The NCBs of Belgium, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

Within the framework of the Luminale 2008, the Grossmarkthalle was illuminated by the lighting artists Casa Magica. This image shows the second of three motifs. It alluded to the upcoming construction works for the new ECB premises.

CHAPTER 5

# ACCOUNTABILITY

# 1 ACCOUNTABILITY VIS-À-VIS THE GENERAL PUBLIC AND THE EUROPEAN PARLIAMENT

Central bank independence has established itself over the past decades as an indispensable element of the monetary policy regimes of mature 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 any independent institution bestowed with a public function should be accountable to citizens and their elected representatives. Accountability is therefore an important counterpart of central bank independence.

The ECB's commitment to accountability and transparency is illustrated by its decision to go beyond the statutory obligations in its regular reporting. For instance, the ECB publishes a Monthly Bulletin, rather than the required quarterly report, and members of the Governing Council deliver numerous speeches to address relevant topics of concern to the public, which in 2009 included the ECB's policy response to the financial crisis, global economic policy challenges, and fundamental reflections on the role and strategy of central banks. Moreover, the press conferences following the first Governing Council meeting of each month continue to be a prime opportunity for the ECB to explain in depth its assessment of the economic situation and the rationale for interest rate decisions.

The European Parliament, as the institution which derives its legitimacy directly from the citizens of the EU, plays the most important institutional role in holding the ECB to account. Since its establishment, the ECB has maintained a close and fruitful dialogue with the European Parliament. The President of the ECB continued to report on the ECB's monetary policy and its other tasks during his quarterly hearings before the European Parliament's Committee on Economic and Monetary Affairs (ECON), and is due to present the ECB's Annual Report 2008 to the plenary session of the Parliament on 25 March 2010. In February 2009 the President appeared before a joint meeting of the European Parliament and the national parliaments to discuss the EU's framework for safeguarding financial stability.

Other members of the ECB's Executive Board also appeared before the European Parliament on a number of occasions. The Vice-President presented the ECB's Annual Report 2008 to ECON. Lorenzo Bini Smaghi and Jürgen Stark participated in the annual joint meetings of the European Parliament and the national parliaments to discuss the situation of the EU in the financial crisis and the post-crisis strategy for growth and jobs and the modernisation of the global financial architecture. José Manuel González-Páramo participated in a hearing organised by the European Parliament's Special Committee on the Financial, Economic and Social Crisis. Gertrude Tumpel-Gugerell also appeared before ECON to inform its members about recent developments in the field of securities clearing and settlement and the Eurosystem's TARGET2-Securities project.

In addition, discussions took place between ECB representatives and members of the European Parliament on the policies of the ECB and other issues where the ECB has specific expertise (e.g. financial stability). In line with past practice, a delegation from ECON visited the ECB in 2009 to exchange views with the members of the Executive Board on the economic situation and on the implementation of the new supervisory framework for the EU.

# 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 during these discussions are outlined below.

### POLICY RESPONSE TO THE ECONOMIC AND FINANCIAL CRISIS

The economic and financial crisis featured prominently in the discussions between the ECB and the European Parliament. In its various resolutions, the European Parliament called for a coordinated approach among Member States in overcoming the crisis and welcomed the launch of the European Economic Recovery Plan. However, it expressed concern about the rapid rise in public debt and budget deficits and called for a return to sound state finances as soon as possible. The Special Committee on the Financial, Economic and Social Crisis was given a mandate to analyse and evaluate the extent of the crisis and its impact on the EU and its Member States.

During his appearances before the European Parliament, the President of the ECB reaffirmed the ECB's full support for the European Commission in its difficult task of ensuring the implementation of the Stability and Growth Pact, and in particular for the Commission's message that ambitious fiscal consolidation should begin as soon as the recovery was under way.

### THE EU FRAMEWORK FOR FINANCIAL SUPERVISION AND STABILITY

The European Parliament and the ECB continued their close dialogue on matters concerning financial supervision. The European Parliament recalled that many of the recommendations contained in the report of the de Larosière Group (for more details, see Chapter 3) had already been made by its members. It also advocated an overhaul of the regulatory and governance framework for financial markets in view of the increasing integration of financial markets in the EU. Finally, it supported the enhancement of the ECB's role in the field of financial stability. In earlier resolutions, the Parliament supported the view that the ECB should be involved in EU-wide macro-prudential supervision of systemically important financial institutions on the basis of Article 127(6) of the Treaty.

During his appearances before the European Parliament, the President of the ECB welcomed the proposal to establish a body which would be specifically responsible for macro-prudential oversight at the European level, the European Systemic Risk Board (ESRB; for more details, see Box 8). The President made it clear that the ECB and the ESRB would have to report separately to the European Parliament, as the two bodies would have clearly distinct mandates.

View of the former Grossmarkthalle from the south (2006).

CHAPTER 6

# EXTERNAL COMMUNICATION

# 1 COMMUNICATION POLICY

External communication at the ECB aims to enhance the public's understanding of the ECB's policies and 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 5.

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.

ECB 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 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 addresses 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 and the communication environment and needs.

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 contributes to the ECB's accountability. 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. A wide range of statistical data is provided by the ECB primarily by means of the Statistical Data Warehouse and interactive charts on the ECB's website, as well as in hard copy in the monthly editions of the Statistics Pocket Book.

All members of the Governing Council of the ECB 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. The President and other members of the Executive Board of the ECB appeared before the European Parliament seven times in total in 2009 (for more details, see Chapter 5). They delivered around 260 speeches to a variety of audiences in the course of 2009 and granted some 200 interviews to the media, as well as having articles published in journals, magazines and newspapers.

The euro area NCBs play an important role in ensuring the dissemination at the national level of Eurosystem information and messages to the general public and interested parties. They address a variety of national and regional audiences in their own languages and environments.

In 2009 the ECB organised 13 seminars aimed at enhancing the knowledge and understanding of the international and national media, either on its own or in cooperation with the EU NCBs, the European Commission, the European Journalism Centre and other public authorities or foundations.

The ECB welcomed approximately 14,000 visitors to its premises in Frankfurt in 2009. The visitors received first-hand information in the form of presentations given by ECB experts and managers.

All documents published by the ECB and its various activities are presented on the ECB's website. In 2009 the website received 25 million visits (38% more than the previous year), with 157 million pages viewed and 45 million documents downloaded.

In 2009 the ECB replied to around 100,000 enquiries (as compared with 60,000 in 2008) from the public requesting information on a number of issues related to the ECB's activities, policies and decisions.

The ECB's communication activities in 2009 focused in particular on explaining the events and consequences of the global financial and economic crisis and the measures taken by the ECB and the Eurosystem. The vast majority of all public speeches delivered by the members of the Executive Board were related to this issue. This topic also dominated the requests for information and questions received from the press, the public and visitors to the ECB. The development of special projects related to payment systems and market infrastructure – the Single Euro Payments Area and TARGET2-Securities – required additional, targeted communication.

As part of the series of events to mark the tenth anniversary of the euro, a symposium entitled “The future of Europe – views from founding fathers” was held, at which Valéry Giscard d’Estaing, former President of France, and Helmut Schmidt, former Chancellor of Germany, were invited to share their experiences and thoughts concerning the creation of the single currency and their views about future developments. The symposium was attended by international guests, representatives from the business community and the media, and university students. In addition, a conference was organised with the title “10 years of European Monetary Union: a legal perspective”, at which 135 lawyers from central banks, ministries of finance, regional organisations and academia discussed the legal aspects of the functioning of the Eurosystem and the ESCB.

The Cultural Days of the ECB were dedicated to Romania in 2009 and organised in cooperation with Banca Națională a României. The Cultural Days initiative was launched in 2003 with the aim of giving the residents of Frankfurt a flavour of the culture of one of the EU countries each year. The programme in 2009 included 24 different events, which were attended by approximately 6,000 people.

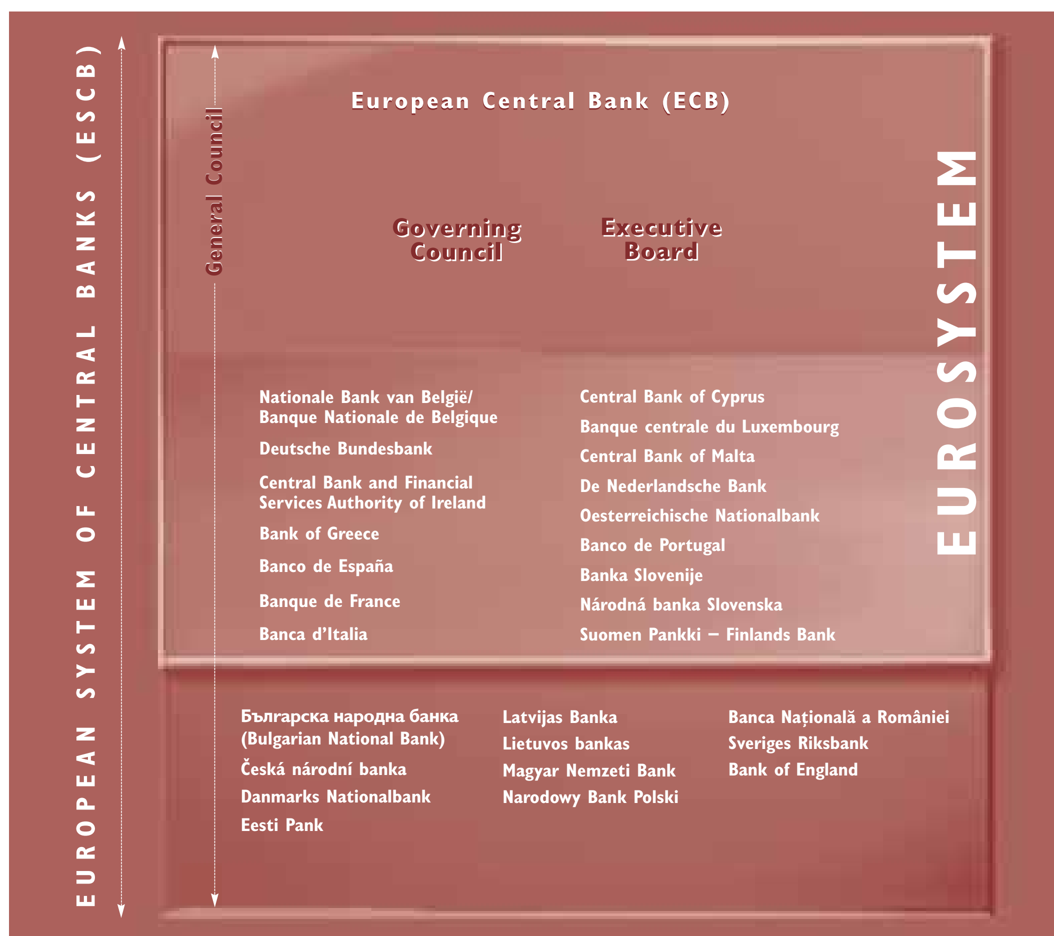
View of the Grossmarkthalle when it was still a wholesale market, with the city centre in the background towards the west (2002).

CHAPTER 7

# 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 (16 since 1 January 2009). The term "Eurosystem" is enshrined by the Lisbon Treaty.[1] The Governing Council had previously adopted this term in order to facilitate understanding of the structure of central banking in the euro area. This term, which underlines the shared identity, teamwork and cooperation of all its members, is already broadly used.

The ESCB is composed of the ECB and the NCBs of all 27 EU Member States, i.e. it also 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 the operations which form part of the tasks of the ESCB are carried out either through its own activities or via the NCBs, to which the ECB shall have recourse to the extent deemed possible and appropriate. The Executive Board implements monetary policy in accordance with the guidelines and decisions laid down by the Governing Council. It gives the necessary instructions to the NCBs. The ECB has legal personality under public international law. Following the entry into force of the Lisbon Treaty, the ECB is now an EU institution. However, the institutional features of the ECB remain unchanged.[2]

1 For more information on the Lisbon Treaty, see Section 1.2 of Chapter 4.
2 For more details on the implications of the Lisbon Treaty for the ECB, see Section 1.2 of Chapter 4.

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.[3] 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 2009 two meetings were held outside Frankfurt: one was hosted by the Banque centrale du Luxembourg in Luxembourg and the other by the Banca d'Italia in Venice. In addition to these meetings, the Governing Council may also hold meetings by means of teleconference or take decisions by written procedure.

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. On 18 December 2008 the Governing Council decided to continue its existing voting regime[4] and to introduce a rotation system only when the number of governors in the Governing Council exceeds 18. On 19 March 2009 the Governing Council adopted a legal act which covers all aspects of the implementation of the

3 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, as amended by Decision ECB/2009/5 of 19 March 2009 OJ L 100, 18.4.2009, p. 10; 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.

4 As provided for by Article 10.2 of the Statute of the ESCB, which limits the number of governors with a voting right to 15 but also foresees the possibility for the Governing Council to postpone the implementation of a rotation system until the number of governors exceeds 18.

rotation system, such as the order, period and rate of rotation, and contains the necessary amendments to the Rules of Procedure.[5] The legal act will enter into force when the rotation system is implemented.

5 Decision ECB/2009/5 amending Decision ECB/2004/2 of 19 February 2004 adopting the Rules of Procedure of the European Central Bank, OJ L 100, 18.4.2009, p. 10. For a detailed description of the implementation modalities of the rotation scheme, see the article entitled "Rotation of voting rights in the Governing Council of the ECB" in the July 2009 issue of the ECB's Monthly Bulletin.

## THE GOVERNING COUNCIL

**Front row (left to right):**
Marko Kranjec, Ewald Nowotny, Yves Mersch, Lucas D. Papademos, Jean-Claude Trichet, Gertrude Tumpel-Gugerell, Vítor Constâncio, Michael C. Bonello

**Middle row (left to right):**
Patrick Honohan, George A. Provopoulos, José Manuel González-Páramo, Miguel Fernández Ordóñez, Athanasios Orphanides, Guy Quaden

**Back row (left to right):**
Jürgen Stark, Erkki Liikanen, Axel A. Weber, Lorenzo Bini Smaghi, Christian Noyer, Ivan Šramko

Note: Mario Draghi and Nout Wellink were not available when the photograph was taken.

**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**
Governor of the Central Bank of Malta
**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
**José Manuel González-Páramo**
Member of the Executive Board of the ECB
**Patrick Honohan**
Governor of the Central Bank and Financial Services Authority of Ireland
(from 26 September 2009)
**John Hurley**
Governor of the Central Bank and Financial Services Authority of Ireland
(until 24 September 2009)
**Marko Kranjec**
Governor of Banka Slovenije
**Erkki Liikanen**
Governor of Suomen Pankki – Finlands Bank
**Yves Mersch**
Governor of the Banque centrale du Luxembourg
**Ewald Nowotny**
Governor of the Oesterreichische Nationalbank
**Christian Noyer**
Governor of the Banque de France
**Athanasios Orphanides**
Governor of the Central Bank of Cyprus
**George A. Provopoulos**
Governor of the Bank of Greece
**Guy Quaden**
Governor of the Nationale Bank van België/Banque Nationale de Belgique
**Ivan Šramko**
Governor of Národná banka Slovenska
**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

## 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[6] 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.

6 As of the entry into force of the Lisbon Treaty, members of the Executive Board are appointed by the European Council, acting by qualified majority, after consultation of the European Parliament and of the ECB. This procedure is in line with those for other key policy positions in EU institutions.

**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
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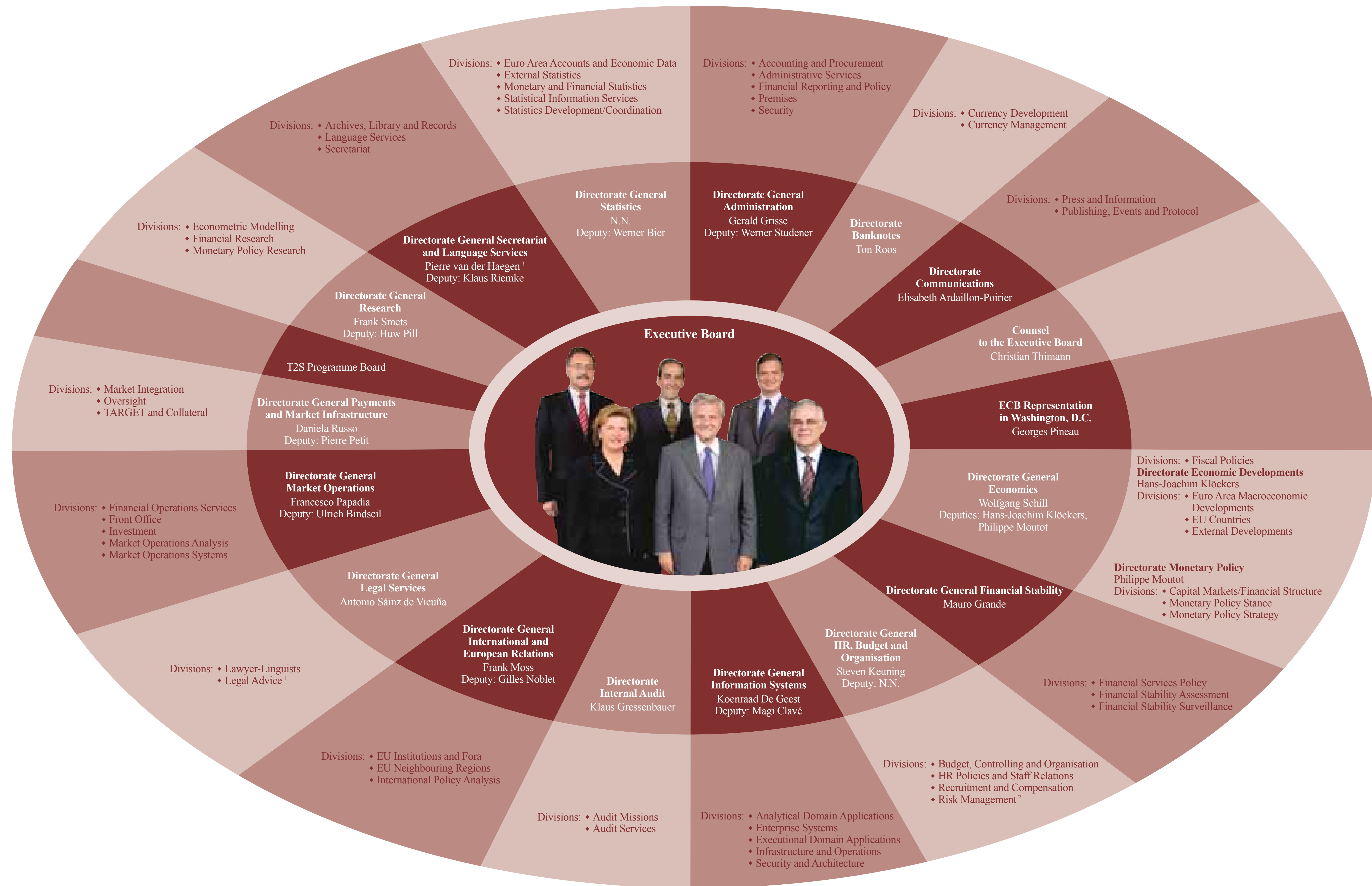
Member of the Executive Board of the ECB
**José Manuel González-Páramo**
Member of the Executive Board of the ECB
**Jürgen Stark**
Member of the Executive Board of the ECB
**Gertrude Tumpel-Gugerell**
Member of the Executive Board of the ECB




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.

