

EN

MONTHLY BULLETIN May



# EUROSYSTEM







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

# MONTHLY BULLETIN MAY 2008

#### © European Central Bank 2008

### Address

Kaiserstrasse 29 60311 Frankfurt am Main Germany

#### Postal address

Postfach 16 03 19 60066 Frankfurt am Main Germany

# Telephone

+49 69 1344 0

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

**Fax** +49 69 1344 6000

This Bulletin was produced under the responsibility of the Executive Board of the ECB. Translations are prepared and published by the national central banks.

All rights reserved. Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

The cut-off date for the statistics included in this issue was 6 May 2008.

ISSN 1561-0136 (print) ISSN 1725-2822 (online)

# EKT EKP

SI

L

V

XI

# CONTENTS

# EDITORIAL

# ECONOMIC AND MONETARY DEVELOPMENTS

The external environment of the euro area
Monetary and financial developments
Prices and costs
Output, demand and the labour market
Exchange Rate and Balance of Payments
developments

# Boxes:

1	Underlying monetary dynamics: concept and quantitative illustration	15
2	The results of the April 2008 bank lending survey for the euro area	22
3	Recent developments in government bond yield spreads	35
4	Judging sectoral inflation developments on the basis of national accounts data	48
5	Wage indexation mechanisms in euro area countries	51
6	Results of the ECB Survey of Professional Forecasters for the second quarter of 2008	54
7	Recent developments in euro area services activity	61

# ARTICLES

Price stability and growth	75
The Eurosystem's open market	
operations during the recent period of	
financial market volatility	89

# 5 EURO AREA STATISTICS

# ANNEXES

9 14 43 58	Chronology of monetary policy measures of the Eurosystem Documents published by the European Central Bank since 2007 Glossary
68	
15	
22	
35	
48	
51	
54	
61	
75	
89	



# **ABBREVIATIONS**

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

# **OTHERS**

OTHERS	
BIS	Bank for International Settlements
b.o.p.	balance of payments
BPM5	IMF Balance of Payments Manual (5th edition)
CD	certificate of deposit
c.i.f.	cost, insurance and freight at the importer's border
CPI	Consumer Price Index
ECB	European Central Bank
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
HWWI	Hamburg Institute of International Economics
ILO	International Labour Organization
IMF	International Monetary Fund
MFI	monetary financial institution
NACE Rev. 1	Statistical classification of economic activities in the European Community
NCB	national central bank
OECD	Organisation for Economic Co-operation and Development
PPI	Producer Price Index
SITC Rev. 3	Standard International Trade Classification (revision 3)
ULCM	unit labour costs in manufacturing
ULCT	unit labour costs in the total economy

In accordance with Community practice, the EU countries are listed in this Bulletin using the alphabetical order of the country names in the national languages.



# EDITORIAL

At its meeting on 8 May 2008, the Governing Council of the ECB decided, on the basis of its regular economic and monetary analyses, to leave the key ECB interest rates unchanged. Inflation rates have risen significantly since autumn 2007, owing mainly to increases in energy and food prices. As the Governing Council has communicated on previous occasions, inflation rates are expected to remain high for a rather protracted period of time, before gradually declining again. The latest information confirms the assessment that upside risks to price stability prevail over the medium term, in a context of continuing very vigorous money and credit growth. At the same time, the economic fundamentals of the euro area are sound, and incoming macroeconomic data continue to point to moderate but ongoing real GDP growth. However, the level of uncertainty resulting from the turmoil in financial markets remains unusually high and tensions still persist. Against this background, the Governing Council emphasises that maintaining price stability in the medium term is its primary objective in accordance with its mandate. The firm anchoring of medium to longer-term inflation expectations is of the highest priority. The Governing Council remains strongly committed to preventing second-round effects and the materialisation of upside risks to price stability over the medium term. It believes that the current monetary policy stance will contribute to achieving its objective and it will continue to monitor very closely all developments over the coming weeks.

Starting with the economic analysis, the latest data and survey information on economic activity confirm previous expectations of moderate but ongoing growth in the first half of 2008. In particular, industrial production data for the first months of the year showed resilience, while economic sentiment generally continued to soften. Overall, the euro area economy has sound fundamentals and does not suffer from major imbalances.

In line with available forecasts, both domestic and foreign demand are expected to support ongoing

real GDP growth in the euro area in 2008, albeit to a lesser extent than during 2007. While moderating, growth in the world economy is expected to remain resilient, benefiting in particular from strong growth in emerging economies. This should continue to support euro area external demand. Meanwhile, investment growth in the euro area should provide ongoing support to economic activity, as capacity utilisation remains solid and profitability in the non-financial corporate sector has been sustained. At the same time, employment and labour force participation have increased significantly and unemployment rates have fallen to levels not seen for 25 years. This supports real disposable income and thus consumption growth, although purchasing power is being dampened by the impact of higher energy and food prices.

The uncertainty surrounding this outlook for economic growth remains high, and downside risks prevail. In particular, risks relate to the potential for the financial market turbulence to have a more negative impact on the real economy than previously anticipated. Moreover, downside risks stem from the dampening impact on consumption and investment of further unanticipated increases in energy and food prices. Risks also arise from protectionist pressures and the possibility of disorderly developments owing to global imbalances.

With regard to price developments, annual HICP inflation has remained above 3% for the past six months. According to Eurostat's flash estimate, it was 3.3% in April 2008. This outturn confirms the ongoing strong short-term upward pressure on inflation, resulting largely from sharp increases in energy and food prices at the global level in recent months.

Looking ahead, on the basis of current futures prices for these commodities, the annual HICP inflation rate is likely to remain significantly above 2% in the coming months, moderating only gradually over the course of 2008. Accordingly, the euro area is currently experiencing a rather protracted period of high



annual rates of inflation. In order to ensure that current high inflation rates remain temporary, it is imperative that they do not become entrenched in longer-term expectations or lead to broadly based second-round effects in wage and price-setting.

The risks to the outlook for inflation over the medium term remain clearly on the upside. These risks include the possibility of further rises in energy and food prices, as well as of increases in administered prices and indirect taxes beyond those foreseen thus far. Most importantly, there is a risk that price and wage-setting behaviour could add to inflationary pressures. In particular, the pricing power of firms, notably in market segments with low competition, may prove stronger than currently expected. Moreover, higher than expected wage growth may emerge, taking into account high capacity utilisation, tight labour market conditions and the risk of second-round effects owing to the high level of current inflation rates.

Against this background, it is imperative that all the parties concerned, in both the private and the public sector, meet their responsibilities. Wage-setting needs to take into account productivity developments, the still high level of unemployment in many economies, and price competitiveness positions. Moderate labour cost increases are particularly necessary in countries which have lost price competitiveness in recent years. Second-round effects stemming from the impact of higher energy and food prices on price and wage-setting behaviour must be avoided. In this context, the Governing Council is concerned about the existence of schemes in which nominal wages are indexed to consumer prices. Such schemes involve the risk of upward shocks in inflation leading to a wage-price spiral, which would be detrimental to employment and competitiveness in the countries concerned. The Governing Council therefore calls for such schemes to be avoided. It is monitoring wage negotiations in the euro area with particular attention. In its view, continued responsible wage agreements are of key importance in order to preserve price stability in the medium term

and thereby the purchasing power of all euro area citizens.

The monetary analysis confirms the prevailing upside risks to price stability at medium to longer-term horizons. Annual M3 growth remained very vigorous at 10.3% in March, supported by the continued strong growth of MFI loans to the private sector. At the same time, annual M1 growth continued to moderate in March, reflecting higher short-term interest rates which encouraged further shifts from overnight into time deposits. While the impact of the flat yield curve and other temporary factors suggest that annual M3 growth currently overstates the underlying pace of monetary expansion, nonetheless, even after taking such effects into account, a broad-based assessment of the latest data confirms that the underlying rate of money and credit growth remains strong.

The growth of household borrowing has moderated over recent months, reflecting the impact of higher short-term interest rates and cooling housing markets in several parts of the euro area. However, the growth of loans to non-financial corporations has remained very robust. While some future moderation can be expected in the light of tightening financing conditions and slower economic growth, bank borrowing by euro area non-financial corporations grew at an annual rate of 15.0% in the year to March 2008, and the flow of loans in recent months has been strong.

For the time being, there is little evidence that the financial market turbulence seen since early August 2007 has strongly influenced the development of broad money and loans. Continued strong loan growth to non-financial corporations suggests that the availability of bank credit to euro area firms has not been significantly impaired by the financial turmoil thus far. Further data and analysis will be required in order to obtain a more complete picture of the impact of the financial market developments on banks' balance sheets, financing conditions and money and credit growth.



To sum up, a cross-check of the outcome of the economic analysis with that of the monetary analysis clearly confirms the assessment that upside risks to price stability prevail over the medium term, in a context of very vigorous money and credit growth and with no significant signs of supply constraints on bank loans. The economic fundamentals of the euro area are sound, and incoming macroeconomic data continue to point to moderate but ongoing real GDP growth. However, the level of uncertainty resulting from the turmoil in financial markets remains high. Against this background, the Governing Council emphasises that the firm anchoring of medium to longer-term inflation expectations is of the highest priority. The Governing Council believes that the current monetary policy stance will contribute to achieving this objective and remains strongly committed to preventing second-round effects and the materialisation of upside risks to price stability over the medium term. The Governing Council will continue to monitor very closely all developments over the coming weeks.

Regarding fiscal policies, the latest forecast by the European Commission points to a rise in the euro area general government deficit ratio in 2008, followed by a further small increase in 2009. This deterioration in part reflects a less favourable economic environment and a likely reversal of windfall revenues accrued in past years. However, it also reflects a standstill in fiscal consolidation and new deficit-increasing measures in a number of countries with fiscal imbalances, including some with high deficits. For several countries, the attainment of the country-specific medium-term objectives by 2010 at the latest, which is the commitment made by euro area governments in Berlin in April 2007, is clearly at risk. In these countries, much more ambitious policies are imperative. For all countries, prudent fiscal policies would also help to counteract current inflationary pressures.

At the current juncture, it is also important to reinforce the structural reform agenda, in particular with a view to fostering market integration and to reducing rigidities in product and labour markets. Policy initiatives aimed at enhancing competition in market segments with low competition, such as services and energy, would allow pricing behaviour to adjust and thus contribute to lower inflation pressures. Furthermore, policies to increase trend productivity growth would contribute to smaller unit labour cost increases and ultimately also to higher employment.

This issue of the Monthly Bulletin contains two articles. The first article discusses the reasons why inflation should be expected to have a systematically detrimental effect real economic activity. The article on reviews some of the empirical evidence on the relationship between inflation and output growth and discusses the positive impact of maintaining price stability on the long-run productive potential of the economy. The second article reviews the conduct of Eurosystem open market operations during the recent period of financial market turbulence. The article concludes that the Eurosystem's operational framework has proved flexible and fairly resilient, with no structural changes required to address the heightened volatility observed in the euro money market since last August.

ECE

# I THE EXTERNAL ENVIRONMENT OF THE EURO AREA

In the context of the financial market turbulence, global economic activity, while remaining resilient overall, continues to be dampened by the weakening of the major developed economies. However, the relative robustness of economic growth in emerging markets continues to support the pace of global economic expansion. At the same time, headline consumer price inflation in OECD countries remains at an elevated level as a result of protracted upward pressures on commodity prices. On balance, the risks to the outlook for global growth continue to lie on the downside.

# **I.I DEVELOPMENTS IN THE WORLD ECONOMY**

In the context of the financial market turbulence, global economic activity, while remaining resilient overall, continues to be dampened by the weakening of the major developed economics. However, the relative robustness of economic growth in emerging markets continues to support the pace of global economic expansion. Survey evidence in April indicated that global economic activity might have decelerated further, particularly in the manufacturing sector.

Headline consumer price inflation in OECD countries remains at an elevated level as a result of protracted upward pressures on commodity prices. Consumer prices in OECD countries rose by 3.5% (year on year) in March, compared with 3.4% the month before. Excluding food and energy, consumer price inflation remained broadly unchanged in March at an annual rate of



(annual percentage changes; monthly data)



2.1%. Survey evidence on global input prices suggests that cost inflation remains at elevated levels, largely reflecting high oil prices, shortages of certain raw materials and increasing labour costs.

### **UNITED STATES**

In the United States the pace of economic activity remained subdued in the first quarter of 2008. Real GDP increased at a quarterly annualised rate of 0.6% according to advance estimates, the same growth rate as in the final quarter of 2007. The largest contribution to GDP growth came from an adjustment in inventories, which added 0.8 percentage point to annualised growth and more than compensated for a contraction in final domestic demand. Net exports of goods and services also supported GDP growth, albeit to a lesser extent than in previous quarters. The components of final domestic demand indicate a further decline in the growth rate of personal consumption expenditure (to an annualised rate of 1.0%, down from 2.3% in the previous quarter), and a contraction in both residential and non-residential investment. Residential investment declined at an annualised rate of 26.7% in the first quarter of 2008, the largest quarterly decline since the start of the current housing market adjustment, while non-residential investment fell by 2.5%.

As regards price developments, headline CPI inflation remained at 4.0% in March, unchanged from February. Upward pressures on headline inflation owing to further energy price increases persisted in subsequent months. The core CPI index (excluding food and energy) increased by 2.4% in March compared with a year earlier, slightly up from 2.3% in February.

# ECONOMIC AND MONETARY DEVELOPMENTS

The external environment of the euro area

On 30 April the US Federal Open Market Committee decided to lower its target for the federal funds rate by 25 basis points to 2.0%. The accompanying statement noted that economic activity remained weak and financial markets under considerable stress. Tight credit conditions and the deepening housing contraction were mentioned as factors that would be likely to weigh on economic growth in the next few quarters. To improve liquidity conditions, the Federal Reserve System announced further monetary policy actions on 2 May, including an increase in the size of the Term Auction Facility, an expansion of the collateral that can be pledged in the Term Securities Lending Facility and increases in temporary reciprocal currency arrangements with the European Central Bank and the Swiss National Bank.

### **JAPAN**

In Japan there has been a slowdown in economic activity in recent months, following the revision of the Building Standard Law in June 2007, which resulted in a significant drop in construction starts in the second half of last year. The results of the March 2008 Bank of Japan Tankan Survey have pointed to some further deterioration in business conditions for large companies in the first quarter of 2008, against the background of rising uncertainty in the global economy. Moreover, business sentiment among small and mediumsized enterprises worsened further in the first quarter of 2008. Overall, the latest Tankan release points to a less favourable short-term outlook for the Japanese economy.

Consumer price inflation has recently picked up as a result of the rise in the price of imported

# Chart 2 Main developments in major industrialised economies



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

raw materials, while domestic inflationary pressures have remained subdued (see Chart 2). In March 2008 the annual change in the CPI (and in the CPI excluding fresh food) was 1.2%, after 1.0% in February; this increase was mostly driven by the prices of energy and processed food products. The annual change in the CPI excluding food and energy was 0.1% in March, after -0.1% in February.

At its meeting on 9 April 2008 the Bank of Japan decided to leave its target for the uncollateralised overnight call rate unchanged at 0.50%.

The external environment of the euro area

# **UNITED KINGDOM**

In the United Kingdom the preliminary estimate of quarterly real GDP growth in the first quarter of 2008 suggests a moderation of growth (from 0.6% in the previous quarter to 0.4%). At the same time, quarterly growth in retail sales in the three months to March was above market expectations, while consumer confidence indicators have recently declined. In March 2008 annual HICP inflation remained unchanged at 2.5%, as positive contributions from higher transport, gas and electricity prices were largely offset by negative contributions from furniture, recreation and culture prices. Manufacturing producer prices rose further in March, owing mainly to higher petroleum product prices.

On 8 May 2008 the Bank of England's Monetary Policy Committee decided to leave its main policy rate unchanged at 5.00%.

#### **OTHER EUROPEAN COUNTRIES**

In the other large EU countries outside the euro area, trends in GDP growth and short-term activity indicators remained mixed. Inflation remained at rather high levels.

Quarter-on-quarter real GDP growth in the fourth quarter of 2007 stood at 0.8% and 0.3% in Sweden and Denmark respectively. Although no national accounts data have been released so far for the first quarter of 2008, GDP growth is estimated to have remained strong in Sweden, but rather weak in Denmark. In Sweden most confidence indicators rebounded in March, remaining above long-term averages, and industrial production and export growth were sound. In Denmark confidence indicators generally continued to fall and were below long-term averages. In addition, manufacturing output contracted. In March annual HICP inflation increased to 3.2% in Sweden, mainly on account of services and food prices, whereas in Denmark it remained unchanged at 3.3%.

In three of the largest central and eastern European countries, real GDP growth was robust in the last quarter of 2007. Quarter-on-quarter real GDP growth stood at 1.7% in the Czech Republic and at 2.0% in Poland, while year-on-year growth stood at 6.6% in Romania. By contrast, GDP growth in Hungary remained sluggish at 0.1%. European Commission confidence indicators do not point to any major changes in the pace of expansion in these countries in the first quarter of 2008. In March 2008 annual HICP inflation increased further in Romania (to 8.7%), while it decreased in the Czech Republic (to 7.1%) and Poland (to 4.4%), and remained unchanged in Hungary (at 6.7%). On 28 April the Magyar Nemzeti Bank decided to increase its main policy rate by 25 basis points to 8.25%. This decision was motivated by a deterioration in the inflation outlook. Similarly, on 6 May Banca Națională a României decided to increase its main policy rate by 25 basis points to 9.75%, with the intention of anchoring inflationary expectations.

# **EMERGING ASIA**

Despite weakening global demand conditions related to the slowdown in large advanced economies, economic activity continued to be strong in emerging Asia at the beginning of 2008. Strong demand within this region and from other emerging economies contributed to the resilience of exports. The recent upsurge in food and other commodity prices has contributed to a rise in headline consumer price inflation in most economies in the region. Consumer price inflation excluding food and energy, although still at more moderate levels, has also been rising.

In China real GDP increased by 10.6% in annual terms in the first quarter of 2008. Economic growth was mainly supported by domestic demand, with the growth rate of urban fixed asset investment and



retail sales of consumer goods accelerating to 25.9% and 20.6% respectively in nominal terms. Exports, in particular to the United States, continued to slow down. The cumulated trade surplus during the first three months of 2008 was USD 41.1 billion, which represents a fall of 11% compared with the same period last year. CPI inflation was at 8.0% in March, after 8.7% in February. Given its high level of self-sufficiency in grains, so far increases in food prices in China have been mainly caused by a temporary drop in the supply of livestock, rather than by high international grain prices. However, the continuous upward cost pressure for a range of commodities, energy resources and raw materials raises the risk of stronger price increases in a broader segment of consumer goods. In April the People's Bank of China raised the banks' reserve requirements ratio by 50 basis points for the third time this year, to 16%.

# LATIN AMERICA

In Latin America the pace of economic activity remained dynamic, with industrial production in February rising by 5.7% in Argentina, 9.7% in Brazil and 5.4% in Mexico compared with a year earlier. Retail sales also remained strong, in particular in Brazil, where the volume of sales increased by 8.2% year on year in February. At the same time, however, robust economic activity and rising commodity prices are leading to a pick-up in headline inflation across the region. In March consumer prices were 8.8% higher compared with a year earlier in Argentina, 4.7% higher in Brazil and 4.3% in Mexico. In response to the increase in inflation and inflationary expectations, at its 15-16 April meeting the Central Bank of Brazil raised the policy rate by 50 basis points to 11.75%.

# **I.2 COMMODITY MARKETS**

In April oil prices continued their surge to unprecedented levels well above USD 100, standing at USD 116.5 on 6 May. Oil prices are now around 24% higher than at the beginning of the year (in euro terms the increase is around 17%). Given OPEC's policy of restricting oil production and its limited spare capacity, markets remain concerned about long-term oil supply. The International Energy Agency revised downwards its global oil demand and supply forecasts and identified

downside risks for oil supply in the event of project delays for new production build-ups. Markets also perceived downside risks to global fuels supply, as increased food price inflation initiated a reassessment of existing biofuel policies in some OECD countries. Amid tight market conditions, both continuous geopolitical tensions and strikes at a Scottish refinery put additional upward pressure on oil prices.

Looking ahead, oil prices are likely to stay at elevated levels by historical standards in the near term and to remain very sensitive to small changes in the supply-demand balance, as well as in the geopolitical environment. As a consequence, market uncertainty remains high, with the implied distribution for future oil prices extracted from options contracts indicating a 90% confidence interval ranging from USD 69 to USD 160 for prices in December 2008.



The external environment of the euro area

Market participants expect prices of around USD 113 for the end of 2009.

In April the prices of non-energy commodities partly recovered from the sell-off in commodity markets in mid-March. In particular, food prices picked up again owing to increased competition for acreage, amid strong demand from emerging economies and increased biofuel production. As plantings were shifted from maize and soybeans to wheat, the price of the latter eased, but that of maize and soybeans continued to rise. Price pressures were exacerbated by an increasing number of export bans and restrictions on food commodities (i.e. for rice) in emerging markets. In aggregate terms, the price index for non-energy commodities (denominated in US dollars) was approximately 23% higher towards the end of April than a year earlier.



# **1.3 OUTLOOK FOR THE EXTERNAL ENVIRONMENT**

While international trade activity remains relatively robust overall, the moderation in global expansion is likely to translate into some weakening of external demand for euro area goods and services. The OECD composite leading indicator (CLI) for February suggests that a slowdown in economic activity lies ahead in OECD countries (see Chart 4). The CLI also points to some moderation in growth in Brazil, China, India and Russia. Despite this slowdown, growth in the world economy is expected to remain resilient.

On balance, downside risks to the outlook for growth continue to exist. These relate to the potential for financial market turbulence to have a more negative impact on the real economy than previously anticipated. Moreover, downside risks stem from further unanticipated increases in energy and food prices, as well as from protectionist pressures and the possibility of disorderly developments owing to global imbalances.

# **2 MONETARY AND FINANCIAL DEVELOPMENTS**

# 2.1 MONEY AND MFI CREDIT

In March 2008 the annual growth rate of M3 declined to 10.3%, largely on account of a base effect. Notwithstanding this strong decrease, M3 growth remained robust, stimulated by shifts into monetary assets from less liquid and riskier instruments outside M3, given the relatively flat yield curve. At the same time, the annual growth rate of M1 continued the downward trend seen over the past year and a half, largely reflecting shifts from overnight deposits into short-term time deposits. Taking a broad view of monetary developments, the continued robust expansion of MFI loans to the non-financial sector and the strength of household deposit growth support the view that the underlying pace of monetary expansion in the euro area remained robust in March. However, it was not so strong as headline M3 data would currently suggest, nor so weak as the current rate of M1 growth might imply. The ongoing financial market tensions do not, thus far, appear to have materially affected the growth of broad money and credit aggregates. However, there is again evidence of an impact on specific components and counterparts of M3, which offset one another at the aggregate level. Overall, the robust underlying monetary expansion continues to point to upside risks to price stability over the medium to longer term.

### THE BROAD MONETARY AGGREGATE M3

The annual growth rate of M3 declined to 10.3% in March 2008, down from 11.3% in February (see Chart 5). This mainly reflected a base effect, with the large flow into M3 in March 2007 dropping out of the calculation of the annual growth rate. The month-on-month growth rate was 0.7%, somewhat below the average observed in the previous six months, but strong nonetheless. Thus, the shorter-term dynamics of M3, as measured by the annualised six-month growth rate of M3, remained robust.

Although declining in March, the annual rate of M3 growth remained robust and continued to overstate the underlying pace of monetary expansion in the euro area on account of the stimulative effect of the relatively flat yield curve. In this context, the remuneration of



monetary assets is attractive by comparison with riskier, longer-maturity assets outside M3, thereby supporting shifts into M3 deposits. (For a thorough description of "underlying" monetary dynamics, see Box 1, entitled "Underlying monetary dynamics: concept and quantitative illustration".) However, even if the impact of the flat yield curve is taken into account, other factors – such as the ongoing strong growth of loans to the non-financial private sector and the strong growth of households' holdings of deposits – suggest that the underlying pace of monetary expansion remains robust.

At the same time, the monetary data for March also confirm that the increases in short-term interest rates since December 2005 are continuing to influence money and credit developments. This impact is visible in the further moderation of both the annual growth rate of loans to households and the annual growth rate of M1.

Monetary and financial developments

Thus far, the ongoing financial market tensions do not appear to have materially affected the growth of broad money and credit aggregates. At the same time, there is again evidence of effects on certain components and counterparts of M3 that are closely related to the nature of the turmoil. For instance, on the counterpart side, the ongoing strong growth of both MFIs' purchases of debt securities from the private sector and MFI loans to non-monetary financial institutions other than insurance corporations and pension funds (i.e. other financial intermediaries (OFIs)) could, to some extent, reflect banks' provision of support to associated special-purpose entities experiencing funding difficulties. However, these developments have little net impact on broad money or loan aggregates.

# Box I

# UNDERLYING MONETARY DYNAMICS: CONCEPT AND QUANTITATIVE ILLUSTRATION

The primary objective of the ECB is to maintain price stability in the euro area. Given that inflation is a monetary phenomenon over the medium to long term, the ECB has assigned an important role to money in its monetary policy strategy.

One way of making this theoretical principle operational for historical analyses (i.e. for backwardlooking ex-post analyses) is to study the link between the low-frequency component (i.e. the persistent component) of inflation and an appropriately defined measure of "money". Recent studies focussing on this type of analysis for a number of countries and over long time horizons<sup>1</sup> have strengthened the view that the relationship between underlying trend movements in money growth and inflation is part of the deep structure of the economy. First, this relationship remained intact under a large number of different policy regimes. Second, the relationship remained strong in countries with a history of low inflation, as well as in countries with high inflation. Finally, the underlying trend movements in money growth seem to precede those of inflation by a number of years, creating scope for monetary policy to contain inflationary pressures that stem from the underlying trend dynamics in money if they can be identified promptly.

In real time, policy-makers obviously have to rely on the information available to them. Tools that are designed to analyse past behaviour (and that draw on information from the entire time series, instead of the information available at the time of a policy decision, in constructing a measure of the underlying trend) are therefore not very useful. To address this issue, the analysis relevant for policy-makers has to be broad-based, employing a number of empirical techniques that can be used to identify the underlying monetary expansion in real time, relying only on the available information. Each of these techniques is inevitably imperfect. This box discusses a number of such techniques, ranging from time series tools, to exclusion-based measures and on to structural models, and presents a number of stylised results for "underlying monetary growth" in recent quarters.

# **Time series measures**

Measures within this class attempt to discriminate between the "temporary" and "persistent" components of observed monetary developments using a variety of statistical filters, where the

<sup>1</sup> For details, see the speech presented by J. Stark, Member of the Executive Board, on "Enhancing monetary analysis " at the conference "The ECB and its Watchers IX" in Frankfurt am Main on 7 September 2007, and the references made therein.



latter reflects the empirical estimate of the "underlying" money growth.<sup>2,3</sup> An alternative time series approach interprets "underlying" money growth as the component of money growth that is common to various monetary variables, e.g. a large set of sub-components, counterparts and sectoral holdings of M3, and seeks to extract this common element using so-called factor models.<sup>4</sup>

# **Exclusion-based measures**

This approach constructs measures of monetary dynamics that focus on certain money holding sectors or on certain MFI liabilities included in M3, on the basis that these elements are more representative of underlying monetary developments. For example, one might argue that households' holdings of M3 provide more insight into the underlying trends in money growth than those of non-monetary financial institutions. Two main arguments would support this view: first, households' money holdings are generally considerably less volatile than M3 holdings of non-monetary financial institutions and, second, households' holdings of M3 are more closely linked to spending decisions, thus offering a more direct link to developments in consumer prices. At the same time, as in the case of exclusion-based measures used to evaluate inflation developments, the usefulness of any particular measure depends, to a large extent, on the specific situation and is unlikely to become generally applicable to all circumstances.

# Structural and semi-structural measures

Finally, one can use semi-structural or structural approaches to construct an empirical measure for capturing the theoretical concept of "underlying money growth".

In a semi-structural approach,<sup>5</sup> expert judgement is combined with analysis that is based on econometric money demand models. The objective of this approach is to distinguish various components of monetary developments, namely:

- those attributable to identifiable special factors and distortions without a link to future inflationary pressures;
- those that result from current changes in the determinants of money, but do not signal immediate risks to price stability;
- those that result from current changes in the determinants of money that signal risks to price stability; and
- those influenced by other monetary shocks not captured by money demand models, such as a possibly temporary increase in the efficiency of the banking sector, that have an impact on risks to future price stability.
- 2 See, for example, L. Christiano and T.J. Fitzgerald, "The bandpass filter", *International Economic Review*, 44(2), 2003, pp. 435-465.
- 3 See A. Bruggeman, G. Camba-Mendez, B. Fischer and J. Sousa, "Structural filters for monetary analysis: inflationary movements of money in the euro area", ECB working paper No 470, 2005.
- 4 For a description of the methodology, see, for example, R. Cristadoro, M. Forni, L. Reichlin and G. Veronese, "A core inflation indicator for the euro area", *Journal of Money, Credit and Banking*, Vol. 37, No 3, June 2005. pp 539-560.
- 5 For details, see K. Masuch, H. Pill and C. Willeke, "Framework and tools of monetary analysis", H.-J. Klöckers and C. Willeke (eds.), Monetary Analysis: Tools and Applications, ECB, 2001.



Monetary and financial developments

In this context, a natural measure of "underlying" monetary growth is the sum of the latter two components, namely those elements that point to risks to price stability. This is the core objective of undertaking the monetary analysis.

One example of a correction of headline M3 growth within this framework was the provision of the M3 series corrected for the extraordinary portfolio shifts that occurred between 2001 and 2003.<sup>6</sup> This analysis led to the construction of a corrected or "underlying" monetary growth series that excluded the significant portfolio shifts into safe and liquid monetary assets at a time of heightened economic and financial uncertainty in the aftermath of a significant stock market correction and the terrorist attacks of 11 September 2001.

Instead of using the decomposition of money growth into the contributions stemming from



Note: The range of measures capturing "underlying" money growth is based on one exclusion-based measure (estimate of annual growth of household's holdings of M2 plus repurchase aggrements) and three time series measures (asymmetric full sample Christiano-Fitzgerald bandpass filter for movements of M3 growth with a periodicity over 10 years, multivariate filter as described in the source provided in footnote 3 of the box and a dynamic factor model).

its main determinants, one can use a structural model in which the impact of "shocks" on M3 growth that vary by nature and source can be identified and quantified. One example for such a modelling approach is a structural dynamic stochastic general equilibrium (DSGE) model with financial frictions and an explicit banking sector.<sup>7</sup> Within such a model, the "underlying" monetary growth is measured empirically as the sum of those "shocks" that should be related with inflationary pressures (which excludes, in particular, money demand shocks related to pure portfolio decisions). The very stylised character of such models, however, calls for considerable caution when used in real-time policy applications.

All empirical measures described above are obviously imperfect measures of the concept of "underlying" monetary developments. Therefore, it is necessary to look at a range of different approaches, rather than to rely on one alone. In addition, it must be borne in mind that the signalling quality of different empirical measures may vary over time. A range of such empirical measures, in addition to headline M3 and M1 growth, is shown in the chart above. Despite the shortcomings listed above, a number of conclusions can be drawn from this chart:

- the underlying pace of monetary expansion remains strong;
- although "underlying" money growth (when analysing the mean or median of these measures) appears to have broadly stabilised in recent quarters, as short-term interest rates have risen, there is nevertheless little sign of a significant moderation; and

For a description, see the article entitled "Monetary analysis in real time" in the October 2004 issue of the Monthly Bulletin.
The model is described in Box 2, entitled "A structural decomposition of money growth", in the article entitled "Interpreting monetary developments since mid-2004 "in the July 2007 issue of the Monthly Bulletin.



 M3 growth currently overstates the pace of monetary expansion, while M1 growth currently understates it.

One explanation for the latter stylised observation can be found in the different impact of the prevailing relatively flat yield curve on different monetary aggregates. On the one hand, the flat yield curve stimulates M3 growth in the short run by making the remuneration of shorter-term monetary assets attractive in comparison with riskier, longer-maturity assets outside M3. On the other hand, the flat yield curve partially reflects the impact of past increases in key ECB interest rates and the effects of the financial market turmoil on the short end of the yield curve. Both factors increase the opportunity costs of holding assets included in M1, leading to substantial shifts out of assets included in M1, mainly into assets included in the broad monetary aggregate that are remunerated closer to market rates.<sup>8</sup>

8 For a description of this issue, see Box 3, entitled "The reaction of euro area M3, M1 and loans to changes in interest rates", in the article entitled "Interpreting monetary developments since mid-2004 "in the July 2007 issue of the Monthly Bulletin.

#### MAIN COMPONENTS OF M3

The annual growth rate of M1 declined to 2.9% in March 2008, down from 3.7% in February. This implies a continuation of the downward trend observed over recent quarters, although the somewhat stronger decrease in March can be traced back to the base effect mentioned above. Looking at the components of M1, the annual growth rate of overnight deposits decreased to 2.0% in March, down from 2.9% in February, while that of currency in circulation remained unchanged at 7.7% (see Table 1).

The largest contribution to annual M3 growth came from short-term deposits other than overnight deposits, although the growth rate of this component moderated somewhat, declining to 18.4% in March, down from 19.4% in the previous month. The dynamism of deposits with an

#### Table I Summary table of monetary variables

(quarterly figures are averages; adjusted for seasonal and calendar effects)

	Outstanding							
	amount as a	amount as a	2007	2007	2007	2008	2008	2008
	percentage of M3 <sup>1)</sup>	Q2	Q3	Q4	Q1	Feb.	Mar	
M1	43.4	6.2	6.5	5.9	3.8	3.7	2.9	
Currency in circulation	7.2	9.9	8.9	8.0	7.8	7.7	7.	
Overnight deposits	36.2	5.5	6.1	5.5	3.1	2.9	2.	
M2 - M1 (= other short-term deposits)	41.4	13.1	15.0	16.8	18.5	19.4	18.	
Deposits with an agreed maturity of up								
to two years	24.0	33.1	37.6	40.6	41.7	43.4	39.	
Deposits redeemable at notice of up to								
three months	17.4	-2.2	-3.2	-3.9	-3.3	-3.1	-2.	
M2	84.8	9.2	10.3	10.7	10.4	10.7	9.	
M3 - M2 (= marketable instruments)	15.2	19.3	18.8	19.7	16.6	15.0	12	
M3	100.0	10.6	11.5	12.0	11.3	11.3	10	
Credit to euro area residents		8.1	8.7	9.3	9.9	9.8	9.	
Credit to general government		-4.4	-4.0	-3.8	-2.2	-2.5	-1	
Loans to general government		-1.2	-0.9	-1.8	-0.9	-1.2	-0	
Credit to the private sector		11.0	11.7	12.2	12.5	12.5	12	
Loans to the private sector		10.5	11.0	11.2	11.0	11.0	10	
Longer-term financial liabilities								
(excluding capital and reserves)		10.3	10.3	8.5	6.9	6.5	5	

Source: ECB.

1) As at the end of the last month available. Figures may not add up due to rounding.



Monetary and financial developments

agreed maturity of up to two years (i.e. short-term time deposits) slowed somewhat, although the annual growth rate of this component remained elevated, standing at 39.6% in March, compared with 43.3% in the previous month. These deposits have benefited from their relatively high level of remuneration, which has developed broadly in line with money market interest rates. As the remuneration of alternative instruments such as overnight deposits has increased by much less, the interest rate differential has supported strong shifts into short-term time deposits. By contrast, deposits redeemable at notice of up to three months (i.e. short-term savings deposits) continued to decline on an annual basis in March, in line with their relatively poor rate of remuneration. This notwithstanding, the annual rate of decline was somewhat weaker, at 2.6% in March, than it had been in February (when it stood at 3.1%).

The annual growth rate of marketable instruments decreased as well, to 12.8% in March, from 15.0% in February. This decline reflected the lower annual growth rate of repurchase agreements, which stood at 11.5% in March, after 18.4% in the previous month, and a drop in the annual growth rate of money market fund shares/units, which was 8.9% in March, compared with 10.9% in the previous month. In the first three months of this year the financial turmoil had no noticeable impact on marketable instruments of the kind observed, for instance, in the outflows from money market funds in August and September of last year. The annual growth rate of short-term MFI debt securities picked up somewhat in March, increasing to 24.7%, up from 22.3% in February, having fallen substantially in the previous two months.

The annual growth rate of short-term deposits and repurchase agreements with MFIs ("M3 deposits", the broadest aggregation of M3 components for which information is available by holding sector) decreased to 10.7% in March, down from 11.8% in February. Despite moderating slightly in March, this growth rate remains at a high level, mainly reflecting the robust contribution of households' M3 deposit holdings, the annual growth rate of which remained broadly unchanged at 9.0% in March. The annual growth rate of M3 deposits held by financial intermediaries (insurance corporations and pension funds, and OFIs) decreased somewhat to 20.1%, down from 22.9% in February, and that of M3 deposits held by non-financial corporations also moderated in March, to 8.6%, after 11.8% in February, accentuating the decline observed in this growth rate since mid-2007.

# MAIN COUNTERPARTS OF M3

On the counterpart side, the annual growth rate of total credit to euro area residents declined slightly to 9.7% in March, down from 9.8% in February. Contrasting developments were observed for credit to general government and credit to the private sector (see Table 1). On the one hand, the annual rate of decline of credit to general government decreased to 1.6% in March, down from 2.5% in the previous month, as banks extended credit through small net purchases of government securities. On the other hand, the annual growth rate of MFI credit to the private sector continued its gradual moderation, falling to 12.1% in March, after 12.5% in February.

Loans, the largest component of credit to the private sector, continued to grow at a robust pace, with an annual growth rate of 10.8% being recorded in March, after 11.0% in the previous month. At the same time, differences remained in the dynamics of the various sectors, with the annual growth rate of loans to non-financial corporations strengthening further in March, whereas the annual growth of loans to households continued to moderate and that of loans to non-monetary financial intermediaries remained broadly stable (see Table 2).

The annual growth rate of MFI loans to non-financial corporations rose further to 15.0% in March, up from 14.8% in the previous month, with little indication that the supply of bank credit had been

#### Table 2 MFI loans to the private sector

(quarterly figures are averages; not adjusted for seasonal and calendar effects)

	Outstanding amount		s				
	as a percentage of the	2007	2007	2007	2008	2008	2008
	total 1)	Q2	Q3	Q4	Q1	Feb.	Mar.
Non-financial corporations	43.5	12.7	13.8	14.0	14.7	14.8	15.0
Up to one year	29.2	10.1	12.1	11.9	13.0	13.2	13.9
Over one and up to five years	19.7	19.0	19.9	21.1	22.5	22.8	21.8
Over five years	51.1	12.0	12.7	12.8	12.9	12.9	13.1
Households <sup>2)</sup>	46.5	7.5	7.0	6.6	5.9	5.8	5.4
Consumer credit <sup>3)</sup>	12.8	6.5	5.7	5.3	5.4	5.4	5.3
Lending for house purchase 3)	71.5	8.6	8.1	7.7	6.7	6.6	6.1
Other lending	15.7	3.6	3.2	3.1	2.5	2.7	1.9
Insurance corporations and pension funds	1.0	23.7	26.6	22.0	6.5	6.4	6.4
Other non-monetary financial intermediaries	9.0	16.1	20.0	23.4	24.2	22.8	22.7

Source: ECB.

Notes: MFI sector including the Eurosystem; sectoral classification based on the ESA 95. For further details, see the relevant technical notes.

 As at the end of the last month available. Sector loans as a percentage of total MFI loans to the private sector; maturity breakdown and breakdown by purpose as a percentage of MFI loans to the respective sector. Figures may not add up due to rounding.
 As defined in the ESA 95.

3) The definitions of consumer credit and lending for house purchase are not fully consistent across the euro area

seriously hampered, at the euro area level, by the financial turmoil. Indeed, the monthly flow of MFI loans to euro area non-financial corporations has averaged €46 billion since the turmoil started in August 2007, higher than in the period from August 2006 to March 2007, when it stood at €35 billion. In terms of the maturity structure, the annual growth rate of shorter-term loans (i.e. those with an original maturity of up to one year) increased in March but remained below that of medium-term loans (i.e. those with an original maturity of between one and five years). This continues to provide little evidence in support of the view that the overall flow of loans to the non-financial corporate sector during the turmoil could, to a large extent, reflect banks' difficulties in removing short-term bridge loans (related to leveraged buyout (LBO) and/or merger and acquisition (M&A) deals) from their balance sheets.

Turning to the household sector, the downward trend observed since early 2006 in the annual growth rate of MFI loans continued in March (with that growth rate standing at 5.4%, down from 5.8% in the previous month). This downward trend is in line with the impact of the increases in bank lending rates since 2005 and the moderation observed in housing market dynamics in a number of euro area countries, as also reported in the April 2008 bank lending survey (See Box 2 entitled "The results of the April 2008 bank lending survey for the euro area"). The relatively small monthly flow seen in March can be attributed in part to the impact of securitisation operations (which imply the derecognition of loans from MFIs' balance sheets). At the same time, there continues to be little indication of the supply of bank loans to households having been disrupted, or of the financial turmoil having had an impact beyond that observed through the usual fundamental determinants, such as interest rates. As regards the various sub-components, the moderation in the growth of loans to households in March continued to be driven by loans for house purchase, the annual growth rate of which declined further to 6.1% in that month, down from 6.6% in February. The annual growth rate of consumer credit remained broadly unchanged at 5.3%, after 5.4% in February, while the annual growth rate of other lending – which tends to be more volatile from one month to the next – declined to 1.9% in March, down from 2.7% in the previous month.

The annual growth rate of loans to OFIs declined slightly to 22.7% in March, down from 22.8% in the previous month. Since the onset of the financial turmoil the average monthly flows of loans

Monetary and financial developments

to OFIs have been somewhat larger than in the corresponding period one year earlier, and the monthly flow of €39 billion recorded in March 2008 was the largest since the start of the monthly series in January 2003. These larger flows may, in part, reflect a direct effect of the financial turmoil, as they are likely to include funding provided to affiliated special-purpose vehicles (which belong to the OFI sector) that are experiencing problems in rolling over commercial paper. However, the data also suggest that MFIs have continued to support the funding of their special purpose entities more strongly through the direct purchase of asset-backed securities, as suggested by the fact that the annual growth rate of securities other than shares purchased from the private sector remained high at above 40% in March.

Among the other counterparts of M3, the annual growth rate of MFIs' longer-term financial liabilities (excluding capital and reserves) declined further to 5.0% in March, down from 6.5% in February (see Chart 6). This decrease reflects weaker growth in both longer-term MFI debt securities and longer-term deposit holdings of the private sector. The latter is related to



the shifts observed from longer into shorter-term deposits in an environment characterised by a relatively flat yield curve. However, looking at the sectoral breakdown, the lower annual growth rate of OFIs' holdings of longer-term deposits may be related to the moderation seen in securitisation activity (including synthetic securitisation), given that the proceeds from securitisation vehicles' sales of securities are usually invested in MFI deposits (both short and long-term).

Finally, the net external asset position of the MFI sector recorded a monthly outflow of  $\in$ 14 billion in March, following an outflow of a similar magnitude in the previous month. On an annual basis, this increased the outflow to  $\in$ 155 billion, the largest cumulative 12-month outflow since July 2001. However, this largely reflects a base effect, as in March 2007 there had been the largest monthly inflow ever seen, which now drops out of the calculation of the 12-month cumulative sum. Finally, it should be borne in mind that monthly developments in MFI net external assets tend to be relatively volatile, especially at times of heightened uncertainty.

Overall, in line with the assessments made in previous months, the data for March confirm that the impact of the financial turmoil on the growth of broad money and credit aggregates remains modest. At the same time, there is again evidence that recent financial market tensions have directly affected some specific components and counterparts of M3 that are closely related to the nature of the turmoil. Nonetheless, there is little evidence of the supply of bank loans to households and, in particular, non-financial corporations being significantly impaired. Looking beyond the effects related to the flat yield curve and the financial turmoil, the pace of underlying monetary expansion remains strong, and this continues to point to upside risks to price stability over the medium to longer term.

# Box 2

### THE RESULTS OF THE APRIL 2008 BANK LENDING SURVEY FOR THE EURO AREA

This box describes the main results of the April 2008 bank lending survey for the euro area conducted by the Eurosystem.<sup>1</sup> In this survey round, a number of changes were introduced. First, Cyprus and Malta participated for the first time in the survey. In addition, the samples for Germany and Italy were enlarged. This led to a new sample of 113 euro area banks, which can be expected to give a better overall picture of bank lending in the euro area. Second, for two further questions on enterprises, a breakdown into large firms and small and medium-sized enterprises (SMEs) was introduced. Third, the classification of banks into large and small banks was revised, leading to a more restrictive definition of large banks.

Respondent banks reported a further increase in the net tightening of credit standards for loans to enterprises in the first quarter of 2008, more for large firms than for SMEs, but expect a somewhat lesser tightening for the second quarter of 2008.<sup>2</sup> This picture was broadly confirmed by the replies to the ad hoc questions included in the April 2008 survey relating to the financial turmoil (see the last section of this box). With regard to the demand for loans, banks reported that net demand for loans to enterprises was negative in the first quarter of 2008, falling from a slight positive net demand in the previous quarter.<sup>3</sup> For the first quarter of 2008, banks also reported a further increase in the net tightening of credit standards for loans to households for house purchase. While the net tightening of credit standards for consumer credit and other lending to households also increased, the net percentage of tightening was considerably lower than for loans to households for house purchase dropped further in the first quarter of 2008 and was significantly negative, while net demand for consumer credit and other lending to households for consumer credit and other lending to house purchase dropped further in the first quarter of 2008 and was significantly negative, while net demand for consumer credit and other lending to households for consumer credit and other lending to households for consumer credit and other lending to house burchase dropped further in the first quarter of 2008 and was significantly negative.