**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)

## 1.4 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 27 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 2009 the General Council met four times.

**Front row (left to right):** Michael C. Bonello, Ewald Nowotny, Yves Mersch, Lucas D. Papademos, Jean-Claude Trichet, Mervyn King, Vítor Constâncio, Marko Kranjec

**Middle row (left to right):** Andràs Simor, Patrick Honohan, George A. Provopoulos, Athanasios Orphanides, Miguel Fernández Ordóñez, Ivan Šramko, Andres Lipstok

**Back row (left to right):** Ilmārs Rimšēvičs, Ivan Iskrov, Erkki Liikanen, Nils Bernstein, Axel A. Weber, Christian Noyer, Guy Quaden, Zdeněk Tůma, Reinoldijus Šarkinas

Note: Mario Draghi, Stefan Ingves, Mugur Constantin Isărescu, Sławomir Skrzypek and Nout Wellink were not available when the photograph was taken.

**Jean-Claude Trichet**
President of the ECB
**Lucas D. Papademos**
Vice-President of the ECB
**Nils Bernstein**
Governor of Danmarks Nationalbank
**Michael C. Bonello**
Governor of the Central Bank of Malta
**Vítor Constâncio**
Governor of the Banco de Portugal
**Mario Draghi**
Governor of the Banca d'Italia
**Miguel Fernández Ordóñez**
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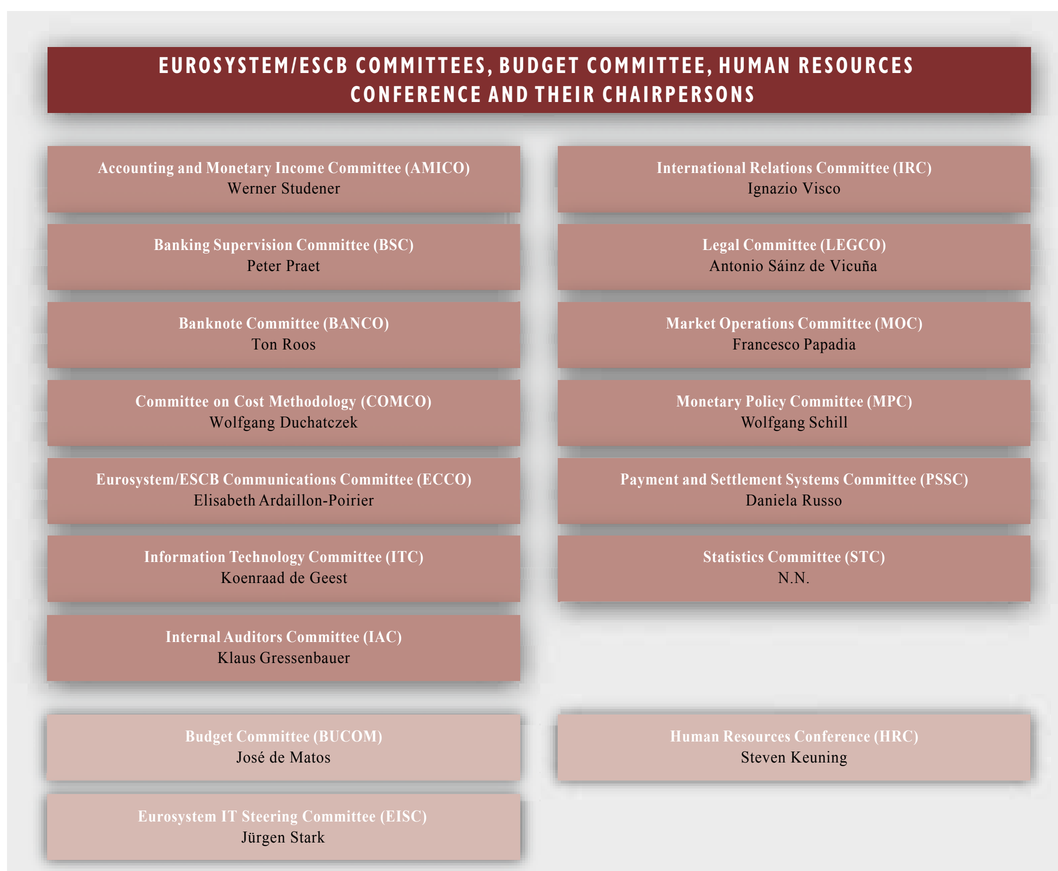
**Stefan Ingves**
Governor of Sveriges Riksbank
**Mugur Constantin Isărescu**
Governor of Banca Naţională a României
**Ivan Iskrov**
Governor of Българска народна банка (Bulgarian National Bank)
**Mervyn King**
Governor of the Bank of England
**Marko Kranjec**
Governor of Banka Slovenije
**Erkki Liikanen**
Governor of Suomen Pankki – Finlands Bank
**Andres Lipstok**
Governor of Eesti Pank
**Yves Mersch**
Governor of the Banque centrale du Luxembourg
**Ewald Nowotny**
Governor of the Oesterreichische Nationalbank
**Christian Noyer**
Governor of the Banque de France
**Athanasios Orphanides**
Governor of the Central Bank of Cyprus
**George A. Provopoulos**
Governor of the Bank of Greece
**Guy Quaden**
Governor of the Nationale Bank van België/Banque Nationale de Belgique
**Ilmārs Rimšēvičs**
Governor of Latvijas Banka

**Reinoldijus Šarkinas**
Chairman of the Board of Lietuvos bankas
**András Simor**
Governor of the Magyar Nemzeti Bank
**Sławomir Skrzypek**
President of Narodowy Bank Polski
**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



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. As at 31 December 2009 13 Eurosystem/ESCB committees had been established under Article 9.1 of the Rules of Procedure of the ECB.

The Budget Committee, which was established under Article 15 of the Rules of Procedure, assists the Governing Council in matters related to the ECB's budget.

The Human Resources Conference was established in 2005 under Article 9a of the Rules of Procedure as a forum for the exchange of experience, expertise and information among Eurosystem/ESCB central banks in the field of human resources management.

The Eurosystem IT Steering Committee was established in 2007 by the Governing Council, with a mandate to steer continuous improvement in the use of IT within the Eurosystem, in line with the Eurosystem mission statement and organisational principles, which state the aim of exploiting synergies within the Eurosystem and achieving cost efficiency gains through economies of scale.

## 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 and rules concerning public access to ECB documents.

### EXTERNAL CONTROL LAYERS

The Statute of the ESCB provides for two control 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.[7] Good practices for the selection and mandate of external auditors, published on the ECB's website, provide high-level guidance for each Eurosystem central bank when selecting external auditors and determining their mandate. The good practices also enable the Governing Council to formulate its recommendations to the EU Council on the basis of harmonised, consistent and transparent selection criteria.

### INTERNAL CONTROL LAYERS

The internal control structure of the ECB is based on an approach in which each organisational unit (section, division, directorate or directorate general) is responsible for managing its own risks and controls, as well as the effectiveness and efficiency of its operations. Each organisational unit implements operational control procedures 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

7 Following the conclusion of a tender procedure and in line with the agreed practice of rotating audit firms, PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft was appointed as the ECB's external auditor for the financial years 2008-12.

from reaching the areas responsible for the management of the ECB's foreign reserves and own funds portfolio.

In 2009 the ECB further refined its approach to operational risk management and aligned its framework with that defined for Eurosystem tasks and processes, which the ECB and the euro area NCBs began implementing in the course of the year. Moreover, a comprehensive exercise in which the business areas of the ECB identified, assessed and reported their operational risks was conducted. The ECB regularly tests its business continuity arrangements and took measures to increase its resilience in the event of a pandemic. The Governing Council approved the roll-out of the Eurosystem business continuity framework, which will begin in 2010.

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,[8] 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 ECB's internal audit activities conform with 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.

An ECB Audit Committee further enhances the corporate governance of the ECB and the Eurosystem as a whole. It is composed of three Governing Council members, with Erkki Liikanen (Governor of Suomen Pankki – Finlands Bank) as Chairman as of October 2009 (following the retirement of John Hurley, Governor of the Central Bank and Financial Services Authority of Ireland).

### CODES OF CONDUCT

There are three codes of conduct of relevance for the ECB's decision-making bodies and its staff.[9] 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.[10] It gives guidance to, and sets ethical standards for, the members of the Governing Council and their alternates when exercising their functions as members of the Governing Council. An adviser has also been appointed by the Governing Council to provide guidance to its members on some aspects of professional conduct. The second code is the Code of Conduct of the ECB, which gives guidance to, and sets benchmarks 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.[11] 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.[12] The third code is a Supplementary Code of Ethical Criteria for the members of the Executive Board.[13] It complements the other two codes by further detailing the ethical regime applicable to members of the Executive Board. An Ethics Adviser appointed by the Executive Board ensures a consistent interpretation of these

8 This charter is published on the ECB's website to foster the transparency of audit arrangements in place at the ECB.
9 For information regarding the T2S Programme Board's Code of Conduct, see Section 2.2 of Chapter 2.
10 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.
11 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.
12 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.
13 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.

rules. The ethical rules applying to staff of the ECB, as currently laid down in the Conditions of Employment, the Staff Rules and the Code of Conduct, are being enhanced and consolidated into a new ethical framework.

### ANTI-FRAUD MEASURES

In 1999 the European Parliament and the EU Council adopted a Regulation[14] 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 EU 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[15] concerning the terms and conditions for investigations by OLAF of the ECB, which entered into force on 1 July 2004.

### INTERNAL ECB ANTI-MONEY LAUNDERING/ COUNTER-TERRORIST FINANCING PROGRAMME

In 2007 the ECB established its internal anti-money laundering (AML) and counter-terrorist financing (CTF) scheme. The design of the AML/CTF provisions is in line with the 40 Recommendations and nine Special Recommendations of the Financial Action Task Force (FATF), as far as applicable to the ECB's operations. A compliance function within the ECB identifies, analyses and addresses the risks associated with money laundering and terrorist financing for all relevant activities of the ECB. In particular, ensuring compliance with applicable AML/CTF legislation is part of the process of assessing and monitoring the eligibility of the ECB's counterparties. In this context, particular attention is paid to restrictive measures adopted by the EU and public statements issued by the FATF. An internal reporting system complements the ECB's AML/CTF framework to ensure that all relevant information is systematically collected and duly communicated to the Executive Board.

### PUBLIC ACCESS TO ECB DOCUMENTS

The ECB's Decision on public access to ECB documents[16] adopted in March 2004 is in line with the objectives and standards applied by other EU 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.[17]

In 2009 the number of public access requests remained limited.

14 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.

15 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.

16 Decision ECB/2004/3 on public access to European Central Bank documents, OJ L 80, 18.3.2004, p. 42.

17 In line with the ECB's commitment to openness and transparency, an "Archives" section on the ECB's website provides access to historical documentation.

# 2 ORGANISATIONAL DEVELOPMENTS

## 2.1 HUMAN RESOURCES MANAGEMENT

In 2009 the ECB continued to develop and implement human resources management policies in four areas: corporate culture, recruitment, professional development and employment conditions.

### CORPORATE CULTURE

In 2009 developments related to the corporate culture of the ECB focused on diversity and professional ethics. A number of initiatives were launched in the area of diversity management, including focus group discussions on gender diversity, a first diversity forum for all staff and the establishment of an internal project group on gender diversity, which aims to establish a common understanding of gender diversity at the ECB and to launch a number of related initiatives. To further strengthen the ECB's ethical framework, the rules governing ethical behaviour were updated and all rules are being incorporated into a single repository, thus providing clearer and more consistent guidance to staff on the ethical standards they should adhere to.

### RECRUITMENT

On 31 December 2009 the actual full-time equivalent number of staff holding employment contracts with the ECB was 1,563 (1,536 on 31 December 2008). External recruitment to fill permanent positions was carried out on the basis of fixed-term contracts which may be converted into unlimited contracts, subject to organisational considerations and individual performance. A total of 64 new fixed-term contracts were offered in 2009. By contrast, 27 members of staff employed on a fixed-term or permanent basis left the ECB in 2009 (45 in 2008). Furthermore, 131 short-term contracts were issued during 2009 (in addition to some contract extensions from 2008) to cover for absences of less than one year, while 111 short-term contracts expired in the course of the year.

The ECB continued to offer short-term contracts to staff from NCBs and international organisations, thus fostering an ESCB-wide team spirit and cooperation with international organisations. On 31 December 2009 127 employees from NCBs and international organisations were working at the ECB on various assignments (compared with 122 on 31 December 2008).

In September 2009 the ECB welcomed the fourth intake of participants in its Graduate Programme. The participants, who are recent graduates from leading universities, have a broad educational background and are each assigned to two business areas on a rotational basis for a total period of two years.

Internship opportunities were offered throughout the year to students and graduates with backgrounds in economics, statistics, business administration, law and translation. On 31 December 2009 72 interns were being hosted by the ECB. The ECB also offered four 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.

### PROFESSIONAL DEVELOPMENT

Mobility and staff development measures continued to be the main tools for professional development at the ECB.

The ECB's internal mobility policy, which encourages members of staff to change positions after five years of service, continued to provide an opportunity for staff to expand their expertise and develop their skills. This policy enables the ECB to broaden staff awareness and increase synergies across business areas. The ECB's internal recruitment policy aims to further facilitate internal mobility by placing emphasis on broad competencies. Rules have been revised so that all managerial positions may be opened up first to internal candidates. In the course of 2009 196 members of staff, including 44 managers and advisers, moved internally to other positions, on either a temporary or a long-term basis.

The ECB, like all ESCB central banks, participates actively in the external work experience scheme which is promoted by the Human Resources Conference and which enables the ECB to second 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. A total of 21 members of staff were seconded under this scheme in 2009. In addition, the ECB granted unpaid leave, for up to three years, to 31 members of staff. Eight of them took up employment at NCBs, international organisations or private companies. Others used these periods of unpaid leave to study or for other personal reasons. The total number of staff members on unpaid leave at the end of December 2009 was 55 (compared with 54 in 2008). The number of staff on parental leave was 28 (compared with 26 in 2008).

A number of initiatives were launched in 2009 to support the development of the ECB's value-driven leadership and management culture and to train managers through workshops, seminars and individual coaching sessions. Training for managers concentrated on coaching and feedback skills, on dealing effectively with conflicts, on influencing skills and on change management. Managers also participated in the multi-source feedback exercise in which reporting staff, peers and external contacts identify areas of strength and areas for managers' personal development. Individual coaching was provided on the basis of the results.

The ECB continued to promote the acquisition and development of skills and the enhancement of the competencies of staff. Learning and development at the ECB are a shared responsibility between the organisation, managers and staff. While the ECB provides the budgetary means and the training framework and managers define the training needs of staff for their current position, staff are required 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 opportunities organised as part of ESCB training programmes or training offered by the NCBs. In addition, the ECB supported the requests of 15 staff members who wished to acquire a qualification that would increase their professional competence beyond the requirements of their current position.

### EMPLOYMENT CONDITIONS

The ECB's employment conditions are designed to be attractive and to balance the needs of staff with those of the organisation. Changes to the ECB's employment conditions in 2009 focused on social security and work-life balance.

The ECB reviewed its retirement plan for staff members to ensure the long-term financial sustainability and sound financial management of the plan. The contributions of the ECB and the staff were increased from 16.5% to 18% of basic salary and from 4.5% to 6% respectively. The existing retirement plan was frozen on 31 May 2009 and a new pension scheme was introduced on 1 June 2009. The acquired rights of staff under the frozen retirement plan were preserved, and some structural elements of the plan, such as the normal ECB retirement age of 65 and the possibility of early retirement, were maintained in the new pension scheme.

The ECB continued to support staff in the areas of childcare and the reconciliation of work and family commitments. The number of staff on unpaid parental leave as at 31 December 2009 was 28 (compared with 26 in 2008). The teleworking pilot project launched in 2008 was extended during 2009. A survey aimed at assessing the benefits and drawbacks of this new policy revealed that teleworking is highly appreciated by both staff and management. The ECB will now decide how to incorporate teleworking as a permanent feature of its human resources management policies.

## 2.2 STAFF RELATIONS AND SOCIAL DIALOGUE

The ECB recognises that the dialogue with its staff is important. In 2009 the ECB consulted the staff representatives on remuneration, employment, working conditions, health and safety conditions and the pension reform and continued to have a dialogue with staff representatives on employment and social matters.

A discussion with the recognised trade union aimed at enhancing the social dialogue at the ECB took place in the last quarter of 2009.

## 2.3 NEW ECB PREMISES

In February 2009 the ECB launched a new tender procedure for the construction works for its new premises in Frankfurt's Ostend area. The construction works were divided into 12 separate tender packages, which were subdivided into a total of 69 lots. Tenders for the first eight packages, namely structural works, on-site infrastructure works, elevators, facades, roofing, height-access systems, mechanical services and electrical services, which represented around 80% of the building costs, were conducted in 2009. The remaining four packages will be put out to tender in the course of 2010 and 2011.

The chosen tender strategy proved to be successful, as the offers submitted by large and medium-sized construction companies from all over Europe for the first eight packages were within the budget for building costs of around €500 million (at 2005 constant prices).

On the basis of this positive outcome, the Governing Council decided on 17 December 2009 to start the construction works in spring 2010. The new premises are expected to be completed by the end of 2013.

Since the very beginning of the project, the ECB has endeavoured to ensure that the new building is highly energy-efficient. To this end, it has aimed to achieve energy consumption levels which are 30% below the German standard applicable at the time that the building permit was issued. The energy design concept foreseen for the new premises comprises a number of energy-saving features, including efficient insulation, natural ventilation, low-energy lighting, rainwater recycling and the use of the ground as an energy source for cooling and heating.

## 2.4 THE EUROSYSTEM PROCUREMENT COORDINATION OFFICE

In 2009 the Eurosystem Procurement Coordination Office (EPCO) coordinated work in three areas which had been identified as potential opportunities for joint procurement in 2008: air transport for ESCB meetings, global hotel agreements, and packaging material for banknotes. EPCO also coordinated three in-depth analyses relating to licences for hardware and software products, market data providers and rating agencies.

Furthermore, EPCO continued the exchange of best achievable practices in the field of procurement, which was initiated in 2008.

## 2.5 ENVIRONMENTAL ISSUES

In 2009 the ECB established an Environmental Management System (EMS), which is compliant with the environmental policy framework adopted by the Executive Board at the end of 2007. The EMS is based on the internationally recognised standard EN ISO 14001 and aims to achieve continuous improvement of the ECB's environmental performance. Certification of the EMS and registration under Regulation (EC) No 761/2001 of the European Parliament and of the Council allowing participation in an eco-management and audit scheme is planned for mid-2010. Furthermore, a programme has been launched with the objective of minimising the ECB's ecological footprint.