#### Loans or credit lines to enterprises

**Credit standards:** Reflecting the financial turmoil and the ongoing reappraisal of risk since the second half of 2007, the net tightening of credit standards for loans or credit lines to enterprises increased further in the first quarter of 2008 (49%, compared with 41% in the previous quarter; see Chart A).<sup>4</sup> With respect to the factors contributing to banks' tightening of credit standards, banks' risk perception regarding general economic activity, the industry or firm-specific outlook and all factors summarised in banks' cost of funds and balance sheet constraints (i.e. banks' ability to access market financing, banks' cost related to their capital position and banks' liquidity position) contributed to the increase in the net tightening.

2 The reported net percentage refers to the difference between the proportion of banks reporting that credit standards have been tightened and the proportion of banks reporting that they have been eased. A positive net percentage indicates that banks have tended to tighten credit standards ("net tightening"), whereas a negative net percentage indicates that banks have tended to ease credit standards ("net easing").

3 The term "net demand" refers to the difference between the proportion of banks reporting an increase in loan demand and the proportion of banks reporting a decline.

4 Based on the previous sample, the net tightening would have been somewhat more pronounced.

<sup>1</sup> The cut-off date for the receipt of data from the responding banks was 8 April 2008. A comprehensive assessment of the results of the April 2008 bank lending survey for the euro area was published on 9 May 2008 on the ECB's website.

Monetary and financial developments





Regarding the conditions and terms of credit, banks increased their tightening of credit standards in net terms, in particular by widening further their margins on both average loans (62%, from 38% in the previous round) and on riskier loans (72%, from 58% in the previous round). Non-price terms and conditions also increasingly contributed to the net tightening of credit standards in the first quarter of 2008, especially the size of loans or credit lines, but also collateral requirements and other terms and conditions.

In the first quarter of 2008, the net tightening of credit standards continued to be stronger for large enterprises (53%, after 44% in the fourth quarter of 2007) than for SMEs (35%, after 27% in the fourth quarter of 2007). For the first time, the factors behind and terms and conditions for the changes in credit standards can also be analysed across firm sizes in this survey. For both large enterprises and SMEs, the most important factors behind the net tightening are the deterioration in expectations regarding general economic activity and the industry or firm-specific outlook. At the same time, banks' cost of funds and balance sheet constraints and, in particular, banks' liquidity position, played a more important role for the net tightening for large firms than for SMEs. With respect to terms and conditions, the increase in banks' margins contributed most to the net tightening of credit standards for both loans to large firms and to SMEs, although it was somewhat more pronounced for large firms (see Chart B). Non-price terms and conditions contributed more strongly to the net tightening for large firms than for SMEs.

Notes: In panel (a), the net percentages refer to the difference between the sum of the percentages for "tightened considerably" and "tightened somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably". The net percentages for the aughened solution what and same the difference between the percentage of banks reporting that the given factor contributed to table to the percentage of banks reporting that the given factor contributed to table and the percentage reporting that it contributed to easing. "Realised" values refer to the period in which the survey was conducted. "Expected" values are the net percentages calculated from the responses given by the banks in the previous survey. For instance, "expected" values for the second quarter of 2008 were reported by banks in the April 2008 survey.



Notes: The net percentages refer to the difference between the sum of the percentages for "tightened considerably" and "tightened somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably".

As regards loan maturities, the further increase in the net tightening was considerably more pronounced for long-term loans (57%, after 39% in the previous survey round) than for short-term loans (33%, after 28% in the previous survey round). This may reflect the increase in the cost of bond financing of banks, as well as the assessment by banks that their access to funding via medium and long-term debt securities continued to be hampered in the first quarter of 2008 (see Chart G).

Looking ahead to the second quarter of 2008, expectations point to a somewhat lesser net tightening of credit standards (44%), compared with the actual net tightening in the first quarter of 2008 (see Chart A).

**Loan demand:** In the first quarter of 2008, net demand for loans by enterprises was negative (-17%), falling from a slight positive net demand (2%) in the previous quarter (see Chart C).<sup>5</sup> The main factors behind the negative net demand were M&As and corporate restructuring as well as fixed investment. In addition, internal financing contributed to lowering the net demand for loans by enterprises, thus pointing to a continued sound profitability of enterprises. Debt securities issuance continued to contribute positively to the net demand for loans by enterprises as market conditions and, in particular, the increased cost of market-based debt financing. For the second quarter of 2008, net demand for loans by enterprises is expected to be less negative (-12%) compared with the actual demand in the first quarter (see Chart C).

# Loans to households for house purchase

**Credit standards:** In the first quarter of 2008, banks reported a further increase in the net tightening of credit standards for loans to households for house purchase (33%, after 21% in the fourth quarter of 2007; see Chart D). The main factors contributing to the further increase

5 Based on the previous sample, the fall in net demand for loans by enterprises would have been more pronounced.



Monetary and financial developments



Notes: In panel (a), the net percentages refer to the difference between the sum of the percentages for "increased considerably" and "increased somewhat" and the sum of the percentages for "decreased somewhat" and "decreased considerably". The net percentages for the questions related to the factors are the difference between the percentage of banks reporting that the given factor contributed to an increase in demand and the percentage reporting that it contributed to a decline. "Realised" values refer to the period in which the survey was conducted. "Expected" values are the net percentages calculated from the responses given by the banks in the previous survey. For instance, "expected" values for the second quarter of 2008 were reported by banks in the April 2008 survey.

in the net tightening of credit standards were less favourable expectations regarding general economic activity and housing market prospects. Competition from other banks continued to contribute towards a net easing. Regarding the conditions and terms of credit, the net tightening for loans for house purchase was mainly implemented by means of widening the margins on both average loans and riskier loans. Non-price terms and conditions, especially a further tightening of loan-to-value ratios, also contributed to the net tightening. For the second quarter of 2008, respondent banks expect a continued net tightening of credit standards for loans to households for house purchase (29%), albeit slightly less than the actual net tightening in the first quarter of 2008.

**Loan demand:** Net demand for loans to households for house purchase dropped further in the first quarter of 2008 (to -57% from -36% in the previous quarter; see Chart E). This mainly reflected deteriorating consumer confidence and worsened housing market prospects. Looking ahead to the second quarter of 2008, net loan demand is expected to be slightly less negative (-53%), compared with actual net demand in the first quarter of 2008.

# Loans for consumer credit and other lending to households

Credit standards: In the first quarter of 2008, banks reported a further increase in the net tightening of credit standards for consumer credit and other lending to households



Notes: In panel (a), the net percentages refer to the difference between the sum of the percentages for "tightened considerably" and "tightened somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably". The net percentages for the questions related to the factors are the difference between the percentage of banks reporting that the given factor contributed to tightening and the percentage reporting that it contributed to easing. "Realised" values refer to the period in which the survey was conducted. "Expected" values are the net percentages calculated from the responses given by the banks in the previous survey. For instance, "expected" values for the second quarter of 2008 were reported by banks in the April 2008 survey.

(19%, after 10% in the previous quarter; see Chart F), although to a level that was considerably lower than for loans to households for house purchase. The main factor for the further net tightening was banks' perception of risk, related to less favourable expectations regarding general economic activity, the creditworthiness of consumers and the risk on the collateral demanded. The net tightening was mainly implemented by means of a widening of the margins on riskier loans, and to a lesser extent, on average loans. In addition, non-price terms and conditions were tightened compared with the previous quarter. For the second quarter of 2008, the net tightening of credit standards for consumer credit and other lending to households is expected to increase somewhat further (25%), compared with the actual net tightening in the first quarter.

**Loan demand:** Banks reported that net demand for consumer credit and other lending to households was broadly unchanged in the first quarter of 2008 and remained negative (-13%, after -11% in the previous quarter; see Chart E). In particular, lower consumer confidence was seen as a dampening factor on the demand for consumer loans. In the second quarter of 2008, net demand is expected to remain negative (-12%), broadly unchanged compared with the first quarter.

#### Ad hoc questions on the financial turmoil

As a follow-up to the ad hoc questions included in the last two survey rounds, the April 2008 survey round also contained a set of questions addressing the impact of the financial market



Monetary and financial developments



Notes: The net percentages refer to the difference between the sum of the percentages for "increased considerably" and "increased somewhat" and the sum of the percentages for "decreased somewhat" and "decreased considerably". "Realised" values refer to the period in which the survey was conducted. "Expected" values are the net percentages calculated from the responses given by the banks in the previous survey. For instance, "expected" values for the second quarter of 2008 were reported by banks in the April 2008 survey.



Chart F Changes in credit standards applied to the approval of consumer credit and other lending to households

Notes: The net percentages refer to the difference between the sum of the percentages for "tightened considerably" and "tightened somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably". The net percentages for the questions related to the factors are the difference between the percentage of banks reporting that the given factor contributed to tightening and the percentage reporting that it contributed to easing. "Realised" values refer to the period in which the survey was conducted. "Expected" values are the net percentages calculated from the responses given by the banks in the previous survey. For instance, "expected" values for the second quarter of 2008 were reported by banks in the April 2008 survey.





Note: Percentages have been calculated by adding together the shares of banks reporting "considerably hampered" and "somewhat hampered".

tensions experienced since the second half of 2007. The questions focus on their impact on credit standards, on access to wholesale funding and on bank lending.

Consistent with the regular questions in the survey, the situation in financial markets had a larger impact on loans to large enterprises than on loans to SMEs. This seems to be in line with the impact according to loan purpose, which shows that the impact of the turmoil on credit standards was especially strong for loans for financing M&As and corporate restructuring. At the same time, the effect was more limited, but increasing, for loans for financing fixed investment as well as for inventories and working capital.

Banks generally reported that the turmoil in financial markets had created more difficult conditions for accessing wholesale funding in the first quarter of 2008 compared with the fourth quarter of 2007 (see Chart G). In particular, banks reported that their securitisation activity continued to be hampered for the selling of loans for house purchase and for the selling of corporate loans. In addition, reporting banks considered their ability to transfer credit risk off balance sheet to have been hampered over the past three months. Banks also reported continued difficulties in accessing wholesale funds through the interbank unsecured money market in the first quarter of 2008. In addition, as in the last survey round, a larger proportion of the banks experienced more difficulties raising funds through medium to long-term bonds than through short-term debt securities over the past three months. Over the next three months, access to wholesale funding is expected to become slightly less hampered compared with the situation in the first quarter of 2008.

Difficulties in accessing wholesale funding in the first quarter of 2008 have also been reported as having an impact on the amounts that banks experiencing such difficulties were willing to lend and the margins at which funds were lent. Banks assessed the impact on lending of their hampered access to securitisation as being generally stronger than the impact of their hampered access to money markets, debt securities and other markets. In addition, as in the previous quarter, the



Monetary and financial developments

impact of the hampered market access was generally stronger for the margins than for the amount of loans granted to borrowers. In contrast to the expectation for a slight relaxation of their access to wholesale funding, responding banks reported that they expect the impact of the hampered market access on their willingness to lend and on margins to increase further during the second quarter of 2008, compared with the actual impact in the first quarter of 2008. As regards the impact of banks' need to fund draw-downs on commitments to asset-backed commercial paper programmes issued by conduits or structured investment vehicles, around one-third of the banks reported an impact on their lending policy.

Finally, with regard to the impact of the change in banks' cost related to their capital position on their lending policy, in the first quarter of 2008, a larger percentage of responding banks reported that there had been a considerable impact on this cost and some impact on lending compared with the previous quarter.

# **2.2 SECURITIES ISSUANCE**

In February 2008 the annual growth rate of debt securities issued by euro area residents slowed down somewhat, compared with the previous month. This reflected mainly a decline in the annual growth rate of long-term debt securities issued by the MFI sector and, to a lesser extent, by non-financial corporations. Issuance of quoted shares remained broadly unchanged, at relatively subdued levels.

# **DEBT SECURITIES**

The annual growth rate of debt securities issued by euro area residents declined to 8.0% in February 2008, down from 8.5% in January (see Table 3). As regards the maturity breakdown of debt securities issued, the annual growth rate of short-term securities issuance remained robust at 25.7% in February, unchanged from the previous month, while that of long-term securities moderated further, falling from 6.7% to 6.1%. These developments mainly reflect a significantly lower issuance of long-term securities by MFIs as a result of the market turmoil that started in the summer of 2007 and of the protracted tensions in the wholesale funding market.

	Amount outstanding (EUR billions)		A	Annual grov	wth rates 1)		
	2008	2007	2007	2007	2007	2008	2008
Issuing sector	Feb.	Q1	Q2	Q3	Q4	Jan.	Feb.
Debt securities:	12,198	8.1	8.8	9.2	9.0	8.5	8.0
MFIs	5,105	10.6	10.6	10.9	10.7	9.9	8.6
Non-monetary financial corporations	1,494	27.6	29.3	28.6	27.3	27.5	24.8
Non-financial corporations	695	4.9	6.3	9.4	8.8	10.4	9.7
General government	4,903	2.4	3.2	3.3	3.0	2.3	2.9
of which:							
Central government	4,590	2.1	3.0	3.3	2.9	2.2	3.0
Other general government	314	6.8	5.7	3.0	4.6	3.0	2.7
Quoted shares:	5,803	1.1	1.2	1.4	1.4	1.3	1.3
MFIs	858	2.5	2.1	1.8	1.3	0.8	0.5
Non-monetary financial corporations	492	1.0	1.1	0.9	2.5	2.4	2.2
Non-financial corporations	4,453	0.8	1.0	1.3	1.3	1.3	1.3

Source: ECB

1) For details, see the technical notes for Sections 4.3 and 4.4 of the "Euro area statistics" section.



The annual growth rate of debt securities issued by non-financial corporations decreased to 9.7% in February, down from 10.6% in the previous month (see Chart 7). The annual growth rate of short-term debt securities issued by non-financial corporations declined by 4.9 percentage points to stand at 31.6% in February, whilst the annual growth rate of longterm debt securities, which represent more than 80% of the total outstanding amount, decreased to 5.6% in February, from 5.8% in January. Looking at short-term developments on the basis of seasonally adjusted data uncovers a sharper slowdown in long-term debt securities issuance following the onset of the financial market turmoil. Six-month annualised growth rates constructed on the basis of seasonally adjusted data indicate that the rate of growth of long-term debt securities issued by nonfinancial corporations declined from 8.3% in July 2007 to 3.3% in both January and February 2008. The slowdown has been more evident since the end of 2007, reflecting the widening in spreads between corporate and government bond yields. Evidence from commercial data providers confirms that activity in the high yield segment has virtually ceased since the outbreak of the market turmoil.



In February 2008 the annual growth rate of debt securities issued by MFIs decreased further by 1.3 percentage points to stand at 8.6%. Consistent with a trend evident since the market turmoil began, issuance of short-term securities remained strong, recording an annual growth rate of 31.0% in February 2008, which was 1.1 percentage points below the figure recorded in January. By contrast, the growth rate of MFIs' issuance of long-term debt securities decreased further to 5.2% in February from 6.5% in the previous month. The shift away from long-term market-based financing is due to the significant repricing that has affected financial sector issuers since the onset of the market turmoil. The magnitude of this effect is better gauged by looking at the short-term dynamics. Indeed, six-month seasonally adjusted data for long-term debt securities issuance show a growth rate of 2.5% in February, the lowest figure since the beginning of 2003.

The annual growth rate of debt securities issued by non-monetary financial corporations decreased from 27.5% in January to 24.8% in February 2008, but it still remained at a high level. Most of the issuance activity in this sector is related to banks' securitisation activities, which have been adversely affected by the financial market turmoil. The resilience of euro area non-monetary financial institutions' issuance to the turmoil appears to be related to a pick-up in private placements, possibly with the purpose of using asset-backed securities as collateral for repo refinancing operations.

The annual growth rate of debt securities issued by the general government sector increased slightly, to 2.9% in February 2008, from 2.3% in January. These figures reflect a moderate

Monetary and financial developments

increase in the growth of debt securities issued by the central government sector, up from 2.2% in January to 3.0% in February, while the annual growth rate of issuance by the other general government sector decreased from 2.4% to 2.2% in the same months.

# **QUOTED SHARES**

The annual growth rate of quoted shares issued by euro area residents remained stable at 1.3% in February 2008, as compared with January (see Table 3). This reflects mainly the subdued dynamics of issuance of quoted shares by nonfinancial corporations, unchanged at 1.3%. Over the same period, the annual growth rates of quoted shares issued by the financial sector declined mildly, to 0.5% for MFIs and to 2.2% for non-monetary financial institutions (see Chart 8).



# 2.3 MONEY MARKET INTEREST RATES

Unsecured money market interest rates increased in April, reflecting rebounding tensions in this market. As a result, spreads between unsecured and secured money market rates rose further,

returning to the high levels observed in December 2007. Moreover, the money market yield curve steepened in April and early May, with the spread between unsecured twelve-month and one-month money market interest rates rising to 57 basis points.

Unsecured money market interest rates increased in April. Between 9 April and 6 May, the onemonth EURIBOR rose by 4 basis points to reach 4.39%. More pronounced increases were observed in the three-month, six-month and twelve-month EURIBOR over the same period, and on 6 May these rates stood at 4.86%, 4.88% and 4.96% respectively, i.e. 12, 13 and 21 basis points higher than the levels observed on 9 April (see Chart 9).

As a result, the spread between the twelve-month and the one-month EURIBOR increased to 57 basis points on 6 May, compared with 39 basis points on 9 April (see Chart 9). This steepening of the slope of the money market yield curve mainly reflected increases in market expectations regarding the future path of key ECB interest rates. These were more pronounced for the latter part of 2008, and thus affected rates with longer maturities more than those with shorter maturities. Changes in the spreads between the unsecured EURIBOR and secured rates (such as the EUREPO or rates derived from the EONIA swap index) also influenced the slope of the money market yield curve. These spreads increased in the context of renewed money market tensions, particularly for longer maturities. At a three-month maturity, the spread between the EURIBOR and the EONIA swap index widened from 74 basis points on 9 April to 82 basis points on 6 May.



The interest rates implied by the prices of three-month EURIBOR futures maturing in June, September and December 2008 stood at 4.74%, 4.60% and 4.50% respectively on 6 May, representing increases of 57, 48 and 39 basis points respectively by comparison with 9 April.

Given the liquidity situation anticipated by the ECB in the final days of the third maintenance period of 2008 (that ending on 15 April), a liquidity-absorbing fine-tuning operation with overnight maturity was launched on the last day of that period. This operation absorbed  $\in$ 14.88 billion, and the EONIA stood at 3.78% on that day (see Chart 10).

In the first few days of the following maintenance period (that ending on 13 May), the EONIA stabilised somewhat at around 4%. During this maintenance period, in order to accommodate counterparties' desire to fulfil their reserve requirements early in the maintenance period, the ECB continued its policy of allotting liquidity in excess of the benchmark amount in its main refinancing operations, while still aiming for balanced liquidity conditions at the end of the maintenance period. Consequently, in the Eurosystem's regular weekly main refinancing operations on 15, 22 and 29 April, and on 6 May, the ECB allotted  $\in$ 35 billion,  $\notin$ 20 billion,  $\notin$ 20 billion and  $\notin$ 4 billion in excess of the respective benchmark amounts. The resulting marginal tender rates for these four operations were 4.21%, 4.21%, 4.26% and 4.26% respectively.

In the Eurosystem's regular longer-term refinancing operation (LTRO) on 30 April (which was conducted with a fixed allotment amount of  $\in$ 50 billion), the marginal and weighted average rates were 4.67% and 4.75% respectively, representing increases of 23 and 22 basis points respectively by comparison with the levels reached in the previous LTRO on 2 April. The marginal rate in the operation on 30 April was 19 basis points lower than the three-month EURIBOR prevailing on that date.



Monetary and financial developments

### **2.4 BOND MARKETS**

Long-term government bond yields increased in the major markets in April and early May. The increase in euro area long-term rates was largely driven by a similar rise in long-term real bond yields. These developments appeared to be closely related to market participants' changing expectations for future monetary policy rates, against the background of new record highs in oil and food prices. At the same time, inflation expectations and related risk premia, as reflected in implied forward breakeven inflation rates, changed little in the euro area between end-March and early May.

Long-term government bond yields in the major markets increased in April and early May (see Chart 11). Anticipations of lower official interest rates were scaled down across the main regions. This, in turn, was mainly attributed to the ongoing rise in commodity prices, as evidenced by the new record highs



Note: Long-term government bond yields refer to ten-year bonds or to the closest available bond maturity.

in oil prices, and food prices, which sharpened market participants' focus on the prospects for consumer price inflation. In the euro area, ten-year government bond yields increased by around 20 basis points between end-March and 6 May, to stand at around 4.3% on the latter date. In the United States, ten-year government bond yields ended the review period at around 4.0%, which is about 50 basis points higher than that prevailing at the end of March. As a consequence, the differential between ten-year government bond yields in the United States and the euro area narrowed by about 30 basis points. The changes in nominal yields in these two economies have been driven mainly by corresponding changes in real yields. In Japan, the ten-year government bond yield increased since the end of March by 35 basis points, standing at 1.6% at the end of the review period. Measures of implied bond market volatility remained broadly unchanged in the euro area, whereas they declined in the United States, suggesting that market participants' uncertainty regarding the short-term outlook for the US bond market diminished over the review period.

In the United States, long-term government bond yields increased in April and early May. Although data releases provided mixed news for the economic outlook, market participants increasingly expected a bottoming-out of the housing market in particular and the US economy in general. The resulting less negative medium-term growth outlook was also reflected in a rise in yields on long-term index-linked government bonds, which however was somewhat smaller than the rise in nominal yields. Break-even inflation rates – which reflect market participants' inflation expectations and related risk premia – increased further over the review period across all horizons. The developments in break-even inflation rates can be explained by new highs in oil prices, typically putting upward pressure on inflation at least in the short run. The Federal Open Market Committee decision on 30 April to lower the target for the federal funds rate by 25 basis points to 2.0% was largely anticipated by market participants.



The upturn in euro area long-term nominal interest rates was mainly driven by similar increases in long-term real yields (see Chart 12). These developments reflected to some extent upward revisions in market participants' views of the growth outlook for the euro area economy. This



(ratings). Notes: The implied forward yield curve, which is derived from the term structure of interest rates observed in the market, reflects market expectations of future levels for short-term interest rates. The method used to calculate these implied forward yield curves is outlined in the "Euro area yield curve" section of the ECB's website. The data used in the estimate are euro area AAA-rated government bond yields. interpretation is supported by some positive economic data releases over the review period, especially for the industrial sector. Apart from this, the increase in nominal and real bond yields is likely to reflect also a rebound in risk premia embedded in nominal and real government bond yields from previous low levels due to a decline in the demand for high-quality government bonds in an environment of rising risk appetite among investors. Box 3 describes developments in sovereign bond yield spreads, which were also significantly affected by the recent swings in investors' general appetite for risk.

Break-even inflation rates at five and ten-year maturities increased since end-March against the background of high and rising energy and food prices (see Chart 13). By contrast, the five-year forward break-even inflation rate five years ahead – a measure of long-term inflation expectations and related risk premia – remained at a level of around 2.4% on 6 May.

Monetary and financial developments

The implied forward overnight interest rate curve in the euro area experienced a further upward shift over the review period, especially at horizons of one to three years (see Chart 14). The upward shift of this curve mainly reflects upward revisions in market participants' expectations about the future course of official interest rates. The Governing Council's decision on 10 April to keep the key ECB interest rates unchanged did not lead to an immediate substantial revision in the implied forward overnight interest rate curve.

Euro area credit spreads in the corporate bond market decreased in April and early May. In particular, spreads for bonds at the lower end of the rating spectrum and issued by financial corporations narrowed. The relative cost of BBB-rated corporate bond financing across all sectors, as measured by the differential vis-à-vis comparable government bond yields, decreased by about 55 basis points in the period under review. All in all, these spread developments appear to mainly reflect a more general decline in the market price of credit risk.

#### Box 3

# **RECENT DEVELOPMENTS IN GOVERNMENT BOND YIELD SPREADS**

During the course of the financial turmoil, differences between German and other euro area government bond yields have been increasing, with a particularly strong upsurge between late February and mid-March (see Chart A).<sup>1</sup> At that time, spreads reached peaks that were close to or even exceeded the maximum since the respective country joined European Monetary Union. The market turmoil and the deterioration in the European financial sector outlook might have contributed to triggering the repricing of sovereign credit risk. In particular, renewed attention has been given by market analysts to countries with large fiscal and external imbalances.

This box takes a closer look at recent developments in euro area sovereign bond spreads, pointing to the potential roles of credit risk and liquidity risk premia. It illustrates that investors increasingly discriminated between countries concerning the role of government bonds as a safe haven. Finally, spread developments are set in relation to the countries' fiscal situation and economic outlook.

# Credit risk and liquidity risk as explanatory factors

The recent widening of sovereign spreads can be attributed to both the relative liquidity of the respective bonds and the differences in the creditworthiness of the issuers.<sup>2</sup> Concerning the first aspect, bonds that can be traded immediately, with low transaction costs and without triggering large price changes, will ceteris paribus tend to offer lower yields. As for the second aspect, it

<sup>1</sup> In this box the charts refer to the five biggest euro area countries (Germany, Spain, France, Italy and the Netherlands) as well as to the high debt countries (Belgium, Greece and Italy).

<sup>2</sup> Concerning the general determinants of sovereign bond spreads in the literature, Favero, Pagano and von Thadden (2007), "How does Liquidity Affect Government Bond Yields?", IGIER Working Paper No. 323, emphasize a common trend related to aggregate risk. Beber, Brandt and Kavajecz (2006), "Flight-to-Quality or Flight-to-Liquidity? Evidence from the Euro-Area Bond Market", NBER Working Paper 12376, claim that the major part of sovereign yield spreads can be explained by differences in credit quality, whereas liquidity factors tend to dominate in times of market stress. Finally, Manganelli and Wolswijk (2007) "Market discipline, financial integration and fiscal rules – What drives spreads in the euro area government bond market?", ECB Working Paper No 745, point to the co-movement of sovereign spreads with short-term interest rates.


Note: The ten-year spread between Greek and German government bonds was over 300 basis points on 1 January 1999.

ECB Monthly Bulletin May 2008

is important to note that not only perceived relative credit risk (the amount of risk) determines the spread but also the required compensation for such risk (the price of risk), which is in turn related to the overall level of investors' risk aversion.

Looking at these two determinants in more detail, the repricing of euro area sovereign risk is consistent with the general rise in risk aversion observed in global financial markets. Spreads for all classes of risky financial assets have widened since the start of the financial turmoil. Sovereign spreads reacted with some lag, but did not escape some contagion. As shown in Chart B, all euro area countries have seen an increase in their credit default swap (CDS) premium, a measure for the default risk of sovereign bonds.

During the various episodes of market turbulence experienced since August 2007, euro area government bond market liquidity has been concentrated mostly in the German government bond futures market (in the Eurex exchange), which has benefited German debt relative to other sovereign debt. This might explain the outperformance of Germany against other countries perceived as having the same or even a better fiscal outlook. The drying-up of liquidity in the euro area government bond market observed in the first half of March has probably exacerbated the widening of sovereign bond spreads. This drying-up of cash market liquidity happened at a time when more difficult refinancing conditions reportedly led some leveraged investors to liquidate some of their holdings in higher yielding government bonds accumulated over past years.

These two factors (the credit premium and the liquidity premium) contributed to the outperformance of those sovereign debt securities perceived as having a higher level of safety and liquidity, in particular German government bonds. The first factor (the reassessment of credit risk) was undoubtedly the stronger force behind this repricing.

Monetary and financial developments

These market factors were dominant during the abrupt spread widening observed in the first half of March. The slow normalisation of liquidity conditions and the return of some risk appetite generally observed in credit markets triggered a narrowing of sovereign spreads in April.

# Widening spreads as a reflection of discrimination in flight-to-quality behaviour

The increasing differentiation in the assessment of sovereign bonds is also reflected in the extent to which government bonds of individual issuers are perceived as a safe haven. In times of turbulent financial markets, investors tend to rebalance their portfolios towards safe and liquid assets. One



Sources: Thomson Financial Datastream, ECB calculations. Note: The correlations are computed using a bivariate GARCH-type model (BEKK).

measure of the strength of such flight-to-quality behaviour is the time-varying correlation between returns on government bonds and those on risky assets, often represented by a broad-based stock price index. The stronger the flight-to-quality behaviour, the more negative – ceteris paribus – the correlation is expected to be. In fact, the correlation of returns on euro area long-term government bonds and the returns on the EURO STOXX 50 index became strongly negative during the recent financial turmoil.

Since the beginning of 2008 the flight-to-quality behaviour has become increasingly discriminating (see Chart C). While the correlation measures stood at around -0.5 with very little dispersion at the beginning of January, they started to fan out in February. Since mid-March, the measure has been discriminating, with Germany having the lowest correlation (reflecting the strongest impact of flight-to-quality flows). The least negative correlations have been exhibited by Greece, followed by Belgium and Italy.

#### Recent fiscal developments and economic outlook

Widening sovereign bond yield spreads reflect a number of country-specific risk factors, notably fiscal positions. While fiscal balances in several euro area countries reached relatively sound levels in 2007, high deficit and debt levels remain in some countries and risks to the fiscal outlook are concentrated on the downside. The European Commission Spring 2008 Economic Forecast projects deficits of 2% of GDP or clearly above for France, Italy, Portugal and Greece in 2008, reflecting a loosening of fiscal policies in the former two countries. For 2009, the Commission projects no consolidation in the high deficit countries. Public debt levels remain high in Italy, Greece and Belgium, or increase in Ireland, Portugal and France (see table).

According to the European Commission Spring 2008 Economic Forecast, at the euro area level GDP growth in 2008 is projected to turn out around 0.6 percentage point lower than in the countries' stability programmes. The largest differences are recorded for Italy (-1.0 percentage

#### Table General government balance and debt

(% of GDP)								
	Balance			Debt				
	2007	2008	2009	2007	2008	2009		
Belgium	-0.2	-0.4	-0.6	84.9	81.9	79.9		
Germany	0.0	-0.5	-0.2	65.0	63.1	61.6		
Ireland	0.3	-1.4	-1.7	25.4	26.9	28.8		
Greece	-2.8	-2.0	-2.0	94.5	92.4	90.2		
Spain	2.2	0.6	0.0	36.2	35.3	35.2		
France	-2.7	-2.9	-3.0	64.2	64.4	65.1		
Italy	-1.9	-2.3	-2.4	104.0	103.2	102.6		
Cyprus	3.3	1.7	1.8	59.8	47.3	43.2		
Luxembourg	2.9	2.4	2.3	6.8	7.4	7.6		
Malta	-1.8	-1.6	-1.0	62.6	60.6	58.8		
Netherlands	0.4	1.4	1.8	45.4	42.4	39.0		
Austria	-0.5	-0.7	-0.6	59.1	57.7	56.8		
Portugal	-2.6	-2.2	-2.6	63.6	64.1	64.3		
Slovenia	-0.1	-0.6	-0.6	24.1	23.4	22.5		
Finland	5.3	4.9	4.6	35.4	31.9	29.1		
Euro area	-0.6	-1.0	-1.1	66.4	65.2	64.3		

Source: European Commission Spring 2008 Economic Forecast.

point), Spain and Luxembourg (-0.9 percentage point), Ireland and France (-0.7 percentage point), and Greece (-0.6 percentage point). Weaker fiscal consolidation plans, together with lower growth prospects, may signal to capital markets the need for additional sovereign borrowing, and put pressure on long-term interest rates for countries with fiscal imbalances. Moreover, macroeconomic uncertainty coincides with large current account deficits in several countries, which require large inflows of external financing.

Furthermore, there is a risk that additional fiscal pressures may emerge over the year related to a reversal of past windfall revenues and possible costs from direct government intervention to support financial institutions (as also reflected in the development of the CDS spreads above). Such risk could raise government expenditure and debt levels, with possible second-round effects via higher interest burdens.

To sum up, the repricing of risk across financial markets and the rise in investors' risk aversion has resulted in outflows from perceived risky assets to government bonds, which are considered the safest. During the first quarter of 2008 differences between German and other euro area government bond yields were widening as investors started to increasingly differentiate between issuing countries. This took place against the background of higher perceived country-specific risks related to the fiscal and macroeconomic outlook, but increased required risk compensation probably also played a role. In addition, the drying-up of liquidity in the government bond market has significantly contributed to the divergence between intra-euro area yield spreads.

Monetary and financial developments

#### 2.5 INTEREST RATES ON LOANS AND DEPOSITS

In February 2008 MFI interest rates on loans to both households and non-financial corporations decreased moderately, partly reflecting developments in market interest rates. Since the financial market turmoil began, short-term MFI interest rates have increased broadly in line with money market rates, while developments in long-term MFI interest rates have resulted in widening spreads over yields on government bonds. At the same time, the increase in spreads between long-term lending rates and the cost of funding as reflected in MFI bond yields has remained subdued.

In February MFI short-term rates on deposits and loans decreased moderately, against the backdrop of a decline in money market interest rates (see Table 4 and Chart 15). The interest rates on shortterm (up to one year) deposits diminished both for deposits from households and from non-financial corporations. As regards short-term loans to households, interest rates on new loans to households for consumption and house purchase declined, respectively, by 5 and 3 basis points between January and February. At the same time, MFI interest rates on both small and large new loans to non-

## Chart 15 Short-term MFI interest rates and a short-term market rate



- deposits from households with an agreed maturity of up to one year
- loans to households for house purchase with a floating rate and an initial rate fixation of up to one year



1) For the period from December 2003 onwards, the weight-adjusted MFI interest rates are calculated using country weights constructed from a 12-month moving average of new business volumes. For the preceding period, from January to November 2003, the weight-adjusted MFI interest rates are calculated using country weights constructed from the average of new business volumes in 2003. For further information, see the box entitled "Analysing MFI interest rates at the euro area level" in the August 2004 issue of the Monthly Bulletin.

### Chart 16 Long-term MFI interest rates and a long-term market rate

(percentages per annum; rates on new business; weight-adjusted<sup>1</sup>)

- five-year government bond yield
- loans to non-financial corporations of over €1 million with an initial rate fixation of over five years
- loans to households for house purchase with an initial rate fixation of over five and up to ten years
- deposits from non-financial corporations with an agreed maturity of over two years
- deposits from households with an agreed maturity of over two years



1) For the period from December 2003 onwards, the weight-adjusted MFI interest rates are calculated using country weights constructed from a 12-month moving average of new business volumes. For the preceding period, from January to November 2003, the weight-adjusted MFI interest rates are calculated using country weights constructed from the average of new business volumes in 2003. For further information, see the box entitled "Analysing MFI interest rates at the euro area level" in the August 2004 issue of the Monthly Bulletin.



(percentages per annum; basis points; weight-adjusted<sup>1</sup>)

								e in basis o Feb. 20	
	2007	2007	2007	2007	2008	2008	2007	2007	2008
	Q1	Q2	Q3	Q4	Jan.	Feb.	July	Oct.	Jan.
MFI interest rates on deposits									
Deposits from households									
with an agreed maturity of up to one year	3.51	3.77	4.07	4.28	4.18	4.10	25	0	-8
with an agreed maturity of over two years	2.71	2.73	3.08	3.09	3.33	3.16	13	-4	-17
redeemable at notice of up to three months	2.38	2.41	2.57	2.61	2.59	2.68	24	10	9
redeemable at notice of over three months	3.14	3.31	3.50	3.67	3.75	3.77	38	20	2
Overnight deposits from non-financial corporations	1.72	1.79	1.92	1.97	2.01	2.01	19	4	0
Deposits from non-financial corporations									
with an agreed maturity of up to one year	3.67	3.93	4.13	4.26	4.12	4.06	5	-1	-6
with an agreed maturity of over two years	3.61	4.09	4.37	4.18	4.62	4.35	-3	-14	-27
MFI interest rates on loans									
Loans to households for consumption									
with a floating rate and an initial rate fixation of									
up to one year	7.69	8.09	8.50	8.24	8.48	8.43	36	32	-5
Loans to households for house purchase									
with a floating rate and an initial rate fixation of									
up to one year	4.78	4.99	5.23	5.31	5.30	5.27	21	-2	-3
with an initial rate fixation of over five and up									
to ten years	4.69	4.89	5.08	5.06	5.07	5.01	-1	-7	-6
Bank overdrafts to non-financial corporations	6.06	6.18	6.50	6.63	6.62	6.50	19	-5	-12
Bank overdrans to non-infancial corporations	0.00	0.16	0.50	0.03	0.02	0.50	19	-5	-12
Loans to non-financial corporations									
of up to €1 million									
with a floating rate and an initial rate fixation of									
up to one year	5.29	5.53	5.92	6.08	5.93	5.84	25	-12	-9
with an initial rate fixation of over five years	4.83	5.00	5.24	5.28	5.27	5.21	12	-6	-6
Loans to non-financial corporations									
of over €1 million									
with a floating rate and an initial rate fixation of									
up to one year	4.68	4.90	5.21	5.33	5.11	5.04	13	-6	-7
with an initial rate fixation of over five years	4.86	5.17	5.43	5.47	5.26	5.13	-5	-18	-13
Memo items									
Three-month money market interest rate	3.89	4.15	4.74	4.85	4.48	4.36	14	-33	-12
Two-year government bond yield	3.94	4.45	4.10	4.05	3.73	3.40	-108	-71	-33
Five-year government bond yield		4.57							-22

Source: ECB.

1) The weight-adjusted MFI interest rates are calculated using country weights constructed from a 12-month moving average of new business volumes. For further information, see the box entitled "Analysing MFI interest rates at the euro area level" in the August 2004 2) Figures may not add up due to rounding.

financial corporations with floating rates and an initial rate fixation period of up to one year dropped by 9 and 7 basis points respectively, while rates on bank overdrafts to non-financial corporations dropped by 12 basis points. These developments should be seen against the background of the 12 basis point decline in the three-month money market rate in February.

Taking a longer perspective, since June 2007 changes in short-term MFI interest rates have remained broadly in line with movements in money market unsecured lending rates. Between June 2007 and February 2008, as the three-month money market rate rose by 21 basis points, MFI shortterm interest rates on deposits from households and non-financial corporations increased by 33 and 13 basis points respectively. At the same time, rates on loans to households for consumption and

Monetary and financial developments

house purchase rose by 34 and 28 basis points respectively, while short-term rates on loans to non-financial corporations of up to  $\in 1$  million increased by 31 basis points.

In February 2008 long-term MFI interest rates on deposits with a maturity of over two years decreased by 17 basis points in the case of households and by 27 basis points for non-financial corporations (see Table 4 and Chart 16). This decline in deposit rates is broadly in line with the 33 and 22 basis point drops in the yields on two and five-year government bonds over the same period. Long-term MFI rates on loans to households for house purchase, as well as on loans of up to  $\notin 1$  million to nonfinancial corporations, dropped by 6 basis points. Long-term rates on loans of over  $\notin 1$  million to nonfinancial corporations decreased to a larger extent, by 13 basis points (see Chart 16).

Still looking at developments over a longer horizon, longer-maturity MFI deposit and lending rates have broadly increased since June 2007. MFI interest rates on loans to households for house purchase with an initial rate fixation period of over five and up to ten years rose by 12 basis points. With regard to loans to non-financial corporations with an initial rate fixation period of over five years, MFI interest rates increased by 21 basis points for loans up to €1 million, while rates on larger loans declined marginally, by 4 basis points. This development contrasts starkly with the contemporaneous sharp decline in government bond yields, by 93 and 105 basis points for the five-year and the two-year bonds respectively. As a result, and consistent with the findings of the latest bank lending survey for the euro area (see Box 2), spreads between MFI lending rates and government bond yields have widened considerably since the outbreak of the financial turmoil. At the same time, up to February the increase in spreads between lending rates and MFIs' funding costs has remained quite subdued, in the face of the soaring cost of MFI wholesale funding, as reflected in bond yields.



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.

#### 2.6 EQUITY MARKETS

Stock prices in the euro area and in other major markets increased markedly between the end of March and early May. The performance of the euro area stock market in that period was generally supported by an increased risk appetite among investors which, in turn, might also be related to market participants' views that the worst in terms of credit market losses might be over. In addition, investors' expectations that the euro area will only face a mild economic slowdown seem to have firmed. At the same time, stock market uncertainty, as measured by implied volatility, declined significantly in the major markets.

Broad-based stock price indices rose in major markets in April and at the beginning of May (see Chart 17). Between the end of March and 6 May 2008 euro area and US stock prices, as measured by the Dow Jones EURO STOXX index and the Standard and Poor's 500 index, increased by 6% and 7%, respectively. Stock prices in Japan, as measured by the Nikkei 225 index, increased by 11% over the same period. At the same time, stock market uncertainty, as measured by the implied volatility extracted from stock options, decreased strongly in major markets, but the levels remained above those prevailing before the outbreak of the financial turmoil (see Chart 18).

In the United States, stock markets rebounded over the review period amid speculation that the worst of the credit market losses might be over. In fact, the actual annual earnings per share growth for corporations in the Standard & Poor's 500 index stood in April at around -2% as in the two months before. This, in turn, might suggest that the earnings-cycle downturn might have bottomed out. In addition, expected earnings per share growth twelve months ahead and over three to five years changed little in April compared with March. In both cases, the expected earnings per share growth remained at double-digit rates. Furthermore, the increase in real interest rates in April and early May appeared to be offset by a fall in the equity risk premium demanded by investors.



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.

Euro area stock prices as measured by the Dow Jones EURO STOXX index also increased over the review period despite rising long-term interest rates. Broadly mirroring the US stock price movements, the main driver appears to have been a decline in the equity risk premium reflecting investors' generally increased appetite for risky assets. The sentiment concerning corporate earnings remained, however, somewhat mixed. The actual year-on-year earnings growth for firms in the Dow Jones EURO STOXX index continued to decline in April to around 9%, the first singledigit growth rate since four years ago. Moreover, a movement from double-digit earnings per share growth to single-digit growth was last observed in October 2001. Survey-based measures of expected earnings growth further declined slightly in April, but still amounted to about 8% for both the twelve-month and the three to five-year horizons. Moreover, professional stock market analysts and companies continued to revise, on balance, their earnings per share growth estimates for the next twelve months significantly more down than up. Although the stock price rise was notable across all sectors of the index, the main sector driving the strong performance of the euro area stock market was the oil and gas sector with a 16% rise, following new highs in oil prices.

Implied volatility declined strongly in the major markets, indicating lower market participants' uncertainty about near-term stock price moves. Stock market uncertainty remained, however, at higher levels than before the outbreak of the financial turmoil. Moreover, euro area corporate bond spreads at the lower end of the rating spectrum narrowed significantly over the review period, which may also indicate a decline in the risk premia demanded by investors for more risky assets such as stocks.

Prices and costs

#### 3 PRICES AND COSTS

In April 2008 annual euro area HICP inflation is estimated to have stood at 3.3%, down from the record high of 3.6% in March, having remained above 3% for six consecutive months. This outcome confirms the ongoing strong short-term upward pressure on inflation, resulting largely from sharp increases in energy and food prices at the global level in recent months. Looking ahead, on the basis of current futures prices for these commodities, the annual HICP inflation rate is likely to remain significantly above 2% in the coming months, moderating only gradually over the course of 2008. While available labour cost indicators point to moderate wage developments in 2007 as a whole, there are some signs of stronger wage increases more recently. Risks to the medium-term outlook for inflation remain clearly on the upside. These risks include the possibility of further rises in energy and food prices, as well as of increases in administered prices and indirect taxes beyond those foreseen thus far. Most importantly, there is a risk that price and wage-setting behaviour could add to inflationary pressures. In particular, the pricing power of firms, notably in market segments with low competition, may prove stronger than currently expected. Moreover, higher than expected wage growth may emerge, taking into account high capacity utilisation, tight labour market conditions and the risk of second-round effects owing to the high level of current inflation rates.

### **3.1 CONSUMER PRICES**

According to Eurostat's flash estimate, overall annual HICP inflation eased to 3.3% in April 2008, down from 3.6% in March (see Table 5). If confirmed, this will be the first decrease in the annual growth rate of HICP since August 2007, when strong contributions from energy and food components spurred by the surge in oil and food commodity prices in global markets started to trigger the rise in euro area inflation. Although a full breakdown of the April HICP is not available yet, evidence suggests that base effects and seasonal effects from the energy, unprocessed food and services components have been substantially contributing to the decrease. More fundamentally, however, it is likely that energy and food prices remained strong contributors to the still high annual HICP inflation rate in April.

In March, the latest month for which detailed information is available, HICP inflation reached a new historical high since the introduction of the euro in 1999, at 3.6%. All components contributed to the rise, in particular energy and food prices (see Chart 19).

#### Table 5 Price developments (annual percentage changes, unless otherwise indicated) 2006 2007 2008 2008 2008 2007 2007 2008 Nov. Dec Jan. Feb. Mar. Apr. HICP and its components Overall index 1) 2.2 2.1 3.1 3.1 3.2 3.3 3.6 Energy 7.7 2.6 9.7 9.2 10.6 10.4 11.2 2.8 3.1 Unprocessed food 3.0 3.0 3.3 3.3 3.8 Processed food 2.1 2.8 4.6 5.1 5.9 6.5 6.8 Non-energy industrial goods 0.6 1.0 1.0 0.7 0.8 0.9 1.1 Services 2.0 2.5 2.5 2.5 2.5 2.4 2.8 Other price indicators 4.3 4.4 5.0 5.7 Industrial producer prices 5.1 2.8 5.4 52.9 Oil prices (EUR per barrel) 52.8 62.8 62.8 62.4 64.1 66.1 69.8 10.4Non-energy commodity prices 24.8 92 -01 14 15.0 10.358

Sources: Eurostat, HWWI and ECB calculations based on Thomson Financial Datastream data.

3.3



Energy prices recorded a very strong month-onmonth increase in March, driven by all oil-related sub-components. The further hike in oil prices in dollars in March was only partly absorbed by the appreciation of the euro exchange rate. Moreover, available data on refined petrol prices suggest that refining margins have recently recovered from previously historically low levels. While a small favourable base effect mitigated the impact in year-on-year terms, the annual growth rate in HICP energy prices nevertheless went up significantly to 11.2% in March, from an already high 10.4% in February (as compared with an average rate of 2.6% in 2007).

As in previous months, developments in food prices contributed significantly to overall HICP inflation in March. Rising agricultural commodity prices in global markets, combined with higher energy and transport costs, continued to push up processed food price inflation, which rose to a new record high in annual terms (6.8%). Nevertheless, there is evidence in March of some moderation in the month-on-month rate of growth of processed food prices from the very high pace observed in the recent past. This slowdown appears to be broadly based among all major sub-components. For instance, the prices of milk, cheese and eggs products grew by 0.4% month-on-month in March, compared with an average of 1.7% over the previous six months. Overall, in the absence of a further shock in global food prices, this should cause the annual growth rate of processed food prices to



also moderate somewhat in the second half of the year, although it is likely to remain substantially above its historical average for some time. The annual rate of change in unprocessed food prices rose to 3.8% in March, from 3.3% in February, mainly on account of vegetable prices. While consumer prices of the meat sub-component (which account for half the weight of unprocessed food) increased only slightly in March, the ongoing pressure on meat prices evidenced by the recent surge in the producer prices of animal feed could materialise in the coming months.

Excluding (both processed and unprocessed) food and energy, the annual HICP growth rate rose to 2.0% in March, from 1.8% in February, driven by an increase in the annual rate of change of both nonenergy industrial goods prices and services prices. The former rose slightly to 0.9% in March, reflecting increases spread over a number of small items, but still remains slightly below the average growth rate of 1.0% observed in 2007. Despite rising domestic input cost pressures and a still high capacity utilisation rate in the manufacturing sector, short-term inflation dynamics in non-energy industrial goods prices have been relatively subdued over the past months, owing to the mitigating impact of the appreciation of the euro exchange rate on import prices, as well as strong international competition.

Prices and costs

The annual rate of change in services prices rose significantly to 2.8% in March, after having hovered around 2.5% since early 2007, following the upward impact of the German VAT rise in January last year. A large part of the March increase in services inflation is however expected to be of a temporary nature, as the early occurrence of Easter compared with last year caused the providers of holiday-related services (such as package holidays, hotels or travelling by air) to bring their seasonal pricing forward. This impact should therefore have reverted in April. By contrast, the rise in consumer prices for communication services observed in March could potentially have a longer-lasting impact. Moreover, the ongoing cost pressure on transport services and on some recreational and personal services (including cafés and restaurants), reflecting mounting energy and food costs, could have more durable implications on the growth rate of HICP.

#### **3.2 INDUSTRIAL PRODUCER PRICES**

The persistence of inflationary pressures in the initial stages of the production chain, stemming from oil and food price developments, is evidenced by a further increase in the annual rate of change in overall industrial producer prices (excluding construction), to 5.7% in March 2008 from 5.4% in February (see Chart 20). The annual rate of change in energy producer prices posted a further strong increase in March (12.7%), following the rise in crude oil prices. Excluding energy (and construction), industrial producer prices increased by 3.7% in annual terms, driven by a further acceleration in the producer prices of both durable and non-durable consumer goods. The latter was largely attributable to another strong increase in the year-on-year growth rate of food producer

prices (to 10.0%), while the month-on-month rate of change continued its gradual decline from the peak reached in October 2007. In particular, the month-on-month rate of change in producer prices of dairy products, one of the largest food components, recorded a marginal decline between February and March, as compared with an average monthly increase of 1.4% over the period from May 2007 to January 2008. Nevertheless, despite the easing in the short-term dynamics of food prices from the strong pace of growth observed in the second half of last year, significant pipeline pressures have accumulated and have not yet been passed on to consumer food prices.

By contrast, there seems to be thus far no evidence of increasing pipeline pressures on consumer prices for non-energy industrial goods, as suggested by the relative stability of the annual growth rate in producer prices of consumer goods excluding tobacco and food, which has hovered around 1.3% since the beginning of last year. The annual rate of change in the producer prices of both capital goods and intermediate goods remained unchanged in March, standing below their respective 2007



averages after having increased somewhat in early 2007. Higher industrial raw material prices and strong oil price increases appear to have been mitigated by the appreciation of the euro exchange rate.

The latest information on firms' price-setting behaviour from the NTC Economics Purchasing Managers' Index (PMI) confirms a picture of ongoing build-up of inflationary pipeline pressures (see Chart 21). According to data for April, input cost pressures were again elevated in both the manufacturing and services sectors, most likely because of high energy, food and raw material prices. There was a slight easing in the indicator of input costs in the manufacturing sector in April, while in the services sector it reached its highest value since October 2000. The index of prices charged increased in the manufacturing sector, indicating that firms continue to pass higher costs on to customers, but fell slightly in the services sector. However, the relative evolution of both indicators, showing a faster rise in input costs than in prices charged in both sectors, suggests that not all input price increases have yet been passed on to consumers.

### Chart 21 Producer input and output price surveys



Note: An index value above 50 indicates an increase in prices, whereas a value below 50 indicates a decrease.

#### 3.3 LABOUR COST INDICATORS

All labour cost indicators available at the euro area level indicate that wage developments remained contained in 2007 (see Table 6 and Chart 22). In particular, the annual growth rate of compensation per employee was 2.3% on average in 2007, compared with 2.2% the previous year. Nevertheless, some acceleration was noticeable in the last quarter of 2007, as indicated by a pick-up in the annual growth rates of both compensation per employee and hourly labour costs data, the latter being mainly attributable to a rise in the annual growth rate of the wage cost component. Driven by a slowdown

Table 6 Labour cost indication	tors						
(annual percentage changes, unless oth	erwise indicated)						
	2006	2007	2006	2007	2007	2007	200
			Q4	Q1	Q2	Q3	Q
Negotiated wages	2.3	2.2	2.5	2.0	2.3	2.2	2.
Total hourly labour costs	2.5	2.5	2.1	2.2	2.6	2.5	2
Compensation per employee	2.2	2.3	1.8	2.4	2.2	2.2	2
Memo items:							
Labour productivity	1.2	0.8	1.6	1.4	0.8	0.8	0
Unit labour costs	1.0	1.5	0.2	1.0	1.4	1.4	2

Sources: Eurostat, national data and ECB calculations



Prices and costs

in productivity throughout the year, the annual growth rate of unit labour costs increased noticeably to 2.0% in the fourth quarter of 2007, and was on average 0.5 percentage point higher in 2007 than in 2006.

Aggregate data however mask contrasting sectoral developments (see Chart 23). In the industry sector, there was a clear moderation in hourly labour cost growth in 2007 compared with 2006, although some increase was observable in the fourth quarter. By contrast, hourly labour cost growth in market services increased in 2007 compared with the previous year, but remained broadly stable in the last quarter. Hourly labour cost growth in the construction sector increased markedly throughout 2007.

The pattern across sectors appears to differ substantially not only in terms of labour cost growth, but also importantly in terms of productivity and, therefore, of unit labour cost developments. Poor productivity growth, associated with sustained profit increases



Sources: Eurostat, national data and ECB calculations.

allowed by low competition, is responsible for inflation pressures in some sectors, notably market services, as analysed in Box 4, based on information from national accounts data.



#### Box 4

#### JUDGING SECTORAL INFLATION DEVELOPMENTS ON THE BASIS OF NATIONAL ACCOUNTS DATA

A variety of different data sources are available for the conjunctural assessment of price pressures in the euro area economy. In particular, the national accounts provide valuable input into understanding prices, labour costs and profits at both the aggregate and sectoral levels. This box looks at national accounts price and cost data in order to gauge current inflationary pressures in the euro area. In addition, information from the latest release of the EU KLEMS database (March 2008) is used to evaluate the role played by productivity and competition in driving sectoral inflation over the longer run.

#### Price pressures at the aggregate level

In the national accounts framework, gross domestic product (GDP) can be split into the various components of income. In connection

### Decomposition of the euro area GDP deflator

(annual percentage changes)



···· net indirect taxes per unit of output

unit labour cost

profit per unit of output



Sources: Eurostat and ECB calculations. Note: Net indirect taxes refer to taxes on production and imports minus subsidies.

with this, the GDP deflator – which measures the "price" of total value added per unit of output – can be decomposed into unit labour costs, profits per unit of output and net indirect taxes (taxes on production and imports less subsidies) per unit of output.<sup>1</sup> This decomposition is depicted in the chart, which shows that the annual rate of change in the GDP deflator (at market prices) has remained relatively contained in recent years, although it picked up over 2007 to reach 2.2% on average in the second half of the year. Since 2004, there have been somewhat divergent developments in the components of the GDP deflator. Profits per unit of output and indirect taxes per unit of output have typically shown annual increases above overall value added inflation, whereas unit labour cost growth has been below. In 2007 as a whole, per unit profits rose by 3.4%, and growth in indirect taxes per unit of output slightly exceeded overall value added inflation while moderating markedly over the year. Moreover, unit labour cost annual growth rose significantly over the course of 2007 to reach 2.0% in the fourth quarter.

An alternative way of decomposing the GDP deflator is to view profits as a mark-up over labour costs. This way of presenting national accounts data offers the advantage of allowing for a similar decomposition at a disaggregated sectoral level (see Table A, which also reports a split of unit labour costs between growth in compensation per employee and labour productivity growth per person employed). The rise in the euro area GDP deflator has reflected both positive unit labour cost growth and an increase in mark-ups. The latter development mirrors the steady decline in the wage share – which is simply the inverse of the profit mark-up indicator – from around 65% in 2000 to 62% in 2007. In 2007 the contribution of unit labour costs to value added inflation increased considerably, while that of mark-ups dropped over the course of the year.

1 For an overview of the different uses of national accounts data for inflation conjunctural analysis, see the box entitled "Using national accounts data to gauge price pressures in the euro area" in the December 2006 issue of the Monthly Bulletin.



Prices and costs

### Table A National accounts data: total economy and main economic sectors

	1996-2007	2004	2005	2006	2007	2007	2007	2007
						Q2	Q3	Q4
Total economy								
GDP deflator (at factor cost)	1.8	1.7	1.7	1.6	1.9	1.9	1.9	1.9
Profit mark-up indicator	0.5	0.7	0.7	0.7	0.4	0.5	0.5	-0.1
Unit labour cost	1.3	1.0	1.0	0.9	1.5	1.4	1.4	2.0
Compensation per employee	2.2	2.2	1.8	2.2	2.3	2.2	2.2	2.5
Labour productivity growth	0.9	1.1	0.8	1.3	0.8	0.8	0.8	0.5
Industry excluding construction								
GDP deflator (at factor cost)	0.7	0.6	1.0	0.6	1.7	2.4	1.7	0.9
Profit mark-up indicator	0.9	1.1	1.8	1.4	2.4	2.4	3.0	1.3
Unit labour cost	-0.2	-0.5	-0.8	-0.8	-0.7	0.1	-1.3	-0.4
Compensation per employee	2.4	2.8	1.6	3.4	2.4	2.8	2.0	2.6
Labour productivity growth	2.6	3.4	2.5	4.2	3.1	2.8	3.4	3.0
Construction								
GDP deflator (at factor cost)	3.5	4.8	4.7	4.8	4.7	5.1	4.8	4.7
Profit mark-up indicator	0.9	1.3	1.4	3.4	0.5	0.3	-0.6	-0.3
Unit labour cost	2.5	3.5	3.3	1.3	4.2	4.8	5.4	5.0
Compensation per employee	2.2	3.0	2.5	3.2	3.3	2.6	3.5	3.5
Labour productivity growth	-0.4	-0.5	-0.7	1.9	-0.8	-2.1	-1.8	-1.4
Market services								
GDP deflator (at factor cost)	1.7	2.1	1.4	1.3	1.4	1.5	1.4	1.6
Profit mark-up indicator	0.3	0.7	0.4	0.2	-0.3	-0.2	-0.3	-0.5
Unit labour cost	1.3	1.4	0.9	1.1	1.7	1.8	1.6	2.1
Compensation per employee	1.9	1.7	1.9	1.8	2.4	2.5	2.1	2.2
Labour productivity growth	0.5	0.3	1.0	0.8	0.6	0.7	0.5	0.0
Non-market services								
GDP deflator (at factor cost)	2.5	2.3	2.5	2.4	1.8	1.2	1.9	2.1
Profit mark-up indicator	0.1	0.2	0.6	0.0	0.1	0.5	0.0	-0.2
Unit labour cost	2.5	2.1	1.9	2.5	1.7	0.7	1.9	2.3
Compensation per employee	2.4	2.4	1.8	1.8	2.1	1.4	2.2	2.6
Labour productivity growth	-0.1	0.3	-0.1	-0.6	0.4	0.7	0.3	0.3

Sources: Eurostat and ECB calculations

Note: The profit mark-up indicator is defined as the difference between the rate of growth in the GDP deflator (at factor cost) and in unit The profit market productivity growth is per person employed. Market services corresponds to the following groupings: trade and repairs, hotels and restaurants, transport and communications, financial intermediation, and real estate, renting and business activities. Non-market services corresponds to public administration, education, health and other services.

#### **Sectoral inflation developments**

Aggregate developments in GDP deflator components mask sharp differences across sectors. The strength in overall profit mark-up growth seen since 2004 appears to have stemmed in part from industry excluding construction. In this sector, fast labour productivity growth has allowed for a decline in unit labour costs. Judging from its strong profit growth, the sector seems to have withstood the pressures from both rises in non-labour input costs and heightened global competition. Since 2004 developments in value added inflation components in industry excluding construction stand in sharp contrast with those in services. In the latter sector, the increase in value added inflation (in both market and non-market components) has been driven by the rise in unit labour costs. The key reason for this has been the sector's below-average labour productivity growth, most notably in non-market services. Wage growth added upward pressure in both market and non-market services in 2007.<sup>2</sup> Finally, the construction sector differs from both industry excluding construction and services in that it has exhibited much higher value added inflation. As with industry excluding construction, the construction sector has shown rapid

2 For a more comprehensive analysis of price pressures in the services sector, see the box entitled "Recent developments in euro area services price inflation" in the April 2008 issue of the Monthly Bulletin.



#### Table B Euro area sectoral data on inflation, competition and productivity, 1996-2005

(annual average percentage changes, unless otherwise specified)

	GDP deflator	Competition	indicators	Productivity growth		
Sector	(at factor cost)	Profit mark-up (in %) Output/Production costs	Profit margin (in %) Compensation of capital/Output	Labour productivity per hour worked	Total factor productivity	
Total economy	1.9	21.5	17.5	1.1	0.2	
Industry excluding						
construction	0.8	12.2	10.9	2.4	1.2	
Agriculture, hunting,						
forestry and fishing	-0.7	13.6	11.9	3.3	1.8	
Construction	3.4	10.8	9.7	-0.1	-0.9	
Market services	1.9	36.5	26.7	0.6	-0.2	

Sources: EU KLEMS and ECB calculations.

Note: The data exclude Cyprus, Malta and Slovenia. Compensation of capital equals gross value added minus labour compensation, with the latter being derived by applying to compensation the ratio of hours worked by total persons engaged to hours worked by employees.

mark-up growth. Moreover, it shares with services a pattern of generally fast increases in unit labour costs.

Taking a longer-term perspective, comprehensive EU KLEMS data available until 2005 allow one to study the link between value added inflation, labour productivity growth and mark-ups across different sectors of the economy (see Table B).<sup>3</sup> In the period 1996-2005, value added inflation in market services exceeded that in industry excluding construction, in part as a result of lower labour productivity growth and higher mark-ups (suggesting a lower degree of competition). At the same time, the construction sector exhibited high gross value added inflation, poor labour productivity growth and low mark-ups over the last decade.

In sum, the analysis of national accounts indicators shows that, in addition to ongoing rises in profit mark-ups, unit labour cost growth picked up in 2007. The rise in unit labour costs has been driven by the services sector, where higher wage growth was not matched by corresponding improvements in labour productivity. From a longer-term standpoint, both poor productivity growth and above-average mark-ups have been associated with relatively fast value added inflation in market services industries. This suggests that the reduction in the contribution of market services to overall inflation would be facilitated by the adoption of measures intended to foster technological progress and competition in these industries.<sup>4</sup>

4 On the need for further structural reforms in the euro area, see R. Gómez-Salvador, A. Musso, M. Stocker and J. Turunen, "Labour productivity developments in the euro area," ECB Occasional Paper No 53, October 2006; the boxes entitled "Developments in euro area productivity and the need for structural reforms", ECB Annual Report 2006, "Sectoral patterns of total factor productivity growth in euro area countries", Monthly Bulletin, October 2007, and "Labour productivity developments in the euro area: results from the latest release of the EU KLEMS database", Monthly Bulletin, January 2008; and the article entitled "Productivity developments and monetary policy" in the January 2008 issue of the Monthly Bulletin.

<sup>3</sup> Compared with standard national accounts data, the EU KLEMS database offers the advantage of reporting labour productivity per hour worked and total factor productivity (as opposed to simply labour productivity per person employed) and allowing for measures of mark-ups that control for total production costs (instead of purely labour costs). See M. Timmer, T. van Moergaestel, E. Stuivenwold, G. Ypma, M. O'Mahony and M. Kangasniemi: EU KLEMS Growth and Productivity Accounts Version 1.0, March 2007. For related computations on mark-ups, see the article entitled "Competition in and economic performance of the euro area services sector" in the May 2007 issue of the Monthly Bulletin; and Task Force of the Monetary Policy Committee of the ESCB: "Competition, productivity and prices in the euro area services sector", ECB Occasional Paper No 44, April 2006.

Prices and costs

As partial information for the first quarter becomes available, further signs of acceleration in wages are emerging. Preliminary information on negotiated wages in January and February suggests that sizeable wage increases took place in several countries, although these were not larger than anticipated. In Germany, recently settled wage agreements imply a substantial increase in wage growth in the public sector and in the steel industry. This poses risks of spillover to ongoing or upcoming wage negotiations in other private sector industries and in other regions, as well as to administered prices.

Looking ahead, the pick-up in wage growth is expected to continue in 2008. The increase stems from both a phasing-out of policies aiming at reducing social security contributions and a rise in actual wage growth, in a context of still tight labour markets, continued high capacity utilisation, unwinding of past wage moderation, and high consumer price inflation. In addition, upward pressure comes from existing wage indexation schemes. The existence of such schemes is of concern to the Governing Council of the ECB. Box 5 provides further background information on such schemes in the euro area countries.

#### Box 5

#### WAGE INDEXATION MECHANISMS IN EURO AREA COUNTRIES

This box examines the nature and extent of wage indexation in the euro area. Formal wage indexation can be defined as the presence of clauses in laws or contracts whereby wages (either public or private) are to a large degree automatically linked to price developments. The Governing Council of the ECB is concerned about the existence of such schemes in which nominal wages are indexed to consumer prices. These schemes involve the risk of upward shocks to inflation, such as those currently observed in energy and food prices, lasting longer and even leading to a wage-price spiral. Such a spiral would complicate the ECB's task of maintaining price stability and would be detrimental to employment and competitiveness in the countries concerned. The Governing Council of the ECB has therefore called for such schemes to be avoided.

Information on wage indexation in the private sector of euro area countries is summarised in the table below. There is some form of automatic price indexation of private sector wages in seven euro area countries (Belgium, Spain, France, Cyprus, Luxembourg, Malta and Slovenia). While none of these countries index wages fully to the headline HICP index, in most cases the national consumer price index (CPI), or a closely related broad consumer price index, is used. More specifically, the price indexation of wages is automatic in Belgium, Cyprus and Luxembourg, where wages are adjusted for past consumer price increases. While in Cyprus and Luxembourg the relevant consumer price indicator is the national CPI (excluding increases in indirect taxes in Cyprus), in Belgium the Health Index is used, which is the CPI excluding alcohol and tobacco and petrol (but including heating fuel, gas and electricity). In most private sector wage agreements in Spain, wages are retroactively adjusted upwards when national CPI inflation exceeds the government's reference rate (normally 2%). In France, Malta and Slovenia, automatic indexation is mainly applied to a social or minimum wage, which in the case of France and Slovenia covers a small share of workers.

As regards the indexation of public sector wages, public wages are fully or partly indexed to inflation in five euro area countries (Belgium, Cyprus, Luxembourg, Malta and Slovenia). The

indexation of public sector wages is automatic and based on past inflation rates in Belgium, Cyprus and Luxembourg. The inflation measure used for indexation is in most cases headline consumer price inflation, excluding increases in indirect taxes in Cyprus and prices of alcohol, tobacco and petrol in Belgium. As wage indexation in the public sector may play an important signalling role for wage negotiators in other sectors, a specific responsibility rests on the public sector to make its contribution to avoiding second-round effects on inflation.

## Summary of the key features of predominantly automatic wage indexation and wage guidelines in the private sector

	Form	Inflation measure	Mechanism	Coverage of privat sector employment
Count	tries with predominantly a	utomatic wage indexat	ion:	
BE	Automatic, but limited by a wage norm and, in some sectors, by an "all in" clause	Health index <sup>1</sup>	Increase in wages once the four-month moving average of past inflation exceeds a certain threshold (mostly 2%). It is becoming more commonplace for indexation to occur at fixed intervals between 1-12 times a year, irrespective of the inflation rate reached.	Almost 100%
ES	Automatic	National CPI	Clause included in most collective wage agreements in the private sector. This adjusts for inflation that is higher than the expected inflation rate embedded in wage agreements.	Around 68%
FR	Automatic	National CPI excluding tobacco	Minimum wage automatically raised in July by inflation + half real salary increase of blue collar workers + discretionary adjustment. More frequent adjustments possible.	Around 13%
СҮ	Automatic	National CPI excluding increases in indirect taxes	Wages adjusted twice a year (on 1 Jan. and 1 July) to average inflation in the preceding six months.	Around 65%
LU	Automatic	National CPI with adjustments for specific fiscal measures	Wages adjusted upwards when the six-month moving average of inflation is 2.5% higher than its level at the time the last wage indexation occurred.	100%
MT	Through cost of living adjustment	Retail price index	Minimum wages are adjusted by the average inflation rate over the last 12 months (to September).	Not available
SI	Automatic	Expected national CPI	Adjustment in July for expected inflation. Additional adjustment made in January of each year if inflation exceeds forecast.	Around 20%
Count	tries with no automatic wa	ge indexation, but whe	re some form of wage guidelines exists:	
GR	Not automatic	National CPI	Up to 2003, negotiated minimum wage and other private sector agreements sometimes included an inflation clause to compensate for inflation above a stated amount, applied at the beginning of the following year. Since then, there have been no such clauses in agreements.	Private non-banking sector only
IT	Not automatic	National CPI	At contract renewal (every two years), compensation for the difference between expected inflation under the previous contract and actual inflation can be negotiated. Terms of trade shocks are excluded.	100%
FI	Contractual, not automatic	National CPI	Wage increases to compensate for past inflation exceeding that in agreements by a threshold amount. These inflation clauses were typically included in comprehensive income policy agreements, but have only been triggered once.	100%



Prices and costs

#### 3.4 EURO AREA RESIDENTIAL PROPERTY PRICES

The slight moderation in residential property prices growth continued during the second half of 2007. The estimations available for the euro area show an annual percentage growth of 4.0% in the second half of 2007, down from 5.0% in the first half of last year and 6.5% in 2006. The trend of a gradual slowdown is common to most countries although in some cases the correction in housing markets seems to be more pronounced (e.g. in Ireland where annual rates have been in negative territory since mid-2007). At the country level, sizeable differences persisted in the annual growth of residential property prices during the second half of 2007: ranging from -3.9% in Ireland to 9.1% in Belgium.

#### 3.5 THE OUTLOOK FOR INFLATION

Looking ahead, annual HICP inflation is likely to have reached a peak in March, but the estimated decrease in April should be taken with caution. The continuous strength of oil prices is suggesting ongoing upward pressure on consumer energy prices, and further processed food price increases cannot be excluded, despite a slowdown in short-term dynamics. In the light of the latest oil price developments and ongoing food and commodity price pressures at the global level, the annual growth rate of HICP inflation is likely to stay significantly above 2% in the coming months, moderating only gradually over the course of 2008. This gradual moderation, helped by favourable base effects from the energy and processed food components, is based on the assumption that the recent rises in commodity prices will be partly reversed, in line with currently observed commodity futures prices. It also relies on the assumption that past surges in oil and food commodity prices will not be transmitted to any significant extent to non-energy and non-food HICP components. With the HICP excluding food and energy growing in March 2008 at its fastest pace since April 2003, underlying inflation pressures warrant close monitoring.

The latest ECB Survey of Professional Forecasters (see Box 6) includes a substantial rise in inflation expectations for 2008 compared with the previous survey round, and a moderate upward revision for 2009. However, longer-term inflation expectations remained broadly unchanged.

Risks to the outlook for inflation over the medium term remain clearly on the upside. These risks include the possibility of further rises in energy and food prices, as well as of increases in administered prices and indirect taxes beyond those foreseen thus far. Most importantly, there is a risk that price and wage-setting behaviour could add to inflationary pressures. In particular, the pricing power of firms, notably in market segments with low competition, may prove stronger than currently expected. Moreover, higher than expected wage growth may emerge, taking into account high capacity utilisation, tight labour market conditions and the risk of second-round effects owing to the high level of current inflation rates.

#### Box 6

#### RESULTS OF THE ECB SURVEY OF PROFESSIONAL FORECASTERS FOR THE SECOND QUARTER OF 2008

This box reports the results of the ECB Survey of Professional Forecasters (SPF) for the second quarter of 2008. The survey was conducted between 16 and 18 April 2008. The SPF gathers information on expectations for euro area inflation, GDP growth and unemployment from experts affiliated to financial or non-financial institutions based in the EU. Given the diversity of the panel of participants, aggregate SPF results can reflect a relatively heterogeneous set of subjective views and assumptions.

#### Inflation expectations for 2008 and 2009

SPF participants' inflation expectations for 2008 have shifted upwards. The reported point estimates averaged 3.0%, 0.5 percentage point higher than in the previous SPF round (see table).<sup>1</sup> The expected inflation rate for 2009 was revised upwards by 0.2 percentage point to 2.2%. These inflation expectations reflect the strong short-term dynamics of oil and food prices as well as concerns about higher cost pressures and wage demand. The SPF inflation expectations for both 2008 and 2009 are within the ranges reported in the March 2008 ECB staff projections but 0.1 percentage point higher than the projections published in the April 2008 issues of Consensus Economics and the Euro Zone Barometer.

SPF participants were also asked to assess the probability of the future outcome falling within specific intervals. The aggregate probability distribution obtained by averaging the forecasters' responses provides a summary of their assessments. It also enables an assessment of how survey participants gauge, on average, the risk of the actual outcome being above or below the most

1 Additional data are available on the ECB's website at www.ecb.int/stats/prices/indic/forecast/html/index.en.html.

Results from the SPF, ECB staff macroeconomic projections, Consensus Economics and Euro Zone Barometer

(annual percentage changes, unless otherwise indicated)

			Survey horizon		
HICP inflation	2008	Mar. 2009	2009	Mar. 2010	Longer term <sup>2)</sup>
SPF Q2 2008	3.0	2.1	2.2	2.0	1.9
Previous SPF (Q1 2008)	2.5	-	2.0	-	2.0
ECB staff macroeconomic projections	2.6 - 3.2	-	1.5 - 2.7	-	-
Consensus Economics (April 2008)	2.9	-	2.1	-	2.0
Euro Zone Barometer (April 2008)	2.9	-	2.1	-	2.0
Real GDP growth	2008	Q4 2008	2009	Q4 2009	Longer term <sup>2)</sup>
SPF Q2 2008	1.6	1.4	1.6	1.9	2.1
Previous SPF (Q1 2008)	1.8	-	2.0	-	2.1
ECB staff macroeconomic projections	1.3 - 2.1	-	1.3 - 2.3	-	-
Consensus Economics (April 2008)	1.5	-	1.7	-	2.0
Euro Zone Barometer (April 2008)	1.5	-	1.7	-	2.0
Unemployment rate 1)	2008	Feb. 2009	2009	Feb. 2010	Longer term <sup>2)</sup>
SPF Q2 2008	7.1	7.2	7.1	7.1	6.6
Previous SPF (Q1 2008)	7.1	-	7.0	-	6.7
Consensus Economics (April 2008)	7.1	-	7.1	-	-
Euro Zone Barometer (April 2008)	7.1	-	7.1	-	6.8

1) As a percentage of the labour force.

2) Longer-term inflation expectations refer to 2012 in the SPF, 2011 in the Euro Zone Barometer and the period 2014-18 in Consensus Economics. The Consensus Economics forecasts for the period 2014-18 were published in the April 2008 issue of Consensus Economics.



Prices and costs

#### Chart A Probability distribution for average annual inflation in 2008 and 2009 in the last three rounds of the SPF $^{(1)}$ (probability in percentages) O4 2007 SPE Q1 2008 SPF O2 2008 SPF 2009 2008 60 60 60 60 50 50 50 50 40 40 40 40 30 30 30 30 20 20 20 20 10 10 10 10 0 0 0 0 0.5-0.9 1.0-1.4 1.5-1.9 2.0-2.4 2.5-2.9 3.0-3.4 ≥ 3.5 0.5-0.9 1.0-1.4 1.5-1.9 2.0-2.4 2.5-2.9 3.0-3.4

Source: ECB.

1) Corresponds to the aggregation of each individual probability distribution provided by SPF forecasters.

likely range. The probability distributions for expected inflation in 2008 and, to a lesser extent, in 2009 have shifted towards higher outcomes compared with the SPF round for the first quarter of 2008 (see Chart A). For 2008 the two most likely outcomes for inflation are within the interval from 3.0% to 3.4%, with a probability of 46%, and within the interval from 2.5% to 2.9%, with a probability of 35%. For 2009 the most likely outcome for inflation is concentrated in the interval from 2.0% to 2.4%, with a probability of 44%. The probability of inflation being in the lower interval, from 1.5% to 1.9%, remains still high, at 26%.

According to the participants, upside risks to the forecasts relate in particular to further increases in oil, food and commodity prices and in nominal wage growth. At the same time, forecasters also quoted factors posing risks on the downside, notably a slowdown in euro area economic activity, less dynamic global developments and further appreciation of the euro.

#### Indicators of longer-term inflation expectations

Longer-term inflation expectations (for the next five years) have hardly been changed since the last round, falling marginally, from 1.950% to 1.948%. However, to one decimal place, this revision leads to a change from 2.0% to 1.9% because of rounding. These point expectations for 2012 are slightly below the long-term inflation projections for 2011 provided by the Euro Zone Barometer and those for inflation six to ten years' ahead published in the April 2008 issue of Consensus Economics. The standard deviation of longer-term inflation expectations in the SPF has fallen over time and remains stable at low levels, indicating a broad consensus among respondents regarding the most likely outcome for the longer-term inflation rate (see Chart B).

The probability of longer-term inflation standing at 2% or above increased slightly to 50%, according to survey respondents, compared with 49% in the previous round (see Chart C). These survey results can be compared with the break-even inflation rate, an indicator of longer-term inflation expectations among market participants calculated as the yield spread between nominal and inflation-linked bonds.<sup>2</sup> Over time, the probability assigned to an outcome that inflation will

2 See also the article entitled "Measures of inflation expectations in the euro area" in the July 2006 issue of the Monthly Bulletin.



stand at 2% or above in the next five years is broadly in line with developments in the implied five-year forward five-year break-even inflation rate (see Chart C).<sup>3</sup>

#### **Real GDP growth expectations**

In comparison with the previous SPF round, expectations for real GDP growth have been revised downwards by 0.2 percentage point for 2008 and by 0.4 percentage point for 2009. The averages of the point estimates for real GDP growth now stand at 1.6% for both 2008 and 2009. These downward revisions reflect mainly forecasters' concerns about the economic slowdown in the United States and the United Kingdom, which could have effects worldwide.

The risks to these expectations are mainly on the downside and are associated with higher oil prices, continued uncertainty surrounding the developments in the financial markets and a disorderly unwinding of global imbalances, with possible effects on the exchange rate of the euro. SPF growth expectations for 2008 and 2009 are within the ranges of the March 2008 ECB staff macroeconomic projections. Compared with the projections published in the latest issues of the Euro Zone Barometer and Consensus Economics, the SPF growth expectations are 0.1 percentage point higher for 2008 and 0.1 percentage point lower for 2009.

Longer-term growth expectations (i.e. for 2012) have remained at 2.1%. According to SPF participants, longer-term growth prospects depend principally on further structural reforms in the labour market and social security systems, the demographic situation and migration flows.

3 Break-even inflation rates should not be interpreted as direct measures of inflation expectations, since they may also incorporate various risk premia (such as inflation uncertainty and liquidity premia).



Prices and costs

#### Expectations for the euro area unemployment rate

Unemployment rate expectations for both 2008 and 2009 currently stand at 7.1%. These expectations imply no change for 2008 and an upward revision of 0.1 percentage point for 2009 compared to the last SPF report. According to the forecasters, even though employment is moderating in the euro area, its pace would be sufficient to keep the unemployment rate at about current levels in the near term. Among the upside risks to the unemployment rate, forecasters mention a possible unwinding of imbalances in the construction and housing sector. Unemployment rate expectations in the last SPF round are in line with those of Consensus Economics for 2008 and 2009 and the Euro Zone Barometer for 2009.

Longer-term unemployment rate expectations have been revised downwards by 0.1 percentage point and stand at 6.6% for 2012. Respondents continued to indicate that the decline in the unemployment rate over the longer-term horizon is mainly dependent on further, and deeper, labour market reforms.





### **4 OUTPUT, DEMAND AND THE LABOUR MARKET**

The latest data and survey information on economic activity confirm earlier indications of moderate but ongoing economic growth in the first half of 2008. In particular, industrial production data for the first few months of the year showed resilience, while economic sentiment generally continued to soften. Surveys of business and consumer confidence, which have indicated a decline in confidence since the summer of 2007, suggest that the moderation has continued in 2008. Overall, the euro area economy has sound fundamentals and does not suffer from major imbalances. Investment growth in the euro area should provide ongoing support to economic activity, as capacity utilisation remains solid and profitability in the non-financial corporate sector has been sustained. At the same time, employment and labour force participation have increased significantly and unemployment rates have fallen to levels not seen for 25 years. However, uncertainty about the prospects for economic growth remains high and risks surrounding the outlook for economic activity lie on the downside.

#### 4.1 OUTPUT AND DEMAND DEVELOPMENTS

#### **REAL GDP AND DEMAND COMPONENTS**

Eurostat's second estimate of national accounts data confirmed earlier estimates which put real GDP growth at 0.4% in the fourth quarter of 2007, following growth of 0.7% in the previous quarter (see Chart 24). The composition of GDP growth was in line with the first estimate. This moderation in economic activity in the fourth quarter is mainly explained by lower domestic demand, which contributed by only 0.1 percentage point to real GDP growth. Private consumption declined by 0.1% on a quarter-on-quarter basis, while investment growth slightly decelerated, to 0.8%, on the same basis, reflecting stagnation in construction investment but buoyant growth in nonconstruction investment. The weakness in domestic demand was partly compensated by a substantial net trade contribution to GDP growth, of 0.4 percentage point, mainly on account of a decline in imports. Inventories made a small negative contribution to real GDP growth of -0.1 percentage point.



The decline in euro area private consumption in the fourth quarter of 2007, which followed an increase of 0.5% recorded in the previous quarter, was partly due to a fall in retail sales of 0.7% quarter on quarter (see Chart 25). In addition, it partly reflected developments in households' decisions on saving and spending in Germany, where private consumption contracted substantially. However, it also resulted from a deceleration in private consumption in other euro area countries, such as France and Spain.

In the first quarter of 2008 retail sales declined by 0.1% quarter on quarter in the euro area, on account of a decline in sales of food, beverages and tobacco products. New passenger car registrations in the

Output, demand and the labour market

euro area decreased by 3.5% quarter on quarter in the first quarter of 2008. The European Commission's retail trade confidence indicator, which captures the perceptions of retailers, declined in April. This indicator, which has shown significant volatility in the recent past, declined notably in the course of 2007 but remains at a high level. According to surveys, euro area consumer confidence remained unchanged in April vis-à-vis the first quarter as a whole, standing at a level below its long-term average for the fourth consecutive month. On a three-month moving average basis, consumer confidence also remained unchanged, possibly indicating that the downward movement that started in mid-2007 may have come to a halt. Indeed, conditions are still favourable in the labour market, providing support for private consumption in 2008.



#### **SECTORAL OUTPUT**

The contribution of the services sector to euro area total value added was 0.3 percentage point in the fourth quarter of 2007, compared with 0.7 percentage point in the previous

quarter. The contribution of the industrial sector to value added growth in the fourth quarter was 0.1 percentage point, while it made a contribution of 0.3 percentage point in the third quarter.

However, euro area industrial production (excluding construction) improved at the start of 2008. It increased by 0.4% month on month in February, having rebounded to 0.7% in the previous month (see Chart 26). The production of capital goods grew strongly in both January and February (month-on-month growth of respectively 2.4% and 1.0%). The level of industrial production in the first two months of 2008 was 0.8% above its average level in the previous quarter, which bodes well for the first quarter of 2008 as a whole. This is supported by a rebound in industrial new orders (excluding heavy transport equipment), a leading indicator of industrial production, which, in both January and February, posted an average level of 0.7% above the average level in the previous quarter, although some moderation in the growth of new orders has been observed in recent months.

These positive developments should not be seen as indicating a change in the trend of moderating growth observed in the industrial sector in recent months, however. The Purchasing Managers' Index (PMI) for the manufacturing sector declined in the course of the first few months of 2008 (see Chart 26). In April the manufacturing PMI fell further, to 50.7, which is marginally above the threshold indicating growth. A similar picture is conveyed by the European Commission's industrial confidence indicator, which continued to decline in the first four months of 2008.

Production in the construction sector rebounded vigorously in the first two months of 2008, after having declined in the last two months of 2007. The increase, which was particularly pronounced in January with a rate of 1.6% month on month, was broadly based across euro area countries,



mainly on account of very mild weather conditions. However, this rebound has to be seen against the background of a slowdown in construction activity observed since late 2006 and is likely to be short-lived. Construction confidence fell further in April 2008, according to the European Commission's indicator, thereby continuing the downward trend in this indicator seen since the end of 2006.

As regards services, survey data available to April 2008 point to moderating growth in this sector also. The services business activity index edged up slightly to 52.0 in April and appears to have stabilised somewhat over the past few months. A more pessimistic picture is conveyed by the Commission's services confidence indicator, which dropped again in April. More detail on recent developments in euro area services activity is provided in Box 7. Overall, the indicators remain consistent with relatively moderate growth in the services sector in the first quarter as a whole and at the beginning of the second quarter.

Summing up, the survey data for both the industrial and services sectors suggest at present that quarterly GDP growth rates in the first half of 2008 may be broadly in line, on average, with those seen in the fourth quarter of last year.



Output. demand and the labour market

#### **RECENT DEVELOPMENTS IN EURO AREA SERVICES ACTIVITY**

The services sector is by far the largest economic sector in the euro area. In 2007 services value added accounted for around 71% of total value added in the euro area.<sup>1</sup> By way of comparison, the share of industry excluding construction was about 20% and the construction and agricultural sectors had relatively small shares, at 7% and 2% respectively. This box provides an overview of the breakdown of the services sector in terms of value added in the euro area. It reviews the growth performance of the main services activities in recent years and discusses the signals provided by surveys regarding euro area services activity at the start of 2008.

#### Sub-sector breakdown of services

According to the NACE classification,<sup>2</sup> the euro area services sector encompasses three main sub-sectors: trade and transportation services, which in 2007 accounted for 29% of total services value added in the euro area, financial and business services (39%) and the "other services" sub-sector (32%). Although this breakdown provides no strict separation between private and public services, the former two sub-sectors are usually referred to as "market services", while the latter comprises mainly government-related services. The largest fraction of value added in trade and transportation services is provided by wholesale and retail trade and repair of motor vehicles, followed by transport, storage and communication services, while hotel and restaurant services account for a somewhat smaller share of value added in that sub-sector. Financial and business services include real estate, renting and business activities as well as the smaller financial intermediation services segment. The very diverse activities subsumed under the other services sub-sector include, in particular, health and social work, public administration and defence and education.

#### Developments in services value added in recent years

Since the start of the current economic upswing in mid-2003, euro area services value added has expanded somewhat less strongly than value added in industry excluding construction (see Chart A). This reflects the stronger cyclical movement of the industrial sector, while, from a longer-term perspective, the services sector generally displays slightly stronger growth than the industrial sector. The pace of growth of market services was, however, even in this period almost as fast as that of industry. Among the market services sub-sectors, value added in financial and business services rose most strongly, but trade and transportation services also showed significant growth, while value added growth in the other services sub-sector clearly lagged behind (see Chart B).

In view of its much larger size, the services sector has clearly been the largest contributor to overall value added growth in the euro area since mid-2003, despite showing somewhat slower growth than the industrial sector. On average in this period services contributed 0.4 percentage point to quarterly value added growth in the euro area, which compares with an average 0.1 percentage point quarterly contribution of industry excluding construction.



<sup>1</sup> See also the box entitled "The sectoral composition of euro area growth" in the ECB's Annual Report 2005.

<sup>2</sup> NACE is a system for classifying economic activities in the European Community



Focusing on 2007, in the first three quarters of that year services value added expanded at an average quarterly rate of 0.7%, before slowing to 0.3% in the fourth quarter. As Chart C shows, financial and business services and trade and transportation services were the main contributors to services growth also in 2007. The significant deceleration from the third to the fourth quarter was mainly on account of trade and transportation services, which stagnated in the fourth quarter, having shown strong growth of 0.9% in the previous quarter. The trade and transportation services sub-sectors, and the sharp drop in growth seen in the fourth quarter suggests that deteriorating fundamentals for this sector, such as higher oil prices and the appreciation of the euro, may have taken their toll.

## Services indicators have weakened since mid-2007

Surveys point to further deceleration in services growth momentum in the euro area at the start of 2008. Both the European Commission's services confidence indicator and the services business activity index of the Purchasing Managers' Survey have posted sharp falls since mid-2007 and declined further in the first quarter of 2008 (see Charts D and E). Both indicators have fallen to levels that are clearly below their long-run averages, suggesting relatively moderate underlying growth in services in the first quarter of 2008 and at the start of the second quarter. However, some of the more pessimistic survey results may not be fully in line with actual developments, as the



ECB Monthly Bulletin May 2008

Output, demand and the labour market

#### Chart D Services value added growth and the European Commission's services confidence indicator







survey responses were given in periods of significant stock market volatility. This increases the uncertainty surrounding interpretations of the results, but does not change the picture of slowing growth momentum in the services sector.

More detailed survey information on services sub-sectors suggests that the slowdown in services growth may be relatively widespread across services activities rather than being concentrated in one or two sub-sectors. The indices for business activity in services sub-sectors from the PMI survey for instance display sharp falls in all the main services activities covered, albeit starting at different points in time (see Chart F). The index for

financial intermediation shows the sharpest decline, which began after the outbreak of the financial turmoil in August 2007. By contrast, the indices for transportation services and hotel and restaurant services had already shown a declining trend since the start of 2007. Finally, the index for real estate, renting and business services has also clearly fallen recently.

The diversity in services activities, together with the differences in the timing and pace of the slowdown of these sub-sector indices, points to the existence of a number of underlying factors. As briefly mentioned above, given the kind of activities subsumed under the trade and transportation services sub-sector, a number of events are likely to have contributed to the broad-based falls in the corresponding sub-sector indices. The



surge in oil prices, slowing growth in foreign demand and the appreciation of the euro may all have dampened activity, in particular in the transportation services segment, whereas food price shocks may have adversely affected activity in the hotel and restaurant services segment. The survey results also point to a sharp fall in activity in the real estate, renting and business activity segment, which could be partly related to housing market slowdowns in some parts of the euro area.

The link between the start of the financial turmoil and the drop in the index for financial intermediation services is particularly clear from the timing of these events. This index shows the steepest fall, declining to quite a low level. But efforts to ascertain to what extent these developments have actually materialised in the "hard" data are hampered by the lags in the availability of more detailed national accounts data. Nevertheless, it is important to recall that given the relatively small share of financial intermediation services in total euro area value added (around 5%), the direct impact of even a large fall in value added in that segment on total euro area value added growth would be relatively limited, although indirect spillover effects could be greater.

To sum up, value added growth in the euro area services sector slowed at the end of 2007 and surveys point to a further decline in the first quarter of 2008, which would be consistent with relatively moderate growth momentum in that sector in the first quarter and also at the start of the second quarter. These developments appear to be relatively broad-based across services activities, probably owing to the various shocks that have affected the euro area economy in the recent past. Given the unusually high degree of uncertainty currently surrounding the economic situation, it could, however, be the case that confidence effects may have unduly influenced survey results in the first quarter of 2008.

#### 4.2 LABOUR MARKET

The euro area labour market has shown a clear improvement in recent years, and, despite moderating somewhat, this favourable performance has continued in 2008 according to the latest data. Employment expectations, although weakening, remain positive and underpin the assessment that labour market prospects are broadly favourable.

#### **EMPLOYMENT**

Following strong economic activity in the euro area, employment growth rose substantially in 2006 and 2007 compared with 2005 (see Table 7). Available information points to continued, albeit moderating, expansion in 2008.