## 2.6 INFORMATION TECHNOLOGY SERVICE MANAGEMENT

During 2009 a strategic review of the ECB's IT functions was performed, resulting in a streamlining of the organisational structure of the Directorate General Information Systems and the creation of a strategic IT plan. This plan will focus on strategic alignment with customers of IT services, whose needs will be supported in an integrated way across the entire service life cycle. The ECB successfully passed its first ISO/IEC 20000 surveillance audit, which assesses IT service management, while the management system for delivering IT projects was certified in accordance with ISO standard 9001:2008.

IT governance within the ESCB has been further strengthened with the adoption of an ESCB architecture governance policy and an IT service management policy under the leadership of the Eurosystem IT Steering Committee.

## 3 THE HUMAN RESOURCES CONFERENCE

The activities of the Human Resources Conference (HRC) and its Task Force on Training and Development covered several aspects of HR management in 2009. In February a conference on health management was held, with the main focus on measures to improve staff health and the management of sick leave. Further topics covered by the HRC were knowledge management and the management of external staff assignments. In relation to the latter topic, the HRC organised a workshop on supporting staff before, during and after their external assignments abroad.

An online brochure was developed to further promote intra-ESCB mobility and development and will be published on the intranet sites of the individual central banks.

Based on a needs analysis, the HRC developed an ESCB seminar programme on project management skills. This focuses on project management methodology, as well as on the soft skills needed in a project environment, and will be introduced in 2010.

## 4 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.[18] 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. This information is provided in a biannual newsletter and at meetings held in Frankfurt twice a year.

In 2009 the ESCB Social Dialogue celebrated its tenth anniversary. Meetings focused on financial supervision and the establishment of the European Systemic Risk Board, the issue of cooperation and specialisation in the Eurosystem, and the ESCB IT portfolio. Issues relating to banknote production and circulation, as well as payment systems, were also discussed. The employee representatives were informed of the work being carried out by the HRC.

The ad hoc meetings on banknote production and circulation continued to address technical issues relating to banknotes prior to the plenary meeting of the ESCB Social Dialogue. The working group on the ESCB Social Dialogue reconvened in October to discuss ways of enhancing the communication flow between the ECB and the federations.

18 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).

# 5 ANNUAL ACCOUNTS OF THE ECB

# MANAGEMENT REPORT FOR THE YEAR ENDING 31 DECEMBER 2009

## 1 NATURE OF THE BUSINESS

The ECB's activities in 2009 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 performance against 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 7 of the Annual Report.

### 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 a qualified majority 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 30, "Staff costs", of the Annual Accounts.

### EMPLOYEES

The average number of staff (full-time equivalent) holding contracts with the ECB[1] rose from 1,499 in 2008 to 1,530 in 2009. At the end of that year 1,563 staff were employed. For further details, see note 30, "Staff costs", of the Annual Accounts and Section 2 of Chapter 7 of the Annual Report 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 ESCB, 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 (a) its paid-up capital, (b) the counterpart of the provision for foreign exchange rate, interest rate, credit and gold price risks, (c) the general reserve fund, and (d) 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 of the Annual Report.

### 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

1 Staff on unpaid leave of absence are excluded. This number includes staff with permanent, fixed or short-term contracts and the participants in the ECB's Graduate Programme. Staff on maternity or long-term sick leave are also included.

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, CREDIT 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 for foreign exchange rate, interest rate and gold price risks. The Governing Council also 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. In 2009, following the establishment of the programme for the purchase of covered bonds (see note 5, "Securities of euro area residents denominated in euro", of the Annual Accounts), the Governing Council decided to extend the scope of the risk provision to also cover credit risk.

As at 31 December 2008 this provision amounted to €4,014,961,580. In accordance with Article 49.2 of the Statute of the ESCB, Národná banka Slovenska contributed an amount of €40,290,173 to the provision with effect from 1 January 2009. In addition, after taking the results of its assessment into account, the Governing Council decided to release, as at 31 December 2009, an amount of €34,806,031 from the provision in order to comply with the maximum allowed ceiling. The net effect of the above developments was an increase in the size of the provision to €4,020,445,722, which is the value of the ECB's capital paid up by the euro area NCBs as at 31 December 2009.

This provision will be used to cover 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, 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.

### FINANCIAL RESULT FOR 2009

In 2009 the net income of the ECB prior to the release from the provision for risks was €2,218 million, compared with €2,661 million in 2008. The net profit, amounting to €2,253 million after this release, was distributed to the NCBs.

In 2008 the depreciation of the euro vis-à-vis the Japanese yen and the US dollar resulted in unrealised gains of €3.6 billion. These gains were recorded in revaluation accounts, in line

with the common accounting policies that have been established by the Governing Council for the Eurosystem. In 2009 the appreciation of the euro vis-à-vis the Japanese yen and the US dollar resulted in a reduction of €1.5 billion in those revaluation accounts, while the significant rise in the price of gold during 2009 has led to an increase of €2.0 billion in the related unrealised gains.

In 2009 net interest income decreased to €1,547 million from €2,381 million in 2008, owing mainly to (a) the decrease in interest income arising from the allocation of euro banknotes within the Eurosystem, which reflected the fact that the average marginal rate for the Eurosystem's main refinancing operations was lower in 2009, and (b) lower net interest income on foreign reserve assets in 2009 that was due mainly to the fact that interest rates on US dollar-denominated assets were lower on average in that year. The resulting decrease was only partially offset by a decrease in the remuneration of NCBs' claims in respect of foreign reserves transferred to the ECB.

Net realised gains arising from financial operations increased from €662 million in 2008 to €1,103 million in 2009, owing mainly to (a) higher net realised gains from security sales in 2009, and (b) higher realised gains from the sale of gold, as a result of the significant rise in the price of gold during 2009, combined with the larger volume of gold sold in that year. 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 €388 million in 2008 to €401 million in 2009.

### CHANGE TO THE CAPITAL OF THE ECB

Under Article 29.3 of the Statute of the ESCB, the capital key for the NCBs' subscriptions to the ECB's capital must be adjusted every five years. The second such adjustment following the establishment of the ECB took place on 1 January 2009.

In addition, pursuant to Council Decision 2008/608/EC of 8 July 2008, taken in accordance with Article 122(2) of the Treaty, Slovakia adopted the single currency on 1 January 2009. Consequently, in accordance with Article 49.1 of the Statute of the ESCB, Národná banka Slovenska paid up the remainder of its capital subscription to the ECB as of that date.

The adjustment of the NCBs' capital key shares in conjunction with Slovakia joining the euro area resulted in an increase in the ECB's paid-up capital from €4,137 million on 31 December 2008 to €4,142 million on 1 January 2009. Details of these changes are contained in note 16, "Capital and reserves", of the Annual Accounts.

## 5 OTHER ISSUES

### REVIEW OF THE ECB'S RETIREMENT PLAN

In 2009 the ECB reviewed its retirement plan for staff members in order to ensure the plan's long-term financial sustainability. As a result of this review, the existing Retirement Plan was frozen on 31 May 2009 and a new Pension Scheme was introduced on 1 June 2009. For further details, see "The ECB's retirement plan and other post-employment benefits" under the Accounting Policies section of the Annual Accounts and Section 2 of Chapter 7 of the Annual Report which also describes the employment conditions at the ECB.

# BALANCE SHEET AS AT 31 DECEMBER 2009

| ASSETS | NOTE NUMBER | 2009 € | 2008 € |
|---|---|---|---|
| **Gold and gold receivables** | 1 | **12,355,158,122** | **10,663,514,154** |
| **Claims on non-euro area residents denominated in foreign currency** | 2 | | |
| Receivables from the IMF | | 346,455,675 | 346,651,334 |
| Balances with banks and security investments, external loans and other external assets | | 35,109,527,121 | 41,264,100,632 |
| | | **35,455,982,796** | **41,610,751,966** |
| **Claims on euro area residents denominated in foreign currency** | 2 | **3,293,593,476** | **22,225,882,711** |
| **Claims on non-euro area residents denominated in euro** | 3 | | |
| Balances with banks, security investments and loans | | **0** | **629,326,381** |
| **Other claims on euro area credit institutions denominated in euro** | 4 | **5,000** | **25,006** |
| **Securities of euro area residents denominated in euro** | 5 | | |
| Securities held for monetary policy purposes | | **2,181,842,083** | **0** |
| **Intra-Eurosystem claims** | 6 | | |
| Claims related to the allocation of euro banknotes within the Eurosystem | | 64,513,307,300 | 61,021,794,350 |
| Other claims within the Eurosystem (net) | | 6,359,967,425 | 234,095,515,333 |
| | | **70,873,274,725** | **295,117,309,683** |
| **Other assets** | 7 | | |
| Tangible fixed assets | | 221,886,920 | 202,690,344 |
| Other financial assets | | 11,816,451,684 | 10,351,859,696 |
| Off-balance-sheet instruments revaluation differences | | 20,951,426 | 23,493,348 |
| Accruals and prepaid expenses | | 775,782,372 | 1,806,184,794 |
| Sundry | | 1,003,035,232 | 1,272,185,672 |
| | | **13,838,107,634** | **13,656,413,854** |
| **Total assets** | | **137,997,963,836** | **383,903,223,755** |

| LIABILITIES | NOTE NUMBER | 2009 € | 2008 € |
|---|---|---|---|
| **Banknotes in circulation** | **8** | **64,513,307,300** | **61,021,794,350** |
| **Liabilities to other euro area residents denominated in euro** | **9** | **1,056,000,000** | **1,020,000,000** |
| **Liabilities to non-euro area residents denominated in euro** | **10** | **9,515,160,271** | **253,930,530,070** |
| **Liabilities to euro area residents denominated in foreign currency** | **11** | **0** | **272,822,807** |
| **Liabilities to non-euro area residents denominated in foreign currency** | **11** | | |
| Deposits, balances and other liabilities | | **18,752,058** | **1,444,797,283** |
| **Intra-Eurosystem liabilities** | **12** | | |
| Liabilities equivalent to the transfer of foreign reserves | | **40,204,457,215** | **40,149,615,805** |
| **Other liabilities** | **13** | | |
| Off-balance-sheet instruments revaluation differences | | 196,041,410 | 1,130,580,103 |
| Accruals and income collected in advance | | 731,468,960 | 2,284,795,433 |
| Sundry | | 409,204,389 | 1,797,414,878 |
| | | **1,336,714,759** | **5,212,790,414** |
| **Provisions** | **14** | **4,042,873,982** | **4,038,858,227** |
| **Revaluation accounts** | **15** | **10,915,251,958** | **11,352,601,325** |
| **Capital and reserves** | **16** | | |
| Capital | | **4,142,260,189** | **4,137,159,938** |
| **Profit for the year** | | **2,253,186,104** | **1,322,253,536** |
| **Total liabilities** | | **137,997,963,836** | **383,903,223,755** |

# PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING 31 DECEMBER 2009

| | NOTE NUMBER | 2009 € | 2008 € |
|---|---|---|---|
| Interest income on foreign reserve assets | | 700,216,277 | 1,036,423,272 |
| Interest income arising from the allocation of euro banknotes within the Eurosystem | | 787,157,441 | 2,230,477,327 |
| Other interest income | | 5,608,442,130 | 9,956,981,127 |
| *Interest income* | | *7,095,815,848* | *13,223,881,726* |
| Remuneration of NCBs' claims in respect of foreign reserves transferred | | (443,045,045) | (1,400,368,012) |
| Other interest expense | | (5,105,724,953) | (9,442,319,040) |
| *Interest expense* | | *(5,548,769,998)* | *(10,842,687,052)* |
| **Net interest income** | **24** | **1,547,045,850** | **2,381,194,674** |
| Realised gains/losses arising from financial operations | **25** | 1,102,597,118 | 662,342,084 |
| Write-downs on financial assets and positions | **26** | (37,939,649) | (2,662,102) |
| Transfer to/from provisions for foreign exchange rate, interest rate, credit and gold price risks | | 34,806,031 | (1,339,019,690) |
| **Net result of financial operations, write-downs and risk provisions** | | **1,099,463,500** | **(679,339,708)** |
| **Net expense from fees and commissions** | **27** | **(16,010)** | **(149,007)** |
| **Income from equity shares and participating interests** | **28** | **934,492** | **882,152** |
| **Other income** | **29** | **6,783,936** | **7,245,593** |
| **Total net income** | | **2,654,211,768** | **1,709,833,704** |
| Staff costs | **30** | (187,314,707) | (174,200,469) |
| Administrative expenses | **31** | (186,447,503) | (183,224,063) |
| Depreciation of tangible fixed assets | | (21,042,602) | (23,284,586) |
| Banknote production services | **32** | (6,220,852) | (6,871,050) |
| **Profit for the year** | | **2,253,186,104** | **1,322,253,536** |

*Frankfurt am Main, 23 February 2010*

EUROPEAN CENTRAL BANK

Jean-Claude Trichet
*President*

# ACCOUNTING POLICIES[1]

## FORM AND PRESENTATION OF THE FINANCIAL STATEMENTS

The financial statements of the 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 of the ECB 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 the market valuation of marketable securities (other than those classified as held-to-maturity), 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 were settled.

With the exception of securities, transactions in financial instruments denominated in foreign currency are recorded in off-balance-sheet accounts on the trade date. At the 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, and realised results arising from sales are also calculated on that 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.

## 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 2009, was derived from the exchange rate of the euro against the US dollar on 31 December 2009.

## SECURITIES

Marketable securities (other than those classified as held-to-maturity) and similar assets are valued either at the mid-market

1 The detailed accounting policies of the ECB are laid down in 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.

prices or on the basis of the relevant yield curve prevailing on the Balance Sheet date, on a security-by-security basis. For the year ending 31 December 2009, mid-market prices on 30 December 2009 were used.

Marketable securities classified as held-to-maturity, non-marketable securities and illiquid equity shares are all 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, at the year-end, they exceed previous revaluation gains registered in the corresponding revaluation account. Unrealised losses in any one security or currency or in gold are not netted against unrealised gains in other securities or currencies or gold. In the event of an unrealised loss on any item taken to the Profit and Loss Account, the average cost of that item is reduced to the year-end exchange rate or market price.

Impairment losses are taken to the Profit and Loss Account and are not reversed in subsequent years unless the impairment decreases and the decrease can be related to an observable event that occurred after the impairment was first recorded.

Premiums or discounts arising on purchased securities, including those classified as held-to-maturity, 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 in the form of cash placed on an account of the ECB. In 2009 the ECB did not receive any collateral in the form of cash in connection with 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.

Important post-balance-sheet events that do not affect the condition of assets and liabilities at the Balance Sheet date are disclosed in the notes.

### 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 TARGET2 – the Trans-European Automated Real-time Gross settlement Express Transfer system (see Chapter 2 of the Annual Report) – and give rise to bilateral balances in accounts held between those EU central banks connected to 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.

Euro-denominated 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 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 rented 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 plan for its staff. This is funded by assets held in a long-term employee-benefit fund.

In 2009 the ECB reviewed its retirement plan for staff members in order to ensure the plan's long-term financial sustainability. As a result of this review, the existing Retirement Plan was frozen on 31 May 2009 and the related rights acquired by existing staff were preserved.

3 As at 31 December 2009 the non-euro area NCBs participating in TARGET2 were: Danmarks Nationalbank, Latvijas Banka, Lietuvos bankas, Narodowy Bank Polski and Eesti Pank.

A new Pension Scheme for both existing staff and new entrants was introduced on 1 June 2009. Under this new scheme, the compulsory contributions of the ECB and the staff were increased from 16.5% to 18% and from 4.5% to 6% of basic salary respectively. Similarly to the frozen Retirement Plan, staff can make additional contributions under the new scheme on a voluntary basis in a defined contribution pillar that can be used to provide additional benefits.[4]

#### 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 as at the Balance Sheet date, *less* the fair value of plan assets used to fund the obligation, adjusted for unrecognised actuarial gains or losses.

The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash flows, using interest rates of high quality corporate bonds that are denominated in euro and have similar terms of maturity to the term of the related pension liability.

Actuarial gains and losses can arise from experience adjustments (where actual outcomes are different from the actuarial assumptions previously made) and changes in actuarial assumptions.

#### PROFIT AND LOSS ACCOUNT

The net amount charged to the Profit and Loss Account comprises:

(a) the current service cost of the benefits accruing for the year;

(b) interest at the discount rate on the defined benefit obligation;

(c) the expected return on the plan assets; and

(d) any actuarial gains and losses recognised in the Profit and Loss Account, using a "10% corridor" approach.

#### "10% CORRIDOR" APPROACH

Net cumulative unrecognised actuarial gains and losses which exceed the greater of (a) 10% of the present value of the defined benefit obligation and (b) 10% of the fair value of plan assets, are to be amortised over the expected average remaining working lives of the participating employees.

#### PENSIONS OF EXECUTIVE BOARD MEMBERS AND OTHER POST-RETIREMENT OBLIGATIONS

Unfunded arrangements are in place for the pensions of members of the Executive Board of the ECB 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.[5] 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.[6]

The ECB has been allocated a share of 8% of the total value of euro banknotes in circulation, which

4 Each member's voluntary funds can be used at retirement to purchase an additional pension. This pension would be included in the defined benefit liability from that point onwards.

5 Decision ECB/2001/15 of 6 December 2001 on the issue of euro banknotes, OJ L 337, 20.12.2001, p. 52, as amended.

6 "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.

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,[7] 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 distributed on the second working day of the following year.[8] It is distributed in full unless the ECB's net profit for the year is less than its income earned on euro banknotes in circulation, and subject to any decisions by the Governing Council to make transfers to a provision for foreign exchange rate, interest rate, credit and gold price risks and/or to charge costs incurred by the ECB in connection with the issue and handling of euro banknotes against this income.

## RECLASSIFICATIONS

Interest income and interest expense in foreign currency arising from US dollar and Swiss franc liquidity-providing operations were previously recorded under the heading "Interest income on foreign reserve assets". The ECB has decided to reclassify these items under the headings "Other interest income" and "Other interest expense",[9] so that only interest income arising from the management of its foreign reserves is reported under the heading "Interest income on foreign reserve assets". The comparable amounts for 2008 have been adjusted as follows:

| | Published in 2008 € | Adjustment owing to reclassification € | Restated amount € |
|---|---|---|---|
| Interest income on foreign reserve assets | 997,075,442 | 39,347,830 | 1,036,423,272 |
| Interest income arising from the allocation of euro banknotes within the Eurosystem | 2,230,477,327 | 0 | 2,230,477,327 |
| Other interest income | 8,430,894,437 | 1,526,086,690 | 9,956,981,127 |
| *Interest income* | *11,658,447,206* | *1,565,434,520* | *13,223,881,726* |
| Remuneration of NCBs' claims in respect of foreign reserves transferred | (1,400,368,012) | 0 | (1,400,368,012) |
| Other interest expense | (7,876,884,520) | (1,565,434,520) | (9,442,319,040) |
| *Interest expense* | *(9,277,252,532)* | *(1,565,434,520)* | *(10,842,687,052)* |
| **Net interest income** | **2,381,194,674** | **0** | **2,381,194,674** |

## 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 PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft as the external auditors of the ECB for a five-year period up to the end of the financial year 2012.

7 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.

8 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.

9 The reclassifications comply with the accounting policies of the ECB laid down in Decision ECB/2006/17, OJ L 348, 11.12.2006, p. 38, as amended.

# NOTES ON THE BALANCE SHEET

## 1 GOLD AND GOLD RECEIVABLES

As at 31 December 2009 the ECB held 16,122,146 ounces[10] of fine gold (2008: 17,156,546 ounces). The reduction was due to (a) sales of 1,141,248 ounces of fine gold 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) the transfer by Národná banka Slovenska to the ECB of 106,848 ounces of fine gold[11] upon the adoption of the single currency by Slovakia, in accordance with Article 30.1 of the Statute of the ESCB. The decrease in the euro equivalent value of this holding, resulting from these transactions, was more than offset by a significant rise in the price of gold during 2009 (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 2009. 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.

| *Claims on non-euro area residents* | 2009 € | 2008 € | Change € |
|---|---|---|---|
| Current accounts | 845,908,975 | 5,808,582,148 | (4,962,673,173) |
| Money market deposits | 636,977,905 | 573,557,686 | 63,420,219 |
| Reverse repurchase agreements | 0 | 379,961,453 | (379,961,453) |
| Security investments | 33,626,640,241 | 34,501,999,345 | (875,359,104) |
| Total | 35,109,527,121 | 41,264,100,632 | (6,154,573,511) |

| *Claims on euro area residents* | 2009 € | 2008 € | Change € |
|---|---|---|---|
| Current accounts | 677,846 | 619,534 | 58,312 |
| Money market deposits | 3,292,915,630 | 22,225,263,177 | (18,932,347,547) |
| Total | 3,293,593,476 | 22,225,882,711 | (18,932,289,235) |

The value of current accounts held with non-euro area residents decreased owing mainly to the following factors:

(a) As at 31 December 2008 current accounts included an amount of €3.9 billion arising from the settlement of the Danish krone leg of outstanding swap transactions with Danmarks Nationalbank.[12] No such swap transactions remained outstanding as at 31 December 2009;

10 This corresponds to 501.5 tonnes.

11 The transfer, with an aggregate value equivalent to €66.5 million, was made with effect from 1 January 2009.

12 A reciprocal currency arrangement (swap line) was established by Danmarks Nationalbank and the ECB in 2008. Under this arrangement, the ECB provides euro funds to Danmarks Nationalbank against Danish kroner for the duration of the transactions. The resulting funds are used in support of measures to improve liquidity in euro short-term markets.

(b) Balances in Swiss francs,[13] arising in connection with the swap arrangement established with the Swiss National Bank, were lower as a result of significantly reduced outstanding operations as at 31 December 2009 (see note 10, "Liabilities to non-euro area residents denominated in euro").

The depreciation of the Japanese yen and the US dollar against the euro and the reduction in unrealised gains on securities (see note 15, "Revaluation accounts") have also contributed to the decrease in the total value of these items.

As at 31 December 2008 deposits related to operations conducted by Eurosystem central banks in order to provide US dollar liquidity to credit institutions in the euro area were included under the component money market deposits with euro area residents. No such deposits remained outstanding as at 31 December 2009, resulting in a significant decrease in this component.

Additionally, upon the adoption of the single currency by Slovakia with effect from 1 January 2009, Národná banka Slovenska transferred foreign reserve assets denominated in US dollars with an aggregate value of €376.6 million to the ECB, in accordance with Article 30.1 of the Statute of the ESCB.

The ECB's net foreign currency holdings[14] of US dollars and Japanese yen, as at 31 December 2009, were as follows:

| | Currency in millions |
|---|---|
| US dollars | 43,123 |
| Japanese yen | 1,093,848 |

## 3 CLAIMS ON NON-EURO AREA RESIDENTS DENOMINATED IN EURO

As at 31 December 2008 this item consisted mainly of a claim of €460.0 million on the Magyar Nemzeti Bank in connection with an agreement established with the ECB on repurchase transactions. This agreement provides the Magyar Nemzeti Bank with a facility to borrow up to €5 billion in order to support its domestic operations for the provision of euro liquidity. No related claims remained outstanding as at 31 December 2009.

## 4 OTHER CLAIMS ON EURO AREA CREDIT INSTITUTIONS DENOMINATED IN EURO

As at 31 December 2009 this claim consisted of a current account with a euro area resident.

## 5 SECURITIES OF EURO AREA RESIDENTS DENOMINATED IN EURO

As at 31 December 2009 this item consisted of securities acquired by the ECB within the scope of the purchase programme for covered bonds announced by the Governing Council on 4 June 2009. Under this programme, the ECB and the NCBs have, for monetary policy purposes, started to purchase euro-denominated covered bonds issued in the euro area. The purchases are expected to be fully implemented by the end of June 2010.

The Governing Council has decided to classify the covered bonds as held-to-maturity (see "Securities" in the notes on accounting policies). As at 31 December 2009 there was no objective evidence that these assets were impaired.

13 The balances in Swiss francs reflect the risk control measures applied by the ECB in its EUR/CHF foreign exchange swap tenders, which take the form of initial margins of 5% for one-week operations.

14 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 euro area residents denominated in foreign currency", "Liabilities to non-euro area residents denominated in foreign currency", "Off-balance-sheet instruments revaluation differences" (liability 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.

## 6 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)

In 2009 this item consisted mainly of the 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 decrease in this position was due mainly to the reduction in the outstanding amount related to the back-to-back swap transactions conducted with NCBs in connection with US dollar liquidity-providing operations (see note 10, "Liabilities to non-euro area residents denominated in euro").

This item also includes the amount due to euro area NCBs in respect of the interim distribution of the ECB's income derived from banknotes (see "Banknotes in circulation" in the notes on accounting policies).

| | 2009 € | 2008 € |
|---|---|---|
| Due from euro area NCBs in respect of TARGET2 | 317,085,135,903 | 420,833,781,929 |
| Due to euro area NCBs in respect of TARGET2 | (309,938,011,037) | (185,532,591,178) |
| Due to euro area NCBs in respect of the interim distribution of the ECB's income derived from banknotes | (787,157,441) | (1,205,675,418) |
| Other claims within the Eurosystem (net) | 6,359,967,425 | 234,095,515,333 |

## 7 OTHER ASSETS

### TANGIBLE FIXED ASSETS

These assets comprised the following items on 31 December 2009:

| | 2009 € | 2008 € | Change € |
|---|---|---|---|
| **Cost** | | | |
| Land and buildings | 168,811,800 | 159,972,149 | 8,839,651 |
| Computer hardware and software | 182,723,860 | 174,191,055 | 8,532,805 |
| Equipment, furniture, plant in building and motor vehicles | 29,786,515 | 28,862,720 | 923,795 |
| Assets under construction | 105,158,742 | 83,407,619 | 21,751,123 |
| Other fixed assets | 3,668,526 | 3,577,485 | 91,041 |
| **Total cost** | **490,149,443** | **450,011,028** | **40,138,415** |
| **Accumulated depreciation** | | | |
| Land and buildings | (70,731,976) | (59,885,983) | (10,845,993) |
| Computer hardware and software | (169,735,407) | (160,665,542) | (9,069,865) |
| Equipment, furniture, plant in building and motor vehicles | (27,593,378) | (26,618,732) | (974,646) |
| Other fixed assets | (201,762) | (150,427) | (51,335) |
| **Total accumulated depreciation** | **(268,262,523)** | **(247,320,684)** | **(20,941,839)** |
| **Net book value** | **221,886,920** | **202,690,344** | **19,196,576** |

The category "Land and buildings" increased owing mainly to the final payment related to the acquisition of the land for the ECB's new premises.

The increase in the category "Assets under construction" is due mainly to activities 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

This item consists of the investment of the ECB's own funds held as a direct counterpart to the capital and reserves of the ECB (see note 13, "Other liabilities"), as well as other financial assets which include 3,211 shares in the Bank for International Settlements (BIS) at the acquisition cost of €41.8 million.

The main components of this item are as follows:

| | 2009<br>€ | 2008<br>€ | Change<br>€ |
|---|---|---|---|
| Current accounts in euro | 8,748,115 | 4,936,630 | 3,811,485 |
| Money market deposits in euro | 0 | 150,000,000 | (150,000,000) |
| Securities denominated in euro | 11,295,095,956 | 9,675,505,128 | 1,619,590,828 |
| Reverse repurchase agreements in euro | 470,622,051 | 479,293,075 | (8,671,024) |
| Other financial assets | 41,985,562 | 42,124,863 | (139,301) |
| Total | 11,816,451,684 | 10,351,859,696 | 1,464,591,988 |

The net increase in this item was due mainly to the investment in the own funds portfolio of the counterpart of the amount transferred to the ECB's provision for foreign exchange rate, interest rate and gold price risks in 2008 and income received on the own funds portfolio in 2009.

### 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 2009 (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 on that date (see "Gold and foreign currency assets and liabilities" in the notes on accounting policies).

Valuation gains in outstanding interest rate swap transactions are also included in this item (see note 20, "Interest rate swaps").

### ACCRUALS AND PREPAID EXPENSES

In 2009 this position included accrued interest receivable on the TARGET2 balances due from euro area NCBs for the final month of 2009, amounting to €261.6 million (2008: €648.9 million), and accrued interest receivable on the ECB's claims related to the allocation of euro banknotes within the Eurosystem for the final quarter of the year (see "Banknotes in circulation" in the notes on accounting policies), amounting to €157.8 million (2008: €500.4 million).

Also included under this item is accrued interest on securities (see also note 2, "Claims on non-euro area and euro area residents denominated in foreign currency", note 5, "Securities of euro area residents denominated in euro", and note 7, "Other assets") and other financial assets.

### SUNDRY

This item consists mainly of the accrued interim distribution of the ECB's income derived from banknotes (see "Banknotes in circulation" in the notes on accounting policies and note 6, "Intra-Eurosystem claims").

This item also includes positive balances related to swap and forward transactions in foreign currency that were outstanding on 31 December 2009 (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 were initially recorded (see "Off-balance-sheet instruments" in the notes on accounting policies).

A claim against the German Federal Ministry of Finance in respect of recoverable value added tax and other indirect taxes paid is also included under this heading. Such taxes are refundable under the terms of Article 3 of the Protocol on the privileges and immunities of the European Union, which applies to the ECB by virtue of Article 39 of the Statute of the ESCB.

## 8 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).

## 9 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 TARGET2 system.

## 10 LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN EURO

As at 31 December 2009 this item consisted mainly of a liability to the Federal Reserve amounting to €4.5 billion (2008: €219.7 billion) in connection with the US dollar Term Auction Facility. Under this programme, US dollars 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 euro area NCBs, which used the resulting funds to conduct US dollar liquidity-providing operations with Eurosystem counterparties in the form of reverse and swap transactions. The back-to-back swap transactions between the ECB and the NCBs resulted in intra-Eurosystem balances between the ECB and the NCBs reported under "Other claims within the Eurosystem (net)".

A liability to the Swiss National Bank amounting to €1.8 billion (2008: €18.4 billion) is also included under this heading. Swiss francs were provided by the Swiss National Bank by means of a swap arrangement with the aim of offering short-term Swiss franc funding to Eurosystem counterparties. The ECB simultaneously entered into swap transactions with euro area NCBs, which used the resulting funds to conduct Swiss franc liquidity-providing operations with Eurosystem counterparties against euro cash in the form of swap transactions. The swap transactions between the ECB and the NCBs resulted in intra-Eurosystem balances reported under "Other claims within the Eurosystem (net)". In addition, in 2008 this item included a liability to the Swiss National Bank amounting to €15.4 billion that arose from the placement with the ECB of euro funds received by the Swiss National Bank from operations with other counterparties. No such related liability remained outstanding as at 31 December 2009.

The reduction in the value of the above liabilities in 2009 reflected the declining demand for US dollar and Swiss franc liquidity among Eurosystem counterparties.

The remainder of this item reflects balances held with the ECB by non-euro area NCBs arising from transactions processed via the TARGET2 system (see "Intra-ESCB balances/intra-Eurosystem balances" in the notes on accounting policies).

## 11 LIABILITIES TO EURO AREA AND NON-EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

These two items consist mainly of repurchase agreements conducted with euro area and non-euro area residents in connection with the management of the foreign currency reserves of the ECB.

## 12 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 24, "Net interest income").

Given the adjustment of the NCBs' weightings in the ECB's capital key (see note 16, "Capital and reserves"), together with Národná banka Slovenska's transfer of foreign reserve assets upon Slovakia's adoption of the single currency, the total liability was increased to €40,204,457,215 by a decision of the Governing Council pursuant to Article 30 of the Statute of the ESCB.

| | From 1 January 2009 € | 31 December 2008[1] € |
|---|---|---|
| Nationale Bank van België/Banque Nationale de Belgique | 1,397,303,847 | 1,423,341,996 |
| Deutsche Bundesbank | 10,909,120,274 | 11,821,492,402 |
| Central Bank and Financial Services Authority of Ireland | 639,835,662 | 511,833,966 |
| Bank of Greece | 1,131,910,591 | 1,046,595,329 |
| Banco de España | 4,783,645,755 | 4,349,177,351 |
| Banque de France | 8,192,338,995 | 8,288,138,644 |
| Banca d'Italia | 7,198,856,881 | 7,217,924,641 |
| Central Bank of Cyprus | 78,863,331 | 71,950,549 |
| Banque centrale du Luxembourg | 100,638,597 | 90,730,275 |
| Central Bank of Malta | 36,407,323 | 35,831,258 |
| De Nederlandsche Bank | 2,297,463,391 | 2,243,025,226 |
| Oesterreichische Nationalbank | 1,118,545,877 | 1,161,289,918 |
| Banco de Portugal | 1,008,344,597 | 987,203,002 |
| Banka Slovenije | 189,410,251 | 183,995,238 |
| Národná banka Slovenska | 399,443,638 | - |
| Suomen Pankki – Finlands Bank | 722,328,205 | 717,086,011 |
| **Total** | **40,204,457,215** | **40,149,615,805** |

1) Individual amounts are shown rounded to the nearest euro. The components may not add up to the total owing to rounding.

Národná banka Slovenska's claim was set at €399,443,638 in order to ensure that the ratio between this claim and the aggregate claim credited to the other NCBs that have adopted the euro will be equal to the ratio between Národná banka Slovenska'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 note 1, "Gold and gold receivables", and note 2, "Claims on non-euro area and euro area residents denominated in foreign currency") was treated as part of the contributions of Národná banka Slovenska, 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 2008 (see note 14, "Provisions", and note 15, "Revaluation accounts").

## 13 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 2009 (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 on that date (see "Gold and foreign currency assets and liabilities" in the notes on accounting policies and note 7, "Other assets").

Valuation losses on 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 12,

"Intra-Eurosystem liabilities"), amounting to €443.0 million (2008: €1,400.4 million). It also includes accruals on balances due to NCBs in respect of TARGET2 amounting to €259.7 million (2008: €570.8 million), accruals on financial instruments and other accruals.

Also included under this heading is a contribution to the ECB from the City of Frankfurt of €15.3 million for the preservation of the listed Grossmarkthalle building in connection with the construction of the ECB's new premises. This amount will be netted against the cost of the building once it comes into use (see note 7, "Other assets").

### SUNDRY

This item includes negative balances related to swap and forward transactions in foreign currency that were outstanding on 31 December 2009 (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 were initially recorded (see "Off-balance-sheet instruments" in the notes on accounting policies).

This item also includes outstanding repurchase transactions of €146.6 million (2008: €337.6 million) conducted in connection with the management of the ECB's own funds (see note 7, "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:

| | 2009 € millions | 2008 € millions |
|---|---|---|
| Present value of obligations | 443.9 | 317.0 |
| Fair value of plan assets | (333.2) | (226.7) |
| Unrecognised actuarial gains/(losses) | (24.0) | 7.6 |
| Liability recognised in the Balance Sheet | 86.7 | 97.9 |

The present value of the obligations includes unfunded obligations of €44.9 million (2008: €42.3 million) relating to the pensions of Executive Board members and to staff disability provisions.

The amounts recognised in the Profit and Loss Account in 2009 and 2008 in respect of "Current service cost", "Interest on obligation", "Expected return on plan assets" and "Net actuarial (gains)/losses recognised in the year" are as follows:

| | 2009 € millions | 2008 € millions |
|---|---|---|
| Current service cost | 24.7 | 24.7 |
| Interest on obligation | 14.2 | 10.7 |
| Expected return on plan assets | (9.9) | (10.0) |
| Net actuarial (gains)/losses recognised in the year | (0.3) | (1.1) |
| Total included in "Staff costs" | 28.7 | 24.3 |

Under the "10% corridor" approach (see "The ECB's retirement plan and other post-employment benefits" in the notes on accounting policies), net cumulative unrecognised actuarial gains and losses exceeding 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 amortised over the expected average remaining working lives of the participating employees.

Changes in the present value of the defined benefit obligation are as follows:

| | 2009 € millions | 2008 € millions |
|---|---|---|
| Opening defined benefit obligation | 317.0 | 285.8 |
| Service cost | 24.7 | 24.7 |
| Interest cost | 14.2 | 10.7 |
| Contributions paid by plan participants | 21.5 | 17.9 |
| Other net changes in liabilities representing plan participants' contributions | (26.6) | (12.3) |
| Benefits paid | (3.9) | (3.8) |
| Actuarial (gains)/losses | 97.0 | (6.0) |
| Closing defined benefit obligation | 443.9 | 317.0 |

Changes in the fair value of plan assets are as follows:

| | 2009 € millions | 2008 € millions |
|---|---|---|
| Opening fair value of plan assets | 226.7 | 229.8 |
| Expected return | 9.9 | 10.0 |
| Actuarial gains/(losses) | 65.7 | (32.7) |
| Contributions paid by employer | 39.7 | 17.5 |
| Contributions paid by plan participants | 21.3 | 17.8 |
| Benefits paid | (3.5) | (3.4) |
| Other net changes in assets representing plan participants' contributions | (26.6) | (12.3) |
| Closing fair value of plan assets | 333.2 | 226.7 |

The actuarial losses for 2009 on the defined benefit obligation amounted to €97.0 million. This amount includes the effects of (a) the decrease in the discount rate from 5.75% to 5.50% that resulted in an increase in the liability value; (b) greater than expected growth in the value of the guaranteed benefits; and (c) the explicit inclusion of the obligation arising in connection with dependents' benefits. Prior to 2009 the (net) liability for dependents' benefits was assumed to be immaterial and was thus not explicitly included. However, as this liability has grown, it was decided to formally include it in the calculation of the defined benefit obligation. Similarly, the explicit inclusion of the corresponding assets in the actuarial valuation resulted in actuarial gains on plan assets amounting to €42.1 million, out of the total actuarial gains of €65.7 million for 2009.