Euro area employment growth was 0.2% quarter on quarter in the fourth quarter of 2007, following an increase of 0.4% in the previous quarter. The sectoral breakdown shows that the moderation in employment growth in the second half of 2007 was broadly based across sectors, but with more pronounced deceleration in the construction sector. Among services, the lower rate of employment growth in the second half of 2007 was observed in both the trade and transportation services sub-sector and the financial and business services sub-sector.

The favourable developments in the euro area labour market in recent years appear to have persisted at the beginning of 2008, based on survey data available to April (see Chart 28). According to the NTC Economics PMI survey, job creation continued in April in both the industrial and



Output, demand and the labour market

### Table 7 Employment growth

(percentage changes compared with the previous period; seasonally adjusted)

	Annual ra	ates					
	2006	2007	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4
Whole economy of which:	1.6	1.8	0.4	0.6	0.5	0.4	0.2
Agriculture and fishing	-1.5	-0.8	-0.5	1.2	-0.6	-1.1	-0.4
Industry	0.6	1.5	0.5	0.7	0.2	0.0	0.1
Excluding construction	-0.4	0.5	0.1	0.2	0.1	0.1	0.0
Construction	2.8	3.8	1.5	1.9	0.4	-0.2	0.2
Services	2.1	2.0	0.4	0.5	0.6	0.7	0.3
Trade and transport	1.5	1.7	0.1	0.5	0.8	0.8	0.0
Finance and business	3.7	3.8	0.7	1.2	1.0	0.7	0.8
Public administration <sup>1)</sup>	1.8	1.3	0.4	0.2	0.4	0.5	0.2

Sources: Eurostat and ECB calculations.

1) Also includes education, health and other services.

services sectors. The employment expectations reported in the European Commission's Business and Consumer Survey convey a similar picture. Notwithstanding the weakening of employment indicators observed in both surveys in recent months, labour market conditions have so far remained broadly resilient to the recent increase in uncertainty regarding economic growth prospects.

Year-on-year labour productivity growth (per person employed) was very low at the end of 2007, at 0.6% in the fourth quarter of 2007, following a rate of 0.8% in the previous quarter (see Chart 29). At the sectoral level, the decline in productivity growth recorded in the second half of 2007 is mainly explained by the slowdown recorded in the services sector. Data available from the PMI survey to March 2008 point to a further deterioration in labour productivity growth in the first quarter of 2008, in both the industrial and services sectors.







#### UNEMPLOYMENT

The euro area unemployment rate stood at 7.1% in March, unchanged with respect to the previous two months (see Chart 30). This figure is the lowest rate seen since the early 1980s. The number of unemployed persons declined by 130,000 in the first quarter of 2008, compared with 170,000 on average during the previous two quarters. In annual terms, unemployment was down by 600,000 persons compared with March 2007. With the exception of Spain and Ireland, unemployment rates remained stable or declined across euro area countries in March 2008. In Spain and Ireland the unemployment rate rose further, partly reflecting developments in construction employment in the first quarter of 2008.

#### 4.3 THE OUTLOOK FOR ECONOMIC ACTIVITY

The latest data and survey information on economic activity confirm previous expectations of moderate but ongoing growth in the first half of 2008. In particular, industrial production data for the first few months of the year showed resilience, while economic sentiment generally continued to soften. Overall, the euro area economy has sound fundamentals and does not suffer from major imbalances.

Looking ahead, both domestic and foreign demand are expected to support ongoing real GDP growth in the euro area in 2008, albeit to a lesser extent than during 2007. While moderating, growth in the world economy is expected to remain resilient, benefiting in particular from the dynamism of emerging economies. This should continue to support euro area external demand. Meanwhile, investment growth in the euro area should provide ongoing support to economic activity, as capacity utilisation is high and profitability in the non-financial corporate sector has been sustained. At the same time, as a result of the improved economic conditions and wage moderation, employment and



Output, demand and the labour market

labour force participation have increased significantly and unemployment rates have fallen to levels not seen for 25 years. This supports real disposable income and thus consumption growth, even though purchasing power is being dampened by the impact of higher energy and food prices.

The uncertainty surrounding this outlook for economic growth remains high and downside risks prevail. In particular, risks relate to the potential for the financial market turbulence to have a more negative impact on the real economy than previously anticipated. Moreover, downside risks stem from the dampening impact on consumption and investment of further unanticipated increases in energy and food prices. Risks also arise from protectionist pressures and the possibility of disorderly developments owing to global imbalances.



### 5 EXCHANGE RATE AND BALANCE OF PAYMENTS DEVELOPMENTS

#### **5.I EXCHANGE RATES**

Following an appreciation in February and March, the effective exchange rate of the euro remained broadly unchanged in April, amid considerable short-run volatility. On 6 May the euro stood 2.7% above its level at the end of January 2008 in nominal effective terms.

#### **EFFECTIVE EXCHANGE RATE OF THE EURO**

On 6 May 2008 the nominal effective exchange rate of the euro – as measured against the currencies of 22 of the euro area's important trading partners – stood 2.7% above its level at the end of January 2008 and 7.1% higher than its average level in 2007 (see Chart 31). In the course of April, the euro initially continued on the upward path that started in February. This strengthening of the euro was partly reversed towards the end of the month. This development in the effective exchange rate of the euro was, to a large extent, influenced by developments in the bilateral rate vis-à-vis the US dollar.

In addition to its appreciation against the US dollar, the appreciation in the nominal effective exchange rate of the euro between the end of January and early May reflects a relatively broad-based strengthening of the single currency, especially vis-à-vis the pound sterling, the main Asian currencies and the Canadian dollar. By contrast, since the end of January 2008, the euro has weakened vis-à-vis the Swedish krona, the Norwegian krone and some of the currencies of the new EU Member States.

Taking a longer-term perspective, on 6 May the nominal effective exchange rate of the euro stood 6.9% higher than at the beginning of 2005. This appreciation stems mainly from a strengthening of the single currency vis-à-vis the US dollar, the pound sterling and the Japanese yen (see Chart 31).

#### **US DOLLAR/EURO**

After moving broadly sideways in January 2008, the euro appreciated vis-à-vis the US dollar through February, March and most of April.

## Chart 31 Euro effective exchange rate and its decomposition $^{\rm (l)}$









From 3 January 2005 to 6 May 2008



An upward movement of the index represents an appreciation
of the euro against the currencies of the most important trading
partners of the euro area and all non-euro area EU Member States.
 Contributions to EER-22 changes are displayed individually for
the currencies of the six main trading partners of the euro area.
 The category "Other Member States (OMS)" refers to the
aggregate contribution of the currencies of the non-euro area
Member States (except the GBP and SEK).
 The category "Other" refers to the aggregate contribution of the
remaining six trading partners of the euro area in the EER-22 index.
 Changes are calculated using the corresponding overall trade
weights in the EER-22 index.

FCR

Exchange rate and balance of payments developments

The strengthening of the euro reflected weaker US macroeconomic data, renewed credit-related concerns and associated market participants' expectations of further reductions in US policy rates in the first half of 2008. After an apparent revision of these expectations in late April, the euro depreciated rather sharply vis-à-vis the US currency, to trade on 6 May at USD 1.55, 4.4% above its level at the end of January 2008 and 13.3% higher than its average level in 2007 (see Chart 32).

#### **JAPANESE YEN/EURO**

The euro traded broadly sideways vis-à-vis the Japanese yen in February and March, to then appreciate rather sharply in April, amid historically high expectations of future volatility in the bilateral JPY/EUR exchange rate. The subsequent moderation of these volatility expectations, together with the deterioration in the macroeconomic outlook for Japan, might have supported the euro against the Japanese currency in April. On 6 May 2008 the euro stood at JPY 162.25, 2.7% higher than its level at the end of January 2008 and broadly around its average level in 2007 (see Chart 32).

#### **EU MEMBER STATES' CURRENCIES**

Since the end of January 2008, most currencies participating in ERM II remained stable vis-à-vis the euro and continued to trade at, or close to, their respective central rates (see Chart 33). The Slovak koruna, which, following the revaluation in March 2007, continued to trade on the strong side of its new central rate, has started to strengthen again since the beginning of 2008. Overall, it rose by almost 5% vis-à-vis the euro between the end of January and 6 May, resulting in a deviation from its ERM II central



rate of more than 9%. The Latvian lats has remained broadly stable vis-à-vis the euro over the last three months and, on 6 May, was about 0.7% stronger than the central rate of the unilaterally set fluctuation band of  $\pm 1\%$ .

With regard to the currencies of other EU Member States not participating in ERM II, between the end of January 2008 and 6 May 2008, the euro appreciated by 5.4% vis-à-vis the pound sterling, amid market perceptions of a deteriorating economic outlook for the UK economy. Over the same period, the euro depreciated by 1.6% vis-à-vis the Romanian leu, by 3.4% against the Czech koruna, by 2.9% against the Hungarian forint and by 5.2% against the Polish zloty.



Source: ECB

Note: 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, the fluctuation band is  $\pm 2.25\%$ ; for all other currencies, the standard fluctuation band of  $\pm 15\%$  applies.

#### **OTHER CURRENCIES**

Between the end of January and 6 May 2008, the euro appreciated by 1.4% vis-à-vis the Swiss franc and by almost 6% against the Canadian dollar, but depreciated by 1.4% vis-à-vis the Swedish krona. At the same time, the euro also strengthened vis-à-vis some of the currencies of the main Asian trading partners, especially against the Korean won (12.3%) and the Hong Kong dollar (4.4%). Over the same three-month period, the euro appreciated by 1.6% against the Chinese renminbi, whose rate of appreciation vis-à-vis the US dollar started to gather pace from mid-December 2007.

#### **5.2 BALANCE OF PAYMENTS**

The euro area current account showed a surplus of  $\notin 17.8$  billion (in seasonally adjusted terms) in the 12-month period to February 2008, compared with a deficit of  $\notin 1.1$  billion a year earlier, largely reflecting an increase in the goods surplus. In the financial account, combined direct and portfolio investment registered cumulative net inflows of  $\notin 145.5$  billion in the 12-month period up to February 2008, compared with net inflows of  $\notin 231.2$  billion a year earlier. This decrease mainly reflected lower net inflows in portfolio investment.

#### TRADE AND THE CURRENT ACCOUNT

The latest balance of payments data show that export growth has declined further, while that of imports has picked up. In the three-month period to February 2008, the value of extra-euro area exports and imports of goods and services grew by 0.4% and 3.1% respectively in seasonally adjusted terms (see Table 8). While the deceleration in exports was mainly the result of declining services exports, the pick-up in growth in the value of imports entirely reflected developments in the goods trade. In the three-month period to February 2008, the value of imports of goods grew by 4.4%, compared with 2.3% in the previous three-month period.

The breakdown of trade in goods into volumes and prices, available up to January 2008, indicates that export volumes accounted for most of the relatively weak growth in export values of goods

Exchange rate and balance of payments developments

### Table 8 Main items of the euro area balance of payments

			Thre	Three-month moving average figures ending				12-month cumulated figures ending	
	2008	2008	2007	2007	2007	2008	2007	2008	
	Jan.	Feb.	May	Aug.	Nov.	Feb.	Feb.	Feb	
		EUR b	illions						
Current account	-7.9	4.3	2.7	5.0	1.9	-3.6	-1.1	17.8	
Goods balance	1.7	3.1	6.1	6.3	4.6	0.5	24.9	52.7	
Exports	131.4	133.3	123.3	127.4	128.4	129.7	1,413.8	1,526.3	
Imports	129.6	130.2	117.2	121.0	123.8	129.2	1,388.9	1,473.6	
Services balance	4.9	5.1	4.3	4.2	4.7	4.5	42.6	53.2	
Exports	40.8	41.6	40.5	41.4	42.3	41.7	444.3	497.6	
Imports	36.0	36.5	36.2	37.2	37.6	37.1	401.7	444.4	
Income balance	-4.1	0.5	-0.8	0.9	0.7	-1.2	10.1	-1.1	
Current transfers balance	-10.5	-4.3	-7.0	-6.5	-8.2	-7.4	-78.7	-87.1	
Financial account <sup>1)</sup>	27.3	-9.9	10.6	35.2	-22.6	-2.0	150.6	63.8	
Combined net direct and portfolio investment	19.4	21.0	20.4	23.5	1.5	3.2	231.2	145.5	
Net direct investment	-29.9	-13.8	-11.1	-8.9	-0.7	-21.5	-120.2	-126.7	
Net portfolio investment	49.3	34.8	31.5	32.3	2.2	24.7	351.4	272.2	
Equities	55.7	44.7	12.6	29.4	-1.3	32.8	192.9	220.7	
Debt instruments	-6.4	-9.9	18.9	2.9	3.5	-8.2	158.5	51.5	
Bonds and notes	28.3	-1.0	14.5	3.0	3.3	9.3	239.1	90.2	
Money market instruments	-34.7	-8.9	4.4	-0.1	0.2	-17.4	-80.6	-38.7	
	Percentag	e changes o	over previo	us period					
Goods and services									
Exports	3.1	1.6	1.6	3.0	1.2	0.4	11.9	8.9	
Imports	-0.7	0.7	-0.4	3.2	2.0	3.1	12.9	7.1	
Goods									
Exports	5.6	1.5	1.0	3.3	0.8	1.0	13.3	8.0	
Imports	1.4	0.4	-1.4	3.3	2.3	4.4	14.6	6.1	
Services									
Exports	-4.1	1.9	3.3	2.2	2.2	-1.6	7.4	12.0	
Imports	-7.7	1.7	2.8	2.9	1.0	-1.2	7.3	10.0	

Source: ECB.

Note: Figures may not add up due to rounding. 1) Figures refer to balances (net flows). A positive (negative) sign indicates a net inflow (outflow). Not seasonally adjusted.

in recent months. Largely reflecting developments in foreign demand, export volumes declined by 0.4% in the three-month period to January 2008. Despite picking up somewhat, export price increases remained moderate, thereby helping to contain the dampening impact on export volumes arising from the loss in price competitiveness resulting from the appreciation of the euro.

Turning to imports, the sharp rises in the price of both oil and non-oil commodities seem to be the main factor behind the rebound in the growth in import values. By contrast, import volumes have continued to decline. Partly reflecting the moderation in euro area domestic demand, the decline in euro area import volumes may also relate to the slowdown in export activity, given the high import content of exports.

Taking a longer-term perspective, the 12-month cumulated current account recorded a surplus of €17.8 billion (about 0.2% of GDP) in February 2008, with surpluses in the balances of goods and services broadly offsetting the deficits in current transfers and the income balance. The shift in the current account from a deficit of  $\in 1.1$  billion a year earlier to a surplus was primarily due to developments in the goods balance, which – in 12-month cumulated terms – rose by  $\notin 27.8$  billion (see Chart 34).
The geographical breakdown of the euro area balance of payments for the whole of 2007 shows that the shift to a current account surplus was due mainly to a reduction in the goods deficit with the group of "other countries"<sup>1</sup> (down from €143.7 billion in 2006 to €119.3 billion in 2007), particularly with Russia, and an increase in the goods surplus with EU countries, particularly with the United Kingdom. By contrast, the goods deficit with China increased (from €85.3 billion in 2006 to €104.3 billion in 2007), mainly due to an increase in imported goods.

#### **FINANCIAL ACCOUNT**

In the three-month period up to February 2008, euro area combined direct and portfolio investment recorded average monthly net inflows of  $\in 3.2$  billion, as opposed to net inflows of  $\in 1.5$  billion in the three-month period ending in November 2007 (see Table 8). Higher net outflows in direct investment were more than compensated for by higher net inflows in portfolio investment, particularly in equity securities and bonds and notes.

Overall, the February data suggest that crossborder portfolio investment continued to be affected by the credit market turmoil which began in August 2007, as investors have generally remained cautious in their foreign investment strategies. While foreigners continuously showed interest in cross-border investment in euro area equities in the three-month period up to February 2008, euro area residents have continued to reduce their equity investment abroad. At the same time, net investment flows by euro area residents in foreign bonds and net investment by non-residents in euro area bonds declined compared with the previous threemonth period.

In the 12-month period to February 2008, cumulative net inflows in combined direct and portfolio investment amounted to  $\notin$ 145.5 billion, compared with net inflows of  $\notin$ 231.2 billion a year earlier (see Chart 35). This decrease

## Chart 34 The euro area current account and trade balances



## Chart 35 Euro area combined direct and portfolio investment



1 These are countries other than the EU Member States, Canada, Japan, Switzerland and the United States.

#### ECONOMIC AND MONETARY DEVELOPMENTS

Exchange rate and balance of payments developments

largely resulted from lower net inflows in portfolio investment, which, in turn, mainly reflected lower net purchases of euro area bonds and notes by non-residents. Meanwhile, net outflows in direct investment remained at a similar level to a year earlier, recording cumulative net outflows of  $\notin$ 126.7 billion.

With regard to the geographical breakdown of direct investment in 2007, net outflows recorded a decrease (from  $\notin$ 144.7 billion in 2006 to  $\notin$ 94.8 billion in 2007). This was mainly accounted for by the shift from net outflows to net inflows from the United States and lower net outflows to the United Kingdom. By contrast, compared with 2006, the euro area registered higher net outflows in direct investment to Switzerland. The United Kingdom, offshore financial centres and the United States continued to be the most important recipients of euro area foreign direct investment, receiving around 60% of total euro area direct investment abroad.







### PRICE STABILITY AND GROWTH

The notion that inflation harms macroeconomic performance, and that preserving price stability is the best contribution monetary policy can make to sustainable economic growth, job creation, prosperity and social cohesion, is part of the contemporary consensus on monetary policy. Inflation has a negative impact on economic growth via several channels. In particular, within an inflationary environment it becomes comparatively more difficult to disentangle changes in relative prices (which would bring about a change in the allocation of resources) from changes in the general price level (which would not trigger such a change), with the result that resources are misallocated, the productivity of factors of production is degraded, and overall macroeconomic performance worsens. Inflation also has a negative impact on capital accumulation, and therefore on the long-term productive potential of the economy, because of the non-indexation of the tax system. The fact that depreciation allowances are not indexed causes a systematic distortion of business investment decisions, with higher inflation artificially increasing, ceteris paribus, investment in short-lived capital equipment and inventories, to the detriment of long-lived capital goods. This effect is compounded by the fact that, first, higher inflation has historically been associated with higher inflation variability, which discourages capital accumulation by increasing macroeconomic uncertainty across the board; and second, by adding an inflation risk premium to risk-free nominal interest rates, inflation uncertainty causes real rates to be higher than they would be otherwise, thus further discouraging capital accumulation. Empirical evidence confirms the existence of a negative relationship between inflation and output growth, with a 100 basis point permanent increase in inflation being associated with a 10 to 30 basis point decrease in trend output growth.

This article discusses the reasons why inflation should be expected to have a systematically detrimental effect on real economic activity, and reviews some of the empirical evidence on the relationship between inflation and output growth. The contemporary consensus on the detrimental impact of inflation on real economic activity makes a compelling case for assigning central banks an explicit mandate to maintain price stability, over and above the justification provided by the traditional argument of monetary neutrality. In this way, monetary policy not only minimises the costs associated with inflation, but also helps to maximise the long-run productive potential of the economy.

#### **INTRODUCTION** Т

The contemporary consensus on monetary policy stresses the notion that inflation harms macroeconomic performance, and that, by preserving price stability, monetary policy can make its best contribution to sustainable economic growth, job creation, prosperity and social cohesion. Such a consensus developed in the wake of the major economic disruptions which followed the so-called Great Inflation of the 1970s. With high inflation being systematically associated with subpar macroeconomic performance in terms of both output growth and unemployment rates within a large cross-section of countries, the Great Inflation acted, in a fundamental sense, as a large-scale experiment which

helped to better understand the nature of some underlying structural economic relationships. By illustrating the corrosive effects of inflation on macroeconomic performance, that episode cemented the contemporary agreement, among both policy-makers and academics, that pursuing price stability ought to be the fundamental goal of monetary policy.

### **EVOLVING CONSENSUS ON THE TRADE-OFF BETWEEN INFLATION AND ECONOMIC ACTIVITY**

From a long-term perspective, it is worth noting that the consensus has returned to where it was fifty years ago, around the time of the enunciation of the so-called Phillips curve. Before the publication of A. W. Phillips' analysis of the relationship



between unemployment and inflation in the United Kingdom,<sup>1</sup> it had always been a widelyshared conviction, among economists and policy-makers alike, that inflation would be detrimental to macroeconomic performance.<sup>2</sup> Phillips' discovery, on the basis of almost a century of UK data, of a negative correlation between inflation and the unemployment rate was interpreted by many as offering policymakers various combinations of inflation and unemployment from among which they could choose. In particular, it was thought that society could opt to trade off a permanently higher inflation rate against a permanently more dynamic macroeconomic performance.

Research published around the mid-1960s<sup>3</sup> and largely inspired by the Phillips curve paradigm suggested another potential benefit of higher inflation: by increasing the cost of holding money balances, a higher rate of inflation might induce agents to switch part of their wealth from "unproductive" money to physical capital, thus stimulating capital accumulation and leading, in equilibrium, to a higher endowment of capital per worker, and thus higher output.

These positions did not go unchallenged. The notion of a permanent trade-off between inflation on the one hand and unemployment and growth on the other, from which society could choose at will, was criticised on the basis of the impact that sustained inflation would ultimately exert on the state of agents' expectations and, through that channel, on the stability of the Phillips curve. Three prominent advocates of such a channel, E. Phelps, M. Friedman and R. Lucas,<sup>4</sup> pointed out how permanently higher inflation would automatically become embedded in agents' expectations, thus leading to higher wages, higher costs of production, reduced employment and therefore to the ultimate disappearance of any positive association between inflation and economic growth.

The reaffirmation of the classical principle of monetary neutrality – which states that monetary policy can only affect nominal variables, leaving the determination of real variables to real factors outside the control of central banks – implied that the only effect of a monetary policy aimed at systematically stimulating macroeconomic performance beyond an economy's equilibrium level of production would be a permanently higher inflation rate, with no lasting gain in terms of real economic activity.

The Great Inflation provided decisive support for the notion that the inflation-growth relationship was not positive and could not be counted on for the type of policy experiments that had been suggested in the previous decade. But the implications of the dismal macroeconomic performance of the 1970s were even starker than would have been implied by the notion that inflation was neutral vis-à-vis growth. By clearly showing higher inflation to be associated with a systematically worse macroeconomic performance, the experience of the 1970s suggested that the long-run relationship between inflation and growth could in fact be negative, with a permanent increase in inflation associated with a permanent loss of output, real income and, ultimately, economic welfare.<sup>5</sup>

Since the 1970s, a vast body of research has explored the mechanisms through which higher inflation has a systematically detrimental impact on overall macroeconomic performance, and has

- See Phillips, A. W. (1958), "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957", Economica, 25(November), 283-299.
- 2 In August 1958, for example, Federal Reserve Chairman William McChesney Martin, Jr. stated that "[...] if inflation should begin to develop again, it might be that the number of unemployed would be temporarily reduced [...] but there would be a larger amount of unemployment for a long time to come. If inflation should really get a head of steam up, unemployment might rise to ten million or fifteen million" (as quoted in Romer, D., and Romer, C. (2002a), "A Rehabilitation of Monetary Policy in the 1950s", American Economic Review, 97(2), on p. 123). At the time of Martin speaking, unemployment stood at five million.
- 3 See Tobin, J. (1965), "Money and Economic Growth", Econometrica, 32, 671-684.
- 4 See Phelps, E. (1967), "Phillips Curves, Expectations of Inflation, and Optimal Unemployment Over Time", Economica, 34, 254-281; Friedman, M. (1968), "The Role of Monetary Policy", American Economic Review, 58, 1-17; and Lucas, R. E., Jr. (1972), "Expectations and the Neutrality of Money", Journal of Economic Theory, 4 (April), 103-124.
- 5 The shift in the intellectual climate was exemplified by Milton Friedman's 1977 Nobel Lecture.

Price stability and growth

documented and quantified such an impact within both a cross-section of countries and a time-series context. The next section discusses in detail these mechanisms, while Section 3 reviews the empirical evidence in support of the wide consensus that price stability is the best contribution monetary policy can make to economic growth. Section 4 discusses several implications for the design of monetary institutions.

#### 2 THE COSTS OF INFLATION FOR ECONOMIC ACTIVITY

Economists have identified several reasons why inflation has a negative impact on real economic activity, which will now be discussed in turn.

First, a well-functioning market economy crucially depends on the ability of the price system - its fundamental conveyor of information - to bring about an efficient allocation of resources. In this respect, the key damage inflicted by inflation has to do with the fact that within an inflationary environment it becomes comparatively more difficult to disentangle changes in relative prices (which would bring about a change in the allocation of resources) from changes in the general price level (which would not trigger such a change). If the variability of relative prices were unrelated to the average inflation level, it would not be more difficult to interpret a change in prices in a high-inflation regime. The signal extraction problem mentioned above would be equivalent in both high-inflation and low-inflation а environment. Historically, however, the variance of relative prices has exhibited a strong positive correlation with average inflation, thus implying that, in practice, high inflation is associated with more variability in relative prices. Given that an increase in such variability automatically makes it more difficult for economic agents to extract the signal (i.e. the changes in the relative price levels) from the noise (i.e. the changes in the overall price level),6 an increase in inflation can safely be expected to be conducive to a misallocation of resources, thus ultimately leading to a degrading of overall macroeconomic performance. The highly volatile inflation rates of the 1970s most

likely played, through this channel, a fundamental role in generating the mediocre macroeconomic performance of that decade. This volatility most likely created fundamental difficulties for businesses in interpreting any observed price change – whether due to a shift in the relative demand for that particular good or in its relative scarcity, or whether it might merely reflect an equi-proportional drift in all prices – and in appropriately reacting to such a change.

A second channel through which inflation has an impact on real economic activity is capital accumulation. A key characteristic of a significant proportion of investment projects is their essentially irreversible nature.7 To put it differently, if market conditions did turn out, ex post, to be worse than expected, a large part of the initial investment costs could not be recovered. It has been shown that, under these circumstances, investment decisions tend to be very sensitive to the perceived riskiness of the investment, so that even a moderate increase in risk - whatever its specific origin, macroeconomic or otherwise - can exert a large negative impact on investment spending. Historically, the variance of inflation has exhibited a strong positive correlation with its average level,<sup>8</sup> thus implying that, in practice, high inflation is associated with more variable - and therefore more uncertain - inflation, which has a negative impact on investment.9

Table 1 provides simple evidence of this. It shows, for the euro area, the United States,

- 6 This was the key theme of Robert E. Lucas, Jr.'s classic 1972 paper, "Expectations and the Neutrality of Money", Journal of Economic Theory, 4(April), pp. 103-124.
- There is a large academic literature on this. A good reference is Pindyck, R. and Solimano, A. (1993), "Economic Instability and Aggregate Investment", in Blanchard, O. J. and Fischer, S., eds., NBER Macroeconomics Annuals 1993, Cambridge, The MIT Press.
- See, for example, Kiley, M. (2007), "Is Moderate-To-High inflation Inherently Unstable?", International Journal of Central Banking, 3(2), 173-201.
   The recent work of Ascari and Ropele shows that within
  - The recent work of Ascari and Ropele shows that, within standard New Keynesian models, an increase in trend inflation is systematically associated with an increase in overall macroeconomic volatility, and so also in the variance of inflation. See, in particular, Ascari, G. and Ropele, T. (2007), "Trend inflation, Taylor principle and indeterminacy", presented at the conference "Defining price stability: Theoretical options and practical experience", Frankfurt Am Main, 26-27 November 2007. The paper is available at: http://www.ecb.europa.eu/events/conferences/html/dps.en.html.

	Euro area <sup>1</sup>		United States		Japan		United Kingdom	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev
1950s	N.A.	N.A.	2.1	2.4	3.2	6.9	1.8	1.0
1960s	3.3	1.0	2.4	1.5	5.4	1.7	3.5	1.
1970s	8.8	2.0	7.1	2.8	9.1	6.0	12.6	5.
1980s	5.9	3.2	5.5	3.5	2.4	2.4	7.5	4.
1990s	2.6	1.1	3.0	1.1	1.2	1.3	3.7	2.
2000s <sup>2</sup>	2.2	0.3	2.8	0.9	-0.4	0.4	2.8	0.
	Canada		Australia		Sweden		Switzerland	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev
1950s	1.8	1.0	1.6	0.4	N.A.	N.A.	N.A.	N.A
1960s	2.5	1.3	2.5	1.5	3.9	1.6	2.9	0.
1970s	7.4	2.9	9.8	4.1	8.6	2.2	5.0	3.
1980s	6.5	3.2	8.4	2.2	7.9	3.1	3.3	1
1990s	2.2	1.7	2.5	2.1	3.3	3.7	2.3	2
$2000s^2$	2.3	0.8	3.3	1.2	1.4	0.9	1.0	0

#### Table I Means and standard deviations of inflation by decades

1) For the 1960s, based on the simple average of the inflation rates in Germany, France and Italy. 2) For the 2000s, data refer to the period 2000-07.

Japan, the United Kingdom, Canada, Australia, Sweden and Switzerland, both the mean and the standard deviation of consumer price inflation by decade. The correlation between the level of inflation and inflation volatility is very high, and especially apparent for the United States, the United Kingdom, Canada and Switzerland. This implies that, by increasing macroeconomic uncertainty, higher inflation can be expected to discourage, ceteris paribus, investment decisions, thus ultimately causing the economy to end up, ex post, with a lower capital stock than it would

The negative impact of inflation on capital accumulation is reinforced by a third, conceptually related mechanism. As a very general rule, for an economic agent to commit resources to a specific investment project under conditions of uncertainty, he or she will demand compensation for the risk such uncertainty entails, over and above the rate of return the agent would demand under conditions of certainty. Under plausible assumptions, such additional compensation - known as the risk premium - is higher the higher the extent of uncertainty. By adding an inflation risk premium to risk-free nominal interest rates, inflation uncertainty therefore causes real rates to be higher than they would be otherwise, further discouraging capital accumulation beyond the effect mentioned in the previous paragraph.

A fourth negative impact of inflation on economic activity has to do with the fact that, within an inflationary environment, both individuals and businesses tend to spend a significant proportion of their time and resources trying to protect their wealth from inflation, rather than carrying out their more productive activities. This has to do with the fact that inflation acts as a tax on money holdings, with the tax rate equal to the rate of inflation, and the tax base equal to the amount of money holdings. As a result of this distortion in individuals' and businesses' optimal allocation of their time and resources, overall macroeconomic performance is inevitably degraded.

A fifth set of negative effects has to do with the interaction between inflation and the tax system.<sup>10</sup> This perverse interaction between inflation and the tax system has several facets. For example, the fact that depreciation allowances are not indexed causes a systematic distortion of business investment decisions, with

otherwise.

<sup>10</sup> This has been extensively discussed by Martin Feldstein in a series of studies. See, in particular, Feldstein, M. (1997), "The Costs and Benefits of Going from Low Inflation to Price Stability", in Romer, D. and Romer, C., eds., Reducing Inflation: Motivation and Strategy, the University of Chicago Press; and Feldstein, M. (1999), "Capital Income Taxes and the Benefits of Price Stability", in Feldstein, M., ed., The Costs and Benefits of Price Stability. The University of Chicago Press.

Price stability and growth

higher inflation artificially increasing, ceteris paribus, investment in short-lived capital equipment and inventories, to the detriment of long-lived capital goods. This effect compounds the previously discussed negative impact of inflation uncertainty on long-term investment, and causes the economy to equip itself, in the long run, with a lower capital stock than it would otherwise, thus reducing its long-term productive potential. By the same token, the fact that progressive tax brackets on personal incomes might not be entirely indexed to the drift in the price level induced by inflation causes the inflation rate to determine over time an increase in the real incidence of taxes. In the medium term, inflation-induced decreases in the real after-tax salary and in the real after-tax return on savings can lead to a diminished incentive to supply labour and capital, respectively, which in turn curtails the economy's long-run growth perspectives.

A final and sixth mechanism through which inflation instability has a negative impact on macroeconomic performance has to do with its influence on the anchoring of inflation expectations. Recent research<sup>11</sup> has shown that, under monetary regimes that are founded on price stability, inflation expectations tend to be well-anchored, and quite insensitive to macroeconomic news. By contrast, under monetary regimes that lack a clear definition of price stability, inflation expectations tend to be revised with new releases of macroeconomic data. The explanation for this finding is that under the former regimes, when trying to forecast the implications of any new economic data releases for future inflation, agents tend to discount a stabilising response on the side of the central bank, and expect that this response will largely offset any adverse influence of the shock on observed inflation at medium-term horizons. This prediction helps to insulate current inflation expectations from potentially unsettling news. In turn, this mechanism has two important implications. First, as price-setting behaviours are partly dependent on agents' anticipations of future inflation, such anchoring of inflation expectations moderates the impact of the

macroeconomic shocks on observed inflation. Second, such relative unresponsiveness of inflation to macroeconomic shocks allows the central bank to adopt a less aggressive stance in the face of any given sequence of adverse innovations. In a sense, owing to a virtuous selfequilibrating response of inflation expectations and inflation outcomes, the central bank can afford a more moderate and steady course of policy than would be possible if inflation expectations were less firmly anchored. This clearly illustrates the benefits of having achieved a high degree of credibility: precisely because the central bank is regarded by the private sector as credible at stabilising inflation, its job is easier than it would have been had its credibility been lower. The final result is therefore not only stable inflation, but also a lower variability of interest rates than would have otherwise been the case, thus benefiting consumption and investment decisions and creating a more predictable environment which is conducive to economic growth.

In this respect, a comparison between the current situation and the 1970s is instructive. In both episodes, commodity prices have undergone a marked and sustained increase, which - by weighing on the cost structure of businesses has created pressures on output prices. Despite these similarities, however, the macroeconomic outcomes in the two respective episodes are quite different. Both inflation expectations and actual inflation surged in the 1970s in a large part of Europe, while business profitability and employment suffered markedly. In a monetary environment which lacked the firm anchor that had been previously secured by the Bretton Woods regime, inflation expectations in many countries became unanchored and started to incorporate the repeated oil price shocks. In such an environment, central banks - in an



<sup>11</sup> See, in particular, Ehrmann, M., Fratzscher, M., Gürkaynak, R. S. and Swanson, E. (2007), "Convergence and anchoring of yield curves in the euro area", ECB Working Paper no 817, October 2007, and Beechey, M. J., Johannsen, B. K. and Levin, A. T. (2007), "Are Long-Run Inflation Expectations Anchored More Firmly in the Euro Area than in the United States?", CEPR Working Paper 6536, October 2007.

attempt to reign in inflation spirals – were often forced to engineer sudden and severe anti-inflationary strikes, which contributed to, rather than contained, macroeconomic volatility. By contrast, the increases in the price of oil observed in recent years did not produce a major dislocation of inflation expectations, with the result that central banks' reactions could be comparatively more measured.

Having discussed conceptual reasons why high and volatile inflation should, in general, be expected to have a negative impact on macroeconomic performance, the next section surveys the available empirical evidence.

#### **3 EMPIRICAL EVIDENCE**

This section reviews the empirical evidence in favour of the contemporary consensus. The key message emerging from this section is that both cross-country and time-series studies clearly point towards a detrimental impact of inflation on economic activity.

#### **CROSS-COUNTRY STUDIES**

The negative association between inflation and economic performance, which is so apparent in the 1970s data, is not confined to that episode. Several authors<sup>12</sup> have documented a negative relationship between inflation and output growth once controlling other \_ for macroeconomic variables - within large groups of countries over the post-Second World War period. Based on a sample of 100 countries over the period from 1960 to 1990, for example, it was found that an increase in trend inflation by ten percentage points had been associated with a decrease in output growth by 0.2-0.3 percentage point per year.13

- 12 See, in particular, Fischer (1993), cit.; De Gregorio, J. (1993), "Inflation, Taxation, and Long-Run Growth", Journal of Monetary Economics, 31, 271-298; Barro, R. J. (1996), "Inflation and Growth", Federal Reserve Bank of St. Louis Economic Review, May/June 1996; and Andres, J. and Hernando, I. (1999), "Does Inflation Harm Economic Growth? Evidence from the OECD", in Feldstein, M., ed., The Costs and Benefits of Price Stability, The University of Chicago Press.
- 13 See Barro, R. J. (1996, cit.).

#### Box I

#### DECOMPOSING AND QUANTIFYING THE IMPACT OF INFLATION ON OUTPUT GROWTH

There are strong conceptual reasons to believe that inflation has an impact on output growth by negatively affecting both capital accumulation and the productivity of the factors of production. Research has not only confirmed these insights, but has also allowed the relative importance of the two channels to be quantified.

Working within the same cross-country framework of Barro, Fischer (1993, cit.) estimated that an increase in inflation by ten percentage points is associated with a decrease in the rate of growth of the capital stock by 0.4 percentage point, a comparatively large effect. This amount – which is already significant in itself – becomes even more impressive once it is considered that it refers to a rate of growth, so that its effects tend to compound over time. Similar results have been obtained by De Gregorio (1993) based on a sample of 12 Latin American countries.

As for the impact of inflation on productivity growth, Fischer (1993) estimated an increase of inflation by ten percentage points to lead to a decrease in the rate of growth of productivity by 0.2 percentage point per year. Although, at first sight, the effect may appear small, it is important to consider, once again, that since it pertains to a rate of growth it tends to compound over time, thus leading to significant shortfalls in the level of real output after several years.

Price stability and growth

One possibility is that the impact of inflation upon growth exhibits non-linearities: for example, it might be strong for comparatively high rates of inflation, and much weaker, to the point of being hard to detect, at lower inflation rates. In order to control for this possibility, Fischer (1993, cit.) re-estimated the basic regressions by splitting the overall dataset into three subsets, corresponding to countries with inflation rates of 15% or less, between 15% and 40%, and above 40%. Evidence suggests that the impact of inflation on growth is indeed non-linear, but that, contrary to what might be expected, the effect weakens as the level of inflation rises. In particular, the impact on output growth of a percentage point increase in inflation in the low-inflation group, at -0.13 percentage point, is 60% greater than in the middle group, and is almost seven times greater than in the high-inflation group.

Such a negative association continues to hold if inflation is replaced with other macroeconomic variables which proxy for it, in order to take into account the joint determination of inflation and output within a macroeconomic context. One of these variables is past inflation. As has been extensively documented, over a large part of the post-Second World War era inflation rates in many countries exhibited, in general, a remarkable persistence, in the sense that the deviation of inflation from its average in one period was a good indicator of deviations in subsequent periods. Such characteristics of post-Second World War inflation are largely due to the significant inflation fluctuations associated with the Great Inflation of the 1970s in many countries and the subsequent gradual stabilisation. However, these characteristics have disappeared in recent years in countries and economic areas characterised - like the euro area - by monetary regimes clearly oriented towards price stability.14

This means that, over the entire post-Second World War period, past inflation represents a good proxy – technically, a so-called instrument – for current inflation. As many studies have shown, substituting past inflation for current inflation produces qualitatively the same results, with inflation and growth being, again, significantly negatively correlated. In the spirit of the quantity theory of money, replacing inflation with the rate of growth of monetary aggregates produces, once again, the same results qualitatively,<sup>15</sup> with a ten percentange point increase in the rate of money growth associated with a decrease in output growth by 0.2 percentage point.

To sum up, the cross-country literature on the relationship between inflation and output growth clearly suggests a negative impact of higher inflation on growth, with high-inflation countries exhibiting systematically lower growth.

#### TIME SERIES ANALYSES

While cross-country panels of data give an indication of how institutional differences across economies' monetary arrangements can have an impact on their relative growth performance, time series analyses are useful to gauge the extent to which growth and inflation co-move over time.

The most immediate approach to such an analysis is to compare shifts in the trend components of inflation and output growth.<sup>16</sup> Chart 1 plots smoothed series of data on CPI inflation and real GDP growth for a number of economies over the post-Second World War period constructed in order to extract their low-frequency – i.e. very slowly-moving –

15 See Barro (1996, cit.).

<sup>14</sup> See Benati, L. (2008), "Investigating Inflation Persistence Across Monetary Regimes", Quarterly Journal of Economics, forthcoming, also available as ECB Working Paper no 851, January 2008.

<sup>16</sup> The analysis of Clark, P. K. (1982), "Inflation and the Productivity Decline", American Economic Review, 72(2), 149-154, provides an early example of this approach applied to productivity growth, as opposed to output growth. In particular, Clark suggested that the productivity slowdown of the 1970s had been due to the Great Inflation. A more recent analysis in the spirit of Clark can be found in Sbordone, A. and Kuttner, K. (1994), "Does Inflation Reduce Productivity?", Federal Reserve Bank of Chicago Economic Perspectives, November/ December.

components.<sup>17</sup> Such a low-frequency statistical component of the data considered is indicative of the trend underlying and driving the respective variable over sufficiently long periods of time. A remarkably strong negative correlation between the low-frequency components of the two series is clearly apparent, with fluctuations in trend inflation having been consistently associated with corresponding fluctuations in trend output growth in the opposite direction for all countries.

At first sight, a possible explanation for this evidence could invoke an accidental preponderance of supply shocks over the sample period. By causing both an increase in inflation and a decrease in output growth, a negative supply shock – such as an increase in the price of oil - would induce a negative correlation between the two variables at any frequency, and so also at the low frequency associated with fluctuations in the trend components. If this were the key explanation, one would also expect to detect a difference between the 1970s a period undoubtedly dominated by two large negative oil shocks - and the previous and subsequent periods.<sup>18</sup> However, the fact that such a correlation remained remarkably stable over the entire post-Second World War era - as is particularly apparent in the case of the euro area, Sweden and Switzerland after the mid-1980s, and the United States and Canada before and after the Great Inflation - suggests that this is most likely not the key explanation for the evidence reported in Chart 1. In contrast, the relationship identified in the chart most likely reflects deep structural features of the economy.

Indeed, a number of studies<sup>19</sup> have further refined analyses along these lines by looking for evidence of the predictive power of one variable onto another. The intuition behind this approach is that a measure of such a predictive power (or lack thereof) provides an indication of the likely direction of causality. Results from these analyses point, once again, towards an empirical validation of the principle that higher inflation exerts a detrimental effect on growth.

Another interesting approach is to focus on inflation crises, which can be defined as episodes in which inflation temporarily surges to levels in excess of a certain threshold, and then eases back to more normal levels.<sup>20</sup> Empirical evidence, which is discussed more extensively in Box 2, suggests such episodes to be characterised by a very consistent pattern, with the inflation crisis being accompanied by a systematic and statistically significant fall in output growth which is below average, while the end of the crisis is associated with an aboveaverage growth upsurge.

- 17 Low-frequency components have been extracted via the statistical filter described in Christiano, L. J. and Fitzgerald, T. (2003), "The Band-Pass Filter", International Economic Review, 44(2), pp. 435-65. Following established conventions in business-cycle analysis, the low-frequency components of the two series have been defined as those associated with cycles with periods of longer than eight years (see, for example, Stock, J. and Watson, M. (1999), "Business Cycle Fluctuations in U.S. Macroeconomic Time Series", in Taylor, J. B. and Woodford, M., eds., Handbook of Macroeconomics, Amsterdam, North Holland).
- 18 This point was first made, within the context of multi-country panel studies, by Fischer, S. (1993), cit..
- 19 This is typically performed via so-called Granger-causality tests. See, for example, Sbordone, A. and Kuttner, K. (1994, cit.), and Andres, J. and Hernando, I. (1999), "Does Inflation Harm Economic Growth? Evidence from the OECD", in Feldstein, M., ed., The Costs and Benefits of Price Stability, The University of Chicago Press, 315-41. Sbordone and Kuttner (1994) find that, within a bivariate context, inflation has a marginal predictive power for productivity growth once controlling for past productivity growth, while the opposite is not true. Andres and Hernando (1999) find that inflation exhibits the same property towards income within a panel of OECD countries.
- 20 This approach was first proposed in Bruno, M. and Easterly, W. (1998), "Inflation Crises and Long-Run Growth", Journal of Monetary Economics, 41, 3-26.



Price stability and growth

#### Box 2

#### **EVIDENCE FROM INFLATION CRISES**

Bruno and Easterly (1998, cit.) defined as inflation crises episodes in which inflation increased temporarily beyond 40% per year for at least two years, and then fell back below such a threshold. The application of this criterion selected 41 inflation crises in 31 countries over the 1961-94 period. Based on either per capita growth or the deviation of per capita growth from the world average, the pattern identified was extremely strong, with an average fall in growth by 2.4 percentage points from the pre-crisis to the crisis period, and a subsequent increase in the post-crisis period by 3.3 percentage points, thus broadly compensating for the temporary output shortfall. These results provide clear evidence that an increase in inflation is associated with a fall in macroeconomic activity.

These results were robust to several changes in the basic specification. It could be reasonably argued, for example, that crises of different durations might be associated with different patterns of output growth shortfalls and recovery. In order to check for this, the overall dataset was split into two, separating countries with a duration of the inflation crisis below the group median (equal to six years) from countries with a duration above the median, with 18 and 23 crises in the two groups, respectively (six crises lasted exactly six years). The decrease in the deviation of the rate of growth of per capita output from the world average was equal to 1.9 and 2.6 percentage points in the two groups, respectively, although this difference was not statistically significant, thus pointing towards a clear robustness of the basic results.

A more sophisticated approach is based on vector autoregressions (VARs), which model the joint dynamics of time-dated macroeconomic indicators in terms of their past evolution. Since the beginning of the 1980s, VARs have become increasingly prominent within macroeconomic research as they allow, first, to effectively capture, in a parsimonious way, the dynamics of a set of macroeconomic variables; and, second, to identify the impact of structural shocks on the variables of interest, by imposing a limited number of assumptions suggested by economic theory.