As a result of the application of the annual Capital Guarantee on 31 December 2008, and given the loss of capital in the plan members' Core Benefit Accounts, the Governing Council, acting on actuarial advice and in line with the rules of the ECB's Retirement Plan, decided in 2009 to make a supplementary contribution of approximately €19.9 million out of the general assets of the ECB. This contribution resulted in an increase in the contributions paid by the ECB in 2009 compared with the respective figure for 2008.

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:

| | 2009 % | 2008 % |
|---|---|---|
| Discount rate | 5.50 | 5.75 |
| Expected return on plan assets | 6.50 | 6.50 |
| General future salary increases 1) | 2.00 | 2.00 |
| Future pension increases | 2.00 | 2.00 |

1) In addition, allowance is made for prospective individual salary increases of between 0% and 2.25% per annum, depending on the age of the members of the plan.

## 14 PROVISIONS

This item consists of a provision for foreign exchange rate, interest rate, credit and gold price risks and other miscellaneous provisions. The latter include 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 new site.

The Governing Council, 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, deemed it appropriate to establish a provision as at 31 December 2005 for these risks. In 2009, following the establishment of the programme for the purchase of covered bonds (see note 5, "Securities of euro area residents denominated in euro"), the Governing Council decided to

extend the scope of the risk provision to also cover credit risk. This provision will be used to the extent deemed necessary by the Governing Council to offset 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.[15] 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 2008 the provision for the above risks amounted to €4,014,961,580. In accordance with Article 49.2 of the Statute of the ESCB, Národná banka Slovenska contributed an amount of €40,290,173 to the provision with effect from 1 January 2009. In addition, given (a) the adjustment of the NCBs' capital key shares (see note 16, "Capital and reserves"), and (b) the contribution by Národná banka Slovenska, and also after taking the results of its assessment into account, the Governing Council decided to release, as at 31 December 2009, an amount of €34,806,031 from the provision in order to comply with the maximum allowed ceiling.

The net effect of the above developments was an increase in the size of the provision to €4,020,445,722, which is also the value of the ECB's capital paid up by the euro area NCBs as at 31 December 2009.

## 15 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, Národná banka Slovenska contributed the amount of €113.9 million to these balances with effect from 1 January 2009.

| | 2009<br>€ | 2008<br>€ | Change<br>€ |
|---|---|---|---|
| Gold | 8,418,303,639 | 6,449,713,267 | 1,968,590,372 |
| Foreign currency | 2,070,299,334 | 3,616,514,710 | (1,546,215,376) |
| Securities and other instruments | 426,648,985 | 1,286,373,348 | (859,724,363) |
| Total | 10,915,251,958 | 11,352,601,325 | (437,349,367) |

The foreign exchange rates used for the year-end revaluation were as follows:

| Exchange rates | 2009 | 2008 |
|---|---|---|
| US dollars per euro | 1.4406 | 1.3917 |
| Japanese yen per euro | 133.16 | 126.14 |
| Euro per SDR | 1.0886 | 1.1048 |
| Swiss francs per euro | 1.4836 | 1.4850 |
| Danish kroner per euro | Not used | 7.4506 |
| Euro per fine ounce of gold | 766.347 | 621.542 |

## 16 CAPITAL AND RESERVES

### (a) CHANGES 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.[16] The second such adjustment

15 See also Chapter 2 of the Annual Report.

16 These weights are also adjusted whenever new Member States join the EU.

following the establishment of the ECB was made on 1 January 2009. 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,[17] the NCBs' capital key shares were adjusted on 1 January 2009 as follows:

| | Capital key from 1 January 2009 % | Capital key on 31 December 2008 % |
|---|---|---|
| Nationale Bank van België/ Banque Nationale de Belgique | 2.4256 | 2.4708 |
| Deutsche Bundesbank | 18.9373 | 20.5211 |
| Central Bank and Financial Services Authority of Ireland | 1.1107 | 0.8885 |
| Bank of Greece | 1.9649 | 1.8168 |
| Banco de España | 8.3040 | 7.5498 |
| Banque de France | 14.2212 | 14.3875 |
| Banca d'Italia | 12.4966 | 12.5297 |
| Central Bank of Cyprus | 0.1369 | 0.1249 |
| Banque centrale du Luxembourg | 0.1747 | 0.1575 |
| Central Bank of Malta | 0.0632 | 0.0622 |
| De Nederlandsche Bank | 3.9882 | 3.8937 |
| Oesterreichische Nationalbank | 1.9417 | 2.0159 |
| Banco de Portugal | 1.7504 | 1.7137 |
| Banka Slovenije | 0.3288 | 0.3194 |
| Národná banka Slovenska | 0.6934 | - |
| Suomen Pankki – Finlands Bank | 1.2539 | 1.2448 |
| ***Subtotal for euro area NCBs*** | ***69.7915*** | ***69.6963*** |
| Българска народна банка (Bulgarian National Bank) | 0.8686 | 0.8833 |
| Česká národní banka | 1.4472 | 1.3880 |
| Danmarks Nationalbank | 1.4835 | 1.5138 |
| Eesti Pank | 0.1790 | 0.1703 |
| Latvijas Banka | 0.2837 | 0.2813 |
| Lietuvos bankas | 0.4256 | 0.4178 |
| Magyar Nemzeti Bank | 1.3856 | 1.3141 |
| Narodowy Bank Polski | 4.8954 | 4.8748 |
| Banca Naţională a României | 2.4645 | 2.5188 |
| Národná banka Slovenska | - | 0.6765 |
| Sveriges Riksbank | 2.2582 | 2.3313 |
| Bank of England | 14.5172 | 13.9337 |
| ***Subtotal for non-euro area NCBs*** | ***30.2085*** | ***30.3037*** |
| **Total** | **100.0000** | **100.0000** |

## (b) CAPITAL OF THE ECB

Pursuant to Council Decision 2008/608/EC of 8 July 2008, taken in accordance with Article 122(2) of the Treaty, Slovakia adopted the single currency on 1 January 2009. In accordance with Article 49.1 of the Statute of the ESCB and the legal acts adopted by the Governing Council on 31 December 2008,[18] Národná banka Slovenska paid up an amount of €37,216,407 as at 1 January 2009, representing the remainder of its capital subscription to the ECB.

The adjustment of the NCBs' capital key shares in conjunction with Slovakia joining the euro area resulted in an increase of €5,100,251 in the ECB's paid-up capital, as shown in the table below:[19]

17 OJ L 181, 19.7.2003, p. 43.
18 Decision ECB/2008/33 of 31 December 2008 on the paying-up of capital, transfer of foreign reserve assets and contributions by Národná banka Slovenska to the European Central Bank's reserves and provisions, OJ L 21, 24.1.2009, p. 83; Agreement of 31 December 2008 between Národná banka Slovenska and the European Central Bank regarding the claim credited to Národná banka Slovenska 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 18, 24.1.2009, p. 3.
19 Individual amounts are shown rounded to the nearest euro. Subtotals in the tables of this section may not add up to the total owing to rounding.

| | Subscribed capital from 1 January 2009 € | Paid-up capital from 1 January 2009 € | Subscribed capital on 31 December 2008 € | Paid-up capital on 31 December 2008 € |
|---|---|---|---|---|
| Nationale Bank van België/Banque Nationale de Belgique | 139,730,385 | 139,730,385 | 142,334,200 | 142,334,200 |
| Deutsche Bundesbank | 1,090,912,027 | 1,090,912,027 | 1,182,149,240 | 1,182,149,240 |
| Central Bank and Financial Services Authority of Ireland | 63,983,566 | 63,983,566 | 51,183,397 | 51,183,397 |
| Bank of Greece | 113,191,059 | 113,191,059 | 104,659,533 | 104,659,533 |
| Banco de España | 478,364,576 | 478,364,576 | 434,917,735 | 434,917,735 |
| Banque de France | 819,233,899 | 819,233,899 | 828,813,864 | 828,813,864 |
| Banca d'Italia | 719,885,688 | 719,885,688 | 721,792,464 | 721,792,464 |
| Central Bank of Cyprus | 7,886,333 | 7,886,333 | 7,195,055 | 7,195,055 |
| Banque centrale du Luxembourg | 10,063,860 | 10,063,860 | 9,073,028 | 9,073,028 |
| Central Bank of Malta | 3,640,732 | 3,640,732 | 3,583,126 | 3,583,126 |
| De Nederlandsche Bank | 229,746,339 | 229,746,339 | 224,302,523 | 224,302,523 |
| Oesterreichische Nationalbank | 111,854,588 | 111,854,588 | 116,128,992 | 116,128,992 |
| Banco de Portugal | 100,834,460 | 100,834,460 | 98,720,300 | 98,720,300 |
| Banka Slovenije | 18,941,025 | 18,941,025 | 18,399,524 | 18,399,524 |
| Národná banka Slovenska | 39,944,364 | 39,944,364 | - | - |
| Suomen Pankki – Finlands Bank | 72,232,820 | 72,232,820 | 71,708,601 | 71,708,601 |
| ***Subtotal for euro area NCBs*** | ***4,020,445,722*** | ***4,020,445,722*** | ***4,014,961,580*** | ***4,014,961,580*** |
| Българска народна банка (Bulgarian National Bank) | 50,037,027 | 3,502,592 | 50,883,843 | 3,561,869 |
| Česká národní banka | 83,368,162 | 5,835,771 | 79,957,855 | 5,597,050 |
| Danmarks Nationalbank | 85,459,278 | 5,982,149 | 87,204,756 | 6,104,333 |
| Eesti Pank | 10,311,568 | 721,810 | 9,810,391 | 686,727 |
| Latvijas Banka | 16,342,971 | 1,144,008 | 16,204,715 | 1,134,330 |
| Lietuvos bankas | 24,517,337 | 1,716,214 | 24,068,006 | 1,684,760 |
| Magyar Nemzeti Bank | 79,819,600 | 5,587,372 | 75,700,733 | 5,299,051 |
| Narodowy Bank Polski | 282,006,978 | 19,740,488 | 280,820,283 | 19,657,420 |
| Banca Națională a României | 141,971,278 | 9,937,989 | 145,099,313 | 10,156,952 |
| Národná banka Slovenska | - | - | 38,970,814 | 2,727,957 |
| Sveriges Riksbank | 130,087,053 | 9,106,094 | 134,298,089 | 9,400,866 |
| Bank of England | 836,285,431 | 58,539,980 | 802,672,024 | 56,187,042 |
| ***Subtotal for non-euro area NCBs*** | ***1,740,206,681*** | ***121,814,468*** | ***1,745,690,822*** | ***122,198,358*** |
| **Total** | **5,760,652,403** | **4,142,260,189** | **5,760,652,403** | **4,137,159,938** |

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. This contribution amounted to a total of €121,814,468 at end-2009. 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.

## 17 POST-BALANCE-SHEET EVENTS

### US DOLLAR AND SWISS FRANC LIQUIDITY-PROVIDING OPERATIONS

The Governing Council decided that after 31 January 2010 it would stop conducting (a) US dollar liquidity-providing operations, given the improvements seen in the functioning of financial market over the past year; and

(b) Swiss franc liquidity-providing operations, against the background of declining demand and improved conditions in the funding markets. Consequently, no related balances remained outstanding shortly after that date (see note 2, "Claims on non-euro area and euro area residents denominated in foreign currency", note 10, "Liabilities to non-euro area residents denominated in euro", and note 21, "Foreign exchange swap and forward transactions"). These decisions concerning the US dollar and Swiss franc operations were taken in agreement with other central banks including the Federal Reserve and the Swiss National Bank respectively.

## OFF-BALANCE-SHEET INSTRUMENTS

## 18 AUTOMATIC SECURITY LENDING PROGRAMME

As part of the management of the ECB's own funds, the ECB has concluded an automatic security lending programme agreement, whereby an appointed agent enters into security lending transactions on behalf of the ECB with a number of counterparties, designated by the ECB as eligible counterparties. Under this agreement, reverse transactions with a value of €2.1 billion (2008: €1.2 billion) were outstanding as at 31 December 2009 (see "Reverse transactions" in the notes on accounting policies).

## 19 INTEREST RATE FUTURES

Interest rate futures are used as part of the management of the ECB's foreign reserves and own funds. As at 31 December 2009 the following transactions were outstanding:

| Foreign currency interest rate futures | 2009 Contract value € | 2008 Contract value € | Change € |
| --- | --- | --- | --- |
| Purchases | 541,523,368 | 2,041,082,857 | (1,499,559,489) |
| Sales | 2,706,847,703 | 1,209,470,518 | 1,497,377,185 |

| Euro interest rate futures | 2009 Contract value € | 2008 Contract value € | Change € |
| --- | --- | --- | --- |
| Purchases | 25,000,000 | 50,000,000 | (25,000,000) |
| Sales | 379,000,000 | 33,000,000 | 346,000,000 |

## 20 INTEREST RATE SWAPS

Interest rate swap transactions with a contract value of €724.4 million (2008: €459.3 million) were outstanding as at 31 December 2009. These transactions were conducted in the context of the management of the ECB's foreign reserves.

## 21 FOREIGN EXCHANGE SWAP AND FORWARD TRANSACTIONS

### MANAGEMENT OF THE FOREIGN RESERVES

The following foreign exchange swap and forward transactions remained outstanding, in the context of the management of the ECB's foreign reserves, as at 31 December 2009:

| Foreign exchange swap and forward transactions | 2009 € | 2008 € | Change € |
| --- | --- | --- | --- |
| Claims | 1,017,926,290 | 358,050,555 | 659,875,735 |
| Liabilities | 1,008,562,032 | 404,319,418 | 604,242,614 |

### LIQUIDITY-PROVIDING OPERATIONS

Forward claims on NCBs and liabilities to the Federal Reserve, which arose in connection with the provision of US dollar liquidity to Eurosystem counterparties (see note 10, "Liabilities to non-euro area residents denominated in euro"), were outstanding on 31 December 2009.

Forward claims on NCBs and liabilities to the Swiss National Bank, which arose in connection with the provision of Swiss franc liquidity to Eurosystem counterparties (see note 10, "Liabilities to non-euro area residents denominated in euro"), were also outstanding on 31 December 2009.

## 22 ADMINISTRATION OF BORROWING AND LENDING OPERATIONS

In accordance with Article 123(2) of the Treaty, as in force until 1 December 2009, and Article 21.2 of the Statute of the ESCB, together

with Article 9 of Council Regulation (EC) No 332/2002 of 18 February 2002, as last amended by Council Regulation (EC) No 431/2009 of 18 May 2009, the ECB continues to be responsible for the administration of the borrowing and lending operations of the EU under the medium-term financial assistance mechanism. Under this scheme, loans from the EU to Latvia, Hungary and Romania for a total amount of €9.2 billion were outstanding as at 31 December 2009.

## 23 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[20] in the production of euro banknotes. The CFI dismissed DSSI's action for damages against the ECB.[21] The ECB is currently pursuing actions to revoke the patent in a number of national jurisdictions. Furthermore, the ECB firmly maintains that it has in no way infringed the patent, and will consequently also enter a defence against any infringement action brought by DSSI before any competent national court.

As a result of the CFI's dismissal of DSSI's action for damages against the ECB, as well as the ECB's successful actions to date in certain national jurisdictions to revoke national portions of DSSI's patent, the ECB remains confident that the possibility of payments to DSSI is remote. The ECB is actively monitoring all developments in the continuing litigation.

20 DSSI's European Patent No 0455 750 B1.

21 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

## 24 NET INTEREST INCOME

### INTEREST INCOME ON FOREIGN RESERVE ASSETS

This item includes interest income, net of interest expense, in respect of the ECB's net foreign reserve assets, as follows:

| | 2009<br>€ | 2008<br>€ | Change<br>€ |
|---|---|---|---|
| Interest income on current accounts | 1,333,874 | 10,303,881 | (8,970,007) |
| Interest income on money market deposits | 17,682,787 | 109,653,055 | (91,970,268) |
| Interest income on reverse repurchase agreements | 1,524,055 | 42,404,485 | (40,880,430) |
| Interest income on securities | 663,881,906 | 885,725,044 | (221,843,138) |
| Net interest income on interest rate swaps | 7,374,057 | 2,299,631 | 5,074,426 |
| Net interest income on swap and forward transactions in foreign currency | 9,519,685 | 15,575,487 | (6,055,802) |
| **Total interest income on foreign reserve assets** | 701,316,364 | 1,065,961,583 | (364,645,219) |
| Interest expense on current accounts | (219,800) | (45,896) | (173,904) |
| Net interest expense on repurchase agreements | (880,287) | (29,492,415) | 28,612,128 |
| **Interest income on foreign reserve assets (net)** | 700,216,277 | 1,036,423,272 | (336,206,995) |

Interest income and interest expense arising from US dollar and Swiss franc liquidity-providing operations, that were previously disclosed under this heading, have now been reclassified under "Other interest income" and "Other interest expense" (see "Reclassifications" in the notes on accounting policies).

### 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 of 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 decrease in income in 2009 mainly reflected the fact that the average main refinancing rate was lower than in 2008.

This income is distributed to the NCBs as described under "Banknotes in circulation" in the notes on accounting policies. Based on the ECB's estimated financial result for 2009, the Governing Council decided to distribute this income in its entirety to the euro area NCBs, in accordance with their respective shares in the ECB's capital.

### 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 €4.0 billion (2008: €8.0 billion) and expenses of €3.7 billion (2008: €7.6 billion) on balances arising from TARGET2 (see "Intra-ESCB balances/intra-Eurosystem balances" in the notes on accounting policies). Interest income and expenses in respect of other assets and liabilities denominated in euro as well as interest income and interest expense arising from the US dollar and Swiss franc liquidity-providing operations are also shown here (see "Reclassifications" in the notes on accounting policies).

## 25 REALISED GAINS/(LOSSES) ARISING FROM FINANCIAL OPERATIONS

Net realised gains/(losses) arising from financial operations in 2009 were as follows:

| | 2009 € | 2008 € | Change € |
|---|---|---|---|
| Net realised price gains/(losses) on securities, interest rate futures and interest rate swaps | 563,594,643 | 349,179,481 | 214,415,162 |
| Net realised exchange rate and gold price gains | 539,002,475 | 313,162,603 | 225,839,872 |
| Realised gains arising from financial operations | 1,102,597,118 | 662,342,084 | 440,255,034 |

The overall increase in net realised exchange rate and gold price gains was due mainly to a significant rise in the price of gold during 2009, combined with the larger volume of gold sold in that year (see note 1, "Gold and gold receivables").

## 26 WRITE-DOWNS ON FINANCIAL ASSETS AND POSITIONS

| | 2009 € | 2008 € | Change € |
|---|---|---|---|
| Unrealised price losses on securities | (34,163,743) | (2,164,000) | (31,999,743) |
| Unrealised price losses on interest rate swaps | (3,774,314) | (476,831) | (3,297,483) |
| Unrealised exchange rate losses | (1,592) | (21,271) | 19,679 |
| Total write-downs | (37,939,649) | (2,662,102) | (35,277,547) |

In 2009 this expense was due mainly to the write-down of the acquisition cost of a number of securities shown on the Balance Sheet to their market value as at 30 December 2009.