Box 3 discusses the results of an analysis of the long-run impact of permanent inflation shocks on trend output growth in what would become the euro area, before the start of Economic and Monetary Union. Restricting the analysis to a pre-EMU period reflects the empirical finding discussed in Box 3: since January 1999 euro area inflation – as should be expected under a monetary regime oriented towards price stability – has not exhibited permanent shifts, so that EMU data are not informative for the issue at hand.

Evidence suggests that a permanent increase in inflation by 1% causes a decrease in trend output growth of around 0.1% to 0.2%. In other words, these estimates imply that, were trend inflation to rise in the euro area by two percentage points, trend output growth would decrease by between 0.2 and 0.4 percentage point per annum, thus implying that, in ten years' time, the level of GDP would be between 2.0% and 4.1% lower than it would have been in the absence of such a shift.

84 Monthly Bulletin May 2008

Price stability and growth

#### IDENTIFYING THE IMPACT OF PERMANENT INFLATION SHOCKS ON TREND OUTPUT GROWTH

A recent strand of literature has documented how post-Second World War inflation appears to contain a sizeable permanent component,<sup>1</sup> in the sense that, over this period, a non-negligible fraction of inflationary shocks did not ultimately dissipate, but rather remained in the system, thus having an impact on trend inflation. The euro area is a case in point. As shown by Benati (2008),<sup>2</sup> euro area inflation fluctuations were largely permanent before the start of EMU, in January 1999, whereas they have been almost entirely transitory since then (to put it differently, under EMU euro area inflation has exhibited a very strong mean reversion). Econometric estimates of the size of the permanent component of euro area HICP inflation,<sup>3</sup> for example, suggest that before January 1999 permanent shocks (i.e. shocks having an impact on trend inflation) had accounted for 47.3% of the quarter-on-quarter variation in inflation. The corresponding figure for output growth – i.e. the fraction of shocks to growth which has an impact on its trend – is 9.1%. This is in line with anecdotal evidence: in the 1970s the simple means of HICP inflation and output growth had been equal to 8.8% and 3.6% respectively, while in the 1990s they had been equal to 2.5% and 2.1% respectively, thus clearly suggesting significant shifts in the trend components of the two series.

This suggests that, if inflation were to really negatively affect output growth, it should be possible to detect its effect by analysing the long-run impact on trend output growth of permanent inflation shocks in pre-EMU euro area data. Permanent inflation shocks are identified within a VAR framework via the assumption that they are the only shocks to affect trend inflation.<sup>4</sup> The impact on trend output growth of a 100 basis point permanent inflation shock is estimated to be between -11 basis points (based on the HICP) and -19 basis points (based on the GDP deflator), in line with Barro's estimate for the low-inflation group of countries discussed in Box 1, equal to -13 basis points.

Box 3

- 3 Estimates are based on Cochrane's variance ratio estimator see Cochrane, J. H. (1988), "How Big Is the Random Walk in GNP?", Journal of Political Economy, 96(5), 893-920.
- 4 This is the assumption used in Roberts, J. M. (1993), "The Sources of Business Cycles: A Monetarist Interpretation", International Economic Review, 34(4), 923-934, and in Bullard, J. and Keating, J. (1995), "The Long-Run Relationship Between Inflation and Output in Post-War Economics", Journal of Monetary Economics, 36, pp. 477-496.

#### 4 IMPLICATIONS FOR THE DESIGN OF MONETARY INSTITUTIONS

If the position entertained by many scholars and analysts in the 1960s were true – that permanently higher inflation could effectively be traded off for permanently higher real economic activity – the implications for monetary policy would be simple. Society would, first, reliably identify the set of feasible combinations of inflation and real activity, and then select and implement the preferred one. However, the implications of the position associated with pure monetary neutrality – i.e. a lack of a long-run trade-off between inflation and real activity – which emerged as the failures of the macroeconomic experiments of the 1960s and the 1970s became increasingly apparent, are radically different. And the contemporary consensus on the detrimental impact of inflation on real economic activity – grounded on the evidence collected on longer and more accurate spans of data – makes this position even stronger. The case for a central bank to be explicitly

<sup>1</sup> For the United States, for example, see Stock, J. and Watson, M. (2007), "Why Has U.S. Inflation Become Harder to Forecast?", Journal of Money, Credit, and Banking, 39(1), pp. 3-33.

<sup>2</sup> See, for example, Benati, L. (2008, cit.).

mandated to maintaining price stability is now significantly reinforced relative to the case that could be built on the long-term neutrality of monetary policy. It has become clear that, in its pursuit of price stability, monetary policy not only minimises the costs associated with inflation, but also, crucially, helps to maximise the economy's long-run productive potential.

While the detrimental consequences of inflation would seem to argue in favour of a long-term inflation rate as close to zero as possible, in identifying a precise numerical definition of price stability a central bank is faced with important considerations.<sup>21</sup> First, a protracted period of deflation at a time of faltering growth may constrain a central bank in the conduct of its monetary policy, since nominal interest rates cannot be reduced below zero. Indeed, any attempt to bring the nominal interest rate below zero would fail, as the public would prefer to hold cash rather than to lend or hold deposits at a negative rate. In a deflationary situation, the existence of a lower bound for nominal interest rates limits the room for manoeuvre of the central bank to reduce real interest rates in order to stimulate demand and counteract deflationary pressures.

Second, for various reasons, consumer price indices may be subject to measurement errors. Such errors may arise if prices are not adequately adjusted for changes in quality or if relevant transactions remain systematically out of the sample used to construct the index. However, in the case of the HICP the possibility of there being a measurement bias is of minor importance for setting a safety margin for inflation rates above zero when viewed against considerations relating to the risks of deflation.

Third, movements of relative prices are a key element for the efficient allocation of resources in a market economy. The economic adjustment of relative prices to shocks could become too sluggish if wages and prices were subject to downward nominal rigidities, i.e. a resistance to accept nominal reductions in prices and wages. In this respect, it has been argued that some inflation may actually "grease" the adjustment of relative prices and thus also the real adjustment of the economy to various shocks.

Fourth, in principle inflation differentials across regions are and should be considered a normal feature of any monetary union. They are an integral part of the adjustment mechanism resulting from demand and supply shocks in the regions' economies. However, inflation differentials may also have a structural component in every currency union, for example owing to differences in income levels and an ongoing catching-up process in terms of standards of living. Given these unavoidable inflation differences, it has been argued that monetary policy should aim to achieve, over the medium term, an inflation rate for the euro area as a whole that is high enough to prevent regions with lower inflation rates from facing significant costs of downward nominal rigidities or entering periods of a protracted decline in prices.

The ECB's decision that, in the pursuit of price stability – defined as a year-on-year increase in the HICP for the euro area of below 2% – it will aim to maintain an inflation rate close to 2% in the medium term reflects a balance of all the above-mentioned considerations.

Following the end of the Great Inflation, over the last two decades the new consensus on the detrimental impact of inflation on macroeconomic activity has been enshrined into law within a growing number of countries. Whatever the specific technical differences between the various existing stability-oriented monetary regimes - Economic and Monetary Union, inflation-targeting regimes, the post-1999 Swiss new monetary policy concept, and Japan's monetary regime - they all share the fundamental principle that, because of the previously discussed reasons, inflation ought to be kept low and stable. In this respect, the Great Inflation did leave at least one positive legacy. By providing a stark practical demonstration of

<sup>21</sup> For a detailed description of the reasons behind the ECB's definition of price stability, see the article entitled "The outcome of the ECB's evaluation of its monetary policy strategy" in the June 2003 issue of the Monthly Bulletin.

Price stability and growth

the corrosive effects of inflation, it convinced legislators to encode the lessons learned from that experience into law in order to prevent such an episode from ever happening again, by granting central banks greater independence and assigning them the task of keeping inflation under control. Hence, the ECB's mandate with its primary objective of maintaining price stability and its complete independence from any other political or institutional body appears as especially appropriate for the successful pursuit of price stability.

As history has repeatedly shown, periods of high inflation have been systematically associated with sizeable redistributions of both income and wealth, thus increasing social tension to the point of sometimes triggering social unrest and political turbulence. By preserving price stability, monetary policy can therefore make its best contribution not only to sustainable economic growth, job creation and prosperity but also - and crucially - to social stability.

#### CONCLUSION 5

The contemporary consensus among policymakers and academics alike is that inflation exerts a systematic detrimental effect on macroeconomic performance. By making it difficult for economic agents to disentangle variations in relative prices from changes in the general price level, high and variable inflation causes a systematic misallocation of resources, thus negatively affecting the productivity of the factors of production. Furthermore, owing to both the macroeconomic uncertainty generated by the variability of inflation and the fact that the tax system is not indexed, inflation causes, through several channels, a systematic reduction in the rate of growth of capital accumulation, thus ultimately leaving the economy with a lower capital stock than it would otherwise.

Empirical evidence confirms the existence of both effects, and suggests their magnitude to be, for low-inflation countries, quite sizeable,

with a 100 basis point permanent increase in inflation being associated with a 10 to 30 basis point decrease in trend output growth. This has fundamental implications for the design of monetary institutions. In particular, the fact that any inflation rate in excess of an extremely small amount is detrimental to macroeconomic performance advocates the need to keep inflation very low and stable.





### THE EUROSYSTEM'S OPEN MARKET OPERATIONS DURING THE RECENT PERIOD OF FINANCIAL MARKET VOLATILITY

The recent period of financial market volatility, which spilled over into the euro area money market in August 2007, marked an important test for the Eurosystem's operational framework for monetary policy implementation. This article provides a chronological overview of the Eurosystem's open market operations in the period from August 2007 to March 2008. It then describes the impact of measures taken as regards the functioning of the money market, taking into account the ECB's fundamental goal of ensuring that the very short-term interbank money market rates are close to the policy rate decided by the ECB's Governing Council. The article concludes that the Eurosystem's open market operations were broadly successful in maintaining the average level of very short-term interbank money market rates close to the policy rate in this period of greater than normal volatility, in particular at the beginning of the financial market turmoil and in the period approaching the year-end. Overall, the Eurosystem's operational framework has proven fairly resilient to the financial market turmoil and no structural changes were needed to cope with the greater volatility.

#### I INTRODUCTION

The period of financial market volatility that started in August 2007 constitutes an important test for the Eurosystem's operational framework for monetary policy implementation. This framework comprises three categories of instruments: open market operations, minimum reserve requirements and standing facilities.<sup>1</sup> While open market operations comprise several different operations, the Eurosystem has so far conducted two types: refinancing operations, through which liquidity (i.e. banks' current account holdings with the Eurosystem) is temporarily lent to counterparties against eligible collateral,<sup>2</sup> and the collection of fixedterm deposits for fine-tuning purposes, which are used to temporarily absorb liquidity from counterparties. Counterparties need a certain amount of liquidity to fulfil their reserve requirements and to satisfy liquidity needs arising from autonomous liquidity factors, which comprise items on the Eurosystem's balance sheet not related to monetary policy instruments. The largest autonomous factor is banknotes in circulation.

The Eurosystem offers two standing facilities which can be accessed at the discretion of individual banks, namely a deposit facility and a marginal lending facility. At their own initiative, banks can place liquidity in the deposit facility on an overnight basis at a rate – decided by the Governing Council – which, since April 1999, has been one percentage point below the policy rate (the minimum bid rate in main refinancing operations), while they can borrow overnight liquidity against eligible collateral via the marginal lending facility at a rate which is one percentage point above the policy rate.

At the same time, banks must hold an amount of liquidity corresponding to their reserve requirements (calculated as a ratio of their short-term liabilities). This requirement needs to be complied with on average over each reserve maintenance period. These periods vary in length but are approximately one month long.

1 See also the ECB Monthly Bulletin articles: "The Eurosystem's experience with forecasting autonomous factors and excess reserves" (January 2008); "The Eurosystem's experience with fine-tuning operations at the end of the reserve maintenance period" (November 2006); "Initial experience with the changes to the Eurosystem's operational framework for monetary policy implementation" (February 2005); and "Changes to the Eurosystem's operational framework for monetary policy implementation" (August 2003); as well as Box 1 entitled "Publication of the benchmark allotment in the main refinancing operations" (April 2004). More generally, see (ECB) "General documentation on the Eurosystem monetary policy instruments and procedures", amended on 20 September 2007.

The Eurosystem accepts as eligible collateral a broad range of assets, including government bonds, corporate bonds, covered bonds, uncovered bank bonds, asset-backed securities and credit claims. The different types of collateral are subject to different haircuts. Overall, the Eurosystem's collateral framework has allowed the liquidity funding risk of counterparties during the financial turmoil to be mitigated by facilitating their access to central bank credit.

#### ARTICLES

The Eurosystem's open market operations during the recent period of financial market volatility With these instruments, the Eurosystem implements the monetary policy decisions of the Governing Council of the ECB. That is, it manages the liquidity situation in the euro area money market with the aim of steering very short-term interbank rates as close as possible to the policy rate decided by the Governing Council. In order to continue meeting this objective during the recent period of financial market volatility, which brought about a change in the pattern of banks' demand for liquidity, the Eurosystem has adjusted the timing and maturity of its open market operations, but has made no changes to the other categories of instruments of its operational framework.

This article reviews how the Eurosystem made use of open market operations in the recent period of financial market volatility. Section 2 describes how the Eurosystem uses open market operations, against the background of standing facilities and reserve requirements, to implement monetary policy, i.e. to meet the objective of steering very short-term interbank money market rates close to the policy rate decided by the Governing Council. Section 3 examines the spillover of the turmoil into the euro area money market and the implications for banks' demand for liquidity, and Section 4 describes and assesses the Eurosystem's response to these events via the conduct of open market operations. Section 5 concludes.

#### 2 HOW THE EUROSYSTEM IMPLEMENTS MONETARY POLICY

The Eurosystem makes a clear distinction between, on the one hand, decisions by the Governing Council of the ECB on the monetary policy stance and, on the other hand, the implementation of these decisions through monetary policy instruments (see Box 1).<sup>3</sup> In the context of its monetary policy strategy and in order to fulfil its mandate, the Governing Council regularly conducts an assessment of risks to price stability on the basis of its economic and monetary analyses. Using the information derived from these analyses, it sets the levels of key ECB interest rates that will serve to maintain price stability over the medium term. The ECB's Executive Board implements these decisions. This clear separation between the decision on the monetary policy stance and its implementation, together with the transparency-oriented communication strategy of the ECB, reduces the risk that economic agents may mistakenly perceive volatility in short-term interbank money market rates, triggered by temporary and unpredictable fluctuations in liquidity demand and supply, to be monetary policy signals of the Eurosystem. This separation has been particularly important during the recent period of financial market volatility, when short-term money market rates were occasionally very volatile.

This separation was reinforced in 2004, when changes to the operational framework were implemented. Since then, there has been no direct interaction between changes in key ECB interest rates and movements in very short-term interest rates during a reserve maintenance period, because any change in official rates only becomes effective at the start of the next maintenance period. However, the Governing Council is free to change the ECB's key interest rates at any time.

The Eurosystem's open market operations during the recent period of financial market volatility

#### Box I

#### SEPARATION BETWEEN MONETARY POLICY DECISIONS AND LIQUIDITY OPERATIONS

The ECB has maintained a clear distinction between, on the one hand, interest rate decisions taken to maintain price stability (i.e. the determination of the monetary policy stance) and, on the other hand, liquidity decisions taken in the course of implementing this stance.

In "normal" times, maintaining this distinction helps to ensure that the intentions of monetary policy-makers are not misinterpreted by market participants and the public. It serves to isolate signals of the monetary policy stance from the impact on very short-term interest rates of the (sometimes inevitable) noise introduced by liquidity movements. In particular, errors in forecasting autonomous factors (such as the demand for banknotes) are inevitable, with the result that allotment decisions in the regular Eurosystem refinancing operations do not precisely fulfil counterparties' liquidity needs. The operational framework for the implementation of monetary policy introduced by the Eurosystem in 1999 has proved very successful in maintaining this distinction. It has been able to clearly signal the monetary policy stance, thereby avoiding uncertainty and misinterpretation that could have created volatility in the money market, and may then have been potentially transmitted to the broader economy.

At times of market stress, maintaining the distinction between decisions on the monetary policy stance and liquidity operations may be even more important, especially if the tensions strongly affect the money market (as has been the case with the recent financial market turmoil). In such circumstances, liquidity management may need to be more active in order to contribute to the functioning of the money market and steer very short-term money market rates close to the minimum bid rate of the Eurosystem's main refinancing operations. If there were no clear separation between monetary policy decisions and liquidity management decisions, the potential for the market to misunderstand monetary policy intentions would be greatly exacerbated, to the detriment of the effective signalling and transmission of the monetary policy stance.

While monetary policy decisions and liquidity operations should be kept separate in order to ensure clarity in the signalling of the monetary policy stance and its effective transmission, decisions made in these two spheres naturally reinforce each other.

On the one hand, the orderly functioning of the money market is of the utmost importance for the transmission of the key policy rates to the economy in general and the price level in particular. Recent experience demonstrates that disturbances in the money market may well interfere with policy transmission. Central banks should therefore contribute to the smooth functioning of financial markets in general, and money markets in particular. As described in the main text, open market operations can contribute in this regard. However, it is also important to recognise that there are limits to the ability of central banks to ensure that markets act in a particular manner. Ultimately, the smooth functioning of the money market relies mainly on the behaviour of and trust among market participants.

On the other hand, conditions in the money market influence wider financing conditions and thus affect household and corporate spending decisions and, ultimately, the evolution of the price level. As such, money market conditions need to be taken into account when reaching monetary policy decisions on the appropriate level of interest rates, as part of the comprehensive assessment made by the Governing Council in its regular economic and monetary analyses. The behaviour of the very short-term interest rates in "normal" times is well understood. Under normal circumstances the two standing facility rates constitute a corridor and thereby limit the volatility of the overnight rate. Furthermore, the ability to average reserve holdings over a maintenance period means that the holding of liquidity in the current account with the central bank on one day is a (quasi-) perfect substitute for holding liquidity on another day during the maintenance period. This facilitates stabilisation of very short-term interest rates because day-to-day fluctuations of liquidity conditions can be smoothed out over the period. On the last day of a maintenance period, when averaging is no longer possible, liquidity conditions will determine the overnight rate. To the extent that "balanced liquidity conditions" are achieved (i.e. an equal probability of a shortage or a surplus of liquidity, which would need to be offset via standing facilities at the end of the maintenance period and thus the probabilities of recourse to the marginal lending facility and the deposit facility are equal), the overnight rate will be maintained close to the minimum bid rate on that day. This acts as an anchor to the overnight rate on preceding days, thereby delivering very short-term interest rates close to the policy rate throughout the maintenance period.

To date, in its one-week main refinancing operations (MROs) the ECB has normally allotted an amount of liquidity to the banking system which is very close to the benchmark amount.<sup>4</sup> This is defined as the allotment amount that allows counterparties to smoothly fulfil their reserve requirements by maintaining, in aggregate terms, the same level of current account holdings with the central bank on each day of the reserve maintenance period. The benchmark amount takes into account all influences on liquidity conditions which are known at the time of allotment, i.e. the liquidity already supplied via other open market operations and the ECB's forecasts of autonomous factors and of excess reserves - the latter denoting banks' demand for reserve holdings that are larger than the minimum reserve requirements. Before the start of the financial market turmoil, allotting close to the benchmark amount did normally result in balanced liquidity conditions in the very short-term money market with an overnight rate close to the minimum bid rate.

Furthermore, as the ECB normally aims to establish balanced liquidity conditions, since October 2004 it has normally conducted a fine-tuning operation on the last day of the maintenance period. This approach supports ex ante expectations in the market that the overnight rate will be at the midpoint of the corridor formed by the standing facility rates (i.e. the minimum bid rate) on the last day of the period, which, as mentioned above, anchors the EONIA<sup>5</sup> close to the policy rate earlier in the period.

Longer-term refinancing operations (LTROs) provide liquidity normally for a three-month period in order to cater for counterparties' need to obtain refinancing from the Eurosystem at a maturity longer than one week. In these operations the Eurosystem does not, as a rule, intend to send signals to the market, therefore, it normally acts as a rate taker. Accordingly, LTROs are usually executed in the form of variable rate tenders with pre-announced allotment amounts. From time to time, the ECB indicates the operation volume to be allotted in forthcoming tenders. The Eurosystem may also execute LTROs through fixed rate tenders or without pre-announcing the allotment amount.

Finally, with respect to the size of the Eurosystem's refinancing operations, the outstanding amount averaged around  $\notin$ 450 billion in 2007, corresponding to the liquidity needs arising almost entirely from reserve requirements and the net liquidity-absorbing effect of autonomous factors. Owing to structural features, these two components are both much larger than in other currency areas, implying that the Eurosystem's open market operations are far larger than those of the other main central banks.

<sup>4</sup> See Box 1 entitled "Publication of the benchmark allotment in the main refinancing operations", in the April 2004 issue of the Monthly Bulletin.

<sup>5</sup> The widely used reference rate for overnight euro deposits is the "euro overnight index average" – EONIA – computed as a weighted average of all overnight unsecured lending transactions in the interbank market initiated within the euro area by a panel of 43 contributing banks.

The Eurosystem's open market operations during the recent period of financial market volatility

#### 3 FINANCIAL MARKET VOLATILITY AND BANKS' DEMAND FOR LIQUIDITY

The financial market turmoil, which started in the US sub-prime mortgage market, spilled over into the euro area money market on 9 August 2007. Due to the adverse developments in the United States, banks faced the risk of having to provide funding to structured investment vehicles and conduits that had invested in mortgage-backed securities or to reabsorb them onto their balance sheets. Consequently, they became increasingly concerned about their liquidity positions and balance sheets. Furthermore, as the number of banks reporting exposures to the US sub-prime mortgage market continued to grow, banks became increasingly unwilling to provide funds to counterparties in the interbank market due to concerns about their creditworthiness. As many of the initial estimates of banks' exposures and write-down needs subsequently had to be revised upwards, a climate of general distrust and uncertainty prevailed. This caused a spiralling of banks' perceptions of credit risk (i.e. the risk of losses associated with default) and liquidity funding risk (i.e. the risk of being unable to raise the liquidity needed to service payments, or only being able to do so



at a cost that is disproportionate to banks' credit standings). In the early days of the turmoil, this led to hoarding of liquidity and progressively weaker interbank money market activity, which was only partly corrected by subsequent central bank intervention. In certain periods, interbank lending on an unsecured basis was largely discontinued, in particular lending at longer maturities. A possible indicator of difficulties in the term money market is the spread between the three-month deposit and swap rates (see Chart 1 and Box 2).

#### Box 2

#### SPREAD BETWEEN DEPOSIT AND SWAP RATES AS AN INDICATOR OF MONEY MARKET TENSIONS

With respect to the interbank money market, the following observations for the determinants of the deposit rate (represented in this box by the three-month Euribor) and the EONIA swap rate of the same maturity must be made in order to interpret the spread between the two.

First, the deposit rate is the price for irrevocably obtaining credit and liquidity over a given period of time, without the provision of collateral. Hence, this rate contains a counterparty credit risk premium, a liquidity risk premium and a term premium related to the uncertainty about the future path of short-term interest rates. Second, the EONIA swap rate is the fixed rate that banks are willing to pay in exchange for receiving the average EONIA as calculated over the maturity of the contract. Therefore, the swap rate reflects the same risk premia that are priced into the expected overnight deposit rates (for which the EONIA is a reference rate), which likewise comprise both a liquidity and a credit element. However, the average risk of lending via short-term overnight deposits is negligible compared with lending via long-term fixed deposits, because the former can be adapted to new circumstances each day. Therefore, when there is an increase in the perceived level of credit and liquidity risk among banks, the EONIA swap rate reacts much less than the deposit rate. The spread between the two rates can therefore be used as an indicator for the overall liquidity and credit risk premia in the money market.<sup>1</sup>

Nevertheless, it is difficult to say whether an increase in the spread reflects an increase in liquidity risk or credit risk, which are closely related and difficult to disentangle. However, the fact that the two risks tend to increase with one another, and given the anecdotal evidence that some banks seem to have entirely lost their access to liquidity in the unsecured money market at maturities beyond a few weeks, suggests that the spread was to some extent driven by liquidity risk developments.

1 A further difference exists in that Euribor rates are fixed at 11 a.m., while EONIA swap rates are collected at 6.30 p.m. The spread between the two rates, therefore, also reflects changes in the yield curve between these points in time during the day.

The elevated liquidity risk perceived by banks during the financial market turmoil had two main implications for the Eurosystem's liquidity management. First, banks increasingly relied on liquidity from the Eurosystem as they had either lost access to liquidity from the interbank market or could only access it at elevated prices. As a consequence, a significant increase was observed in the MRO and LTRO tender rates compared with the EONIA swap rates for the same maturities. Second, the pattern of banks' demand for liquidity seemed to change as banks preferred to fulfil their reserve requirements relatively early in the reserve maintenance period. By holding reserves early in the period, banks reduced their need to raise liquidity later in the maintenance period. As a consequence, the principle of the (quasi-) perfect substitutability of liquidity that normally holds true for any two days of a maintenance period in a system with averaging reserve requirements, was attenuated, and the overnight rate became more volatile.

#### 4 OPEN MARKET OPERATIONS DURING THE FINANCIAL MARKET TURMOIL

In the circumstances described above, the ECB devoted great attention to the overall

functioning of both the short and longerterm money markets. From the very first day that the financial market turmoil reached the euro area money market, the ECB conducted several additional refinancing operations, first with very short (overnight) maturities and then with longer (three-month) maturities as well. In this respect it should be borne in mind that a central bank cannot directly control the development of a spread, such as the difference between the three-month Euribor and the EONIA swap rate, as it is affected by factors outside the central bank's scope of influence, in particular the credit risk component. More generally, the ECB has always stressed that central banks cannot be expected to solve more fundamental problems specific to individual banks and credit markets. However, the liquidity risk premium reflects, at least in part, the breakdown of the money market, in particular at longer maturities, where a central bank has some leeway to enhance solvent banks' access to liquidity. The contribution of the Eurosystem during the period of financial market volatility has therefore been to continue to steer aggregate liquidity conditions in a way which supports banks' liquidity management process over time. A central bank's key contribution to countering increased liquidity risk at longer

The Eurosystem's open market operations during the recent period of financial market volatility

maturities is to support the re-establishment of the smooth functioning of the very shortterm money market and to communicate and act on its commitment to this goal over time.

#### 4.1 OVERVIEW OF THE MEASURES TAKEN

In the environment of increased liquidity risk and in response to changes in the pattern of some banks' demand for liquidity, the ECB supported banks' access to liquidity and the general functioning of the money market by adjusting (i) the distribution of the liquidity supply within the reserve maintenance period, and (ii) the way in which liquidity was allotted to the banking system.

In response to the changes in the pattern of banks' demand for liquidity during the reserve maintenance period, the ECB adjusted the distribution of the liquidity by increasing the supply at the beginning of the period and reducing it later in the period so that the average supply of liquidity remained unchanged. Indeed, before the turmoil, reserve holdings remained broadly at the level of the required reserves (Chart 2 shows holdings in the last maintenance period before the start of the financial market turmoil), whereas during the turmoil they were largely above the level of the required reserves early in the maintenance period and well below this level later in the period (see Chart 3 for holdings in the first maintenance period of the financial market turmoil).

From the technical definition of the benchmark allotment it follows that such a liquidity supply path, which is termed "frontloading", is achieved by allotting liquidity significantly above the benchmark early in the maintenance period and then gradually reducing the amounts allotted above the benchmark in later MROs.

The way in which liquidity was allotted to the banking system comprised the following actions: (i) given the absence of a precise estimation of the changes in the pattern of banks' demand, in particular at the beginning of the financial market turmoil, the ECB made more frequent use of fine-tuning operations than in "normal" times, both in order to inject more liquidity in addition to the above-benchmark allotment provided in the MROs, and to absorb excess liquidity, as needed in order to steer the EONIA close to the minimum bid rate; (ii) the average maturity of open market operations was lengthened, mainly by offering supplementary



#### Chart 3 Fulfilment of reserve requirements during the financial market turmoil





LTROS. This allowed counterparties to reduce their need for liquidity in the future, i.e. their "liquidity gaps", which are conventional liquidity risk measures; (iii) a special tender procedure with full allotment was applied on two occasions when it was deemed more efficient to leave it to the market to determine the exact allotment amount.

None of these measures mark a structural change to the Eurosystem's operational framework for monetary policy implementation. Moreover, throughout the period of financial market turmoil, the ECB communicated its liquidity policy intentions and explained its actions via press releases and statements on newswire services<sup>6</sup> as well as via its main communication channels (e.g. press conferences, speeches, the ECB Monthly Bulletin, etc.). In the same vein, the Eurosystem's ongoing contacts with market participants, which enable it to receive information on specific events and feedback on market sentiment, proved especially helpful during this time.

#### 4.2 CHRONOLOGICAL REVIEW OF THE MEASURES TAKEN

# THE DIFFICULT START: AUGUST AND SEPTEMBER 2007

When it became clear on the morning of 9 August that there was an imminent risk of gridlock in the euro area money market and the overnight rate increased to 4.60%, the ECB released a communication stating its readiness to contribute to orderly conditions in the euro area money market. A few hours later, it conducted a fine-tuning operation in which it injected liquidity with an overnight maturity into the market via a fixed rate tender with full allotment of all bids. In the days that followed, upward pressure on the overnight rate continued because counterparties were reluctant to lend liquidity and feared unexpected liquidity needs. Consequently, the ECB carried out three more fine-tuning operations, each with an overnight maturity, for progressively smaller amounts. However, unlike the first, they were conducted

through a variable rate tender procedure with a minimum bid rate. Together with the ensuing MRO with an allotment of €73.5 billion above the benchmark amount, these fine-tuning operations succeeded in stabilising very shortterm interest rates for some time. In subsequent MROs, the ECB gradually reduced the allotments from historically high levels above the benchmark so that banks' reserve surpluses were reabsorbed by the end of the maintenance period. A drawback of this approach to supplying liquidity was that a large daily reserve deficit the difference between current account holdings and required reserves - of nearly €60 billion occurred for around one week, which reduced the buffer normally provided by the minimum reserve system and led to a sharp increase in the EONIA, notably on the last trading day in August (i.e. the end-of-month reporting day when banks usually "window dress" their balance sheets). After the last MRO of the maintenance period the overnight rate is normally more responsive to differences between the actual allotment and the benchmark amount. The allotment of €5 billion above the benchmark was very ample on a historical scale. However, the overnight rate increased strongly after the allotment so that the ECB conducted another liquidity-providing fine-tuning operation on the following day.

As activity in the longer-term money market remained limited, in particular for unsecured lending, on 22 August the ECB carried out a supplementary LTRO via a variable rate tender. This operation aimed to further enhance banks' access to longer-term funding and to foster market activity through the associated redistribution of the aggregate allotment among banks. Both factors were intended to improve the functioning of the very short-term money market and thereby the ability to steer the EONIA. This supplementary LTRO did not affect the principle that the total liquidity provided should be left unchanged, as subsequent MROs were accordingly reduced. Thus, in effect the ECB altered the maturity composition of its

<sup>6</sup> For details, see http://www.ecb.europa.eu/mopo/implement/omo/ html/communication.en.html.

The Eurosystem's open market operations during the recent period of financial market volatility



outstanding refinancing operations, giving greater weight to three-month operations.

Overall, this period of high tensions was characterised by exceptionally active use of open market operations, which were effective in steering the average level of the EONIA (4.05%), although they could not avoid a comparatively high level of volatility. Chart 4 summarises the ECB's open market operations and the evolution of reserve holdings and of the EONIA during the first reserve maintenance period of the financial market turmoil (8 August-11 September 2007).

the following maintenance period In September-9 October 2007), the ECB (12)applied a broadly similar approach, allotting significant excess liquidity at the beginning of the maintenance period which was then gradually reabsorbed over the following weeks by reducing the allotment above the benchmark. Once again, the average level of the EONIA (3.93%) was close to the policy rate although the EONIA continued to be rather volatile, partly because it took time to quantify the change in the pattern of banks' demand.

Notwithstanding additional the liquidity provided in August with a three-month maturity, liquidity in the longer-term segments of the money market continued to be limited, and the ECB conducted another supplementary LTRO. In this operation, no allotment amount was preset and it was carried out as a variable rate tender. This allowed the ECB to take into account additional information regarding counterparties' demand as contained in the bid schedule, i.e. the rates and quantities of banks' bids. The bid schedule revealed that, overall, the banking system was still willing to pay a large premium for refinancing from the Eurosystem with a three-month maturity, with the weighted average rate (4.52%) being much higher than in the LTRO conducted before the start of the turmoil (4.20%).

# SIGNS OF IMPROVEMENT: OCTOBER AND NOVEMBER 2007

The subsequent maintenance period (10 October-13 November 2007, see Chart 5) marked a return to quasi-normality regarding the overnight rate volatility and liquidity policy, as demand for liquidity was more stable owing to some improvements in the general financial market conditions and probably also to the reinforced liquidity supply policy of the ECB that was announced on 8 October, before the start of the maintenance period. In the first MRO of the period, the ECB allotted an amount substantially above the benchmark amount. When this turned out to be too ample and interest rates fell significantly, some of the excess liquidity was absorbed in a fine-tuning operation and very short-term interest rates stabilised at a level close to 4.00% thereafter. In subsequent MROs, in which the allotment amount above the benchmark was progressively reduced, the ECB chose to provide a level of liquidity that was slightly on what the ECB perceived to be the ample side, in order to avoid a peak in very short-term market rates. The issued communication and this liquidity policy succeeded remarkably in stabilising very short-term rates close to the minimum bid rate.

following maintenance In the period (14 November-11 December 2007) renewed upward pressure on very short-term interest rates emerged ahead of the end of November and the year-end, when banks were particularly anxious to secure their liquidity holdings. In the light of this, the ECB increased the amount allotted above the benchmark, and thereby brought the overnight rate back to levels close to the minimum bid rate in the days that followed. The final allotment of the maintenance period was followed by a relatively sharp decline in the overnight rate, and the ECB partially absorbed surplus liquidity in a fine-tuning operation while still maintaining a surplus which was then absorbed through a fine-tuning operation



#### Source: ECB.

Notes: The daily reserve surplus/deficit is the difference between the current account holdings of banks and the minimum reserve requirements for each day; the average daily reserve surplus/deficit is the average of the daily reserve surpluses/deficits that have occurred since the beginning of the maintenance period. FTO stands for "fine-tuning operation".

The Eurosystem's open market operations during the recent period of financial market volatility

on the last day of the maintenance period. This stabilised very short-term interest rates at levels closer to the minimum bid rate, albeit still somewhat below it.

Finally, in order to further consolidate the progress achieved regarding the normalisation of the euro area money market, the ECB decided to renew the two outstanding supplementary LTROs, which matured on 23 November and 12 December respectively, in both cases through variable rate tenders with a preset amount of  $\in 60$  billion.

#### THE YEAR-END TENSIONS: DECEMBER 2007

In view of the approaching year-end, tensions re-emerged and a more active approach was once again required in the maintenance period of 12 December 2007-15 January 2008 (see Chart 6). To reassure market participants regarding its commitment to the smooth functioning of the money market, the ECB announced on 30 November that it would, exceptionally, lengthen the maturity of the penultimate MRO of the year to two weeks, thereby covering Christmas and the year-end.

Notwithstanding this announcement and despite the ample allotment in the first MRO of the maintenance period, and in contrast to the pattern in previous years, the premium that banks had to pay in advance for liquidity on the last day of the year did not decline as the end of the year approached. For instance, the two-week Euribor was quoted on 17 December the first day on which it covered the end of the year – at a level of 4.95%, i.e. close to the rate of the marginal lending facility. This therefore bore witness to the very tense money market conditions. As a further measure, the ECB consequently announced that in the exceptional two-week MRO it would satisfy all bids at or above the weighted average rate of the previous



Notes: The daily reserve surplus/deficit is the difference between the current account holdings of banks and the minimum reserve requirements for each day; the average daily reserve surplus/deficit is the average of the daily reserve surpluses/deficits that have occurred since the beginning of the maintenance period. FTO stands for "fine-tuning operation"

MRO (4.21%). As a result, the ECB allotted  $\in$  348.6 billion, which was  $\in$  168.1 billion above the benchmark amount. Large amounts of this additional liquidity were subsequently absorbed via several fine-tuning operations, mostly with an overnight maturity. The EONIA remained somewhat below the minimum bid rate, reflecting banks' comfortable liquidity positions.

Shortly thereafter, a slight underbidding occurred in the regular LTRO. The volume of submitted bids was  $\notin 1.5$  billion lower than the pre-announced allotment amount of  $\notin 50$  billion. Again, this reflected the very comfortable liquidity situation following the allotment in the two-week MRO. Finally, despite a "negative" benchmark amount<sup>7</sup> in the last one-week MRO of the year, an amount of  $\notin 20$  billion was allotted in order to satisfy residual demand for liquidity ahead of the end of the year.

On average, the EONIA was 3.93% in this maintenance period. On the last trading day of the year it was, for the first time since 1999, somewhat below the policy rate.

Furthermore, in the context of international central bank cooperation, the ECB announced on 12 December that it would participate in joint central bank actions to address elevated pressures in US dollar short-term funding markets. Specifically, the Eurosystem would offer US dollar funding to Eurosystem counterparties against collateral eligible for Eurosystem credit operations. In two Eurosystem operations, funding of USD 10 billion was provided with a maturity of approximately one month. The two operations were conducted at a fixed rate equal to the marginal rate of the simultaneous tenders by the Federal Reserve System. While it obviously did not directly affect euro liquidity, this US dollar Term Auction Facility reduced banks' liquidity gaps in US dollars, and thereby probably also reduced the related demand for euro liquidity. The operations were renewed in January and March 2008. While international cooperation between central banks has been quite common in the field of foreign

exchange markets, this occasion marked the first multilateral central bank cooperation in the money market field, which is central to the implementation of a central bank's monetary policy.

# IN SPITE OF IMPROVEMENTS, SOME TENSIONS PERSISTED: JANUARY TO MARCH 2008

In the first maintenance period after the year-end (16 January-12 February 2008, see Chart 7), the money market situation looked broadly similar to the situation in the 10 October-13 November 2007 maintenance period. The latter period therefore served as a point of reference for determining how much above the benchmark amount would be allotted in the MROs. The EONIA was remarkably stable throughout the maintenance period at a level very close to the minimum bid rate, with the only exception being a relatively large peak at the end of January. No fine-tuning operations were necessary, apart from the regular one at the end of the maintenance period.

However, some tensions continued to prevail, as was illustrated for example by the spread between the three-month Euribor and EONIA swap rates. This spread decreased only to slightly below 40 basis points, i.e. a level far higher than the level prevailing before the turmoil, which was below 10 basis points. Consequently, the ECB announced on 7 February that it would renew the two outstanding supplementary LTROs again, on 21 February and 13 March respectively.

In the following maintenance period (13 February-11 March 2008), the EONIA continued to be stable throughout the period at a level very close to the minimum bid rate. On average, the EONIA was 4.03% in this period. As in the previous maintenance period, no fine-tuning operations were necessary, apart from the one on the last day of the maintenance period.

<sup>7</sup> The ECB explained on 27 December that the calculation of the negative benchmark amount followed the usual procedure and resulted from the fact that the two-week MRO had established very ample liquidity conditions for the entire two-week period, one week of which overlapped with the regular MRO.

The Eurosystem's open market operations during the recent period of financial market volatility



Notes: The daily reserve surplus/deficit is the difference between the current account holdings of banks and the minimum reserve requirements for each day; the average daily reserve surplus/deficit is the average of the daily reserve surpluses/deficits that have occurred since the beginning of the maintenance period. FTO stands for "fine-tuning operation"

#### 4.3 IMPACT OF THE MEASURES TAKEN

The chronological overview demonstrates that the various measures – notably the "frontloading" of liquidity within a maintenance period and the increase in the frequency of finetuning operations – were broadly successful in steering the average level of the EONIA close to the minimum bid rate, although the volatility of the EONIA was higher than in "normal" times, notably at the beginning of the turmoil and again before the year-end (see Chart 8).

The effectiveness of reserve averaging as a tool to steer the overnight rate in the course of a maintenance period weakened during the turmoil. In this regard, it is interesting to note that the significant increase in volatility of the overnight rate was only observed before the last day of the maintenance period, while, in fact, on that day volatility decreased (see the Table). As in "normal" times, on the last day of the period the overnight rate is solely determined by the probability for net recourse to the marginal lending facility or the deposit facility and the rates thereof, and it is not influenced by the possibility of substituting reserve holdings on different days. The reason for the additional relative stability of the overnight rate on the last day of the period during the financial turmoil may be that a necessary condition for stability in the overnight rate on that day is the conduct of fine-tuning operations to absorb aggregate



Notes: The period of turmoil in the euro area money market is highlighted in yellow. The end of each maintenance period is indicated by the vertical lines.

# ${\ensuremath{\mathsf{Statistics}}}$ on the EONIA spread in the course of maintenance periods before and during the turmoil

EONIA spread		before the last week	last week, excl. last day	last day
before the turmoil				
(Mar. 2004 to July 2007)	standard deviation	3.1	7.4	23.8
	average	7.3	5.3	5.1
during the turmoil				
(Aug. 2007 to March 2008)	standard deviation	12.3	20.3	15.9
	average	0.7	-4.0	-0.2

Source: ECB.

liquidity imbalances which can no longer be offset via reserve averaging. The conduct of such operations was almost certain during the turmoil, given the liquidity policy chosen by the ECB.

It is rather more difficult to assess how far the measures affected conditions in the longer-term segment of the money market. Nevertheless, the lengthening of the maturity structure of the Eurosystem's outstanding refinancing operations, which was achieved by reducing the size of one-week MROs and expanding LTROs (see Chart 9), may have satisfied the relatively strong demand within the banking system for reducing liquidity gaps.

This strong demand is also evident from the fact that the spread between the LTRO weighted

average rate and the three-month EONIA swap rate increased to 50 basis points at the end of August 2007 and to 85 basis points in early December, while the spread between the MRO weighted average rate and the one-week EONIA swap rate increased to 10 basis points and to 35 basis points respectively (see Chart 10).

Overall, with respect to the Eurosystem's measures to enhance banks' access to liquidity and, more generally, to improve the functioning of the money market at longer than overnight maturities, the most successful actions appear to have been the conduct of several supplementary LTROs and the variation of full allotment in the two-week MRO before the year-end. Furthermore, the US dollar Term Auction Facility operations reduced banks' liquidity





02 Monthly Bulletin May 2008

FCR

The Eurosystem's open market operations during the recent period of financial market volatility

gaps in US dollars and thereby probably also reduced the related demand for euro liquidity, thus providing confidence to the market (see Chart 11).

Moreover, the general liquidity allotment policy aimed at steering the overnight rate is likely to have had a significant indirect positive effect on general money market conditions, because the success achieved in stabilising the overnight rate also spilled over to somewhat longer-term maturities – at least in the period to mid-January 2008 – for instance by enhancing the possibilities for arbitrage between different maturities.

Finally, it is important to underline that Charts 2, 3 and 9 confirm that the average liquidity supply in open market operations was not higher during the financial market turmoil compared with the situation before, as the higher MRO allotment at the start of each maintenance period was compensated by lower MRO allotments later on and the increase in the size of the threemonth LTROs was compensated by a reduction in the size of the refinancing provided via the one-week MROs. Hence, the supply of liquidity was unchanged when narrowly defined as current account holdings with the central bank, although the measures did have a mitigating effect on banks' overall liquidity risk. Accordingly, the ECB did not create conditions to ensure that interest rates stayed systematically below the policy rate during the turmoil and it did not provide liquidity to force banks to use the deposit facility, even though the use of the deposit facility did increase slightly from a daily average of €0.2 billion in 2006 to €0.7 billion during the period of financial market turmoil (while the average use of the marginal lending facility increased only slightly, from €0.1 billion per day in 2006 to €0.2 billion per day during the turmoil). Overall, the various measures taken within the context of monetary policy implementation via the Eurosystem's



#### ECB Monthly Bulletin May 2008

operational framework also contributed to the maintenance of financial stability.

#### **5** CONCLUSION

This article provides an overview of the rationale for the Eurosystem's conduct of open market operations during the financial market volatility that spilled over into the euro area money market in August 2007. The Eurosystem's operational framework, which aims to steer very short-term money market rates close to the MRO minimum bid rate that is determined by the Governing Council, proved able to provide the degree of flexibility needed to achieve this objective even in times of financial market tensions. Indeed, while, in "normal" times, it is sufficient to calibrate regular open market operations to meet very stable liquidity demand on the part of the banking system in order to stabilise money market rates, the experience during the financial market turmoil demonstrated that it was also possible, and effective, to accommodate volatile liquidity demand under stressful conditions. Overall, no structural adjustments to the Eurosystem's operational framework were needed in order to cope with the ongoing financial market turmoil.