## 27 NET EXPENSE FROM FEES AND COMMISSIONS

| | 2009 € | 2008 € | Change € |
|---|---|---|---|
| Income from fees and commissions | 679,416 | 588,052 | 91,364 |
| Expenses relating to fees and commissions | (695,426) | (737,059) | 41,633 |
| Net expense from fees and commissions | (16,010) | (149,007) | 132,997 |

In 2009 income under this heading consisted of 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 interest rate futures (see note 19, "Interest rate futures").

## 28 INCOME FROM EQUITY SHARES AND PARTICIPATING INTERESTS

Dividends received on shares which the ECB holds in the BIS (see note 7, "Other assets") are shown under this heading.

## 29 OTHER INCOME

In 2009 the main item of other miscellaneous income included under this heading was income arising 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.

## 30 STAFF COSTS

Salaries, allowances, staff insurance and other miscellaneous costs of €158.6 million (2008: €149.9 million) are included under this heading. Also included under this item is an amount of €28.7 million (2008: €24.3 million) recognised in connection with the ECB's retirement plan and other post-employment benefits (see note 13, "Other liabilities"). Staff costs of €1.2 million (2008: €1.1 million) incurred in connection with the construction of the ECB's new 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 Union.

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 Union as well as to deductions in respect of contributions to the pension, medical and accident insurance schemes. Allowances are non-taxable and non-pensionable.

Basic salaries paid to members of the Executive Board in 2009 and 2008 were as follows:

| | 2009 € | 2008 € |
|---|---|---|
| Jean-Claude Trichet (President) | 360,612 | 351,816 |
| Lucas D. Papademos (Vice-President) | 309,096 | 301,548 |
| Gertrude Tumpel-Gugerell (Board Member) | 257,568 | 251,280 |
| José Manuel González-Páramo (Board Member) | 257,568 | 251,280 |
| Lorenzo Bini Smaghi (Board Member) | 257,568 | 251,280 |
| Jürgen Stark (Board Member) | 257,568 | 251,280 |
| Total | 1,699,980 | 1,658,484 |

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 €614,879 (2008: €600,523), resulting in total emoluments of €2,314,859 (2008: €2,259,007).

Transitional payments are made to former members of the Executive Board for a period after the end of their terms of office. In 2009 no such payments were made since no former Executive Board member was in receipt of such benefits (2008: €30,748, including the ECB's contributions to the medical and accident insurance schemes). 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 €348,410 (2008: €306,798).

At the end of 2009 the actual full-time equivalent number of staff holding contracts with the ECB was 1,563,[22] including 150 with managerial positions. The change in the number of staff during 2009 was as follows:

| | 2009 | 2008 |
|---|---|---|
| As at 1 January | 1,536 | 1,478 |
| Newcomers/change of contract status | 320 | 307 |
| Resignations/end of contract | 283 | 238 |
| Net decrease due to changes in part-time working patterns | 10 | 11 |
| As at 31 December | 1,563 | 1,536 |
| Average number of staff employed | 1,530 | 1,499 |

## 31 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 expenses.

## 32 BANKNOTE PRODUCTION SERVICES

This expense relates to costs arising mainly from the cross-border transportation of euro banknotes between NCBs. These costs are borne centrally by the ECB.

22 Staff on unpaid leave of absence are excluded. This number includes staff with permanent, fixed or short-term contracts and the participants in the ECB's Graduate Programme. Staff on maternity or long-term sick leave are also included.

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President and Governing Council
of the European Central Bank
Frankfurt am Main

24 February 2010

**Independent auditor's report**

We have audited the accompanying annual accounts of the European Central Bank, which comprise the balance sheet as at 31 December 2009, 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 judgement, 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

...

Vorsitzender des Aufsichtsrats: WP StB Reiner Dickmann · Vorstand: WP StB Hans Wagener, WP StB Peter Albrecht, WP StB Frank Brebeck, StB Prof. Dr. Dieter Endres
WP StB Ernst-Wilhelm Frings, WP RA Dr. Hans Friedrich Gelhausen, WP StB Werner Hölzl, WP StB Prof. Dr. Georg Kämpfer, WP RA StB Dr. Jan Konerding
WP StB Georg Kütter, Dr. Ludger Mansfeld, StB Marius Möller, WP StB Franz Nienborg, WP StB Gert-Michael Raabe, WP StB Martin Scholich, RA StB Christoph Schreiber
WP StB Dr. Norbert Vogelpoth, WP StB Franz Wagner, WP StB Wolfgang Wagner, WP StB Prof. Dr. Norbert Winkeljohann
Sitz der Gesellschaft: Frankfurt am Main, Amtsgericht Frankfurt am Main HRB 44845
PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft ist Mitglied von PricewaterhouseCoopers International, *einer Company limited by guarantee* registriert in England und Wales

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 2009, 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, 24 February 2010

**PricewaterhouseCoopers**
**Aktiengesellschaft**
**Wirtschaftsprüfungsgesellschaft**

Jens Rönnberg
Wirtschaftsprüfer

ppa. Muriel Atton
Wirtschaftsprüfer

# NOTE ON PROFIT DISTRIBUTION/ ALLOCATION OF LOSSES

*This note is not part of the financial statements of the ECB for the year 2009.*

## INCOME RELATED TO THE ECB'S SHARE OF TOTAL BANKNOTES IN CIRCULATION

In respect of 2008, following a decision by the Governing Council, an amount of €1,206 million, comprising part of the income earned on the ECB's share of total euro banknotes in circulation, was distributed to the NCBs on 5 January 2009. In respect of 2009 the full income earned on the ECB's share of total euro banknotes in circulation, amounting to €787 million, was distributed to the NCBs on 5 January 2010. Both amounts were distributed to the euro area NCBs in proportion to their paid-up shares in the subscribed capital of the ECB.

## 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 of the ESCB.[1]

Just as for 2008, the Governing Council decided on 4 March 2010 to make no transfer to the general reserve fund and to distribute the remaining balance of the profit for 2009, amounting to €1,466 million, to the euro area NCBs, in proportion to their paid-up shares.

Non-euro area NCBs are not entitled to receive any share of the ECB's profit, nor are they liable to fund any loss of the ECB.

| | 2009<br>€ | 2008<br>€ |
|---|---|---|
| Profit for the year | 2,253,186,104 | 1,322,253,536 |
| Income on the ECB's banknote issue distributed to NCBs | (787,157,441) | (1,205,675,418) |
| Profit for the year after distribution of income on the ECB's banknote issue | 1,466,028,663 | 116,578,118 |
| Distribution of profit to NCBs | (1,466,028,663) | (116,578,118) |
| Total | 0 | 0 |

1 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.

# 6 CONSOLIDATED BALANCE SHEET OF THE EUROSYSTEM AS AT 31 DECEMBER 2009

(EUR MILLIONS)

| ASSETS | 31 DECEMBER 2009[1] | 31 DECEMBER 2008 |
|---|---|---|
| **1 Gold and gold receivables** | **266,919** | **217,722** |
| **2 Claims on non-euro area residents denominated in foreign currency** | **195,479** | **160,372** |
| 2.1 Receivables from the IMF | 62,799 | 13,192 |
| 2.2 Balances with banks and security investments, external loans and other external assets | 132,680 | 147,180 |
| **3 Claims on euro area residents denominated in foreign currency** | **32,151** | **234,293** |
| **4 Claims on non-euro area residents denominated in euro** | **15,193** | **18,651** |
| 4.1 Balances with banks, security investments and loans | 15,193 | 18,651 |
| 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** | **749,890** | **860,312** |
| 5.1 Main refinancing operations | 79,277 | 239,527 |
| 5.2 Longer-term refinancing operations | 669,297 | 616,662 |
| 5.3 Fine-tuning reverse operations | 0 | 0 |
| 5.4 Structural reverse operations | 0 | 0 |
| 5.5 Marginal lending facility | 1,289 | 4,057 |
| 5.6 Credits related to margin calls | 27 | 66 |
| **6 Other claims on euro area credit institutions denominated in euro** | **26,282** | **56,988** |
| **7 Securities of euro area residents denominated in euro** | **328,652** | **271,196** |
| 7.1 Securities held for monetary policy purposes | 28,782 | 0 |
| 7.2 Other securities | 299,870 | 271,196 |
| **8 General government debt denominated in euro** | **36,171** | **37,438** |
| **9 Other assets** | **252,288** | **218,134** |
| **Total assets** | **1,903,024** | **2,075,107** |

Totals/subtotals may not add up due to rounding.

1 Consolidated figures as at 31 December 2009 also include Národná banka Slovenska, which has been a member of the Eurosystem since 1 January 2009.

| LIABILITIES | 31 DECEMBER 2009 | 31 DECEMBER 2008 |
|---|---|---|
| **1 Banknotes in circulation** | **806,522** | **762,921** |
| **2 Liabilities to euro area credit institutions related to monetary policy operations denominated in euro** | **395,614** | **492,310** |
| 2.1 Current accounts (covering the minimum reserve system) | 233,490 | 291,710 |
| 2.2 Deposit facility | 162,117 | 200,487 |
| 2.3 Fixed-term deposits | 0 | 0 |
| 2.4 Fine-tuning reverse operations | 0 | 0 |
| 2.5 Deposits related to margin calls | 6 | 113 |
| **3 Other liabilities to euro area credit institutions denominated in euro** | **340** | **328** |
| **4 Debt certificates issued** | **0** | **0** |
| **5 Liabilities to other euro area residents denominated in euro** | **129,730** | **91,077** |
| 5.1 General government | 120,495 | 83,282 |
| 5.2 Other liabilities | 9,235 | 7,794 |
| **6 Liabilities to non-euro area residents denominated in euro** | **46,769** | **293,592** |
| **7 Liabilities to euro area residents denominated in foreign currency** | **4,032** | **5,723** |
| **8 Liabilities to non-euro area residents denominated in foreign currency** | **9,616** | **10,258** |
| 8.1 Deposits, balances and other liabilities | 9,616 | 10,258 |
| 8.2 Liabilities arising from the credit facility under ERM II | 0 | 0 |
| **9 Counterpart of special drawing rights allocated by the IMF** | **51,249** | **5,465** |
| **10 Other liabilities** | **164,082** | **166,500** |
| **11 Revaluation accounts** | **220,101** | **175,735** |
| **12 Capital and reserves** | **74,969** | **71,200** |
| **Total liabilities** | **1,903,024** | **2,075,107** |

# ANNEXES

# LEGAL INSTRUMENTS ADOPTED BY THE ECB

The following table lists the legal instruments that were adopted by the ECB in 2009 and published in the Official Journal of the European Union. Copies of the Official Journal can be obtained from the Publications Office of the European Union. 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/2009/1 | Guideline of the European Central Bank of 20 January 2009 amending Guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem | OJ L 36, 5.2.2009, p. 59 |
| ECB/2009/2 | Decision of the European Central Bank of 27 January 2009 amending Decision ECB/2007/5 laying down the Rules on Procurement | OJ L 51, 24.2.2009, p. 10 |
| ECB/2009/3 | Recommendation of the European Central Bank of 16 February 2009 to the Council of the European Union on the external auditors of the Deutsche Bundesbank | OJ C 43, 21.2.2009, p. 1 |
| ECB/2009/4 | Decision of the European Central Bank of 6 March 2009 concerning derogations that may be granted under Regulation ECB/2007/8 concerning statistics on the assets and liabilities of investment funds | OJ L 72, 18.3.2009, p. 21 |
| ECB/2009/5 | Decision of the European Central Bank of 19 March 2009 amending Decision ECB/2004/2 adopting the Rules of Procedure of the European Central Bank | OJ L 100, 18.4.2009, p. 10 |
| ECB/2009/6 | Decision of the European Central Bank of 19 March 2009 on the establishment of the TARGET2-Securities Programme Board | OJ L 102, 22.4.2009, p. 12 |
| ECB/2009/7 | Regulation of the European Central Bank of 31 March 2009 amending Regulation ECB/2001/18 concerning statistics on interest rates applied by monetary financial institutions to deposits and loans vis-à-vis households and non-financial corporations | OJ L 94, 8.4.2009, p. 75 |
| ECB/2009/8 | Recommendation of the European Central Bank of 3 April 2009 to the Council of the European Union on the external auditors of De Nederlandsche Bank | OJ C 93, 22.4.2009, p. 1 |
| ECB/2009/9 | Guideline of the European Central Bank of 7 May 2009 amending Guideline ECB/2007/2 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) | OJ L 123, 19.5.2009, p. 94 |

| Number | Title | OJ reference |
|---|---|---|
| ECB/2009/10 | Guideline of the European Central Bank of 7 May 2009 amending Guideline ECB/2000/7 on monetary policy instruments and procedures of the Eurosystem | OJ L 123, 19.5.2009, p. 99 |
| ECB/2009/11 | Guideline of the European Central Bank of 28 May 2009 amending Guideline ECB/2006/4 on the Eurosystem's provision of reserve management services in euro to central banks and countries located outside the euro area and to international organisations | OJ L 139, 5.6.2009, p. 34 |
| ECB/2009/12 | Recommendation of the European Central Bank of 5 June 2009 to the Council of the European Union on the external auditors of Banka Slovenije | OJ C 132, 11.6.2009, p. 1 |
| ECB/2009/13 | Decision of the European Central Bank of 9 June 2009 amending Decision ECB/2007/7 concerning the terms and conditions of TARGET2-ECB | OJ L 151, 16.6.2009, p. 39 |
| ECB/2009/14 | Recommendation of the European Central Bank of 25 June 2009 to the Council of the European Union on the external auditors of Národná banka Slovenska | OJ C 149, 1.7.2009, p. 1 |
| ECB/2009/15 | Decision of the European Central Bank of 25 June 2009 amending Decision ECB/2008/20 as regards the volume of euro coins that Austria may issue in 2009 | OJ L 172, 2.7.2009, p. 35 |
| ECB/2009/16 | Decision of the European Central Bank of 2 July 2009 on the implementation of the covered bond purchase programme | OJ L 175, 4.7.2009, p. 18 |
| ECB/2009/17 | Decision of the European Central Bank of 19 June 2009 amending Decision ECB/2003/14 concerning the administration of the borrowing-and-lending operations concluded by the European Community under the medium-term financial assistance facility | OJ L 190, 22.7.2009, p. 11 |
| ECB/2009/18 | Guideline of the European Central Bank of 17 July 2009 amending Guideline ECB/2006/16 on the legal framework for accounting and financial reporting in the European System of Central Banks | OJ L 202, 4.8.2009, p. 65 |
| ECB/2009/19 | Decision of the European Central Bank of 17 July 2009 amending Decision ECB/2006/17 on the annual accounts of the European Central Bank | OJ L 202, 4.8.2009, p. 54 |
| ECB/2009/20 | Guideline of the European Central Bank of 31 July 2009 on government finance statistics (recast) | OJ L 228, 1.9.2009, p. 25 |

| Number | Title | OJ reference |
|---|---|---|
| ECB/2009/21 | Guideline of the European Central Bank of 17 September 2009 amending Guideline ECB/2007/2 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) | OJ L 260, 3.10.2009, p. 31 |
| ECB/2009/22 | Decision of the European Central Bank of 6 October 2009 amending Decision ECB/2007/7 concerning the terms and conditions of TARGET2-ECB | OJ L 274, 20.10.2009, p. 38 |
| ECB/2009/23 | Guideline of the European Central Bank of 4 December 2009 amending Guideline ECB/2007/9 on monetary, financial institutions and markets statistics | OJ L 16, 21.1.2010, p. 6 |
| ECB/2009/24 | Guideline of the European Central Bank of 10 December 2009 amending Guideline ECB/2008/18 on temporary changes to the rules relating to eligibility of collateral | OJ L 330, 16.12.2009, p. 95 |
| ECB/2009/25 | Decision of the European Central Bank of 10 December 2009 on the approval of the volume of coin issuance in 2010 | OJ L 7, 12.1.2010, p. 21 |
| ECB/2009/26 | Recommendation of the European Central Bank of 14 December 2009 to the Council of the European Union on the external auditors of the Central Bank and Financial Services Authority of Ireland | OJ C 308, 18.12.2009, p. 1 |
| ECB/2009/27 | Decision of the European Central Bank of 14 December 2009 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 339, 22.12.2009, p. 55 |
| ECB/2009/28 | Guideline of the European Central Bank of 14 December 2009 amending Guideline ECB/2006/16 on the legal framework for accounting and financial reporting in the European System of Central Banks | OJ L 348, 29.12.2009, p. 75 |
| ECB/2009/29 | Decision of the European Central Bank of 14 December 2009 amending Decision ECB/2006/17 on the annual accounts of the European Central Bank | OJ L 348, 29.12.2009, p. 57 |

# OPINIONS ADOPTED BY THE ECB

The following table lists the opinions adopted by the ECB in 2009 and early 2010 under Article 105(4) of the Treaty establishing the European Community (now Article 127(4) of the Treaty)[1] and Article 4 of the Statute of the ESCB. For a list of all the opinions adopted by the ECB since its establishment, see the ECB's website.

1 Article 105(4) of the Treaty establishing the European Community is the legal basis for opinions adopted until 30 November 2009, and Article 127(4) of the Treaty on the Functioning of the European Union for opinions adopted from 1 December 2009.