EURO AREA STATISTICS





# **CONTENTS**<sup>1</sup>

	EURO	AREA OVERVIEW					
	Sum	nary of economic indicators for the euro area	<b>S 5</b>				
1	MONE	TARY POLICY STATISTICS					
		Consolidated financial statement of the Eurosystem	<b>S 6</b>				
		Key ECB interest rates	<b>S7</b>				
		Eurosystem monetary policy operations allotted through tenders	<b>S</b> 8				
		Minimum reserve and liquidity statistics	59				
	MONE	DNEY, BANKING AND INVESTMENT FUNDS					
	2.1	Aggregated balance sheet of euro area MFIs	S I 0				
	2.2	Consolidated balance sheet of euro area MFIs	<b>S I I</b>				
	2.3	Monetary statistics	S   2				
	2.4	MFI loans, breakdown	S I 4				
	2.5	Deposits held with MFIs, breakdown	S I 7				
	2.6	MFI holdings of securities, breakdown	<b>S20</b>				
	2.7	Revaluation of selected MFI balance sheet items	<b>S2</b> I				
	2.8	Currency breakdown of selected MFI balance sheet items	<b>S22</b>				
	2.9	Aggregated balance sheet of euro area investment funds	<b>S24</b>				
	2.10	Assets of euro area investment funds broken down by investment policy and type of investor	S 2 5				
	EURO	RO AREA ACCOUNTS					
	3.1	Integrated economic and financial accounts by institutional sector	S26				
	3.2	Euro area non-financial accounts	<b>S30</b>				
	3.3	Households	<b>S32</b>				
	3.4	Non-financial corporations	S 3 3				
	3.5	Insurance corporations and pension funds	\$34				
4 4 4 4	FINA	ANCIAL MARKETS					
	4.1	Securities, other than shares, by original maturity, residency of the issuer and currency	S 3 5				
	4.2	Securities, other than shares, issued by euro area residents, by sector of the issuer and instrument type	S36				
	4.3	Growth rates of securities, other than shares, issued by euro area residents	<b>S 3 8</b>				
	4.4	Quoted shares issued by euro area residents	<b>S40</b>				
	4.5	MFI interest rates on euro-denominated deposits and loans by euro area residents	<b>S42</b>				
	4.6	Money market interest rates	<b>S44</b>				
	4.7	Euro area yield curves	<b>S45</b>				
	4.8	Stock market indices	<b>S46</b>				
5		ICES, OUTPUT, DEMAND AND LABOUR MARKETS					
	5.1	HICP, other prices and costs	S47				
	5.2	Output and demand	<b>S 5 0</b>				
	5.3	Labour markets	\$54				
6	GOVE	VERNMENT FINANCE					
6.1 6.2		Revenue, expenditure and deficit/surplus	S 5 5				
	6.2	Debt	<b>S 5 6</b>				

1 For further infomation, please contact us at: statistics@ecb.europa.eu. See the ECB Statistical Data Warehouse on the Statistics section of the ECB website (http://sdw.ecb.europa.eu) for longer runs and more detailed data.


	6.3	Change in debt	\$57
	6.4	Quarterly revenue, expenditure and deficit/surplus	\$58
	6.5	Quarterly debt and change in debt	\$59
7	EXTI	ERNAL TRANSACTIONS AND POSITIONS	
	7.1	Summary balance of payments	\$60
	7.2	Current and capital accounts	S 6 I
	7.3	Financial account	\$63
	7.4	Monetary presentation of the balance of payments	\$69
	7.5	Trade in goods	\$70
8	EXC	HANGE RATES	
	8.1	Effective exchange rates	\$72
	8.2	Bilateral exchange rates	\$73
9	DEV	ELOPMENTS OUTSIDE THE EURO AREA	
	9.1	In other EU Member States	\$74
	9.2	In the United States and Japan	\$75
	LIST	OF CHARTS	\$76
	TECH	HNICAL NOTES	\$77
	GEN	ERAL NOTES	\$83

## ENLARGEMENT OF THE EURO AREA ON I JANUARY 2008 TO INCLUDE CYPRUS AND MALTA

Unless otherwise indicated, all data series covering observations for 2008 relate to the Euro 15 (the euro area including Cyprus and Malta) for the whole time series. For interest rates, monetary statistics and the HICP (and, for consistency reasons, the components and counterparts of M3 and the components of the HICP), the statistical series relating to the euro area cover the EU Member States that had adopted the euro at the time to which the statistics relate. Where applicable, this is indicated in the tables by means of a footnote. In such cases, where underlying data are available, absolute and percentage changes for 2001, 2007 and 2008, calculated from a base in 2000, 2006 and 2007, use a series which takes into account the impact of the entry of Greece, Slovenia and Cyprus and Malta, respectively, into the euro area. Historical data referring to the euro area before the entry of Cyprus and Malta are available on the ECB web site at http://www.ecb.europa.eu/stats/services/downloads/html/index.en.html

### **Conventions used in the tables**

··_··	data do not exist/data are not applicable
"·"·	data are not yet available
"…"	nil or negligible
"billion"	109
(p)	provisional
s.a.	seasonally adjusted
n.s.a.	non-seasonally adjusted





## **EURO AREA OVERVIEW**

Summary of economic indicators for the euro area

### 1. Monetary developments and interest rates

	M1 <sup>1)</sup>	M2 <sup>1)</sup>	M3 <sup>1), 2)</sup>	M3 <sup>1),2)</sup> 3-month moving average (centred)	MFI loans to euro area residents excluding MFIs and general government <sup>1)</sup>	Securities other than shares issued in euro by non-MFI corporations <sup>1)</sup>	3-month interest rate (EURIBOR, % per annum, period averages)	10-year spot rate (% per annum, end-of- period) <sup>3)</sup>
	1	2	3	4	5	6	7	8
2006 2007	8.6 6.4	8.7 9.9	8.4 11.1	-	10.9 10.8	15.8 18.9	3.08 4.28	3.91 4.38
2007 Q2 Q3 Q4 2008 Q1	6.2 6.5 5.9 3.8	9.2 10.3 10.7 10.4	10.6 11.5 12.0 11.3	- - -	10.5 11.0 11.2 11.0	18.7 20.2 19.9	4.07 4.49 4.72 4.48	4.51 4.38 4.38 4.13
2007 Nov. Dec.	6.2 4.0	10.9 10.1	12.3 11.5	12.0 11.8	11.1 11.2	19.3 22.0	4.64 4.85	4.21 4.38
2008 Jan. Feb. Mar. Apr.	4.4 3.7 2.9	10.4 10.7 9.8	11.6 11.3 10.3	11.5 11.1	11.1 11.0 10.8	21.8 20.4	4.48 4.36 4.60 4.78	4.05 4.06 4.13 4.32

### 2. Prices, output, demand and labour markets

	HICP	Industrial producer prices	Hourly labour costs	Real GDP	Industrial production excluding construction	Capacity utilisation in manufacturing (percentages)	Employment	Unemployment (% of labour force)
	1	2	3	4	5	6	7	8
2006 2007	2.2 2.1	5.1 2.8	2.5 2.6	2.8 2.6	4.0 3.4	83.2 84.2	1.6 1.8	8.2 7.4
2007 Q3 Q4 2008 Q1	1.9 2.9 3.4	2.1 4.0 5.4	2.5 2.7	2.7 2.2	3.9 3.1	84.0 84.0 83.7	1.9 1.7	7.3 7.2 7.1
2007 Nov. Dec.	3.1 3.1	4.3 4.4	-	-	3.1 1.8	-	-	7.2 7.2
2008 Jan. Feb. Mar.	3.2 3.3 3.6	5.0 5.4 5.7			3.4 3.4	83.9	- - -	7.1 7.1 7.1
Apr.	3.3		-	-		83.5	-	

### 3. Balance of payments, reserve assets and exchange rates

(EUR billions, unless otherwise indicated)

	Balan	ce of payments (n	et transactions)		Reserve assets (end-of-period	Effective exchang the euro: EER		USD/EUR exchange rate
	Current and		Direct	Portfolio	positions)	(index, 1999 Q1	= 100)	0
	capital Goods		investment	investment				
	accounts					Nominal	Real (CPI)	
	1	2	3	4	5	6	7	8
2006	7.9	19.2	-144.7	266.3	325.8	103.6	104.5	1.2556
2007	40.5	55.6	-94.8	253.9	347.4	107.7	108.3	1.3705
2007 Q2	0.1	20.1	-57.9	90.4	325.3	107.1	107.7	1.3481
	15.2	17.1	-40.9	65.1	340.5	107.6	108.2	1.3738
Q3 Q4	16.8	9.7	18.2	-44.2	347.4	110.5	111.2	1.4486
2008 Q1					356.3	112.7	113.1	1.4976
2007 Nov.	4.7	5.1	9.5	9.9	339.2	111.0	111.7	1.4684
Dec.	6.1	-2.3	-20.8	-10.1	347.4	111.2	111.7	1.4570
2008 Jan.	-15.5	-7.3	-29.9	49.3	374.8	112.0	112.3	1.4718
Feb.	7.3	2.9	-13.8	34.8	375.4	111.8	111.9	1.4748
Mar.					356.3	114.6	115.0	1.5527
Apr.						116.0	116.6	1.5751

Sources: ECB, European Commission (Eurostat and Economic and Financial Affairs DG) and Reuters.

Note: For more information on the data, see the relevant tables later in this section.

1) Annual percentage changes of monthly data refer to the end of the month, whereas those of quarterly and yearly data refer to the annual change in the period average of the series. Annual percentage enarges of monthly due to the end of the end o





## **MONETARY POLICY STATISTICS**

## I.I Consolidated financial statement of the Eurosystem (EUR millions)

### 1. Assets

	2008 11 April	2008 18 April	2008 25 April	2008 2 May
Gold and gold receivables	209,697	209,661	209,643	209,643
Claims on non-euro area residents in foreign currency	136,169	138,188	138,660	137,964
Claims on euro area residents in foreign currency	41,747	40,481	40,142	39,571
Claims on non-euro area residents in euro	14,904	15,776	15,890	16,255
Lending to euro area credit institutions in euro	424,987	499,525	468,020	465,039
Main refinancing operations	131,649	204,500	173,000	170,000
Longer-term refinancing operations	293,110	295,001	295,001	295,007
Fine-tuning reverse operations	0	0	0	0
Structural reverse operations	0	0	0	0
Marginal lending facility	195	1	1	27
Credits related to margin calls	33	23	18	5
Other claims on euro area credit institutions in euro	35,171	34,639	34,832	32,022
Securities of euro area residents in euro	109,597	109,302	109,350	110,015
General government debt in euro	38,614	38,592	38,592	38,009
Other assets	350,896	347,026	350,730	351,256
Total assets	1,361,782	1,433,190	1,405,859	1,399,774

### 2. Liabilities

	2008 11 April	2008 18 April	2008 25 April	2008 2 May
Banknotes in circulation	662,330	662,793	664,260	671,693
Liabilities to euro area credit institutions in euro	175,545	246,960	197,364	209,303
Current accounts (covering the minimum reserve system)	174,879	246,314	196,875	209,077
Deposit facility	321	288	140	73
Fixed-term deposits	0	0	0	0
Fine-tuning reverse operations	0	0	0	0
Deposits related to margin calls	345	358	349	153
Other liabilities to euro area credit institutions in euro	213	192	184	176
Debt certificates issued	0	0	0	0
Liabilities to other euro area residents in euro	75,126	72,649	90,394	65,129
Liabilities to non-euro area residents in euro	57,408	58,444	58,072	57,862
Liabilities to euro area residents in foreign currency	797	762	888	1,664
Liabilities to non-euro area residents in foreign currency	18,495	19,101	19,348	17,454
Counterpart of special drawing rights allocated by the IMF	5,148	5,148	5,148	5,148
Other liabilities	139,074	139,493	142,150	143,293
Revaluation accounts	156,231	156,231	156,231	156,231
Capital and reserves	71,415	71,417	71,820	71,821
Total liabilities	1,361,782	1,433,190	1,405,859	1,399,774

Source: ECB.



## I.2 Key ECB interest rates

With effect from <sup>1)</sup> Deposit facility			Ma	ain refinancing operatio	ns	Marginal lending facility	
			Fixed rate tenders	Variable rate tenders			
			Fixed rate	Minimum bid rate			
	Level	Change	Level	Level	Change	Level	Change
	1	2	3	4	5	6	7
1999 1 Jan.	2.00	-	3.00	-	-	4.50	-
$4^{(2)}$ 22	2.75 2.00	0.75 -0.75	3.00 3.00	-		3.25 4.50	-1.25 1.25
<sup>22</sup> 9 Apr.	1.50	-0.50	2.50	-	-0.50	3.50	-1.00
5 Nov.	2.00	0.50	3.00	-	0.50	4.00	0.50
2000 4 Feb.	2.25	0.25	3.25	-	0.25	4.25	0.25
17 Mar.	2.50	0.25	3.50	-	0.25	4.50	0.25
28 Apr.	2.75	0.25	3.75	-	0.25	4.75	0.25
9 June 28 <sup>3)</sup>	3.25 3.25	0.50	4.25	4.25	0.50	5.25 5.25	0.50
28 <sup>1</sup> 1 Sep.	3.25 3.50	0.25	-	4.25	0.25	5.25 5.50	0.25
6 Oct.	3.50	0.25	-	4.50	0.25	5.75	0.25
2001 11 May	3.50	-0.25	-	4.50	-0.25	5.50	-0.25
31 Aug.	3.25	-0.25	-	4.25	-0.25	5.25	-0.25
18 Sep.	2.75	-0.50	-	3.75	-0.50	4.75	-0.50
9 Nov.	2.25	-0.50	-	3.25	-0.50	4.25	-0.50
2002 6 Dec.	1.75	-0.50	-	2.75	-0.50	3.75	-0.50
2003 7 Mar.	1.50	-0.25	-	2.50	-0.25	3.50	-0.25
6 June	1.00	-0.50	-	2.00	-0.50	3.00	-0.50
2005 6 Dec.	1.25	0.25	-	2.25	0.25	3.25	0.25
2006 8 Mar.	1.50	0.25	-	2.50	0.25	3.50	0.25
15 June	1.75	0.25	-	2.75	0.25	3.75	0.25
9 Aug.	2.00	0.25	-	3.00	0.25	4.00	0.25
11 Oct.	2.25	0.25	-	3.25	0.25	4.25	0.25
13 Dec.	2.50	0.25	-	3.50	0.25	4.50	0.25
2007 14 Mar.	2.75	0.25	-	3.75	0.25	4.75	0.25
13 June	3.00	0.25	-	4.00	0.25	5.00	0.25

Source: ECB.

From 1 January 1999 to 9 March 2004, the date refers to the deposit and marginal lending facilities. For main refinancing operations, changes in the rate are effective from the first operation following the date indicated. The change on 18 September 2001 was effective on that same day. From 10 March 2004 onwards, the date refers to the deposit and marginal lending facilities and to the main refinancing operations (changes effective from the first main refinancing operation following the Governing Council discussion), unless otherwise indicated.

On 22 December 1998 the ECB announced that, as an exceptional measure between 4 and 21 January 1999, a narrow corridor of 50 basis points would be applied between the interest rates for the marginal lending facility and the deposit facility, aimed at facilitating the transition to the new monetary regime by market participants.

3) On 8 June 2000 the ECB announced that, starting from the operation to be settled on 28 June 2000, the main refinancing operations of the Eurosystem would be conducted as variable rate tenders. The minimum bid rate refers to the minimum interest rate at which counterparties may place their bids.



## 1.3 Eurosystem monetary policy operations allotted through tenders $^{1), 2)}$

### 1. Main and longer-term refinancing operations<sup>3)</sup>

Date of settlement	Bids (amount)							
	()	rr	()	Minimum bid rate	Marginal rate <sup>4)</sup>	Weighted average rate	() days	
	1	2	3	4	5	6	7	
		·	Main refinar	ncing operations		·		
2008 9 Jan.	283,354	301	151,500	4.00	4.20	4.22	7	
16	242,078	281	190,500	4.00	4.16	4.21	7	
23	234,633	276	175,500	4.00	4.16	4.19	7	
30	253,268	264	167,500	4.00	4.18	4.20	7	
6 Feb.	223,805	226	161,500	4.00	4.17	4.20	7	
13	223,706	229	187,500	4.00	4.10	4.18	7	
20	226,655	262	178,000	4.00	4.10	4.15	7	
27	233,242	260	183,000	4.00	4.10	4.15	7	
5 Mar.	240,542 260,402	264 298	176,500	4.00	4.11 4.12	4.14 4.16	7 7	
12 19	295,701	298 336	209,500 202,000	$4.00 \\ 4.00$	4.12	4.16	7	
26	302,534	301	216,000	4.00	4.10	4.20	7	
20 2 Apr.	283.699	301	150,000	4.00	4.23	4.28	7	
9	247,590	295	130,000	4.00	4.23	4.24	7	
16	249,682	310	204,500	4.00	4.21	4.26	, 7	
23	218,419	302	173,000	4.00	4.21	4.25	7	
30	247,451	316	170,000	4.00	4.26	4.29	7	
7 May	229,288	304	150,000	4.00	4.26	4.29	7	
			Longer-term ref	inancing operations				
2007 27 Sep.	85,353	159	50,000	_	4.50	4.63	84	
1 Nov.	87,587	157	50,000	-	4.45	4.53	91	
23	147,977	130	60,000	-	4.55	4.61	90	
29	132,386	175	50,000	-	4.65	4.70	91	
12 Dec.	105,126	122	60,000	-	4.81	4.88	92	
20	48,476	97	48,476	-	4.00	4.56	98	
2008 31 Jan.	98,183	151	50,000	-	4.21	4.33	92	
21 Feb.	110,490	105	60,000	-	4.15	4.26	91	
28	109,612	165	50,000	-	4.16	4.23	91	
13 Mar.	132,591	139	60,000	-	4.25	4.40	91	
27	131,334	190	50,000	-	4.44	4.53	91	
3 Apr.	103,109	177	25,000	-	4.55	4.61	189	
2 May	101,175	177	50,000	-	4.67	4.75	90	

### 2. Other tender operations

Date of settlement	Type of operation	Bids (amount)	Number of participants	Allotment (amount)	Fixed rate tenders		iable rate tend		Running for () days
	-				Fixed rate	Minimum	Marginal	Weighted	
						bid rate	rate <sup>4)</sup>	average rate	
					_		_		
	1	2	3	4	5	6	7	8	9
2007 11 Dec.	Collection of fixed-term deposits	23,550	20	21,000	4.00	-	-	-	1
17	Collection of fixed-term deposits	36,610	25	36,610	4.00	-	-	-	2
19	Collection of fixed-term deposits	133,610	52	133,610	4.00	-	-	-	1
20	Collection of fixed-term deposits	165,815	58	150,000	4.00	-	-	-	1
	Collection of fixed-term deposits	141,565	55	141,565	4.00	-	-	-	6
27	Collection of fixed-term deposits	145,640	49	145,640	4.00	-	-	-	1
28	Collection of fixed-term deposits	160,450	52	150,000	4.00	-	-	-	3
2008 2 Jan.	Collection of fixed-term deposits	168,640	54	168,640	4.00	-	-	-	1
3	Collection of fixed-term deposits	212,620	69	200,000	4.00	-	-	-	1
	Collection of fixed-term deposits	45,712	28	20,000	4.00	-	-	-	1
12 Feb.	Collection of fixed-term deposits	29,155	22	16,000	4.00	-	-	-	1
11 Mar.	Reverse transaction	45,085	32	9,000	-	4.00	4.13	4.14	1
20	Reverse transaction	65,810	44	15,000	-	4.00	4.13	4.20	5
31	Reverse transaction	30,720	25	15,000	-	4.00	4.06	4.13	1
15 Apr.	Collection of fixed-term deposits	14,880	7	14,880	4.00	-	-	-	1

Source: ECB.

1) The amounts shown may differ slightly from those in Section 1.1 due to operations allotted but not settled.

With effect from April 2002, split tender operations, i.e. operations with one-week maturity conducted as standard tenders in parallel with a main refinancing operation, are classified as main refinancing operations. For split tender operations conducted before this month, see Table 2 in Section 1.3.
 On 8 June 2000 the ECB announced that, starting from the operation to be settled on 28 June 2000, the main refinancing operations of the Eurosystem would be conducted as variable rate tenders. The minimum bid rate refers to the minimum interest rate at which counterparties may place their bids.
 In liquidity-providing (absorbing) operations, the marginal rate refers to the lowest (highest) rate at which bids were accepted.



## 1.4 Minimum reserve and liquidity statistics

## 1. Reserve base of credit institutions subject to reserve requirements

These to sub-of-ereal institutions subject to reserve requirements									
Reserve base	Total	Liabilities to which a 2% res	erve coefficient is applied	Liabilities to which a 0% reserve coefficient is applied					
as at <sup>1)</sup>	_	Deposits (overnight, up to 2 years' agreed maturity and notice period)	Debt securities up to 2 years' agreed maturity	Deposits (over 2 years' agreed maturity and notice period)	Repos	Debt securities over 2 years' agreed maturity			
	1	2	3	4	5	6			
2005	14,040.7	7,409.5	499.2	1,753.5	1,174.9	3,203.6			
2006	15,648.3	8,411.7	601.9	1,968.4	1,180.3	3,486.1			
2007 Q1	16,253.0	8,634.2	657.4	2,009.8	1,358.8	3,592.8			
Q2	16,753.3	8,940.5	677.6	2,066.6	1,383.5	3,685.1			
Q2 Q3	16,968.2	9,073.2	745.5	2,075.7	1,424.9	3,649.0			
2007 Oct. 2)	17,242.4	9,255.8	799.4	2,098.1	1,425.0	3,664.2			
Nov. 2)	17,338.9	9,302.0	804.7	2,096.9	1,489.0	3,646.4			
Dec. <sup>2)</sup>	17,394.7	9,438.8	815.0	2,143.1	1,364.0	3,633.9			
2008 Jan.	17,678.3	9,525.3	845.1	2,140.6	1,512.9	3,654.4			
Feb.	17,734.6	9,572.1	844.7	2,132.6	1,533.9	3,651.2			

### 2. Reserve maintenance

Maintenance period ending on:	Required reserves	Credit institutions' current accounts	Excess reserves	Deficiencies	Interest rate on minimum reserves
ending on:	1	2	3	4	5
2005 2006	152.0 172.5	153.0 173.2	1.0 0.7	0.0 0.0	2.07 3.30
2007 Q1 Q2 Q3 Q4	179.8 185.3 191.9 195.9	180.6 186.2 192.7 196.8	0.8 0.9 0.9 1.0	0.0 0.0 0.0 0.0	3.55 3.80 4.09 4.17
2007 11 Dec.	195.9	196.8	1.0	0.0	4.17
2008 15 Jan. <sup>3)</sup> 12 Feb. 11 Mar. 15 Apr.	199.8 201.6 204.6 206.9 207.8	200.9 202.4 205.3 207.5	1.1 0.8 0.7 0.6	0.0 0.0 0.0 0.0	4.20 4.17 4.10 4.19
13 May	207.8				

### 3. Liquidity

Maintenance period ending on:		Liquidity	-providing fact Monetary po		ns of the Euro	osystem	Liquidi	ty-absorbing	factors		Credit institutions' current accounts	Base money
	Eurosystem's net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity- providing operations	Deposit facility	Other liquidity- absorbing operations 4)	Banknotes in circulation	Central government deposits with the Eurosystem	Other factors (net)	accounts	
	1	2	3	4	5	6	7	8	9	10	11	12
2005 2006	313.2 327.0	301.3 313.1	90.0 120.0	$0.0 \\ 0.1$	$0.0 \\ 0.1$	$0.1 \\ 0.1$	0.3 0.0	539.8 598.6	51.0 54.9	-39.6 -66.4	153.0 173.2	692.9 771.8
2007 Q1 Q2 Q3 Q4	321.6 326.4 317.3 327.5	288.7 284.9 268.7 173.0	134.6 150.0 171.7 278.6	0.0 0.3 0.2 0.3	0.0 0.0 10.7 0.0	0.5 0.2 0.4 0.4	0.8 0.2 1.7 2.2	606.2 625.2 639.2 644.6	47.1 49.1 52.3 61.9	-90.0 -99.4 -117.8 -126.6	180.6 186.2 192.7 196.8	787.2 811.7 832.4 841.9
2008 12 Feb. 11 Mar. 15 Apr.	353.6 343.3 349.1	173.8 181.3 181.5	268.5 268.5 278.6	0.2 0.1 0.1	0.0 0.3 2.6	0.4 0.3 0.6	0.6 0.0 0.4	651.7 653.2 661.7	51.7 59.7 70.2	-110.7 -125.0 -128.6	202.4 205.3 207.5	854.5 858.7 869.9

Source: ECB.

1) End of period.

Includes the reserve bases of credit institutions in Malta and Cyprus. On a transitional basis, credit institutions located in the euro area may have decided to deduct from their own reserve bases any liabilities owed to credit institutions located in Malta and Cyprus. Starting from the reserve base as at end-January 2008, the standard treatment applies 2) (see Regulation (EC) No 1348/2007 of the ECB of 9 November 2007 concerning transitional provisions for the application of minimum reserves by the ECB following the introduction of the euro in Cyprus and Malta (ECB/2007/11)).

Owing to the adoption of the euro by Cyprus and Malta (bc/b/2007/11)). Owing to the adoption of the euro by Cyprus and Malta on 1 January 2008, the reserve requirement is an average - weighted by the number of calendar days - of the reserve requirements for the then 13 countries of the euro area for the period 12-31 December 2007 and the reserve requirements for the 15 countries now in the euro area for the period 1-15 January 2008. Starting from 1 January 2008, includes monetary policy operations in the form of collection of fixed-term deposits which were conducted by the Central Bank of Malta and the Central Bank of Cyprus before 1 January 2008 and were still outstanding after this date. 3)

4)





## MONEY, BANKING AND INVESTMENT FUNDS

## **2.1 Aggregated balance sheet of euro area MFIs**<sup>1</sup>) (EUR billions; outstanding amounts at end of period)

### 1. Assets

	Total	Lo	ans to euro a	rea resident	ts	shares i	ngs of securi ssued by eur		idents	Money market fund	Holdings of shares/ other equity	External assets	Fixed assets	Remaining assets
		Total	General government	Other euro area residents	MFIs	Total	General government	Other euro area residents	MFIs	shares/ units <sup>2)</sup>	issued by euro area residents			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
							Eurosystem							
2005	1,404.9	635.5	20.7	0.6	614.2	185.7	165.6	2.1	18.1	-	14.8	337.0	14.7	217.2
2006	1,558.2	695.7	19.7	0.6	675.3	217.0	187.5	2.5	27.0		17.2	351.4	14.7	262.4
2007	2,046.1	1,031.7	17.8	0.6	1,013.3	268.6	225.1	1.9	41.6		17.4	373.7	15.2	339.6
2007 Q3	1,707.3	753.5	17.8	0.6	735.1	259.5	219.3	2.2	38.0	-	17.7	368.8	15.6	292.3
Q4	2,046.1	1,031.7	17.8	0.6	1,013.3	268.6	225.1	1.9	41.6		17.4	373.7	15.2	339.6
2008 Jan.	1,934.2	886.8	19.4	0.7	866.7	273.5	230.2	2.0	41.3	-	16.3	401.3	15.4	341.1
Feb.	1,957.7	902.9	19.4	0.7	882.8	279.1	236.2	2.2	40.7		16.5	400.6	15.3	343.3
Mar. <sup>(p)</sup>	2,024.2	968.2	19.4	0.7	948.1	278.5	235.9	2.3	40.3		16.2	383.3	15.2	362.8
						MFIs exc	luding the Eu	irosystem						
2005	23,631.5	13,681.7	826.9	8,285.1	4,569.7	3,498.6	1,429.4	551.5	1,517.7	83.1	1,008.7	3,652.8	165.7	1,540.9
2006	25,974.6	14,904.3	810.5	9,160.3	4,933.5	3,555.4	1,276.5	645.9	1,632.9	83.5	1,194.5	4,330.4	172.6	1,733.9
2007	29,468.0	16,903.0	955.8	10,158.3	5,788.9	3,880.9	1,194.2	949.8	1,736.9	93.5	1,314.8	4,873.3	206.0	2,196.6
2007 Q3	28,473.1	16,176.3	793.0	9,949.9	5,433.4	3,746.8	1,214.4	804.8	1,727.6	95.9	1,257.1	4,878.8	203.1	2,115.2
Q4	29,468.0	16,903.0	955.8	10,158.3	5,788.9	3,880.9	1,194.2	949.8	1,736.9	93.5	1,314.8	4,873.3	206.0	2,196.6
2008 Jan.	30,052.0	17,122.7	961.0	10,299.3	5,862.5	3,973.4	1,219.7	962.1	1,791.7	98.2	1,315.4	5,089.9	205.7	2,246.6
Feb.	30,224.5	17,164.8	951.4	10,354.6	5,858.7	4,024.3	1,216.4	984.3	1,823.6	102.7	1,302.8	5,128.9	200.6	2,300.4
Mar. <sup>(p)</sup>	30,228.5	17,230.5	958.1	10,447.4	5,825.0	4,038.3	1,216.8	1,006.7	1,814.8	100.4	1,311.9	4,971.5	197.5	2,378.3

### 2. Liabilities

	Total	Currency	1	Deposits of eur	o area residents		Money market	Debt securities	Capital and	External liabilities	Remaining liabilities
		circulation	Total	Central government	Other general government/ other euro area residents	MFIs	fund shares/ units <sup>3)</sup>	issued <sup>4)</sup>	reserves		
	1	2	3	4	5	6	7	8	9	10	11
					Eurosystem						
2005	1,404.9	582.7	385.4	24.4	14.5	346.5	-	0.1	202.9	27.6	206.2
2006	1,558.2	647.0	431.6	33.7	15.9	382.0	-	0.1	208.6	35.3	235.6
2007	2,046.1	697.0	714.7	23.9	19.1	671.8	-	0.1	238.0	66.0	330.3
2007 Q3	1,707.3	657.2	510.7	51.7	19.1	439.9	-	0.1	222.6	48.3	268.4
Q4	2,046.1	697.0	714.7	23.9	19.1	671.8	-	0.1	238.0	66.0	330.3
2008 Jan.	1,934.2	671.3	626.6	54.6	21.0	551.1	-	0.1	254.5	72.9	308.9
Feb.	1,957.7	674.4	653.9	53.7	23.1	577.0	-	0.1	259.3	58.2	311.9
Mar. <sup>(p)</sup>	2,024.2	681.9	705.8	60.4	20.8	624.6	-	0.1	246.5	70.3	319.7
				MFIs	excluding the Eur	osystem					
2005	23,631.5	-	12,212.2	149.2	7,211.9	4,851.2	698.9	3,858.3	1,310.6	3,518.0	2,033.5
2006	25,974.6	-	13,257.2	124.2	7,890.6	5,242.4	698.3	4,247.6	1,449.7	3,991.1	2,330.6
2007	29,468.0	-	15,085.4	127.1	8,865.9	6,092.4	754.1	4,645.3	1,678.8	4,530.1	2,774.3
2007 Q3	28,473.1	-	14,254.9	144.3	8,410.0	5,700.6	778.4	4,577.2	1,589.5	4,527.4	2,745.7
Q4	29,468.0	-	15,085.4	127.1	8,865.9	6,092.4	754.1	4,645.3	1,678.8	4,530.1	2,774.3
2008 Jan.	30,052.0	-	15,192.5	114.3	8,931.4	6,146.7	835.5	4,687.2	1,699.3	4,795.7	2,841.8
Feb.	30,224.5	-	15,224.3	135.4	8,947.6	6,141.3	852.8	4,686.6	1,702.7	4,869.1	2,889.1
Mar. <sup>(p)</sup>	30,228.5	-	15,295.4	139.8	9,018.0	6,137.7	848.3	4,679.8	1,718.0	4,755.4	2,931.6

Source: ECB.

1) Data refer to the changing composition of the euro area. For further information, see the General notes.

Amounts issued by euro area residents. Amounts issued by non-euro area residents are included in external assets.
 Amounts held by euro area residents.
 Amounts issued with maturity up to two years held by non-euro area residents are included in external liabilities.



## **2.2 Consolidated balance sheet of euro area MFIs** <sup>1)</sup> (EUR billions; outstanding amounts at end of period; transactions during period)

### 1. Assets

	Total	Loans to	) euro area res	idents		ecurities other y euro area res		Holdings of shares/ other equity	External assets	Fixed assets	Remaining assets
		Total	General government	Other euro area residents	Total	General government	Other euro area residents	issued by other euro area residents			
	1	2	3	4	5	6	7	8	9	10	11
					Outstandi	ing amounts					
2005	17,870.7	9,133.3	847.5	8,285.7	2,148.5	1,595.0	553.6	710.5	3,989.7	180.4	1,708.2
2006	19,743.9	9,991.1	830.2	9,161.0	2,112.4	1,464.0	648.4	829.9	4,681.8	187.3	1,941.4
2007	22,352.2	11,132.6	973.6	10,158.9	2,371.0	1,419.3	951.8	902.8	5,247.0	221.1	2,477.7
2007 Q3	21,680.8	10,761.3	810.8	9,950.5	2,240.7	1,433.7	807.0	851.9	5,247.5	218.7	2,360.7
Q4	22,352.2	11,132.6	973.6	10,158.9	2,371.0	1,419.3	951.8	902.8	5,247.0	221.1	2,477.7
2008 Jan.	22,839.6	11,280.3	980.4	10,299.9	2,413.9	1,449.9	964.0	893.5	5,491.2	221.1	2,539.5
Feb.	22,981.0	11,326.1	970.8	10,355.2	2,439.1	1,452.6	986.6	872.3	5,529.5	216.0	2,598.0
Mar. <sup>(p)</sup>	23,018.8	11,425.6	977.6	10,448.1	2,461.7	1,452.7	1,009.0	871.8	5,354.8	212.8	2,692.1
					Trans	sactions					
2005	1,608.0	708.9	12.8	696.0	156.2	76.2	80.0	53.2	448.0	1.4	240.4
2006	1,998.4	877.3	-14.4	891.6	10.7	-96.8	107.5	98.5	802.0	6.4	203.5
2007	2,598.3	1,014.7	-9.9	1,024.6	236.7	-38.9	275.6	55.8	791.9	-0.5	499.6
2007 Q3	367.4	247.6	-5.1	252.7	-16.3	-62.2	45.9	-23.9	85.1	1.6	73.4
Q4	558.9	231.0	8.8	222.3	105.4	-6.6	112.0	42.2	91.1	-5.8	95.0
2008 Jan.	411.1	95.0	3.8	91.3	21.7	12.9	8.8	7.8	239.2	-1.3	48.8
Feb.	191.1	51.2	-9.5	60.8	26.6	2.9	23.7	-20.8	83.8	-5.1	55.5
Mar. <sup>(p)</sup>	175.6	111.3	6.9	104.4	35.2	8.8	26.5	1.6	-58.9	-3.2	89.5

### 2. Liabilities

	Total	Currency in circulation	Deposits of central government	other general	Money market fund shares/ units <sup>2)</sup>	Debt securities issued <sup>3)</sup>	Capital and reserves	External liabilities	Remaining liabilities	Excess of inter- MFI liabilities
	1	2	3		5	6	7	8	9	10
				C	outstanding amou	nts				
2005	17,870.7	532.8	173.6	7,226.4	615.8	2,322.6	1,200.6	3,545.6	2,239.7	13.7
2006	19,743.9	592.2	158.0	7,906.5	614.7	2,587.8	1,276.5	4,026.5	2,566.2	15.6
2007	22,352.2	638.5	151.0	8,885.0	660.6	2,867.0	1,487.4	4,596.1	3,104.6	-38.0
2007 Q3	21,680.8	610.4	196.0	8,429.2	682.5	2,811.7	1,389.3	4,575.7	3,014.0	-28.1
Q4	22,352.2	638.5	151.0	8,885.0	660.6	2,867.0	1,487.4	4,596.1	3,104.6	-38.0
2008 Jan.	22,839.6	623.1	168.9	8,952.4	737.3	2,854.3	1,515.7	4,868.6	3,150.7	-31.4
Feb.	22,981.0	628.7	189.2	8,970.7	750.1	2,822.4	1,514.9	4,927.3	3,201.0	-23.3
Mar. <sup>(p)</sup>	23,018.8	632.9	200.2	9,038.7	747.9	2,824.8	1,508.3	4,825.6	3,251.3	-10.8
					Transactions					
2005	1,608.0	64.4	10.9	495.7	-3.1	213.5	95.5	448.0	333.9	-50.8
2006	1,998.4	59.4	-15.2	683.7	27.6	285.5	57.2	601.6	253.3	45.3
2007	2,598.3	45.8	-13.4	835.0	54.7	270.7	167.4	775.8	467.2	-4.9
2007 Q3	367.4	5.5	-25.6	141.6	-17.0	60.0	38.9	154.1	20.4	-10.6
Q4	558.9	28.1	-49.8	311.2	-12.7	22.6	87.1	98.8	66.6	7.1
2008 Jan.	411.1	-16.4	15.3	21.3	43.7	2.8	10.3	259.9	60.7	13.4
Feb.	191.1	5.6	20.3	25.3	11.9	-23.1	1.3	98.0	36.8	15.1
Mar. <sup>(p)</sup>	175.6	4.2	11.0	77.7	3.1	18.4	15.4	-23.6	42.9	26.6

Source: ECB.
Data refer to the changing composition of the euro area. For further information, see the General notes.
Amounts held by euro area residents.
Amounts issued with maturity up to two years held by non-euro area residents are included in external liabilities.

## 2.3 Monetary statistics <sup>1)</sup> (EUR billions and annual grown

### 1. Monetary aggregates<sup>2)</sup> and counterparts

2005 2006	1 3,423.3 3,686.1 3,835.4	2,653.2 2,953.0	3	4	5						
	3,686.1		( 07( 5			6	7	8	9	10	11
	3,686.1		(07(5		Outstanding a	imounts					
2007	- ,	3,504.1	6,076.5 6,639.1 7,339.4	998.1 1,101.7 1,311.0	7,074.6 7,740.9 8,650.5	-	5,000.6 5,429.7 5,978.3	2,473.0 2,321.3 2,417.0	9,564.3 10,664.1 12,045.7	8,289.3 9,171.5 10,174.9	424.3 635.7 630.6
2007 Q3	3,819.3	3,314.8	7,134.1	1,264.8	8,398.9	-	5,790.5	2,257.5	11,632.5	9,950.5	666.4
Q4	3,835.4	3,504.1	7,339.4	1,311.0	8,650.5	-	5,978.3	2,417.0	12,045.7	10,174.9	630.6
2008 Jan.	3,857.2	3,580.6	7,437.8	1,350.4	8,788.2	-	6,037.6	2,430.7	12,172.7	10,303.8	620.2
Feb.	3,853.5	3,635.9	7,489.4	1,340.1	8,829.6		6,014.7	2,423.7	12,246.5	10,372.6	598.9
Mar. <sup>(p)</sup>	3,854.1	3,672.2	7,526.2	1,348.6	8,874.8		5,970.1	2,421.9	12,330.4	10,451.5	547.2
					Transacti	ons					
2005	339.8	139.3	479.1	8.4	487.5	-	401.5	94.1	837.0	701.8	-0.4
2006	261.2	309.8	571.0	131.0	702.0		427.5	-114.7	1,107.4	898.6	200.6
2007	147.3	523.5	670.8	220.9	891.7		494.5	-52.4	1,363.6	1,029.9	15.5
2007 Q3	38.3	145.9	184.2	43.2	227.5	-	91.8	-37.5	333.4	280.2	-67.5
Q4	18.2	160.6	178.9	54.4	233.2		143.1	12.7	385.4	238.3	-22.5
2008 Jan. Feb. Mar. <sup>(p)</sup>	9.6 -0.1 3.7	45.6 57.5 40.5	55.2 57.4 44.1	17.4 -10.7 14.5	72.6 46.7 58.6	- -	42.0 -11.1 -5.2	-7.1 -6.8 6.9	90.8 80.8 101.8	79.2 74.3 90.5	-3.0 -14.9 -14.1
					Growth r	ates					
2005 Dec.	11.4	5.4	8.5	0.9	7.4	7.5	8.9	4.1	9.6	9.3	-0.4
2006 Dec.	7.6	11.7	9.4	13.3	10.0	9.8	8.5	-4.7	11.6	10.8	200.6
2007 Dec.	4.0	17.7	10.1	20.1	11.5	11.8	9.1	-2.3	12.8	11.2	15.5
2007 Sep.	6.1	15.4	10.2	18.1	11.4	11.7	8.9	-4.3	11.6	11.0	201.5
Dec.	4.0	17.7	10.1	20.1	11.5	11.8	9.1	-2.3	12.8	11.2	15.5
2008 Jan.	4.4	17.9	10.4	18.3	11.6	11.5	9.1	-2.3	12.7	11.1	18.1
Feb.	3.7	19.4	10.7	15.0	11.3	11.1	8.0	-2.5	12.5	11.0	-37.6
Mar. <sup>(p)</sup>	2.9	18.4	9.8	12.8	10.3		6.6	-1.6	12.1	10.8	-155.4

CI Monetary aggregates <sup>1)</sup>

### C2 Counterparts <sup>1)</sup>





Source: ECB.

Data refer to the changing composition of the euro area. For further information, see the General notes. 1)

Monetary liabilities of MFIs and central government (post office, treasury) vis-à-vis non-MFI euro area residents excluding central government (M1, M2, M3: see glossary). Values in the section "growth rates" are sums of the transactions during the 12 months ending in the period indicated. 2)

3)



## 2.3 Monetary statistics <sup>1)</sup>

## 2. Components of monetary aggregates and longer-term financial liabilities

	Currency in circulation	Overnight deposits	Deposits with agreed maturity up to 2 years	Deposits redeemable at notice up to 3 months	Repos	Money market fund shares/units	Debt securities up to 2 years	Debt securities over 2 years	Deposits redeemable at notice over 3 months	Deposits with agreed maturity over 2 years	Capital and reserves
	1	2	3	4	5	6	7	8	9	10	11
					Outstanding a	mounts					
2005	521.1	2,902.2	1,109.6	1,543.7	236.0	635.9	126.2	2,205.0	86.8	1,511.3	1,197.5
2006	578.4	3,107.7	1,401.0	1,552.0	266.1	637.0	198.7	2,399.6	102.2	1,655.0	1,273.0
2007	625.8	3,209.6	1,968.8	1,535.3	307.4	686.8	316.8	2,561.7	119.6	1,813.4	1,483.5
2007 Q3	611.5	3,207.7	1,807.8	1,507.0	295.3	687.2	282.3	2,526.6	112.9	1,766.9	1,384.0
Q4	625.8	3,209.6	1,968.8	1,535.3	307.4	686.8	316.8	2,561.7	119.6	1,813.4	1,483.5
2008 Jan.	629.5	3,227.7	2,043.5	1,537.0	306.4	745.1	298.9	2,579.0	122.9	1,819.3	1,516.5
Feb.	634.2	3,219.3	2,099.3	1,536.6	313.4	754.8	272.0	2,561.4	121.3	1,815.8	1,516.2
Mar. <sup>(p)</sup>	638.0	3,216.0	2,130.7	1,541.4	308.7	752.3	287.5	2,538.5	119.4	1,813.3	1,498.9
					Transactio	ons					
2005	63.0	276.8	70.3	69.0	-7.1	-0.9	16.4	199.5	-4.3	111.4	94.9
2006	57.3	203.9	300.5	9.3	30.9	30.0	70.1	217.2	15.4	138.1	56.8
2007	46.9	100.4	579.5	-56.0	43.3	58.8	118.8	153.0	9.9	164.4	167.1
2007 Q3	10.8	27.5	162.0	-16.0	7.8	-8.1	43.5	27.8	2.9	25.3	35.8
Q4	14.2	4.0	171.7	-11.1	12.2	8.8	33.4	3.7	-0.1	51.0	88.5
2008 Jan.	2.7	6.9	49.6	-4.0	-0.9	25.0	-6.7	21.5	1.9	3.6	15.0
Feb.	4.7	-4.7	57.7	-0.3	7.0	8.8	-26.6	-9.0	-1.5	-2.3	1.7
Mar. <sup>(p)</sup>	3.8	-0.2	35.6	4.9	-4.5	2.9	16.1	-7.6	-1.8	-0.3	4.6
					Growth ra	ites					
2005 Dec.	13.8	11.0	6.6	4.4	-3.0	-0.1	15.7	10.0	-4.7	8.1	8.8
2006 Dec.	11.0	7.0	27.2	0.6	13.2	4.9	54.5	9.9	17.8	9.1	4.7
2007 Dec.	8.1	3.2	41.3	-3.6	16.3	9.2	59.8	6.4	9.6	9.9	12.8
2007 Sep.	8.3	5.7	38.2	-3.6	12.1	9.8	55.7	10.1	15.1	9.0	6.4
Dec.	8.1	3.2	41.3	-3.6	16.3	9.2	59.8	6.4	9.6	9.9	12.8
2008 Jan.	7.8	3.7	41.3	-3.7	17.6	11.0	40.8	6.5	9.2	9.5	13.5
Feb.	7.7	2.9	43.4	-3.1	18.4	10.9	22.3	4.8	6.3	8.8	12.9
Mar. <sup>(p)</sup>	7.7	2.0	39.6	-2.6	11.5	8.9	24.7	3.7	3.5	7.0	11.4
			L)								

## **C3 Components of monetary aggregates** <sup>1)</sup> (annual growth rates; seasonally adjusted)

C4 Components of longer-term financial liabilities <sup>1)</sup>





Source: ECB.

1) Data refer to the changing composition of the euro area. For further information, see the General notes.

20

15

10

5

0

--5

## **2.4 MFI loans, breakdown**<sup>1), 2)</sup> (EUR billions and annual growth rates;

## 1. Loans to financial intermediaries and non-financial corporations<sup>3)</sup>

	Insurance co and pensi		Other f	ïnancial diaries <sup>4)</sup>		Non-financial	corporations	
	Total		Total		Total	Up to 1 year	Over 1 year and up to	Over 5 years
		Up to 1 year		Up to 1 year			5 years	
	1	2	3	4	5	6	7	8
			Οι	utstanding amounts				
2005	64.6	41.6	620.4	370.2	3,409.1	1,037.7	594.0	1,777.3
2006	82.8	55.2	696.0	420.6	3,844.5	1,137.9	707.1	1,999.5
2007	96.4	70.6	865.2	524.3	4,388.6	1,276.7	858.9	2,253.0
2007 Q3	112.0	87.8	855.0	535.4	4,230.6	1,248.2	814.1	2,168.4
Q4	96.4	70.6	865.2	524.3	4,388.6	1,276.7	858.9	2,253.0
2008 Jan.	101.7	75.7	899.8	557.5	4,462.3	1,296.6	878.7	2,287.0
Feb.	102.7	76.7	900.4	557.9	4,499.8	1,309.0	887.9	2,302.9
Mar. <sup>(p)</sup>	104.2	78.4	935.1	587.8	4,547.6	1,329.5	895.8	2,322.3
				Transactions				
2005	15.0	9.8	60.8	29.2	262.7	56.8	54.3	151.6
2006	18.1	13.9	81.9	57.7	446.2	100.5	123.1	222.6
2007	14.0	15.8	174.0	111.6	557.1	145.2	155.6	256.2
2007 Q3	1.7	4.4	57.7	37.5	129.3	25.7	39.6	64.0
Q4	-15.5	-17.1	15.3	-7.7	161.6	30.5	47.5	83.6
2008 Jan.	5.3	5.2	31.6	30.5	45.8	12.7	14.0	19.1
Feb.	1.1	1.0	2.3	1.8	39.9	13.5	10.3	16.1
Mar. <sup>(p)</sup>	1.6	1.8	38.7	32.7	53.5	22.3	9.2	21.9
				Growth rates				
2005 Dec.	30.6	31.2	11.0	8.7	8.3	5.8	9.9	9.3
2006 Dec.	28.0	33.3	13.3	15.6	13.1	9.7	20.8	12.4
2007 Dec.	16.9	28.5	24.8	26.5	14.5	12.8	22.0	12.8
2007 Sep.	25.6	40.0	20.7	23.3	14.0	12.6	20.3	12.5
Dec.	16.9	28.5	24.8	26.5	14.5	12.8	22.0	12.8
2008 Jan.	2.3	5.4	26.3	28.0	14.5	12.4	22.7	12.8
Feb.	6.4	9.9	22.8	22.7	14.8	13.2	22.8	12.9
Mar. <sup>(p)</sup>	6.4	9.9	22.7	22.4	15.0	13.9	21.8	13.1

C5 Loans to financial intermediaries and non-financial corporations<sup>2)</sup>



MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95. Data refer to the changing composition of the euro area. For further information, see the General notes. Before January 2003 data were collected in March, June, September and December each year. Monthly data prior to January 2003 are derived from quarterly data. 1) 2) 3) 4)

This category includes investment funds.



## **2.4 MFI loans, breakdown**<sup>1), 2)</sup> (EUR billions and annual growth rates;

## 2. Loans to households 3)

2. Loans to n	ousenoius												
	Total		Consume	er credit		Lei	nding for h	ouse purchase			Other l	ending	
		Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9	10	11	12	13
					0	utstanding an	nounts						
2005	4,191.0	554.1	129.1	200.7	224.3	2,915.3	15.2	67.5	2,832.6	721.6	147.3	99.9	474.4
2006	4,537.0	586.5	135.3	202.7	248.5	3,212.1	15.6	72.1	3,124.5	738.4	146.2	101.5	490.7
2007	4,808.1	617.9	137.8	203.5	276.6	3,436.9	15.9	73.8	3,347.2	753.4	147.5	104.0	501.8
2007 Q3	4,752.3	607.3	134.1	203.1	270.1	3,392.3	16.1	73.4	3,302.9	752.7	146.6	104.2	501.9
Q4	4,808.1	617.9	137.8	203.5	276.6	3,436.9	15.9	73.8	3,347.2	753.4	147.5	104.0	501.8
2008 Jan.	4,835.4	619.5	136.8	204.1	278.5	3,457.1	15.9	73.7	3,367.4	758.9	146.7	104.8	507.3
Feb.	4,851.7	619.1	135.7	202.5	280.8	3,471.5	15.8	73.5	3,382.1	761.2	145.4	105.7	510.1
Mar. <sup>(p)</sup>	4,860.5	623.0	137.3	202.9	282.8	3,476.3	16.1	73.6	3,386.6	761.2	147.3	105.6	508.3
						Transaction	ns						
2005	357.5	40.7	9.0	11.6	20.0	300.6	0.7	4.8	295.0	16.2	3.8	1.3	11.1
2006	345.4	42.6	8.2	4.8	29.5	281.8	1.5	4.6	275.8	20.9	1.4	3.8	15.7
2007	279.4	31.3	3.6	1.1	26.7	228.5	0.9	2.3	225.3	19.6	1.4	4.4	13.8
2007 Q3	64.0	4.8	-0.5	-1.4	6.7	57.3	0.1	0.8	56.4	1.9	-3.4	0.9	4.5
Q4	60.9	10.8	4.2	0.6	6.0	46.6	0.0	0.6	46.1	3.4	1.2	1.0	1.2
2008 Jan.	8.6	-1.5	-1.7	-0.7	0.8	11.0	-0.1	-0.2	11.4	-0.9	-1.9	-0.1	1.1
Feb.	17.5	-0.6	-1.0	-1.5	2.0	14.8	-0.1	-0.2	15.1	3.3	-1.2	1.0	3.5
Mar. <sup>(p)</sup>	10.6	4.1	1.7	0.5	1.9	5.5	0.2	0.1	5.2	1.0	2.0	0.1	-1.1
						Growth rate	es						
2005 Dec.	9.4	7.9	7.5	6.1	9.8	11.5	5.1	7.5	11.7	2.3	2.6	1.3	2.4
2006 Dec.	8.2	7.7	6.5	2.4	13.2	9.6	9.7	6.8	9.7	2.9	1.0	3.9	3.3
2007 Dec.	6.2	5.3	2.7	0.5	10.7	7.1	6.1	3.2	7.2	2.7	1.0	4.3	2.8
2007 Sep.	6.8	5.1	3.9	-0.5	10.5	7.9	7.1	4.4	8.0	3.4	1.0	5.3	3.7
Dec.	6.2	5.3	2.7	0.5	10.7	7.1	6.1	3.2	7.2	2.7	1.0	4.3	2.8
2008 Jan.	6.0	5.3	1.9	0.7	10.8	6.9	7.2	2.4	7.0	2.6	0.5	4.9	2.7
Feb.	5.8	5.4	2.8	0.3	11.0	6.6	4.5	1.9	6.7	2.7	-0.6	6.0	3.0
Mar. <sup>(p)</sup>	5.4	5.3	4.4	0.0	9.9	6.1	2.3	2.5	6.2	1.9	-0.2	4.5	2.1
C/ Lassa A		1 2)											

C6 Loans to households<sup>2)</sup>



1)

MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95. Data refer to the changing composition of the euro area. For further information, see the General notes. Including non-profit institutions serving households. Before January 2003 data were collected in March, June, September and December each year. Monthly data prior to January 2003 are derived from quarterly data. 2) 3)



## **2.4 MFI loans, breakdown**<sup>1), 2)</sup> (EUR billions and annual growth rates;

## 3. Loans to government and non-euro area residents

		G	eneral governme	nt			Non-e	uro area reside	nts	
	Total	Central government	Other	general governmer	nt	Total	Banks <sup>3)</sup>		Non-banks	
			State government	Local government	Social security funds		7	Total	General government	Other
	1	2	3	4 Outstand	5 ling amounts	6	7	8	9	10
2005	826.9	125.1	246.8	425.8	29.2	2,485.2	1,722.1	763.1	66.0	697.1
2006	810.5	104.1	232.5	448.1	25.8	2,924.3	2,061.0	863.4	63.2	800.2
2007 <sup>(p)</sup>	955.8	213.0	217.6	485.0	40.5	3,295.4	2,349.7	946.1	60.3	885.8
2007 Q1	801.4	97.2	225.2	447.8	31.2	3,169.7	2,265.1	904.6	60.0	844.6
Q2	798.2	95.7	218.8	446.1	37.6	3,286.4	2,334.3	952.0	61.4	890.6
Q3	793.0	91.8	213.9	446.0	41.4	3,303.1	2,353.2	948.5	61.3	887.2
Q4 <sup>(p)</sup>	955.8	213.0	217.6	485.0	40.5	3,295.4	2,349.7	946.1	60.3	885.8
				Tran	isactions					
2005	13.7	-5.6	-8.1	21.9	5.5	296.8	207.9	89.0	1.3	87.7
2006	-13.4	-17.6	-14.3	21.9	-3.4	532.5	402.9	129.6	-0.1	129.6
2007 <sup>(p)</sup>	-8.0	-4.9	-13.0	-4.5	14.6	542.3	394.4	148.4	0.7	147.7
2007 Q1	-8.2	-6.9	-6.3	-0.3	5.3	272.7	222.0	50.8	-2.7	53.4
Q2	-3.4	-1.8	-5.5	-2.5	6.4	135.3	79.6	55.7	1.8	53.9
Q3	-5.1	-3.8	-5.0	-0.2	3.8	77.6	56.5	19.6	1.2	18.3
Q4 <sup>(p)</sup>	8.7	7.6	3.8	-1.4	-0.9	56.7	36.3	22.4	0.3	22.0
				Grov	wth rates					
2005 Dec.	1.7	-4.3	-3.2	5.4	22.9	14.8	15.3	13.6	2.0	14.9
2006 Dec.	-1.6	-14.0	-5.8	5.1	-11.6	21.8	23.7	17.4	-0.1	19.1
2007 <sup>(p)</sup> Dec.	-1.0	-4.7	-5.6	-1.0	56.5	18.7	19.3	17.4	1.2	18.7
2007 Mar.	-1.3	-15.2	-6.1	4.6	6.8	26.4	28.7	21.2	-0.9	23.2
June	-0.9	-7.7	-5.9	2.0	17.3	29.0	30.1	26.5	-5.2	29.4
Sep.	-1.2	-8.8	-6.3	1.9	16.0	26.3	28.0	22.0	-2.0	24.1
Dec. <sup>(p)</sup>	-1.0	-4.7	-5.6	-1.0	56.5	18.7	19.3	17.4	1.2	18.7

C7 Loans to government and non-euro area residents<sup>2)</sup>





Source: ECB.

1) 2) 3)

MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95. Data refer to the changing composition of the euro area. For further information, see the General notes. The term "banks" is used in this table to indicate institutions of a similar type to MFIs resident outside the euro area.



## 2.5 Deposits held with MFIs, breakdown <sup>1), 2)</sup> (EUR billions and annual growth rates; outstanding amounts

### 1. Deposits by financial intermediaries

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Up to     Over     Up to     Over       10     11     12     13
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Up to Over Up to Over 2 years 2 years 3 months 3 months
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	2 years 2 years 3 months 3 months
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	10 11 12 13 14
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	185.0         329.8         10.5         0.1         121.1           251.8         469.4         10.6         0.2         125.1           347.9         652.8         12.2         0.3         147.1
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	305.9580.913.00.8161.1347.9652.812.20.3147.1
2005         26.3         7.4         -0.6         19.2         0.4         0.0         -0.2         176.1         40.1           2006         37.9         2.7         5.5         25.6         -0.2         0.0         4.4         249.2         45.5           2007         41.4         0.8         11.7         33.4         -0.2         -0.3         -4.1         341.1         32.7	345.1         652.8         12.9         0.3         164.5           367.7         643.7         11.9         0.3         166.1           367.0         648.2         13.2         0.2         169.4
2006         37.9         2.7         5.5         25.6         -0.2         0.0         4.4         249.2         45.5           2007         41.4         0.8         11.7         33.4         -0.2         -0.3         -4.1         341.1         32.7	
2007 Q3 22.9 3.0 5.1 13.1 0.0 -0.1 1.8 51.1 11.5	37.3         96.8         1.5         0.0         0.4           67.8         130.5         0.3         0.1         4.9           98.9         183.7         1.7         0.1         24.1
<u>Q4</u> 12.7 3.4 5.9 3.6 0.0 0.0 -0.1 82.4 -17.6	19.8         7.9         1.6         0.6         9.8           41.9         73.1         -0.7         -0.5         -13.8
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Growth rates	
2005 Dec.         4.5         12.4         -1.2         4.3         36.0         -         -0.8         26.9         22.2           2006 Dec.         6.2         4.0         10.7         5.4         -16.3         -         21.2         28.2         19.5           2007 Dec.         6.4         1.1         20.5         6.8         -22.5         -         -16.3         30.0         11.5	25.0         47.3         14.3         -         0.4           36.8         38.9         2.9         -         4.0           39.5         39.1         15.9         -         19.1
2007 Sep.         6.5         1.5         23.4         6.6         -18.2         -         -13.7         28.7         20.5           Dec.         6.4         1.1         20.5         6.8         -22.5         -         -16.3         30.0         11.5	31.1         38.5         29.0         -         12.1           39.5         39.1         15.9         -         19.1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	41.2         37.6         24.1         -         21.8         50.4         34.5         16.7         -         21.2         38.8         26.4         17.7         -         13.5         13.5

**C8 Total deposits by sector**<sup>2)</sup> (annual growth rates)



Source: ECB.

1)

MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95. Data refer to the changing composition of the euro area. For further information, see the General notes. This category includes investment funds. Covers deposits in columns 2, 3, 5 and 7. 2) 3)

4)

5) Covers deposits in columns 9, 10, 12 and 14.



C9 Total deposits and deposits included in M3 by sector <sup>2)</sup> (annual growth rates)

. . .

insurance corporations and pension funds (total) other financial intermediaries (total) insurance corporations and pension funds (included in M3)<sup>4)</sup> other financial intermediaries (included in M3)<sup>5)</sup> - -



## **2.5 Deposits held with MFIs, breakdown**<sup>1), 2)</sup> (EUR billions and annual growth rates; outstanding amounts

### 2. Deposits by non-financial corporations and households

			Non-finar	icial corp	orations					Н	ouseholds <sup>3</sup>	)		
	Total	Overnight	With agreed	maturity	Redeemab	e at notice	Repos	Total	Overnight	With agree	d maturity	Redeemable	e at notice	Repos
			Up to 2 years	Over 2 years	Up to 3 months	Over 3 months				Up to 2 years	Over 2 years	Up to 3 months	Over 3 months	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
						Outstand	ling amounts	;						
2005	1,211.9	769.2	305.1	67.2	44.5	1.2	24.6	4,343.1	1,685.9	534.0	631.7	1,354.2	84.5	52.8
2006	1,343.1	851.8	355.3	69.4	40.5	1.3	24.8	4,552.6	1,751.2	669.0	606.8	1,355.7	99.8	70.0
2007	1,470.6	882.1	474.6	59.6	29.2	1.4	23.7	4,989.0	1,777.6	994.5	561.0	1,457.6	111.1	87.1
2007 Q3	1,405.0	844.6	438.8	64.1	31.6	1.4	24.4	4,706.3	1,754.3	886.5	565.7	1,308.0	107.9	84.0
Q4	1,470.6	882.1	474.6	59.6	29.2	1.4	23.7	4,989.0	1,777.6	994.5	561.0	1,457.6	111.1	87.1
2008 Jan.	1,425.5	840.7	471.7	60.0	29.4	1.6	22.3	5,044.9	1,763.0	1,057.4	558.5	1,462.4	112.0	91.6
Feb.	1,441.0	833.3	494.0	60.3	28.6	1.5	23.3	5,053.9	1,747.7	1,084.4	553.1	1,461.6	111.1	95.9
Mar. <sup>(p)</sup>	1,448.1	846.5	488.4	59.7	28.9	1.5	23.2	5,076.8	1,757.2	1,100.6	548.6	1,465.8	109.1	95.6
						Tran	sactions							
2005	96.6	88.9	11.4	-1.6	3.7	-0.4	-5.4	177.7	125.1	16.3	-2.8	45.9	-4.0	-2.9
2006	141.2	85.7	55.7	3.9	-4.2	0.1	0.2	215.2	65.7	137.5	-23.1	2.5	15.4	17.2
2007	134.5	31.8	123.4	-8.0	-11.0	-0.7	-1.1	280.8	21.7	322.0	-45.4	-45.7	11.2	17.1
2007 Q3	23.4	-15.6	48.0	-2.6	-4.4	0.1	-2.0	29.5	-31.1	85.3	-11.6	-21.0	1.7	6.3
Q4	69.6	38.0	38.3	-4.1	-1.8	-0.1	-0.7	136.6	23.4	107.7	-3.1	2.3	3.3	3.1
2008 Jan.	-55.5	-43.8	-8.8	-0.1	-1.3	0.0	-1.5	26.2	-21.2	45.8	-4.4	1.4	0.0	4.6
Feb.	16.9	-6.7	23.0	0.4	-0.8	-0.1	1.1	9.7	-15.2	27.4	-5.3	-0.7	-0.9	4.3
Mar. <sup>(p)</sup>	10.0	14.5	-4.1	-0.5	0.3	0.0	-0.2	24.4	9.8	17.2	-4.5	4.2	-2.0	-0.4
						Grov	wth rates							
2005 Dec.	8.6	13.1	3.8	-2.0	9.0	-29.0	-18.2	4.3	8.5	3.1	-0.4	3.3	-4.5	-5.1
2006 Dec.	11.7	11.2	18.4	5.7	-9.4	5.9	0.6	5.0	3.9	25.8	-3.7	0.2	18.2	32.6
2007 Dec.	10.0	3.7	34.8	-11.7	-26.9	-31.6	-4.3	6.1	1.2	47.8	-7.5	-3.5	11.2	24.4
2007 Sep.	11.4	7.1	32.5	-8.8	-28.4	-26.9	-2.8	5.8	2.7	43.9	-7.2	-3.5	16.0	29.6
Dec.	10.0	3.7	34.8	-11.7	-26.9	-31.6	-4.3	6.1	1.2	47.8	-7.5	-3.5	11.2	24.4
2008 Jan.	9.6	4.3	31.4	-11.9	-27.7	-34.7	-10.6	6.9	2.3	48.6	-7.4	-3.5	9.2	25.7
Feb.	10.6	3.2	37.1	-10.7	-26.9	-37.4	-11.3	6.9	1.4	48.1	-7.4	-2.8	6.2	27.9
Mar. <sup>(p)</sup>	7.6	1.9	29.1	-11.2	-29.0	-1.3	-14.3	6.8	1.4	45.7	-7.6	-2.2	2.7	25.1

**CIO** Total deposits by sector <sup>2)</sup>



## CII Total deposits and deposits included in M3 by sector <sup>2)</sup> (annual growth rates)

non-financial corporations (total) households (total)

. . .

non-financial corporations (included in M3)<sup>4)</sup> households (included in M3)<sup>5)</sup> - -



Source: ECB.

- 1) MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.
- Data refer to the changing composition of the euro area. For further information, see the General notes. Including non-profit institutions serving households. Covers deposits in columns 2, 3, 5 and 7. Covers deposits in columns 9, 10, 12 and 14. 2) 3)

4) 5)



## 2.5 Deposits held with MFIs, breakdown <sup>1), 2)</sup>

### **General government** Non-euro area residents Total Central Other general government Total Banks Non-banks government General State Local Social Total Other government government security government funds 10 8 Outstanding amounts 2005 2006 2007 <sup>(p)</sup> 313.1 329.0 372.9 149.2 124.2 127.1 38.3 45.4 58.5 80.9 90.8 107.7 674.2 743.3 746.5 44.7 68.6 3,050.5 3,429.0 2,250.5 2,557.1 800.0 871.9 125.8 128.6 79.9 3.853.2 2,964.2 888.0 141.5 2007 Q1 Q2 Q3 Q4 <sup>(p)</sup> 337.8 380.2 373.5 372.9 67.9 71.4 72.0 79.9 42.1 43.8 88.8 95.2 97.2 107.7 3,663.9 3,821.5 3,877.1 2,778.3 2,898.7 2,962.0 132.4 137.5 145.9 141.5 753.2 785.3 885.6 922.8 139.0 169.8 144.3 127.1 60.0 913.6 767.6 3 853 2 888.0 58 5 2.964.2 746 5 Transactions 381.1 476.6 611.7 17.8 6.6 18.3 2005 2006 30.8 14.2 7.8 7.0 0.3 23.9 292.8 385.8 88.3 90.8 70.5 84.2 11.2 -24.5 11.5 7.8 9.8 2007 <sup>(p)</sup> 30.9 -3.1 13.2 11.3 549.7 61.1 42.8 2007 Q1 Q2 Q3 Q4 <sup>(p)</sup> -0.7 3.5 0.6 7.9 -2.3 6.4 2.0 4.2 5.7 7.8 42.4 256.6 177.7 130.2 19.4 15.2 35.9 14.1 30.8 -3.3 1.7 237.2 41.6 9.4 -9.3 136.1 10.8 -2.5 -7.3 -26.116.1 119.2 -1.4 -12.0 -21.9 -1.4 3.7 47.2 57.2 -6.8 Growth rates 16.8 5.3 14.2 2005 Dec. 10.9 8.1 25.4 16.6 0.6 15.4 16.4 12.7 12.0 53.5 16.4 11.5 7.0 2006 Dec. 2007 <sup>(p)</sup>Dec. 4.5 9.4 -16.5 -2.3 18.4 9.6 10.7 15.8 18.0 17.3 21.6 12.6 5.8 29.0 7.3 18.5 10.7 -6.3 21.9 -3.5 -2.3 10.4 10.5 44.0 12.2 12.2 13.3 38.6 25.3 19.4 16.4 21.8 20.0 19.2 25.4 24.4 5.8 8.9 13.2 14.2 91 2007 Mar. 8.6 11.5 7.5 7.0 12.0 6.5 5.8 June Sep. Dec.<sup>(p)</sup> 9.4 29.0 10.7 16.4 18.0 21.6

## 3. Deposits by government and non-euro area residents

C12 Deposits by government and non-euro area residents<sup>2)</sup>



Source: ECB.

- 1) MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.
- 2)

Data refer to the changing composition of the euro area. For further information, see the General notes. The term "banks" is used in this table to indicate institutions of a similar type to MFIs resident outside the euro area. 3)

# **2.6** MFI holdings of securities, breakdown <sup>1</sup>), <sup>2</sup>) (EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during period)

			5	Securities o	ther than sh	ares				Shares and	l other equity	7
	Total	MF	Īs	Gen govern		Other area res		Non-euro area residents	Total	MFIs	Non-MFIs	Non-euro area residents
		Euro	Non-euro	Euro	Non-euro	Euro	Non-euro					
	1	2	3	4	5	6	7	8	9	10	11	12
					Out	standing am	ounts					
2005	4,418.9	1,450.4	67.3	1,412.5	17.0	525.7	25.8	920.3	1,254.7	308.5	700.1	246.1
2006	4,664.3	1,560.6	72.3	1,260.4	16.2	615.8	30.1	1,108.9	1,490.3	377.3	817.2	295.8
2007	5,113.7	1,652.8	84.0	1,177.6	16.6	916.4	33.4	1,232.8	1,658.6	424.9	889.9	343.8
2007 Q3	4,971.4	1,645.5	82.1	1,199.7	14.7	769.1	35.7	1,224.7	1,606.7	418.3	838.7	349.7
Q4	5,113.7	1,652.8	84.0	1,177.6	16.6	916.4	33.4	1,232.8	1,658.6	424.9	889.9	343.8
2008 Jan.	5,251.1	1,698.0	93.7	1,202.1	17.6	925.3	36.8	1,277.7	1,646.7	433.6	881.7	331.3
Feb.	5,313.4	1,728.8	94.9	1,200.7	15.7	950.4	34.0	1,289.1	1,629.1	442.5	860.3	326.3
Mar. <sup>(p)</sup>	5,301.8	1,727.6	87.2	1,201.5	15.4	962.4	44.4	1,263.4	1,605.1	451.7	860.1	293.2
						Transaction	IS					
2005	356.3	85.7	2.0	52.3	-0.9	71.9	7.7	137.6	109.1	26.5	53.4	29.2
2006	337.4	122.8	10.6	-122.7	0.5	100.6	6.5	219.0	194.4	58.8	97.0	38.6
2007	549.0	136.1	18.3	-78.8	1.5	266.6	9.5	195.7	154.3	48.0	55.7	50.6
2007 Q3	-8.5	5.4	5.7	-66.6	-0.4	42.9	3.0	1.5	-9.4	13.4	-23.9	1.1
Q4	195.6	48.7	5.0	-14.7	2.5	113.4	-1.2	42.0	49.9	8.6	42.3	-0.9
2008 Jan.	103.0	28.9	7.2	13.4	0.7	5.5	3.2	43.9	17.0	8.9	7.8	0.3
Feb.	80.2	29.8	2.8	-1.6	-1.6	25.4	-2.0	27.4	-15.8	8.5	-21.1	-3.2
Mar. <sup>(p)</sup>	34.5	-1.1	-4.6	8.0	0.3	14.4	12.0	5.4	-21.5	8.2	1.7	-31.3
						Growth rate	s					
2005 Dec.	9.0	6.3	3.6	4.2	-4.5	16.0	43.8	18.2	9.4	9.4	8.0	13.6
2006 Dec.	7.7	8.5	16.5	-8.9	3.0	19.3	25.7	24.2	15.2	18.7	13.7	15.2
2007 Dec.	11.8	8.7	25.7	-6.2	10.5	42.8	33.4	17.8	10.3	12.7	6.8	17.1
2007 Sep.	8.7	6.3	27.2	-9.8	-5.7	31.3	49.2	21.1	11.7	20.9	3.2	25.0
Dec.	11.8	8.7	25.7	-6.2	10.5	42.8	33.4	17.8	10.3	12.7	6.8	17.1
2008 Jan.	12.1	8.9	32.6	-6.3	20.0	44.0	31.9	17.9	9.0	12.9	6.0	12.0
Feb.	12.7	10.1	28.4	-6.2	8.7	45.3	15.8	18.3	7.0	12.2	4.8	6.2
Mar. <sup>(p)</sup>	12.0	8.6	24.5	-4.9	12.3	41.4	48.1	16.4	3.5	13.3	2.8	-6.8

**C13 MFI holdings of securities**<sup>2)</sup> (annual growth rates)



Source: ECB.
 MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.
 Data refer to the changing composition of the euro area. For further information, see the General notes.



## **2.7 Revaluation of selected MFI balance sheet items** <sup>1), 2)</sup> (EUR billions)

### 1. Write-offs/write-downs of loans to households<sup>3)</sup>

		Consum	er credit		Lei	nding for h	ouse purchase			Other le	ending	
	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9	10	11	12
2005	-4.1	-1.7	-0.9	-1.5	-4.4	-0.3	-1.1	-3.0	-9.8	-2.7	-3.2	-3.9
2006	-3.9	-1.5	-0.9	-1.6	-2.7	-0.1	-0.1	-2.4	-6.7	-1.1	-2.0	-3.6
2007	-4.2	-1.2	-1.4	-1.6	-2.7	-0.2	-0.2	-2.3	-6.8	-0.8	-2.3	-3.7
2007 Q3	-0.8	-0.3	-0.2	-0.3	-0.4	0.0	0.0	-0.4	-1.3	-0.2	-0.5	-0.7
Q4	-1.6	-0.4	-0.6	-0.6	-1.2	-0.1	-0.1	-1.0	-2.2	-0.2	-1.1	-1.0
2008 Jan.	-0.5	-0.2	-0.1	-0.2	-0.7	0.0	0.0	-0.6	-0.6	-0.3	0.0	-0.3
Feb.	-0.3	-0.1	-0.1	-0.1	-0.2	0.0	0.0	-0.2	-0.3	-0.1	-0.1	-0.2
Mar. <sup>(p)</sup>	-0.3	-0.1	-0.1	-0.1	-0.4	0.0	0.0	-0.4	-0.5	0.0	-0.1	-0.4

## 2. Write-offs/write-downs of loans to non-financial corporations and non-euro area residents

		Non-financial corp	orations		Non-euro	area residents	
	Total	Up to 1 year	Over 1 year and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 year
	1	2	3	4	5	6	7
2005	-19.3	-7.4	-5.6	-6.2	-1.2	-0.3	-0.9
2006	-13.2	-3.5	-4.6	-5.1	-0.8	-0.1	-0.7
2007	-12.4	-2.1	-5.4	-4.9	-5.2	-3.4	-1.8
2007 Q3	-1.8	-0.4	-0.7	-0.7	-0.2	-0.1	-0.1
Q4	-4.9	-0.9	-2.6	-1.4	-3.7	-3.3	-0.4
2008 Jan.	-1.5	-0.8	-0.3	-0.5	-0.3	-0.1	-0.3
Feb.	-0.4	-0.1	-0.2	-0.1	-0.2	0.0	-0.2
Mar. <sup>(p)</sup>	-1.0	-0.3	-0.3	-0.4	-1.8	-1.7	-0.1

## 3. Revaluation of securities held by MFIs

			8	Securities of	ther than sh			Shares and	l other equity	y		
	Total	MF	Is	Gen govern		Other area res		Non-euro area residents	Total	MFIs	Non-MFIs	Non-euro area residents
		Euro	Non-euro	Euro	Non-euro	Euro	Non-euro	0	0	10		12
	1	2	3	4		6	/	8	9	10	11	12
2005	21.5	3.4	0.5	6.7	0.7	1.3	0.2	8.6	25.7	5.0	14.4	6.3
2006	-8.6	1.2	-0.4	-7.9	-0.2	-0.4	-0.3	-0.7	31.5	7.1	16.3	8.0
2007	-19.3	-2.3	-0.1	-7.2	-0.2	-1.7	-0.5	-7.3	17.1	2.8	12.9	1.4
2007 Q3	-1.6	1.0	0.1	1.0	-0.1	-1.0	-0.2	-2.6	-5.8	-1.7	-3.3	-0.8
Q4	-9.5	-1.1	0.0	-4.7	-0.1	-0.2	-0.2	-3.2	2.8	2.0	2.6	-1.9
2008 Jan.	-6.9	-3.3	0.0	3.2	0.0	-3.1	-0.1	-3.7	-17.2	-2.1	-9.7	-5.4
Feb.	-3.5	0.2	0.0	0.1	-0.1	-0.4	-0.3	-3.1	-1.8	0.3	-0.4	-1.8
Mar. <sup>(p)</sup>	-11.9	-0.9	-0.2	-2.1	-0.2	-1.7	-0.4	-6.4	-2.5	1.1	-1.8	-1.8

Source: ECB.

MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.

2) Data refer to the changing composition of the euro area. For further information, see the General notes.
3) Including non-profit institutions serving households.



## **2.8 Currency breakdown of selected MFI balance sheet items** <sup>1),2)</sup> (percentages of total; outstanding amounts in EUR billions; end of period)

## 1. Deposits

			MFI	S <sup>3)</sup>						Non-l	MFIs			
	All	Euro <sup>4)</sup>		Non-eur	o currencies	s		All	Euro <sup>4)</sup>		Non-euro	currencies	3	
	(outstanding amount)		Total				(	outstanding amount)		Total				
	unounty			USD	JPY	CHF	GBP	uniount)			USD	JPY	CHF	GBP
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
						By euro ar	ea resider	nts						
2005	4,851.2	90.9	9.1	5.6	0.4	1.5	1.0	7,361.0	96.8	3.2	1.9	0.3	0.1	0.5
2006	5,242.4	90.7	9.3	5.6	0.4	1.5	1.2	8,014.8	96.4	3.6	2.2	0.3	0.1	0.6
2007 <sup>(p)</sup>	6,092.4	92.1	7.9	4.7	0.4	1.2	1.0	8,993.0	96.3	3.7	2.2	0.4	0.1	0.5
2007 Q1	5,395.9	90.5	9.5	5.6	0.5	1.4	1.2	8,199.9	96.3	3.7	2.3	0.3	0.1	0.6
Q2	5,572.9	90.5	9.5	5.8	0.4	1.3	1.1	8,448.1	96.3	3.7	2.3	0.3	0.1	0.6
Q3	5,700.6	91.2	8.8	5.3	0.4	1.3	1.0	8,554.3	96.1	3.9	2.4	0.3	0.1	0.6
Q4 <sup>(p)</sup>	6,092.4	92.1	7.9	4.7	0.4	1.2	1.0	8,993.0	96.3	3.7	2.2	0.4	0.1	0.5
					B	y non-euro	area resid	lents						
2005	2,250.5	46.2	53.8	35.4	2.7	2.8	10.0	800.0	51.8	48.2	32.1	1.7	2.2	9.2
2006	2,557.1	45.3	54.7	35.1	2.3	2.7	11.5	871.9	50.7	49.3	32.0	1.3	2.0	10.4
2007 <sup>(p)</sup>	2,964.2	46.8	53.2	33.3	2.8	2.5	11.5	888.0	50.1	49.9	32.8	1.6	1.6	10.1
2007 Q1	2,778.3	46.4	53.6	34.3	2.5	2.5	11.2	885.6	51.1	48.9	31.8	1.6	2.2	9.4
Q2	2,898.7	45.0	55.0	34.8	2.6	2.4	11.8	922.8	51.2	48.8	32.3	1.3	1.8	9.7
Q3	2,962.0	46.1	53.9	33.6	2.6	2.3	11.9	913.6	49.5	50.5	33.8	1.1	1.9	9.6
Q4 <sup>(p)</sup>	2,964.2	46.8	53.2	33.3	2.8	2.5	11.5	888.0	50.1	49.9	32.8	1.6	1.6	10.1

### 2. Debt securities issued by euro area MFIs

	All	Euro <sup>4)</sup>		Non-et	uro currencies		
	(outstanding amount)		Total				
				USD	JPY	CHF	GBP
	1	2	3	4	5	6	7
2005	4,051.7	81.2	18.8	9.6	1.8	1.9	3.2
2006	4,485.5	80.5	19.5	10.0	1.6	1.9	3.5
2007 <sup>(p)</sup>	4,948.0	81.4	18.6	9.3	1.6	1.8	3.4
2007 Q1	4,673.7	80.7	19.3	9.8	1.7	1.9	3.5
Q2	4,797.0	80.2	19.8	10.1	1.6	1.8	3.7
Q3 Q4 <sup>(p)</sup>	4,862.4	80.8	19.2	9.7	1.7	1.8	3.6
Q4 <sup>(p)</sup>	4,948.0	81.4	18.6	9.3	1.6	1.8	3.4

Source: ECB.
MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.
Data refer to the changing composition of the euro area. For further information, see the General notes.
For non-euro area residents, the term "MFIs" refers to institutions of a similar type to euro area MFIs.
Including items expressed in the national denominations of the euro.



## **2.8 Currency breakdown of selected MFI balance sheet items** <sup>1</sup>),2) (percentages of total; outstanding amounts in EUR billions; end of period)

3. Loans

J. Loans														
			MF	Is <sup>3)</sup>						Non-l	MFIs			
	All	Euro <sup>4)</sup>		Non-eu	ro currencie	es		All	Euro <sup>4)</sup>		Non-eur	o currencie	s	
	(outstanding amount)		Total					(outstanding amount)		Total				
				USD	JPY	CHF	GBP				USD	JPY	CHF	GBP
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
						To euro a	rea reside	nts						
2005	4,569.7	-	-	-	-	-	-	9,112.0	96.3	3.7	1.6	0.2	1.3	0.5
2006	4,933.5	-	-	-	-	-	-	9,970.8	96.4	3.6	1.6	0.2	1.1	0.5
2007 <sup>(p)</sup>	5,788.9	-	-	-	-	-	-	11,114.1	96.2	3.8	1.8	0.2	1.0	0.5
2007 Q1	5,097.6	-	-	-	-	-	-	10,242.4	96.4	3.6	1.7	0.2	1.1	0.5
Q2	5,264.5	-	-	-	-	-	-	10,510.8	96.2	3.8	1.8	0.2	1.0	0.6
Q3	5,433.4	-	-	-	-	-	-	10,742.9	96.1	3.9	1.9	0.2	1.0	0.5
Q4 <sup>(p)</sup>	5,788.9	-	-	-	-	-	-	11,114.1	96.2	3.8	1.8	0.2	1.0	0.5
					1	lo non-euro	o area resi	dents						
2005	1,722.1	48.5	51.5	30.5	4.3	2.0	10.1	763.1	38.2	61.8	43.7	1.8	4.1	8.6
2006	2,061.0	50.7	49.3	28.9	2.0	2.3	11.0	863.4	39.3	60.7	43.2	1.1	4.0	8.6
2007 <sup>(p)</sup>	2,349.7	48.1	51.9	28.9	2.3	2.4	12.7	946.1	40.5	59.5	41.5	1.2	3.7	8.5
2007 Q1	2,265.1	51.7	48.3	27.7	2.2	2.5	10.8	904.6	41.3	58.7	41.8	1.0	4.1	8.1
Q2	2,334.3	50.3	49.7	28.7	1.9	2.4	11.7	952.0	39.4	60.6	43.1	1.0	3.8	8.4
Q3	2,353.2	48.8	51.2	28.4	2.1	2.5	12.9	948.5	39.2	60.8	43.3	1.1	3.9	8.2
Q4 <sup>(p)</sup>	2,349.7	48.1	51.9	28.9	2.3	2.4	12.7	946.1	40.5	59.5	41.5	1.2	3.7	8.5

## 4. Holdings of securities other than shares

			Issued by	y MFIs <sup>3)</sup>						Issued by	non-MFIs			
	All	Euro <sup>4)</sup>		Non-eur	o currencie	s		All	Euro <sup>4)</sup>		Non-euro	o currencie	s	
	(outstanding amount)		Total					(outstanding amount)		Total				
				USD	JPY	CHF	GBP				USD	JPY	CHF	GBP
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
					Iss	sued by euro	o area res	idents						
2005	1,517.7	95.6	4.4	2.0	0.3	0.4	1.4	1,980.9	97.8	2.2	1.1	0.3	0.1	0.5
2006	1,632.9	95.6	4.4	2.3	0.2	0.3	1.3	1,922.5	97.6	2.4	1.3	0.3	0.1	0.7
2007 <sup>(p)</sup>	1,736.9	95.2	4.8	2.4	0.3	0.3	1.5	2,144.0	97.7	2.3	1.4	0.2	0.1	0.5
2007 Q1	1,693.0	95.5	4.5	2.3	0.3	0.3	1.4	1,968.0	97.5	2.5	1.3	0.3	0.1	0.8
Q2	1,716.4	95.4	4.6	2.2	0.3	0.3	1.6	2,043.1	97.6	2.4	1.3	0.3	0.1	0.7
Q3	1,727.6	95.2	4.8	2.4	0.3	0.2	1.5	2,019.2	97.5	2.5	1.4	0.3	0.1	0.7
Q4 <sup>(p)</sup>	1,736.9	95.2	4.8	2.4	0.3	0.3	1.5	2,144.0	97.7	2.3	1.4	0.2	0.1	0.5
					Issue	ed by non-er	uro area r	esidents						
2005	397.5	51.0	49.0	28.5	0.8	0.5	15.7	522.8	38.3	61.7	35.0	7.8	0.8	12.6
2006	514.5	52.2	47.8	28.8	0.7	0.4	14.5	594.4	38.9	61.1	36.5	4.9	0.8	14.2
2007 <sup>(p)</sup>	578.2	53.9	46.1	27.5	0.7	0.4	14.4	655.9	35.7	64.3	39.3	4.0	0.8	13.7
2007 Q1	545.5	52.7	47.3	28.5	0.6	0.5	14.4	636.2	38.1	61.9	36.9	4.4	0.6	14.8
Q2	584.0	51.9	48.1	28.5	0.7	0.5	14.6	667.1	37.4	62.6	36.9	4.3	0.7	15.7
Q3	574.3	53.9	46.1	26.7	0.7	0.4	15.0	650.9	35.4	64.6	38.9	4.1	0.7	14.5
Q4 <sup>(p)</sup>	578.2	53.9	46.1	27.5	0.7	0.4	14.4	655.9	35.7	64.3	39.3	4.0	0.8	13.7

Source: ECB.
 MFI sector excluding the Eurosystem; sectoral classification is based on ESA 95.
 Data refer to the changing composition of the euro area. For further information, see the General notes.
 For non-euro area residents, the term "MFIs" refers to institutions of a similar type to euro area MFIs.
 Including items expressed in the national denominations of the euro.



## **2.9 Aggregated balance sheet of euro area investment funds**<sup>1)</sup> (EUR billions; outstanding amounts at end of period)

### 1. Assets

	Total	Deposits		oldings of securiti other than shares		Holdings of shares/ other	Holdings of investment fund shares	Fixed assets	Other assets
			Total	Up to 1 year	Over 1 year	1.0	-	0	0
	1	2	3	4	3	6	/	δ	9
2006 Q3 Q4	5,359.0 5,551.3	317.5 320.6	1,985.0 2,005.8	178.4 170.6	1,806.6 1,835.2	1,874.4 2,022.0	631.3 670.6	181.5 187.9	369.2 344.3
2007 Q1 Q2 Q3 Q4 <sup>(p)</sup>	5,713.3 5,989.1 5,892.3 5,779.8	332.4 346.2 358.1 353.0	2,031.8 2,044.4 2,015.8 1,994.4	181.0 192.9 187.0 183.8	1,850.8 1,851.5 1,828.8 1,810.6	2,068.9 2,216.1 2,165.9 2,073.7	718.7 784.1 773.3 783.3	188.9 182.0 182.5 190.7	372.7 416.3 396.6 384.7

### 2. Liabilities

	Total	Deposits and loans taken	Investment fund shares	Other liabilities
	1	2	3	4
2006 Q3	5,359.0	75.9	4,999.5	283.7
Q4	5,551.3	77.8	5,217.0	256.4
2007 Q1	5,713.3	82.2	5,349.3	281.8
Q2	5,989.1	85.9	5,586.6	316.6
Q3	5,892.3	80.1	5,495.5	316.7
Q4 <sup>(p)</sup>	5,779.8	78.2	5,409.4	292.2

## 3. Total assets/liabilities broken down by investment policy and type of investor

	Total		Fund	ds by investment po	licy		Funds by typ	e of investor
		Equity funds	Bond funds	Mixed funds	Real estate funds	Other funds	General public funds	Special investors' funds
	1	2	3	4	5	6	7	8
2006 Q3 Q4	5,359.0 5,551.3	1,533.3 1,680.5	1,594.2 1,657.0	1,321.5 1,376.0	221.2 231.8	688.9 606.0	4,085.5 4,252.1	1,273.5 1,299.2
2007 Q1 Q2 Q3 Q4 <sup>(p)</sup>	5,713.3 5,989.1 5,892.3 5,779.8	1,723.2 1,824.8 1,796.1 1,732.0	1,674.9 1,693.4 1,655.8 1,598.1	1,459.3 1,539.2 1,522.8 1,537.2	238.4 230.9 236.1 244.0	617.5 700.7 681.4 668.6	4,372.8 4,577.2 4,468.4 4,344.1	1,340.6 1,411.8 1,423.9 1,435.7



### Source: ECB.

1) Other than money market funds. For further details, see the General notes.



## 2.10 Assets of euro area investment funds broken down by investment policy and type of investor (EUR billions; outstanding amounts at end of period)

	Total	Deposits	Holdin other	gs of securities r than shares		Holdings of shares/ other	Holdings of investment fund shares	Fixed assets	Other assets
			Total	Up to 1 year	Over 1 year	equity			
	1	2	3	4	5	6	7	8	9
				Equity funds					
2006 Q3 Q4	1,533.3 1,680.5	53.8 56.1	76.1 66.0	33.2 22.7	42.9 43.3	1,284.3 1,429.3	66.8 74.3	-	52.3 54.8
2007 Q1 Q2 Q3	1,723.2 1,824.8 1,796.1	59.3 60.9 71.9	65.7 67.9 68.6	25.7 27.4 26.7	40.0 40.4 41.9	1,461.2 1,546.2 1,505.0	78.4 84.0 82.2		58.6 65.9 68.4
Q4 <sup>(p)</sup>	1,732.0	57.7	71.7	26.5	45.2	1,461.4	79.2	-	61.8
				Bond funds					
2006 Q3 Q4	1,594.2 1,657.0	105.5 108.3	1,288.5 1,343.6	86.8 91.1	1,201.8 1,252.5	41.6 45.4	48.2 49.8	-	110.3 110.0
2007 Q1 Q2 Q3	1,674.9 1,693.4 1,655.8	112.3 114.9 109.9	1,356.5 1,346.7 1,319.6	95.1 99.5 97.0	1,261.4 1,247.2 1,222.6	44.5 62.9 62.6	52.5 55.7 53.2	- -	109.0 113.2 110.5
Q4 <sup>(p)</sup>	1,598.1	116.1	1,274.3	92.8	1,181.6	58.1	49.8	-	99.8
				Mixed funds					
2006 Q3 Q4	1,321.5 1,376.0	68.5 71.0	510.6 519.4	45.2 43.4	465.4 476.0	332.3 364.2	272.3 292.8	0.3 0.4	137.4 128.2
2007 Q1 Q2 Q3 O4 <sup>(p)</sup>	1,459.3 1,539.2 1,522.8 1,537.2	73.8 84.0 86.2 89.9	530.5 529.2 522.4 546.9	45.5 50.2 46.3 47.0	485.0 479.0 476.1 499.9	380.8 398.9 405.3	322.3 346.4 345.0 343.3	0.3 0.9 0.5	151.5 179.8 163.3
Q4 (*)	1,537.2	89.9	546.9			394.8	343.3	0.8	161.5
2006.02	221.2	16.4	6.0	Real estate fund		1.0	( )	100.2	10.4
2006 Q3 Q4	221.2 231.8	16.4 17.6	6.0 6.1	1.6 1.7	4.4 4.4	1.9 2.2	6.2 7.0	180.3 187.0	10.4 11.9
2007 Q1 Q2 Q3 Q4 <sup>(p)</sup>	238.4 230.9 236.1 244.0	18.9 18.8 20.7 19.6	6.7 6.6 6.4 6.0	1.9 1.9 1.6 1.5	4.8 4.7 4.8 4.5	2.3 2.0 2.0 1.7	9.6 10.0 13.1 12.5	188.4 180.4 181.1 189.5	12.6 12.9 12.8 14.7

## **1.** Funds by investment policy

## 2. Funds by type of investor

	Total	Deposits	Holdings of securities other than shares	Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	<b>Other</b> assets
	1	2	3	4	5	6	7
			General put	blic funds			
2006 Q3	4,085.5	260.6	1,374.1	1,531.3	470.9	151.2	297.3
Q4	4,252.1	265.4	1,402.4	1,650.2	498.2	155.2	280.6
2007 Q1	4,372.8	274.3	1,420.9	1,693.5	529.0	155.6	299.5
Q2	4,577.2	280.9	1,432.0	1,816.8	576.5	147.3	323.7
Q3	4,468.4	287.8	1,376.6	1,788.8	564.0	144.8	306.4
Q4 <sup>(p)</sup>	4,344.1	279.7	1,337.8	1,714.9	569.1	150.7	291.9
			Special inves	stors' funds			
2006 Q3	1,273.5	56.9	610.9	343.1	160.5	30.2	71.9
Q4	1,299.2	55.2	603.4	371.8	172.4	32.7	63.7
2007 Q1	1,340.6	58.0	610.8	375.4	189.7	33.3	73.2
Q2	1,411.8	65.3	612.4	399.3	207.6	34.7	92.7
Q3	1,423.9	70.3	639.2	377.1	209.3	37.7	90.2
Q4 <sup>(p)</sup>	1,435.7	73.2	656.5	358.8	214.2	40.0	92.9

Source: ECB.