**(a) ECB opinions following a consultation by a European institution[1]**

| Number[2] | Originator | Subject | OJ reference |
|---|---|---|---|
| CON/2009/1 | EU Council | A new regulation on cross-border payments in the Community | OJ C 21, 28.1.2009, p. 1 |
| CON/2009/14 | EU Commission | Standards for the treatment of seasonal products in the Harmonised Indices of Consumer Prices | OJ C 58, 12.3.2009, p. 1 |
| CON/2009/17 | EU Council | Amendments to the Banking Directive and the Capital Adequacy Directive as regards banks affiliated to central institutions, certain own funds items, large exposures, supervisory arrangements and crisis management | OJ C 93, 22.4.2009, p. 3 |
| CON/2009/37 | EU Council | Amendments to the medium-term financial assistance facility for Member States' balances of payments | OJ C 106, 8.5.2009, p. 1 |
| CON/2009/38 | EU Council | A proposal for a regulation of the European Parliament and of the Council on credit rating agencies | OJ C 115, 20.5.2009, p. 1 |
| CON/2009/76 | EU Council | A proposal for a Council regulation on the introduction of the euro (codified version) | OJ C 246, 14.10.2009, p. 1 |
| CON/2009/81 | EU Council | A proposal for a directive of the European Parliament and of the Council on alternative investment fund managers and amending Directives 2004/39/EC and 2009/…/EC | OJ C 272, 13.11.2009, p. 1 |
| CON/2009/88 | EU Council | A proposal for a regulation of the European Parliament and of the Council on Community macro-prudential oversight of the financial system and establishing a European Systemic Risk Board and a proposal for a Council decision entrusting the ECB with specific tasks concerning the functioning of the European Systemic Risk Board | OJ C 270, 11.11.2009, p. 1 |

1 Also published on the ECB's website.
2 Consultations are numbered in the order in which the Governing Council adopted them.

| Number [2] | Originator | Subject | OJ reference |
|---|---|---|---|
| CON/2009/91 | EU Council | Recommendations for Council decisions on the position to be taken by the European Community regarding the renegotiation of the monetary agreement with the Vatican City State and on the position to be taken by the European Community regarding the renegotiation of the monetary agreement with the Republic of San Marino | OJ C 284, 25.11.2009, p. 1 |
| CON/2009/94 | EU Council | A proposal for a directive of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards capital requirements for the trading book and for resecuritisations, and the supervisory review of remuneration policies | OJ C 291, 1.12.2009, p. 1 |
| CON/2009/95 | EU Council | A proposal for a Council regulation concerning authentication of euro coins and handling of euro coins unfit for circulation | OJ C 284, 25.11.2009, p. 6 |
| CON/2010/5 | EU Council | Three proposals for regulations of the European Parliament and of the Council establishing a European Banking Authority, a European Insurance and Occupational Pensions Authority and a European Securities and Markets Authority | OJ C 13, 20.1.2010, p. 1 |
| CON/2010/6 | EU Council | A proposal for a directive of the European Parliament and of the Council amending Directives 2003/71/EC and 2004/109/EC | OJ C 19, 26.1.2010, p. 1 |

**(b) ECB opinions following a consultation by a Member State[3]**

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2009/2 | Latvia | State guarantees for bank loans |
| CON/2009/3 | Slovenia | Conditions for state capital investments and debt to equity swaps under the Law on public finance |
| CON/2009/4 | Belgium | Amendments to the rules governing the distribution of the income of the Nationale Bank van België/Banque Nationale de Belgique and the allocation of its profits to the Belgian state |
| CON/2009/5 | Austria | Payment by the Oesterreichische Nationalbank of the proposed increase in Austria's IMF quota |
| CON/2009/6 | Denmark | Extension of the financial stability scheme guaranteeing full coverage of claims by depositors and ordinary creditors and a scheme for provision of state capital to credit institutions |
| CON/2009/7 | Luxembourg | The Banque centrale du Luxembourg's role in the compilation of certain statistics |
| CON/2009/8 | Sweden | The smallest denomination coin ceasing to be legal tender and amendments to the rounding rules |
| CON/2009/9 | Hungary | The terms and conditions and the operating rules of the central securities depository, the clearing house and the central counterparty |
| CON/2009/10 | Latvia | The deposit guarantee scheme and the supervisory authority's role in insolvency proceedings |
| CON/2009/11 | Latvia | Compensation paid by the state in the context of bank takeovers |
| CON/2009/12 | Cyprus | The terms and conditions for the granting of state loans and guarantees in emergency situations |
| CON/2009/13 | Bulgaria | Additional eligibility criteria for the Governing Council members of Българска народна банка (Bulgarian National Bank) and further rules for submitting information in this respect |
| CON/2009/15 | Ireland | Financial support measures related to the remuneration of public servants |
| CON/2009/16 | Ireland | Legislation to allow the Minister for Finance to direct the National Pensions Reserve Fund to invest in financial institutions as part of the recapitalisation of the banks |
| CON/2009/18 | Estonia | Stabilisation measures for the financial system |

3 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.
4 Consultations are numbered in the order in which the Governing Council adopted them.

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2009/19 | Poland | Recapitalisation and state takeover of certain financial institutions |
| CON/2009/20 | Cyprus | Extension of the scope of the deposit guarantee schemes |
| CON/2009/21 | Cyprus | The stock exchange and the central depository and central securities registry |
| CON/2009/22 | Poland | Amendments to the legal framework for the state bank, Bank Gospodarstwa Krajowego, enhancing its role in government programmes |
| CON/2009/23 | Italy | The management of the Treasury availability account held with the Banca d'Italia |
| CON/2009/24 | Germany | Measures for the further stabilisation of the financial market |
| CON/2009/25 | Belgium | Amendment to the state guarantee aimed at avoiding liquidity outflows |
| CON/2009/26 | Lithuania | Amendment to the rules on the distribution of the profits of Lietuvos bankas in the context of financial turmoil |
| CON/2009/27 | Slovenia | Payment services and systems |
| CON/2009/28 | Hungary | Procedural rules for state guarantees in the interests of maintaining financial stability |
| CON/2009/29 | Belgium | Extension of the scope of measures that can be taken in a financial crisis |
| CON/2009/30 | Sweden | The provision of state guarantees to banks and other institutions |
| CON/2009/31 | Latvia | Amendments to the Law on the deposit guarantee scheme as regards coverage and payment |
| CON/2009/32 | Lithuania | New measures to strengthen financial stability |
| CON/2009/33 | Italy | The increase of Italy's IMF quota |
| CON/2009/34 | Czech Republic | Certain amendments to the Law on banks in connection with the financial market crisis |
| CON/2009/35 | Spain | The payment by the Banco de España of the proposed increase in Spain's IMF quota |
| CON/2009/36 | Cyprus | Payment services and systems |
| CON/2009/39 | Greece | Measures to enhance liquidity in the economy |

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2009/40 | Lithuania | The supervision of payment institutions by Lietuvos bankas |
| CON/2009/41 | Portugal | The payment by the Banco de Portugal of the increase in Portugal's IMF quota |
| CON/2009/42 | Romania | The organisation and functioning of official statistics in Romania |
| CON/2009/43 | Romania | The liberalisation of correspondent banking services for payments in the national currency and related statistical reporting requirements |
| CON/2009/44 | Hungary | Alignment of the Magyar Nemzeti Bank's legal framework with new administrative rules |
| CON/2009/45 | Germany | The legal relationships applying to Deutsche Bundesbank staff |
| CON/2009/46 | Luxembourg | Broadening the Banque centrale du Luxembourg's oversight role by a draft law on payment services, electronic money institutions and settlement finality in payment and securities settlement systems |
| CON/2009/47 | Latvia | Measures on public sector remuneration with regard to central bank independence |
| CON/2009/48 | Romania | Strengthening Banca Națională a României's remedial powers in relation to credit institutions in distress |
| CON/2009/49 | Slovakia | Measures to mitigate financial turmoil |
| CON/2009/50 | Germany | New measures strengthening financial supervision |
| CON/2009/51 | Romania | Measures to increase the effectiveness of the deposit guarantee scheme |
| CON/2009/52 | Czech Republic | The circulation of banknotes and coins |
| CON/2009/53 | Latvia | The distribution of Latvijas Banka's profits |
| CON/2009/54 | Germany | Further financial market stabilisation measures |
| CON/2009/55 | Poland | Amendments to the rules governing the central securities depository |
| CON/2009/56 | Ireland | Changes to financial support measures for credit institutions |
| CON/2009/57 | Cyprus | The regulation of finance leasing and leasing companies' activities |
| CON/2009/58 | Sweden | The state recapitalisation scheme |

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2009/59 | Italy | The taxation of the Banca d'Italia's gold reserves |
| CON/2009/60 | Poland | The legal framework for cooperative savings and credit unions |
| CON/2009/61 | Lithuania | The procedure for changing the official litas exchange rate |
| CON/2009/62 | Spain | Bank restructuring and reinforcement of credit institutions' own funds |
| CON/2009/63 | Italy | An amended draft legislative provision on the taxation of the Banca d'Italia's gold reserves |
| CON/2009/64 | Slovenia | Public access to information on officials' wealth |
| CON/2009/65 | Latvia | Strengthening bank resolution techniques |
| CON/2009/66 | Finland | Amending the legal framework for clearing operations |
| CON/2009/67 | Poland | An extension to Narodowy Bank Polski's entitlement to trade in securities |
| CON/2009/68 | Ireland | The establishment of the National Asset Management Agency |
| CON/2009/69 | Italy | The remuneration of the Treasury availability account held with the Banca d'Italia |
| CON/2009/70 | Spain | Money laundering and terrorist financing prevention provisions relating to the Banco de España |
| CON/2009/71 | Czech Republic | Česká národní banka's supervisory tasks relating to consumer credit |
| CON/2009/72 | Romania | Payment services |
| CON/2009/73 | Belgium | An extension of the state guarantee covering liabilities of credit institutions |
| CON/2009/74 | France | The nomination procedure for the Governor of the Banque de France |
| CON/2009/75 | Slovakia | Payment services |
| CON/2009/77 | Lithuania | The public audit of Lietuvos bankas |
| CON/2009/78 | Cyprus | The issuance of special government bonds to credit institutions |
| CON/2009/79 | Sweden | Extending government guarantees to banks and other institutions |

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2009/80 | The Netherlands | The involvement of De Nederlandsche Bank in the monetary system in Bonaire, Sint Eustatius and Saba |
| CON/2009/82 | Poland | The extension of state Treasury support to financial institutions |
| CON/2009/83 | Lithuania | The distribution of the profits of Lietuvos bankas |
| CON/2009/84 | The Netherlands | Supervision by De Nederlandsche Bank of clearing and settlement services |
| CON/2009/85 | Slovakia | Národná banka Slovenska’s independence |
| CON/2009/86 | Austria | Measures to improve liquidity and increase the competitiveness of credit institutions |
| CON/2009/87 | Hungary | Extending the deadline for submitting certain banknotes to be exchanged |
| CON/2009/89 | Ireland | The composition of the Board of the Central Bank and Financial Services Authority of Ireland and the membership of the Irish Financial Services Regulatory Authority |
| CON/2009/90 | Belgium | The ranking of the lien of the Nationale Bank van België/Banque Nationale de Belgique |
| CON/2009/92 | Ireland | The extension of the Irish state guarantee of certain liabilities of credit institutions |
| CON/2009/93 | Lithuania | Conditions and procedures for the application of the measures to strengthen financial stability |
| CON/2009/96 | Spain | The realisation of collateral provided to the Banco de España, to other national central banks of the Member States or to the ECB in the performance of their tasks |
| CON/2009/97 | Germany | Foreign trade reporting requirements |
| CON/2009/98 | Hungary | The general terms and conditions, and the operating and technical requirements, of clearing service providers for the payment system in Hungary |
| CON/2009/99 | Austria | The extension of the Austrian state guarantees for the interbank market |
| CON/2009/100 | Slovenia | The competences of Banka Slovenije related to Slovenia’s membership of the IMF |
| CON/2010/1 | Hungary | The reproduction of forint and euro banknotes and of forint and euro coins in Hungary |
| CON/2010/2 | Estonia | A new legal framework for the production of national statistics |

| Number[4] | Originator | Subject |
|---|---|---|
| CON/2010/3 | France | Certain measures concerning banking and financial regulation |
| CON/2010/4 | France | The merger of the banking and insurance licensing and supervisory authorities |
| CON/2010/7 | Belgium | Recovery measures that apply to undertakings in the banking and financial sector, the supervision of the financial sector and financial services, and the statutes of the Nationale Bank van België/Banque Nationale de Belgique |
| CON/2010/8 | Greece | Restructuring of business and professional debts owed to credit institutions and credit bureau data processing |
| CON/2010/9 | Finland | The consolidation of deposit banks |
| CON/2010/10 | Hungary | The Magyar Nemzeti Bank's tasks, the structure and legal status of the Hungarian Financial Supervisory Authority and the establishment of the Financial Stability Council |
| CON/2010/11 | Sweden | The second prolongation of the state recapitalisation scheme |
| CON/2010/12 | Romania | The special administration procedure initiated by Banca Națională a României for credit institutions in distress |
| CON/2010/13 | Hungary | The tasks of the Magyar Nemzeti Bank relating to Hungary's membership of the IMF |
| CON/2010/14 | Poland | Measures to support bank lending to businesses |
| CON/2010/16 | Estonia | Preparations for the introduction of the euro |
| CON/2010/17 | Greece | The establishment of the Hellenic Statistical System and an independent statistical authority |

# CHRONOLOGY OF MONETARY POLICY MEASURES OF THE EUROSYSTEM[1]

### 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, 6 MARCH, 10 APRIL, 8 MAY AND 5 JUNE 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.

### 3 JULY 2008

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 4.25%, starting from the operation to be settled on 9 July 2008. In addition, it decides to increase by 25 basis points the interest rates on both the marginal lending facility and the deposit facility, to 5.25% and 3.25% respectively, with effect from 9 July 2008.

### 7 AUGUST, 4 SEPTEMBER AND 2 OCTOBER 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 4.25%, 5.25% and 3.25% respectively.

### 8 OCTOBER 2008

The Governing Council of the ECB decides to decrease the minimum bid rate on the main refinancing operations by 50 basis points to 3.75%, starting from the operations to be settled on 15 October 2008. In addition, it decides to decrease by 50 basis points the interest rates on

1 The chronology of monetary policy measures taken by the Eurosystem between 1999 and 2006 can be found in the ECB's Annual Report for the respective years.

both the marginal lending facility and the deposit facility, to 4.75% and 2.75% respectively, with immediate effect. Moreover, the Governing Council decides that, as from the operation settled on 15 October, the weekly main refinancing operations will be carried out through a fixed rate tender procedure with full allotment at the interest rate on the main refinancing operation. Furthermore, as of 9 October, the ECB will reduce the corridor of standing facilities from 200 basis points to 100 basis points around the interest rate on the main refinancing operation. The two measures will remain in place for as long as needed, and at least until the end of the first maintenance period of 2009, on 20 January.

## 15 OCTOBER 2008

The Governing Council of the ECB decides to further expand the collateral framework and enhance the provision of liquidity. To do so, the Governing Council decides: (i) to expand the list of assets eligible as collateral in Eurosystem credit operations, with this expansion remaining in force until the end of 2009, (ii) to enhance the provision of longer-term refinancing, with effect from 30 October 2008 and until the end of the first quarter of 2009, and (iii) to provide US dollar liquidity through foreign exchange swaps.

## 6 NOVEMBER 2008

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 3.25%, starting from the operations to be settled on 12 November 2008. In addition, it decides to decrease by 50 basis points the interest rates on both the marginal lending facility and the deposit facility, to 3.75% and 2.75% respectively, with effect from 12 November 2008.

## 4 DECEMBER 2008

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations of the Eurosystem by 75 basis points to 2.50%, starting from the operations to be settled on 10 December 2008. In addition, it decides to decrease by 75 basis points the interest rates on both the marginal lending and the deposit facility to 3.00% and 2.00% respectively, with effect from 10 December 2008.

## 18 DECEMBER 2008

The Governing Council of the ECB decides that the main refinancing operations will continue to be carried out through a fixed rate tender procedure with full allotment beyond the maintenance period ending on 20 January 2009. This measure will be in place for as long as needed, and at least until the last allotment of the third maintenance period in 2009 on 31 March. Moreover, as of 21 January 2009, the corridor of standing facility rates, which on 9 October 2008 was reduced to 100 basis points around the prevailing interest rate of the main refinancing operation, will be be re-widened symmetrically to 200 basis points.

## 15 JANUARY 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 2.00%, starting from the operations to be settled on 21 January 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 3.00% and 1.00% respectively, with effect from 21 January 2009, in line with the decision of 18 December 2008.

## 5 FEBRUARY 2009

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.00%, 3.00% and 1.00% respectively.

### 5 MARCH 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 1.50%, starting from the operations to be settled on 11 March 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 2.50% and 0.50% respectively, with effect from 11 March 2009.

Moreover, the Governing Council decides to continue the fixed rate tender procedure with full allotment for all main refinancing operations, special-term refinancing operations and supplementary and regular longer-term refinancing operations for as long as needed, and in any case beyond the end of 2009. In addition, the Governing Council decides to continue with the current frequency and maturity profile of supplementary longer-term refinancing operations and special-term refinancing operations for as long as needed, and in any case beyond the end of 2009.

### 2 APRIL 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 25 basis points to 1.25%, starting from the operations to be settled on 8 April 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 2.25% and 0.25% respectively, with effect from 8 April 2009.

### 7 MAY 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 25 basis points to 1.00%, starting from the operation to be settled on 13 May 2009. In addition, it decides to decrease the interest rate on the marginal lending facility by 50 basis points to 1.75% with effect from 13 May 2009, and to leave the interest rate on the deposit facility unchanged at 0.25%.

In addition, the Governing Council decides to proceed with its enhanced credit support approach. In particular, it decides that the Eurosystem will conduct liquidity-providing longer-term refinancing operations with a maturity of one year as fixed rate tender procedures with full allotment. In addition, it decides in principle that the Eurosystem will purchase euro-denominated covered bonds issued in the euro area.

### 4 JUNE 2009

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. In addition, the Governing Council of the ECB decides upon the technical modalities related to the purchase of euro-denominated covered bonds issued in the euro area decided on 7 May 2009.

### 2 JULY, 6 AUGUST, 3 SEPTEMBER, 8 OCTOBER, 5 NOVEMBER AND 3 DECEMBER 2009, AND 14 JANUARY AND 4 FEBRUARY 2010

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

# OVERVIEW OF THE ECB'S COMMUNICATION RELATED TO THE PROVISION OF LIQUIDITY [1]

## PROVISION OF LIQUIDITY IN EURO

### 5 MARCH 2009

#### TENDER PROCEDURES AS OF 8 APRIL 2009

The Governing Council of the ECB today decided to continue the fixed rate tender procedure with full allotment for all main refinancing operations, special-term refinancing operations and supplementary and regular longer-term refinancing operations for as long as needed, and in any case beyond the end of 2009.

In addition, the Governing Council decided to continue with the current frequency and maturity profile of supplementary longer-term refinancing operations and special-term refinancing operations for as long as needed, and in any case beyond the end of 2009.

### 7 MAY 2009

#### LONGER-TERM REFINANCING OPERATIONS

The Governing Council of the ECB has today decided to conduct liquidity-providing longer-term refinancing operations (LTROs) with a maturity of one year.

The operations will be conducted as fixed rate tender procedures with full allotment, and the rate in the first of these operations will be the rate in the main refinancing operations at that time. In subsequent LTROs with full allotment, the fixed rate may include a spread in addition to the rate in the main refinancing operations, depending on the circumstances at the time.

The operations will be conducted in addition to the regular and supplementary LTROs, which will be unaffected.

A tentative schedule for such LTROs in 2009 is provided below.

Moreover, the Governing Council has today decided to prolong until the end of 2010 the temporary expansion of the list of eligible assets, announced on 15 October 2008.

#### EUROPEAN INVESTMENT BANK BECOMES AN ELIGIBLE COUNTERPARTY IN THE EUROSYSTEM'S MONETARY POLICY OPERATIONS

The Governing Council of the ECB has today decided that the European Investment Bank (EIB) will become an eligible counterparty in the Eurosystem's monetary policy operations on 8 July 2009.

As of this date, the EIB will have access, if and when appropriate for its treasury management, to the Eurosystem's open market operations and standing facilities through the Banque centrale du Luxembourg under the same conditions as any other counterparty. The EIB will comply with all eligibility requirements and it will hold minimum reserves with the Eurosystem.

Access to the Eurosystem's liquidity is a natural complement to the EIB's financing initiatives and will facilitate the accommodation by the EIB of additional demand for its lending programme. At present, this additional demand is estimated to be €10 billion in 2009. Given the usual leverage ratios involved, it is estimated by the EIB that such additional financing could generate additional investment value of up to €40 billion this year.

1 For more details on the liquidity-providing operations conducted by the Eurosystem in 2009, see the "Open market operations" section of the ECB's website.

| Operation | Announcement date | Allotment date | Settlement date | Maturity date | Maturity |
|---|---|---|---|---|---|
| One-year LTRO | Tuesday, 23 June 2009 | Wednesday, 24 June 2009 | Thursday, 25 June 2009 | Thursday, 1 July 2010 | 12 months |
| One-year LTRO | Tuesday, 29 September 2009 | Wednesday, 30 September 2009 | Thursday, 1 October 2009 | Thursday, 30 September 2010 | 12 months |
| One-year LTRO | Tuesday, 15 December 2009 | Wednesday, 16 December 2009 | Thursday, 17 December 2009 | Thursday, 23 December 2010 | 12 months |

More information on the EIB's activities can be found in the statement issued by the EIB today.

### 3 DECEMBER 2009

### ECB ANNOUNCES DETAILS OF REFINANCING OPERATIONS UP TO 7 APRIL 2010

The Governing Council of the ECB has today decided to continue conducting its main refinancing operations (MROs) as fixed rate tender procedures with full allotment for as long as is needed – and at least until the third maintenance period of 2010 ends on 13 April. This tender procedure will also continue to be used in the special-term refinancing operations with a maturity of one maintenance period, which will continue for at least the first three maintenance periods of 2010.

The Governing Council has also decided that the rate in the last 12-month longer-term refinancing operation, to be allotted on 16 December 2009, will be fixed at the average minimum bid rate of the MROs over the life of this operation.[2]

As regards longer-term refinancing operations in the first quarter of 2010, the Governing Council has decided to carry out the last six-month longer-term refinancing operation on 31 March 2010. This operation will be carried out using a full allotment fixed rate tender procedure, as will the regular monthly three-month longer-term refinancing operations already announced for the first quarter of 2010 (see the ECB's press release of 29 May 2009).

Looking beyond the first quarter of 2010, the Governing Council will take into account the need to smooth out the liquidity effect of the 12-month longer-term refinancing operations maturing during the second half of 2010.

2 Only one interest payment will be made – on the maturity date (i.e. 23 December 2010). This interest payment will be calculated as the allotted amount multiplied by

$$[6R_0^{MBR} + \sum_{i-1}^{52} 7R_i^{MBR} + R_{53}^{MBR}] / 360$$

Here, $R_0^{MBR}$ is the minimum bid rate of the MRO settled on 16 December 2009, while $R_t^{MBR}$, t=1,…,53 are the minimum bid rates of the 53 subsequent MROs. The operation will have a maturity of 371 days.

# PROVISION OF LIQUIDITY IN OTHER CURRENCIES AND AGREEMENTS WITH OTHER CENTRAL BANKS

## 16 JANUARY 2009

### SWISS NATIONAL BANK AND ECB COOPERATION TO PROVIDE SWISS FRANC LIQUIDITY

On 15 October 2008 the Swiss National Bank and the ECB jointly announced that they would conduct EUR/CHF foreign exchange swaps providing Swiss francs against euro with a term of seven days at a fixed price to improve liquidity in short-term Swiss franc money markets. At that time, it was announced that this measure would remain in place as long as needed and at least until January 2009.

Today the Swiss National Bank and the ECB are jointly announcing that they will continue these one-week EUR/CHF foreign exchange swap operations at least until the end of April 2009 to support further improvements in the short-term Swiss franc money markets.

## 3 FEBRUARY 2009

### EXTENSION OF TEMPORARY CURRENCY ARRANGEMENTS

To address continued pressures in global US dollar funding markets, the temporary reciprocal currency arrangements (swap lines) between the Federal Reserve and other central banks have been extended.

The Governing Council of the ECB and the Federal Open Market Committee of the Federal Reserve of the United States of America have decided to extend their temporary reciprocal currency arrangement (swap line) to 30 October 2009.

## 19 MARCH 2009

### US DOLLAR LIQUIDITY-PROVIDING OPERATIONS OF THE EUROSYSTEM IN THE SECOND QUARTER OF 2009

The Governing Council of the ECB has decided, in agreement with other central banks including the Federal Reserve, to continue conducting US dollar liquidity-providing operations at terms of 7, 28 and 84 days.

These operations will continue to take the form of repurchase operations against ECB-eligible collateral and to be carried out as fixed rate tenders with full allotment.

Given the limited demand, the operations in the form of EUR/USD foreign exchange swaps were discontinued at the end of January but could be started again in the future, if needed in view of prevailing market circumstances.

## 6 APRIL 2009

### CENTRAL BANKS ANNOUNCE EXPANDED SWAP ARRANGEMENTS

The Bank of England, the ECB, the Federal Reserve, the Bank of Japan and the Swiss National Bank are announcing swap arrangements that would enable the provision of foreign currency liquidity by the Federal Reserve to US financial institutions. Should the need arise, euro, yen, sterling and Swiss francs would be provided to the Federal Reserve via these additional swap agreements with the relevant central banks. Central banks continue to work together and are taking steps as appropriate to foster stability in global financial markets.

### ECB DECISIONS

The Governing Council of the ECB has decided to establish a temporary reciprocal currency arrangement (swap line) with the Federal Reserve. This agreement will provide the Federal Reserve with the capacity to offer liquidity of up to €80 billion. The Governing Council approved this swap line until 30 October 2009.

## 10 JUNE 2009

### ECB ACTIVATES THE SWAP LINE WITH SVERIGES RIKSBANK

The ECB and Sveriges Riksbank have today decided to activate their temporary reciprocal

currency agreement (swap line) whereby the Swedish central bank can borrow euro from the ECB in exchange for Swedish kronor.

The ECB and Sveriges Riksbank signed a swap agreement on 20 December 2007 with the aim of facilitating the functioning of financial markets and providing euro liquidity to the latter if needed. The maximum amount that can be borrowed by Sveriges Riksbank is €10 billion, for a maturity of up to three months.

## 25 JUNE 2009

### ECB AND SWISS NATIONAL BANK EXTEND THEIR SWISS FRANC LIQUIDITY-PROVIDING OPERATIONS

The Governing Council of the ECB has decided, in agreement with the Swiss National Bank, to continue conducting one-week Swiss franc liquidity-providing swap operations until at least 31 October 2009 to support further improvements in the short-term Swiss franc funding markets.

### ECB AND OTHER CENTRAL BANKS EXTEND THEIR SWAP LINES WITH FEDERAL RESERVE

The temporary reciprocal currency arrangements (swap lines) between the Federal Reserve and other central banks have been extended until 1 February 2010.

In particular, the Governing Council of the ECB and the Federal Open Market Committee of the Federal Reserve have extended until 1 February 2010 their respective swap lines, whereby the Federal Reserve makes US dollar liquidity available to the ECB while the ECB makes euro liquidity available to the Federal Reserve for distribution, when needed, to their respective counterparties.

The Governing Council has also decided to continue conducting US dollar liquidity-providing operations at terms of 7 and 84 days until at least 30 September 2009. A similar decision has been taken by the Bank of England and the Swiss National Bank. These operations will continue to take the form of repurchase operations against ECB-eligible collateral and to be carried out as fixed rate tenders with full allotment.

Given the limited demand and the improved conditions in funding markets, the US dollar operations at terms of 28 days will be discontinued following the operation to be held on 28 July. As with the EUR/USD foreign exchange swaps which were discontinued at the end of January, the 28-day operations could be started again in the future if required by prevailing market circumstances.

## 24 SEPTEMBER 2009

### ECB AND SWISS NATIONAL BANK EXTEND THEIR SWISS FRANC LIQUIDITY-PROVIDING OPERATIONS

The Governing Council of the ECB has decided, in agreement with the Swiss National Bank, to continue conducting one-week Swiss franc liquidity-providing swap operations until 31 January 2010 to support further improvements in the short-term Swiss franc funding markets.

### ECB AND OTHER CENTRAL BANKS DECIDE TO CONTINUE CONDUCTING US DOLLAR LIQUIDITY-PROVIDING OPERATIONS

The Governing Council of the ECB has decided, in agreement with other central banks including the Federal Reserve, to continue conducting US dollar liquidity-providing operations from October 2009 to January 2010.

These Eurosystem operations will continue to take the form of seven-day repurchase operations against ECB-eligible collateral and to be carried out as fixed rate tenders with full allotment. Given the limited demand and the improved conditions in funding markets, the US dollar operations with a term of 84 days will be discontinued following the operation to be held on 6 October 2009 and maturing on 7 January 2010. The 84-day operations, as well as the other US dollar liquidity-providing

operations that were previously discontinued, could be started again in the future if needed.

A similar decision has been taken by the Bank of England and the Swiss National Bank.

### 18 JANUARY 2010

### ECB DISCONTINUES THE SWISS FRANC LIQUIDITY-PROVIDING OPERATIONS

The Governing Council of the ECB has decided, in agreement with the Swiss National Bank, to stop conducting one-week Swiss franc liquidity-providing swap operations after 31 January 2010. This decision was made against the background of declining demand and improved conditions in the funding markets.

### 27 JANUARY 2010

### ECB AND OTHER CENTRAL BANKS DECIDE TO DISCONTINUE THE TEMPORARY SWAP LINES WITH THE FEDERAL RESERVE

In coordination with other central banks, the ECB confirms the expiration of its temporary liquidity swap lines with the Federal Reserve on 1 February 2010. These lines, which were established to counter pressures in global funding markets, are no longer needed given the improvements seen in the functioning of financial markets over the past year. Central banks will continue to cooperate as needed.

In this context, the Governing Council of the ECB has decided, in agreement with the Federal Reserve, the Bank of England, the Bank of Japan and the Swiss National Bank, to stop conducting US dollar liquidity-providing operations after 31 January 2010.

# DOCUMENTS PUBLISHED BY THE EUROPEAN CENTRAL BANK SINCE 2009

This list is designed to inform readers about selected documents published by the European Central Bank since January 2009. For Working Papers, which as of January 2009 (from Working Paper No 989 onwards) are available online only, the list only refers to publications released between December 2009 and February 2010. Unless otherwise indicated, hard copies can be obtained or subscribed to free of charge, stock permitting, by contacting info@ecb.europa.eu.

For a complete list of documents published by the European Central Bank and by the European Monetary Institute, please visit the ECB's website (http://www.ecb.europa.eu).

## ANNUAL REPORT

"Annual Report 2008", April 2009.

## MONTHLY BULLETIN ARTICLES

"Housing wealth and private consumption in the euro area", January 2009.
"Foreign asset accumulation by authorities in emerging markets", January 2009.
"New survey evidence on wage setting in Europe", February 2009.
"Assessing global trends in protectionism", February 2009.
"The external financing of households and non-financial corporations: a comparison of the euro area and the United States", April 2009.
"Revisions to GDP estimates in the euro area", April 2009.
"The functional composition of government spending in the European Union", April 2009.
"Expectations and the conduct of monetary policy", May 2009.
"Five years of EU membership", May 2009.
"Credit rating agencies: developments and policy issues", May 2009.
"The impact of government support to the banking sector on euro area public finances", July 2009.
"The implementation of monetary policy since August 2007", July 2009.
"Rotation of voting rights in the Governing Council of the ECB", July 2009.
"Housing finance in the euro area", August 2009.
"Recent developments in the retail bank interest rate pass-through in the euro area", August 2009.
"Monetary policy and loan supply in the euro area", October 2009.
"Recent developments in the balance sheets of the Eurosystem, the Federal Reserve System and the Bank of Japan", October 2009.
"Financial development in emerging economies – stock-taking and policy implications", October 2009.
"Central bank communication in periods of heightened uncertainty", November 2009.
"Monetary analysis in an environment of financial turmoil", November 2009.
"The latest euro area recession in a historical context", November 2009.
"The ECB's monetary policy stance during the financial crisis", January 2010.
"The ECB's relations with European Union institutions and bodies: trends and prospects", January 2010.
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"Euro repo markets and the financial market turmoil", February 2010.
"Euro area commercial property markets and their impact on banks", February 2010.
"Update on developments in general economic statistics for the euro area", February 2010.

## STATISTICS POCKET BOOK

Available monthly since August 2003.

## LEGAL WORKING PAPER SERIES

8 "National rescue measures in response to the current financial crisis" by A. Petrovic and R. Tutsch, July 2009.

9 "The legal duty to consult the European Central Bank – national and EU consultations" by S. E. Lambrinoc, November 2009.

10 "Withdrawal and expulsion from the EU and EMU: some reflections" by P. Athanassiou, December 2009.

## OCCASIONAL PAPER SERIES

100 "Survey data on household finance and consumption: research summary and policy use" by the Eurosystem Household Finance and Consumption Network, January 2009.

101 "Housing finance in the euro area" by a Task Force of the Monetary Policy Committee of the European System of Central Banks, March 2009.

102 "Domestic financial development in emerging economies: evidence and implications" by E. Dorrucci, A. Meyer-Cirkel and D. Santabárbara, April 2009.

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107 "The collateral frameworks of the Eurosystem, the Federal Reserve System and the Bank of England and the financial market turmoil" by S. Cheun, I. von Köppen-Mertes and B. Weller, December 2009.

## RESEARCH BULLETIN

"Research Bulletin", No 8, March 2009.

## WORKING PAPER SERIES

1119 "Nonparametric hybrid Phillips curves based on subjective expectations: estimates for the euro area" by M. Buchmann, December 2009.

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“Letter from the ECB President to Mr Robert Sturdy, Member of the European Parliament”, January 2009 (online only).
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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. In the case of the former Yugoslav Republic of Macedonia, the European Commission recommended the opening of accession negotiations in October 2009.

**Central counterparty (CCP):** an entity that interposes itself, in one or more markets, between the **counterparties** to the contracts traded, becoming the buyer to every seller and the seller to every buyer and thereby guaranteeing the performance of open contracts.

**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; ii) provides custodial services (e.g. the administration of corporate actions and redemptions); and iii) plays an active role in ensuring the integrity of securities issues. Securities can be held in a physical (but immobilised) form or in a dematerialised form (whereby 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. the **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 **European System of Central Banks** with the aim of enabling **counterparties** to use eligible **collateral** in a cross-border context. In the CCBM, NCBs act as custodians for one another. This means that each NCB has a securities account in its securities administration for each of the other NCBs and 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 the full value of an obligation – neither when it becomes due, nor at any time thereafter. Credit risk includes replacement cost risk and principal risk. It also includes the risk of the settlement bank failing.

**Debt security:** a promise on the part of the issuer (i.e. the borrower) to make one or more payment(s) 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 at an NCB. Such deposits are remunerated at a pre-specified interest rate (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). Included are equity capital, reinvested earnings and other capital associated with inter-company operations.

**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 EU 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 EU, 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):** a weighted average of bilateral euro exchange rates against the currencies of the **euro area**'s main trading partners. The **European Central Bank** publishes nominal EER indices for the euro against two groups of trading partners: the EER-21 (comprising the 11 non-euro area EU Member States and 10 trading partners outside the EU) and the EER-41 (composed of the EER-21 and 20 additional countries). The weights used reflect the share of each partner country in the euro area's trade in manufactured goods 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 formed by the EU Member States whose currency is the euro 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, Slovakia and Finland.

**Eurogroup:** an informal gathering of the ministers of economy and finance of the EU Member States whose currency is the euro.

**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 282(3)). 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 EU'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 whose currency is not 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 EU Member States whose currency is the euro.

**Excessive deficit procedure:** the provision set out in Article 126 of the Treaty and specified in Protocol (No 12) 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 126 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, since the entry into force of the **Treaty of Lisbon**, by the European Council, acting by a qualified majority, on a recommendation from the EU Council.

**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 EU Member States whose currency is 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 the development 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 rates on the **main refinancing operations**, the **marginal lending facility** and the **deposit facility**.

**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 credit operation with a maturity of more than one week that is executed by the **Eurosystem** in the form of **reverse transactions**. The regular monthly operations have a maturity of three months. During the financial market turmoil that started in August 2007, supplementary operations with maturities ranging from one maintenance period to one year were conducted, the frequency of which varied.

**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 liquidity risk:** the risk that transactions on the financial market cannot be concluded or can only be concluded at worse than expected conditions owing to inadequate market depth or market disruption.

**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 EU 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, i.e. funds that invest in short-term and low-risk instruments usually with a maturity of one year or less.

**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:** the lower limit to the interest rates at which **counterparties** may submit bids in the variable rate tenders.

**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 **equities** 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 a transaction-by-transaction basis in real time (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:** the process of borrowing money by combining the sale of an asset (usually a fixed income security) with the subsequent repurchase of that same asset on a specified date for a slightly higher specified price (which reflects the borrowing rate).

**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** over a predefined **maintenance period**. Compliance with the requirement is determined on the basis of the average of the daily balances in the reserve accounts over the maintenance period.

**Reverse transaction:** an operation whereby the central bank buys or sells assets under a **repurchase agreement** or conducts credit operations against **collateral**.

**Securities settlement system (SSS):** a system which allows the transfer of securities, either free of payment (FOP) or against payment (delivery versus payment).

**Securitisation:** the pooling of financial assets, such as residential mortgage loans, and their subsequent sale to a special-purpose vehicle, which then issues fixed income securities for sale to investors. The principal and interest of these securities depend on the cash flows produced by the pool of underlying financial assets.

**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 includes, in particular, operational risks, **credit risks** and liquidity risks.

**Stability and Growth Pact:** intended to serve as a means of safeguarding sound government finances in the EU Member States 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) No 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) No 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 a 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 credit facility available to **counterparties** at 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.

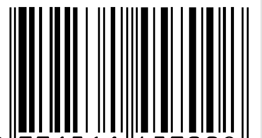
**Systemic risk:** the risk that the inability of one participant to meet its obligations in a system will cause other participants to be unable to meet their obligations when they become due, potentially with spillover effects (e.g. significant liquidity or credit problems) threatening the stability of or confidence in the financial system. That inability to meet obligations can be caused by operational or financial problems.

**TARGET (Trans-European Automated Real-time Gross settlement Express Transfer system):** the **Eurosystem**'s **real-time gross settlement system** for the euro. The first-generation TARGET system was replaced by **TARGET2** in May 2008.

**TARGET2:** the second-generation **TARGET** system. It settles payments in euro in central bank money and functions on the basis of a single shared IT platform, to which all payment orders are submitted for processing.

**TARGET2-Securities (T2S):** the **Eurosystem**'s single technical platform enabling **central securities depositories** and NCBs to provide core, borderless and neutral securities settlement services in central bank money in Europe.

**Treaty of Lisbon (Lisbon Treaty):** amends the EU's two core treaties: the Treaty on European Union and the Treaty establishing the European Community. The latter has been renamed the Treaty on the Functioning of the European Union. The Treaty of Lisbon was signed in Lisbon on 13 December 2007 and entered into force on 1 December 2009. Unless stated otherwise, all references in this report to the "Treaty" refer to the Treaty on the Functioning of the European Union, and the references to article numbers reflect the numbering in effect since 1 December 2009.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