## **EURO AREA ACCOUNTS**

## **3.1 Integrated economic and financial accounts by institutional sector** (EUR billions)

44.1 39.7 21.8 57.1 35.6 01.1 34.5	Households 119.1 9.2 87.9 280.7 53.9	Non-financial corporations 718.4 20.7 180.4 255.7	<b>Financial</b> <b>corporations</b> 57.9 4.7 10.9 26.6	General government 248.7 5.1 42.6 -6.0	Rest of the world 523.0 -27.9
39.7 21.8 57.1 35.6 01.1	9.2 87.9 280.7	20.7 180.4	4.7 10.9	5.1 42.6	
39.7 21.8 57.1 35.6 01.1	9.2 87.9 280.7	20.7 180.4	4.7 10.9	5.1 42.6	
39.7 21.8 57.1 35.6 01.1	9.2 87.9 280.7	20.7 180.4	4.7 10.9	5.1 42.6	
39.7 21.8 57.1 35.6 01.1	9.2 87.9 280.7	20.7 180.4	4.7 10.9	5.1 42.6	
39.7 21.8 57.1 35.6 01.1	9.2 87.9 280.7	20.7 180.4	4.7 10.9	5.1 42.6	
01.1	53.9				
01.1	53.9				
	50.8 3.0	313.8 84.9 228.9	403.7 301.2 102.5	64.2 64.2 0.0	4.5 137.2 84.3 53.0
03.0	1,634.5	73.4	47.7	247.4	
36.0 28.1 20.4 92.6 46.3 46.2 00.1 77.6	249.5 428.1 1.5 72.3 33.4 38.9 1,392.5	71.2 16.0 25.1 11.1 14.0 -8.2	15.0 25.3 49.1 1.0 46.2 1.9 46.3	0.3 377.7 46.1 0.7 45.4 547.0	1.4 1.0 0.8 8.9 1.1 0.6 7.2
75.6 99.6 16.2	1,278.9 1,278.9 0.1 129.8	1.8 -10.0	14.3 32.0	496.3 296.7 199.6 0.0 50.7	0.1 -16.9
13.1 -5.8 0.1	163.1 163.8 -0.7 0.0 9.8 6.0 3.8 59.5	256.4 261.6 -5.2 0.7 2.5 0.2 2.2 2.2 -52.7	9.6 9.5 0.1 0.0 2.7 0.0 2.7 31.6	78.3 78.2 0.1 -0.6 45.4 45.4 -16.3	-0.1 7.8 0.0 7.8 -22.0 0.0
1 9 1 1 0 0 1 1 1 0 0 0 1 1 1 0 0 0 0 1 1 0	60.4	75.6 1,278.9 99.6 16.2 0.1 02.5 129.8 07.4 163.1 113.1 163.8 -5.8 -0.7 0.1 0.0 60.4 9.8 6.3 6.0 54.1 3.8	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Sources: ECB and Eurostat. 1) For the calculation of the balancing items, see the Technical notes.



# **3.1** Integrated economic and financial accounts by institutional sector (cont'd) (EUR billions)

Resources	Euro area	Households	Non-financial corporations	Financial corporations	General government	Rest of the world
2007	04					
External account						
Imports of goods and services Trade balance						495.1
Generation of income account						
Gross value added (basic prices) Taxes less subsidies on products Gross domestic product (market prices) <sup>20</sup> Compensation of employees Other taxes less subsidies on production Consumption of fixed capital <i>Net operating surplus and mixed income</i>	2,062.7 247.8 2,310.5	497.0	1,175.2	100.1	290.3	
Allocation of primary income account						
Net operating surplus and mixed income Compensation of employees Taxes less subsidies on production Property income Interest Other property income	557.1 1,145.9 295.6 840.1 489.1 351.0	280.7 1,145.9 261.8 77.8 184.0	255.7 131.5 48.1 83.5	26.6 424.7 354.0 70.7	-6.0 295.6 22.0 9.2 12.8	2.7 -8.1 132.7 96.3 36.4
Net national income						
Secondary distribution of income account			= 2 /			
Net national income Current taxes on income, wealth, etc. Social contributions Social benefits other than social transfers in kind	2,003.0 336.7 428.1 418.5	1,634.5 1.2 418.5	73.4 18.3	47.7 40.7	247.4 336.7 368.0	0.7 1.0 2.7
Other current transfers Net non-life insurance premiums	168.5 46.2	89.7	12.5	47.3 46.2	19.1	33.0 1.2
Non-life insurance claims Other Net disposable income	45.7 76.7	35.3 54.3	9.2 3.3	0.8 0.3	0.3 18.8	1.1 30.7
Use of income account						
Net disposable income Final consumption expenditure Individual consumption expenditure Collective consumption expenditure Adjustment for the change in net equity of households in pension fund reserves Net saving/current external account	1,977.6	1,392.5	-8.2	46.3	547.0	0.0
Capital account						
Net saving / current external account Gross capital formation Gross fixed capital formation Changes in inventories and acquisitions less disposals of valuables	202.5	129.8	-10.0	32.0	50.7	-16.9
Consumption of fixed capital Acquisitions less disposals of non-produced non-financial assets	321.8	87.9	180.4	10.9	42.6	
Capital transfers Capital taxes Other capital transfers	65.6 6.3 59.3	14.8 14.8	36.4 36.4	1.0 1.0	13.4 6.3 7.1	2.6 0.0 2.6
Net lending (+)/net borrowing (-) (from capital account) Statistical discrepancy	6.00	14.0	50.4	1.0	7.1	2.0

Sources: ECB and Eurostat. 2) Gross domestic product is equal to gross value added of all domestic sectors plus net taxes (taxes less subsidies) on products.



# **3.1** Integrated economic and financial accounts by institutional sector (cont'd) (EUR billions)

Assets	Euro area	Households	Non-financial corporations	MFIs	Other financial inter-	Insurance corporations and pension	General govern- ment	Rest of the world
2007 Q4					mediaries	funds		
Opening balance sheet, financial assets						·		
Total financial assets Monetary gold and special drawing rights (SDRs)		17,530.1	14,616.1	21,596.0 191.7	10,129.1	6,221.1	2,904.5	15,059.5
Currency and deposits		5,494.2	1,686.2	2,465.4	1,490.3	775.8	580.3	3,999.6
Short-term debt securities		50.0	122.8	111.5	269.1	261.8	41.3	799.7
Long-term debt securities		1,258.6	223.0	3,473.6	1,962.7	1,956.1	220.0	2,391.4
Loans		41.8	2,015.9	11,717.4 8,790.8	1,490.6	335.0	362.5	1,645.2
of which long-term Shares and other equity		25.8 5,188.2	1,171.0 7,752.1	8,790.8 1,877.2	1,178.2 4,701.7	298.6 2,414.7	321.6 1,137.7	5,436.2
Quoted shares		1,215.4	1,920.0	740.2	2,514.3	860.3	427.1	5,450.2
Unquoted shares and other equity		2,321.4	5,434.8	858.7	1,482.6	464.2	561.1	
Mutual fund shares		1,651.4	397.4	278.3	704.7	1,090.3	149.6	
Insurance technical reserves		5,164.2	136.1	2.0	0.0	149.6	3.2	220.4
Other accounts receivable and financial derivatives		333.2	2,680.0	1,757.2	214.8	328.1	559.3	567.1
Net financial worth								
Financial account, transactions in financial assets								
Total transactions in financial assets		151.4	209.0	504.8	331.2	80.7	-50.0	258.4
Monetary gold and special drawing rights (SDRs)		1475	50.2	-1.4	115.0	10.4	42.0	1.4
Currency and deposits Short-term debt securities		147.5 -1.5	50.2 2.5	40.3 3.0	115.2 18.3	10.4 -2.7	-42.9 -6.8	67.2 -17.4
Long-term debt securities		9.3	4.0	176.8	-20.6	40.9	-0.8	85.1
Loans		-1.4	48.7	250.9	96.0	-5.7	8.1	68.9
of which long-term		-1.9	4.1	225.9	59.1	-5.0	-1.0	
Shares and other equity		-46.4	46.1	21.3	123.6	41.4	-3.1	40.9
Quoted shares		-24.8	34.0	-3.4	41.5	4.6	0.6	
Unquoted shares and other equity Mutual fund shares		3.6 -25.2	47.7 -35.6	31.7 -7.0	70.4 11.8	21.3 15.5	-5.1 1.4	
Insurance technical reserves		-23.2	-55.0	-7.0	0.0	2.4	0.0	3.3
Other accounts receivable and financial derivatives		-14.6	57.2	13.9	-1.3	-6.0	-11.3	9.0
Changes in net financial worth due to transactions								
Other changes account, financial assets								
Total other changes in financial assets		-108.4	52.3	79.6	-257.8	-55.4	29.4	-100.0
Monetary gold and special drawing rights (SDRs)				15.3				
Currency and deposits		7.1	-1.4	-41.1	-82.7	-5.0	-0.1	-71.3
Short-term debt securities		-2.3	12.5	3.1	-0.6	0.2	0.0	-8.1
Long-term debt securities		0.6	-2.6	-14.5	-16.1	-4.3	-0.1	0.6
Loans of which long-term		-0.1 0.0	6.8 2.5	115.5 139.1	-78.2 -73.4	1.3 0.7	7.5 7.5	-11.7
Shares and other equity		-111.7	43.0	-16.3	-73.4	-46.5	20.8	-42.1
Quoted shares		-61.8	7.2	-17.2	-41.0	-21.4	11.4	
Unquoted shares and other equity		-38.3	38.4	6.0	-39.3	-3.8	12.1	
Mutual fund shares		-11.5	-2.5	-5.1	-1.6	-21.4	-2.7	
Insurance technical reserves		-0.7	-0.1	0.0	0.0	-4.2	0.0	22.9
Other accounts receivable and financial derivatives Other changes in net financial worth		-1.4	-6.0	17.6	1.7	3.2	1.3	9.7
Closing balance sheet, financial assets		17 572 1	14 977 4	22 190 4	10 202 5	6.246.4	2 002 0	15 016 5
Total financial assets Monetary gold and special drawing rights (SDRs)		17,573.1	14,877.4	22,180.4 205.6	10,202.5	6,246.4	2,883.8	15,216.5
Currency and deposits		5,648.7	1,735.0	2,464.6	1,522.7	781.3	537.3	3,995.5
Short-term debt securities		46.2	137.8	117.6	286.7	259.3	34.5	774.2
Long-term debt securities		1,268.5	224.4	3,635.9	1,926.1	1,992.6	225.9	2,477.1
Loans		40.3	2,071.5	12,083.8	1,508.3	330.6	378.1	1,702.3
of which long-term		23.9	1,177.6	9,155.7	1,163.9	294.3	328.2	5 405 0
Shares and other equity Quoted shares		5,030.1 1,128.7	7,841.2	1,882.2	4,743.4	2,409.5 843.5	1,155.4 439.0	5,435.0
Quoted shares Unquoted shares and other equity		2,286.6	1,961.1 5,520.8	719.6 896.4	2,514.8 1,513.7	843.5 481.7	439.0 568.0	·
Mutual fund shares		1,614.7	359.3	266.2	714.9	1,084.3	148.3	:
Insurance technical reserves		5,222.1	136.3	2.0	0.0	147.8	3.3	246.6
Other accounts receivable and financial derivatives		317.2	2,731.2	1,788.7	215.2	325.3	549.4	585.8
Net financial worth								

Source: ECB.



# **3.1** Integrated economic and financial accounts by institutional sector (cont'd) (EUR billions)

Liabilities	Euro area	Households	Non-financial corporations	MFIs	Other financial inter-	Insurance corporations and pension	General govern- ment	Rest of the world
2007 Q4					mediaries	funds		
Opening balance sheet, liabilities								
Total liabilities		5,826.4	23,570.5	21,699.9	10,017.0	6,413.4	6,811.3	13,526.2
Monetary gold and special drawing rights (SDRs)			26.5	13,182.7	221.8	16	331.2	2,724.9
Currency and deposits Short-term debt securities			26.5 276.4	405.7	79.3	4.6 0.8	661.4	2,724.9
Long-term debt securities			445.6	2,691.3	1,446.0	25.0	4,343.1	2,534.4
Loans		5,245.0	6,931.5	_,	1,483.2	184.3	1,081.9	2,682.3
of which long-term		4,935.6	4,729.8		734.0	73.4	920.5	
Shares and other equity			13,149.7	3,185.4	6,571.7	677.5	10.2	4,913.4
Quoted shares			4,978.1	1,032.2	264.0	295.1	0.0	•
Unquoted shares and other equity Mutual fund shares			8,171.6	1,105.6 1,047.6	904.7 5,402.9	381.8	10.2	
Insurance technical reserves		32.7	335.7	53.3	0.6	5,252.8	0.5	•
Other accounts payable and financial derivatives		548.7	2,405.0	2,181.6	214.5	268.4	383.0	438.7
Net financial worth <sup>1)</sup>	-1,341.5	11,703.7	-8,954.3	-103.9	112.1	-192.3	-3,906.9	
Financial account, transactions in liabilities								
Total transactions in liabilities		74.3	279.3	450.8	362.0	72.3	-33.7	280.4
Monetary gold and special drawing rights (SDRs)								
Currency and deposits			-1.6	396.1	9.6	-0.2	12.3	-28.5
Short-term debt securities Long-term debt securities			4.6 9.6	34.9 11.7	8.2 215.4	-0.1 1.6	-55.7 -7.2	3.3 70.4
Long-term debt securities		83.5	201.9	11./	78.1	-18.1	-7.2	122.8
of which long-term		77.7	162.7		50.9	-7.8	17.9	122.0
Shares and other equity			40.1	39.2	63.1	2.3	0.2	78.9
Quoted shares			-20.0	-1.1	13.8	-1.0	0.0	
Unquoted shares and other equity			60.1	43.8	80.6	3.3	0.2	
Mutual fund shares		0.0		-3.5	-31.3	(2.5	0.0	
Insurance technical reserves		0.0 -9.3	2.1 22.6	-0.2 -31.1	0.0 -12.3	62.7 24.1	0.0 19.4	33.5
Other accounts payable and financial derivatives Changes in net financial worth due to transactions <sup>1</sup>	22.0	-9.5	-70.4	-51.1	-12.5	24.1 8.4	-16.3	-22.0
Other changes account, liabilities								
Total other changes in liabilities		1.8	35.9	74.1	-235.5	-33.8	0.6	-218.9
Monetary gold and special drawing rights (SDRs)								
Currency and deposits			0.0	77.9	-142.5	0.0	-90.2	-39.6
Short-term debt securities Long-term debt securities			0.2 -2.3	5.4 20.7	-0.1 -22.4	0.0 -0.4	-0.2 -12.1	-0.5 -19.7
Loans		0.3	-18.9	20.7	-22.4	-0.4	98.0	-19.7
of which long-term		0.7	-2.5		-4.1	-0.1	98.2	
Shares and other equity			25.3	-54.9	-71.9	-17.5	0.0	-115.8
Quoted shares			10.7	-30.7	-14.4	-17.6	0.0	
Unquoted shares and other equity			14.6	-14.9	-10.4	0.0	0.0	•
Mutual fund shares		0.0	0.0	-9.2 0.0	-47.1 0.0	17.8	0.0	•
Insurance technical reserves Other accounts payable and financial derivatives		1.5	31.7	25.1	3.0	-33.4	5.1	-7.0
Other changes in net financial worth <sup>1</sup>	-103.6	-110.2	16.4	5.5	-22.3	-21.7	28.7	118.9
Closing balance sheet, liabilities								
Total liabilities		5,902.5	23,885.7	22,224.9	10,143.5	6,451.9	6,778.3	13,587.7
Monetary gold and special drawing rights (SDRs)			25.0	12 (5( 0	00.0	4.5	252.2	2656.0
Currency and deposits Short-term debt securities			25.0 281.2	13,656.8 446.0	88.9 87.4	4.5 0.6	253.3 605.6	2,656.8 235.4
Long-term debt securities			452.8	2,723.7	1,638.9	26.2	4,323.8	2,585.1
Loans		5,328.9	7,114.5	,	1,559.7	165.9	1,177.1	2,768.8
of which long-term		5,014.0	4,890.0		780.8	65.5	1,036.6	
Shares and other equity			13,215.1	3,169.7	6,562.8	662.3	10.4	4,876.5
Quoted shares			4,968.8	1,000.3	263.3	276.5	0.0	
Unquoted shares and other equity Mutual fund shares			8,246.3	1,134.5	974.9 5 324 6	385.1	10.4	•
Insurance technical reserves		32.7	337.7	1,034.9 53.2	5,324.6 0.6	5,333.4	0.5	·
Other accounts payable and financial derivatives		541.0	2,459.3	2,175.6	205.1	259.1	407.5	465.2
Net financial worth <sup>1)</sup>	-1,423.1	11,670.6	-9,008.3	-44.4	59.0	-205.5	-3,894.5	
Source: ECB.								



# **3.2 Euro area non-financial accounts** (EUR billions; four-quarter cumulated flows)

Uses	2003	2004	2005	2006 Q1- 2006 Q4	2006 Q2- 2007 Q1	2006 Q3- 2007 Q2	2006 Q4- 2007 Q3	2007 Q1- 2007 Q4
Generation of income account								
Gross value added (basic prices) Taxes less subsidies on products Gross domestic product (market prices)								
Compensation of employees Other taxes less subsidies on production Consumption of fixed capital Net operating surplus and mixed income <sup>1)</sup>	3,666.7 110.2 1,072.7 1,889.1	3,772.0 121.5 1,120.3 1,990.9	3,878.6 130.2 1,171.7 2,055.5	4,031.3 131.3 1,223.7 2,163.3	4,074.5 132.8 1,235.5 2,199.3	4,116.5 133.4 1,246.4 2,236.3	4,155.5 132.6 1,256.9 2,279.2	4,203.8 128.7 1,269.0 2,312.5
Allocation of primary income account								
Net operating surplus and mixed income Compensation of employees Taxes less subsidies on production								
Property income Interest	2,281.2 1,268.1	2,338.2 1,243.6	2,556.9 1,331.7	2,929.9 1,602.1	3,025.6 1,676.0	3,128.2 1,751.2	3,213.7 1,821.4	3,296.7 1,896.1
Other property income Net national income <sup>1)</sup>	1,013.1 6,408.3	1,094.7 6,679.7	1,225.1 6,913.0	1,327.9 7,241.0	1,349.6 7,336.8	1,377.0 7,423.5	1,392.3 7,516.1	1,400.6 7,607.9
Secondary distribution of income account								
Net national income Current taxes on income, wealth, etc.	856.8	882.1	931.6	1,023.0	1,035.9	1,058.7	1,085.0	1,106.7
Social contributions Social benefits other than social transfers in kind Other current transfers	1,388.8 1,408.7 658.4	1,428.2 1,453.7 683.6	1,470.7 1,498.2 703.2	1,532.5 1,543.0 708.3	1,545.7 1,551.1 711.5	1,560.8 1,559.8 717.4	1,573.1 1,569.7 719.3	1,588.3 1,586.0 726.5
Net non-life insurance premiums Non-life insurance claims	173.8 174.5	175.7 176.3	175.6 176.7	175.3 175.5	176.2 176.6	177.4 177.8	177.9 178.1	178.8 178.6
Other Net disposable income <sup>1)</sup>	310.0 6,338.5	331.7 6,602.1	350.8 6,826.4	357.5 7,151.1	358.7 7,247.3	362.2 7,334.8	363.4 7,427.9	369.1 7,517.7
Use of income account								
Net disposable income Final consumption expenditure Individual consumption expenditure Collective consumption expenditure	5,854.8 5,234.7 620.1	6,075.8 5,432.1 643.7	6,307.5 5,646.9 660.6	6,565.3 5,887.0 678.3	6,619.5 5,936.1 683.4	6,670.7 5,983.5 687.2	6,727.0 6,034.6 692.4	6,789.8 6,090.8 698.9
Adjustment for the change in net equity of households in pension funds reserves Net saving <sup>1)</sup>	54.6 483.9	57.3 526.5	59.5 519.2	63.0 586.2	63.1 628.1	61.2 664.4	61.2 701.2	60.9 728.1
Capital account								
Net saving Gross capital formation Gross fixed capital formation	1,528.0 1,527.5	1,609.6 1,600.3	1,701.8 1,689.5	1,842.7 1,814.7	1,884.5 1,857.6	1,918.1 1,890.6	1,947.2 1,919.4	1,981.5 1,946.5
Changes in inventories and acquisitions less disposals of valuables Consumption of fixed capital	0.5	9.3 -1.1	12.3 -0.1	28.0 0.6	26.9 0.2	27.5 0.0	27.7	35.0 0.3
Acquisitions less disposals of non-produced non-financial assets Capital transfers Capital taxes	182.6 35.9	172.7 29.8	181.4 24.3	175.8 22.3	174.0 22.9	170.5 23.4	168.7 24.1	160.2 24.0
Other capital transfers Net lending (+)/net borrowing (-) (from capital account) <sup>1)</sup>	146.8 40.2	142.9 54.7	157.2 2.7	153.5 -17.9	151.1 -3.2	147.1 9.8	144.6 26.8	136.2 30.1

Sources: ECB and Eurostat. 1) For the calculation of the balancing items, see the Technical notes.



## **3.2 Euro area non-financial accounts (cont'd)** (EUR billions; four-quarter cumulated flows)

Resources	2003	2004	2005	2006 Q1- 2006 Q4	2006 Q2- 2007 Q1	2006 Q3- 2007 Q2	2006 Q4- 2007 Q3	2007 Q1- 2007 Q4
Generation of income account								
Gross value added (basic prices)	6,738.7	7,004.7	7,235.9	7.549.6	7,642.1	7,732.7	7,824.3	7.914.0
Taxes less subsidies on products	761.3	797.2	839.7	904.4	921.3	933.5	944.2	953.9
Gross domestic product (market prices) <sup>2)</sup>	7,500.0	7,801.9	8,075.6	8,454.0	8,563.3	8,666.1	8,768.5	8,867.9
Compensation of employees								
Other taxes less subsidies on production								
Consumption of fixed capital								
Net operating surplus and mixed income								
Allocation of primary income account								
Net operating surplus and mixed income	1,889.1	1,990.9	2,055.5	2,163.3	2,199.3	2,236.3	2,279.2	2,312.5
Compensation of employees	3,673.9	3,779.1	3,884.3	4,037.4	4,080.7	4,122.8	4,161.8	4,210.2
Taxes less subsidies on production	880.7	932.4	981.5	1,046.9	1,063.7	1,076.4	1,085.6	1,091.8
Property income	2,246.0	2,315.5	2,548.7	2,923.3	3,018.7	3,116.2	3,203.2	3,290.1
Interest	1,237.2	1,212.6	1,303.5	1,570.0	1,642.2	1,718.6	1,786.8	1,857.4
Other property income	1,008.8	1,103.0	1,245.2	1,353.4	1,376.5	1,397.6	1,416.4	1,432.7
Net national income								
Secondary distribution of income account								
Net national income	6,408.3	6,679.7	6,913.0	7,241.0	7,336.8	7,423.5	7,516.1	7,607.9
Current taxes on income, wealth, etc.	858.7	885.2	935.4	1,027.8	1,041.2	1,065.7	1,092.5	1,114.2
Social contributions	1,387.9	1,427.4	1,470.3	1,532.0	1,545.3	1,560.3	1,572.5	1,587.8
Social benefits other than social transfers in kind	1,402.2	1,446.2	1,490.6	1,535.4	1,543.2	1,551.8	1,561.4	1,577.8
Other current transfers	594.0 174.5	611.3 176.3	620.8 176.7	621.6 175.5	624.9 176.6	630.3 177.8	632.5 178.1	637.5 178.6
Net non-life insurance premiums Non-life insurance claims	174.3	170.5	176.7	173.5	170.0	177.8	178.1	178.0
Other	248.3	261.5	269.7	273.2	274.4	277.3	278.7	282.4
Net disposable income	21010	20110	20010	21012	27.00	27710	2/01/	20211
Use of income account								
Net disposable income	6,338.5	6,602.1	6,826.4	7,151.1	7,247.3	7,334.8	7,427.9	7,517.7
Final consumption expenditure								
Individual consumption expenditure								
Collective consumption expenditure								
Adjustment for the change in net equity of households								
in pension funds reserves	54.8	57.5	59.8	63.4	63.5	61.5	61.4	61.1
Net saving								
Capital account								
Net saving	483.9	526.5	519.2	586.2	628.1	664.4	701.2	728.1
Gross capital formation Gross fixed capital formation								
Changes in inventories and acquisitions less disposals of valuables								
Consumption of fixed capital	1,072.7	1,120.3	1,171.7	1,223.7	1,235.5	1,246.4	1,256.9	1,269.0
Acquisitions less disposals of non-produced non-financial assets								
Capital transfers	194.8	189.2	195.0	191.4	191.8	187.5	184.5	175.0
Capital taxes	35.9	29.8	24.3	22.3	22.9	23.4	24.1	24.0
Other capital transfers	158.9	159.4	170.7	169.1	168.9	164.1	160.4	151.0
Net lending (+)/net borrowing (-) (from capital account)								

Sources: ECB and Eurostat. 2) Gross domestic product is equal to gross value added of all domestic sectors plus net taxes (taxes less subsidies) on products.



**3.3 Households** (EUR billions; four-quarter cumulated flows; outstanding amounts at end-of-period)

	2003	2004	2005	2006 Q1-	2006 Q2-	2006 Q3- 2007 Q2	2006 Q4-	2007 Q1-
· · · · · · · · ·	2003	2004	2005	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4
Income, saving and changes in net worth								
Compensation of employees (+)	3,673.9	3,779.1	3,884.3	4,037.4	4,080.7	4,122.8	4,161.8	4,210.2
Gross operating surplus and mixed income (+)	1,229.9	1,281.7	1,330.5	1,404.7	1,425.3	1,447.0	1,467.5	1,484.5
Interest receivable (+)	237.6	230.7	228.8	259.8	267.2	275.4	284.1	292.9
Interest payable (-)	124.0	125.2	128.8	157.0	165.3	174.3	181.4	189.0
Other property income receivable (+)	614.9	650.9	696.4	736.5	743.1	755.6	759.7	765.2
Other property income payable (-) Current taxes on income and wealth (-)	8.9 702.2	9.3 705.6	9.4 738.4	9.5 788.8	9.5 796.7	9.6 810.2	9.6 828.4	9.7 845.9
Net social contributions (-)	1,385.1	1,424.5	1,466.7	1,528.2	1,541.4	1,556.5	1,568.8	1,584.0
Net social benefits (+)	1,397.5	1,441.3	1,485.4	1,528.2	1,541.4	1,546.2	1,555.9	1,572.2
Net current transfers receivable (+)	66.8	65.4	67.8	64.3	65.4	65.3	65.7	66.0
= Gross disposable income	5,000.3	5,184.6	5,349.8	5,549.0	5,606.5	5,661.8	5,706.5	5,762.6
Final consumption expenditure (-)	4,319.8	4,484.8	4,652.4	4,843.5	4,881.5	4,920.4	4,960.6	5,005.4
Changes in net worth in pension funds (+)	54.4	57.1	59.4	62.9	63.0	61.1	61.0	60.7
= Gross saving	734.9	756.9	756.8	768.4	788.1	802.5	806.9	818.0
Consumption of fixed capital (-)	288.3	303.6	318.7	335.6	339.1	342.4	344.8	347.3
Net capital transfers receivable (+)	12.6	18.8	24.9	28.4	27.6	25.7	23.6	17.5
Other changes in net worth $^{1}(+)$	265.3	305.8	564.3	497.3	404.9	611.2	225.6	-100.0
= Changes in net worth <sup>1)</sup>	724.5	777.9	1,027.3	958.5	881.5	1,096.9	711.4	388.2
Investment, financing and changes in net worth								
Net acquisition of non-financial assets (+)	495.9	526.8	560.2	612.6	627.3	638.1	644.6	649.9
Consumption of fixed capital (-)	288.3	303.6	318.7	335.6	339.1	342.4	344.8	347.3
Main items of financial investment (+)								
Short-term assets	211.4	214.7	207.6	304.6	347.5	379.7	395.6	418.9
Currency and deposits	226.5	213.0	247.9	283.8	293.2	316.8	328.2	348.0
Money market fund shares	25.1	-6.4	-20.2	0.7	25.7	44.7	44.4	43.3
Debt securities <sup>2)</sup>	-40.1	8.2	-20.2	20.1	28.6	18.2	23.0	27.6
Long-term assets	309.4	342.2	443.1	322.2	284.6	246.3	196.2	144.8
Deposits	-8.7	29.6	-8.8	-6.6	-20.6	-31.0	-37.4	-48.0
Debt securities	27.3	65.1	12.3	70.2	51.7	38.1	8.3	8.6
Shares and other equity	59.6	-4.6	139.2	-30.6	-22.9	-37.4	-36.2	-65.5
Quoted, unquoted shares and other equity Mutual fund shares	7.5 52.1	-11.1 6.5	65.7 73.6	-0.1 -30.5	36.2 -59.0	32.1 -69.5	40.6 -76.9	21.1
Life insurance and pension fund reserves	231.2	252.1	300.3	-30.3	-39.0 276.4	276.5	261.5	-86.6 249.7
Main items of financing (-)	231.2	232.1	500.5	209.1	270.4	270.5	201.5	249.7
Loans	262.8	311.6	390.6	390.0	382.0	365.1	360.4	341.1
of which from euro area MFIs	211.6	280.8	358.3	346.5	337.2	316.8	302.3	279.4
Other changes in financial assets (+)	21110	20010	00010	01010	00112	01010	00210	2,,,,,,
Shares and other equity	274.6	252.9	483.8	474.6	371.4	576.5	203.0	-112.4
Life insurance and pension fund reserves	28.8	56.3	129.5	51.3	35.6	65.2	32.1	16.8
Remaining net flows (+)	-44.5	0.2	-87.5	-81.2	-63.9	-101.3	-54.9	-41.5
= Changes in net worth <sup>1)</sup>	724.5	777.9	1,027.3	958.5	881.5	1,096.9	711.4	388.2
Financial balance sheet								
Financial assets (+)								
Short-term assets	4,058.1	4,276.0	4,494.1	4,752.8	4,830.8	4,970.1	5,017.5	5,204.0
Currency and deposits	3,710.1	3,926.0	4,176.7	4,456.5	4,497.3	4,613.3	4,653.9	4,844.8
Money market fund shares	321.0	313.9	300.5	261.7	281.0	305.0	304.3	303.7
Debt securities <sup>2)</sup>	27.1	36.0	16.9	34.6	52.4	51.8	59.4	55.5
Long-term assets	9,131.2	9,767.9	10,808.8	11,675.7	11,889.6	11,979.0	11,788.2	11,661.5
Deposits	843.0	881.6	890.9	881.3	854.2	841.7	840.3	804.0
Debt securities	1,207.2	1,248.0	1,233.6	1,286.1	1,296.4	1,249.8	1,249.2	1,259.2
Shares and other equity Ouoted, unquoted shares and other equity	3,554.3 2,406.4	3,803.2 2,638.3	4,419.4	4,903.0 3,524.3	5,057.7	5,120.1	4,883.9 3,536.7	4,726.4
Mutual fund shares	2,406.4 1,147.9	2,038.3	3,102.5 1,316.8	3,524.5 1,378.6	3,682.4 1,375.3	3,734.8 1,385.4	3,336.7 1,347.2	3,415.3 1,311.0
Life insurance and pension fund reserves	3,526.7	3,835.2	4,265.0	4,605.4	4,681.2	4,767.4	4,814.7	4,871.9
Remaining net assets (+)	213.8	252.9	4,203.0	4,003.4	4,081.2	4,707.4	4,814.7	4,871.9
Liabilities (-)	213.0	232.9	107.1	140.0	155.1	140.0	145.0	1.54.0
Loans	3,923.9	4,247.6	4,634.4	5,018.6	5,079.2	5,170.1	5,245.0	5,328.9
of which from euro area MFIs	3,521.2	3,812.5	4,195.9	4,543.0	4,611.3	4,692.7	4,752.9	4,808.7
= Net financial wealth	9,479.2	10,049.2	10,855.7	11,556.0	11,796.3	11,922.3	11,703.7	11,670.6

Sources: ECB and Eurostat.1) Excluding changes in net worth due to other changes in non-financial assets such as revaluations of residential property.2) Securities issued by MFIs with a maturity of less than two years and by other sectors with a maturity of less than one year.



**3.4** Non-financial corporations (EUR billions; four-quarter cumulated flows; outstanding amounts at end-of-period)

				2006 Q1-	2006 Q2-	2006 Q3-	2006 Q4-	2007 Q1-
	2003	2004	2005	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4
Income and saving								
Gross value added (basic prices) (+)	3,834.8	3,989.3	4,113.8	4,294.8	4,354.3	4,412.3	4,467.6	4,518.7
Compensation of employees (-)	2,313.1	2,382.4	2,445.7	2,544.6	2,573.2	2,605.6	2,633.5	2,664.4
Other taxes less subsidies on production (-)	58.6 1,463.1	64.6	71.4 1.596.8	75.1 1,675.1	77.1 1,704.1	78.0	77.6 1,756.5	73.4 1,780.9
= Gross operating surplus (+) Consumption of fixed capital (-)	607.2	1,542.4 631.9	660.4	686.9	693.0	1,728.7 698.6	704.5	711.2
= Net operating surplus (+)	855.8	910.5	936.4	988.2	1,011.0	1,030.2	1,052.0	1,069.7
Property income receivable (+)	320.5	364.2	427.8	468.7	478.5	485.4	496.3	507.5
Interest receivable	126.6	121.9	132.5	154.8	161.1	168.6	175.1	181.3
Other property income receivable	193.9	242.3	295.4	313.9	317.4	316.8	321.2	326.2
Interest and rents payable (-)	228.9	226.8	235.4	279.2	293.4	307.5	318.6	331.2
= Net entrepreneurial income (+)	947.5	1,047.8	1,128.8	1,177.7	1,196.2	1,208.1	1,229.7	1,246.0
Distributed income (-)	693.4	751.5	837.2	906.8	915.1	923.4	931.3	933.1
Taxes on income and wealth payable (-)	117.0	135.6	147.8	184.1	188.4	195.8	203.6	208.1
Social contributions receivable (+)	73.4	73.5	74.2	76.8	77.2	76.0	74.7	73.0
Social benefits payable (-)	59.9	60.4	62.2	62.1	62.1	61.9	62.0	62.2
Other net transfers (-)	57.0	63.2	61.8	61.6	61.3	58.5	56.1	55.3
= Net saving	93.6	110.7	94.0	39.8	46.5	44.6	51.4	60.4
Investment, financing and saving								
Net acquisition of non-financial assets (+)	196.5	214.4	241.2	288.6	304.0	318.3	330.2	349.2
Gross fixed capital formation (+)	803.8	841.0	889.4	950.2	973.6	993.4	1,010.8	1,029.8
Consumption of fixed capital (-)	607.2	631.9	660.4	686.9	693.0	698.6	704.5	711.2
Net acquisition of other non-financial assets (+)	-0.1	5.4	12.2	25.3	23.4	23.5	23.9	30.6
Main items of financial investment (+)	105.9	103.1	126.7	155.4	188.8	205.1	177.7	176.2
Short-term assets Currency and deposits	64.9	88.9	1120.7	133.4	163.2	163.4	157.6	148.3
Money market fund shares	22.5	16.5	8.6	3.7	103.2	23.5	-9.2	-18.5
Debt securities <sup>1)</sup>	18.5	-2.4	5.2	7.2	5.8	18.2	29.3	46.4
Long-term assets	281.6	213.0	365.4	376.0	372.5	395.2	429.8	430.3
Deposits	43.9	5.2	35.6	27.6	28.6	35.5	20.0	-1.8
Debt securities	-46.1	-52.5	-29.7	-21.7	-31.4	-42.5	-42.5	-56.1
Shares and other equity	149.4	179.3	228.9	207.3	197.7	207.0	243.5	295.5
Other, mainly intercompany loans	134.3	81.0	130.7	162.7	177.7	195.2	208.8	192.7
Remaining net assets (+)	56.1	76.0	100.7	171.0	159.5	149.5	194.2	182.4
Main items of financing (-)								
Debt	289.7	235.0	422.0	657.7	660.8	695.4	750.1	781.0
of which loans from euro area MFIs	102.7	172.4	264.6	448.6	443.9	483.6	520.6	557.1
of which debt securities	63.1	7.0	12.0	40.2	39.4	53.6	37.3	49.5
Shares and other equity Quoted shares	210.6 18.7	197.1 11.9	257.2 100.5	223.9 36.2	245.6 55.6	256.3 74.4	260.0 81.1	230.7 44.2
Unquoted shares and other equity	191.8	185.3	156.8	187.7	190.0	181.9	178.9	186.6
Net capital transfers receivable (-)	46.3	63.8	60.8	69.6	71.9	69.5	68.1	66.7
= Net saving	93.6	110.7	94.0	39.8	46.5	44.6	51.4	60.4
Financial balance sheet								
Financial assets								
Short-term assets	1,318.8	1,379.2	1,510.2	1,655.6	1,694.4	1,747.0	1,762.3	1,830.7
Currency and deposits	1,028.9	1,102.6	1,220.7	1,356.8	1,364.8	1,405.0	1,429.0	1,830.7
Money market fund shares	143.8	163.7	176.3	185.9	204.2	205.2	185.8	162.3
Debt securities <sup>1)</sup>	146.1	112.9	113.2	112.9	125.4	136.8	147.5	168.7
Long-term assets	6,696.2	7,194.0	8,160.6	9,371.6	9,733.8	10,115.2	10,037.8	10,179.2
Deposits	136.5	137.4	180.3	210.2	261.7	269.0	257.2	235.3
Debt securities	380.9	328.5	284.8	260.3	236.5	228.6	198.3	193.5
Shares and other equity	4,709.8	5,191.4	6,020.7	7,050.3	7,309.1	7,637.8	7,566.4	7,678.9
Other, mainly intercompany loans	1,469.1	1,536.7	1,674.7	1,850.8	1,926.5	1,979.8	2,015.9	2,071.5
Remaining net assets	195.2	240.6	285.2	356.8	430.5	428.1	437.7	433.2
Liabilities	(1(2.0	62440	6 700 0	7 400 7	7 500 5	7.926.0	7 090 2	0 106 0
Debt	6,163.8	6,344.9	6,788.9	7,422.7	7,588.5	7,836.9	7,989.2	8,186.3
of which loans from euro area MFIs of which debt securities	3,034.4 628.2	3,160.8 650.8	3,419.5 668.9	3,857.4 690.5	3,956.3 698.2	4,106.8 730.3	4,230.6 722.0	4,388.6 734.0
Shares and other equity	8,289.2	9,216.8	10,539.2	12,229.6				13,215.1
Quoted shares	2,731.5	9,216.8 2,986.7	3,680.5	4,451.1	12,685.1 4,685.5	13,315.8 5,060.7	13,149.7 4,978.1	4,968.8
Unquoted shares and other equity	5,557.7	6,230.1	6,858.7	7,778.4	7,999.6	8,255.1	8,171.6	8,246.3
Sources: ECB and Eurostat.	5,557.1	.,	-,500.1	.,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,20011	-,	-,2.00
1) G bit i 11 MTT id i 10 G1 d								

1) Securities issued by MFIs with a maturity of less than two years and by other sectors with a maturity of less than one year.



**3.5** Insurance corporations and pension funds (EUR billions; four-quarter cumulated flows; outstanding amounts at end-of-period)

	2003	2004	2005	2006 Q1- 2006 Q4	2006 Q2- 2007 Q1	2006 Q3- 2007 Q2	2006 Q4- 2007 Q3	2007 Q1- 2007 Q4
Financial account, financial transactions		I			I	I	I	
Main items of financial investment (+)								
Short-term assets	21.7	40.0	23.8	50.6	69.5	57.7	49.3	44.2
Currency and deposits	7.0	13.2	7.2	12.4	18.0	2.4	8.9	7.8
Money market fund shares	7.7	2.7	0.4	3.7	7.1	3.6	0.3	0.1
Debt securities <sup>1)</sup>	7.1	24.1	16.2	34.5	44.4	51.7	40.2	36.3
Long-term assets	231.0	218.5	286.4	318.1	289.7	295.5	266.3	273.2
Deposits	22.7	37.6	17.1	51.9	61.6	65.4	62.2	53.5
Debt securities	144.9	131.2	132.9	131.3	148.3	162.1	155.8	158.3
Loans	11.6	6.6	-2.6	-0.9	-18.4	-17.2	-23.0	-17.0
Quoted shares	9.5	13.0	31.7	19.2	14.9	8.1	7.1	8.5
Unquoted shares and other equity	5.1	-0.4	20.3	28.2	20.8	23.3	29.1	31.1
Mutual fund shares	37.1	30.6	87.1	88.4	62.6	53.8	35.2	38.8
Remaining net assets (+)	-2.3	11.7	15.1	30.0	34.6	30.5	41.3	2.4
Main items of financing (-)								
Debt securities	4.9	-1.7	-0.4	5.2	5.0	3.9	3.3	1.4
Loans	12.5	4.6	18.4	32.7	19.8	25.5	21.9	9.2
Shares and other equity	11.6	13.6	9.9	8.6	11.1	12.5	10.7	12.0
Insurance technical reserves	236.8	262.1	335.3	344.5	340.0	341.3	324.2	301.8
Net equity of households in life insurance and pension fund reserves	210.5	230.5	292.0	288.6	280.3	281.7	274.5	263.9
Prepayments of insurance premiums and reserves for								
outstanding claims	26.4	31.6	43.3	55.9	59.7	59.7	49.8	37.9
= Changes in net financial worth due to transactions	-15.3	-8.3	-37.8	7.7	18.0	0.6	-3.2	-4.7
Other changes account								
Other changes in financial assets (+)								
Shares and other equity	106.8	110.3	175.7	176.4	136.5	253.0	141.9	17.8
Other net assets	-12.3	140.1	53.8	-49.6	-64.5	-86.0	-119.6	-55.3
Other changes in liabilities (-)								
Shares and other equity	98.3	21.0	124.1	44.2	31.0	95.1	12.7	-17.9
Insurance technical reserves	33.5	83.7	139.8	56.3	43.3	72.5	34.5	34.8
Net equity of households in life insurance and pension fund reserves	34.0	63.9	145.4	59.1	43.7	70.2	34.0	20.5
Prepayments of insurance premiums and reserves for								
outstanding claims	-0.5	19.8	-5.6	-2.8	-0.4	2.2	0.5	14.3
= Other changes in net financial worth	-37.3	145.6	-34.5	26.2	-2.3	-0.5	-24.9	-54.4
Financial balance sheet								
Financial assets (+)								
Short-term assets	264.5	401.4	430.2	481.4	505.4	511.2	515.6	521.5
Currency and deposits	121.3	133.6	142.7	154.6	155.9	144.4	154.0	163.2
Money market fund shares	68.5	72.2	74.3	80.4	82.8	84.3	81.0	78.2
Debt securities <sup>1)</sup>	74.7	195.5	213.2	246.4	266.7	282.6	280.6	280.1
Long-term assets	3,754.0	4,110.3	4,588.6	5,014.9	5,102.1	5,205.3	5,227.8	5,251.8
Deposits	457.6	497.1	515.6	570.8	595.1	609.4	621.8	618.1
Debt securities	1,470.6	1,639.7	1,789.9	1,857.7	1,890.8	1,901.2	1,937.3	1,971.8
Loans	368.3	363.5	360.1	353.6	337.5	338.9	335.0	330.6
Quoted shares	524.9	574.9	703.7	827.0	847.2	873.9	860.3	843.5
Unquoted shares and other equity	304.7	334.5	377.5	444.0	447.3	468.1	464.2	481.7
Mutual fund shares	627.8	700.6	841.8	961.8	984.2	1,013.8	1,009.3	1,006.1
Remaining net assets (+)	108.5	125.0	165.6	209.6	207.9	205.7	204.8	209.5
Liabilities (-)								
Debt securities	24.4	22.9	22.0	26.8	26.6	25.7	25.8	26.8
Loans	126.3	119.8	131.7	160.6	167.3	178.4	184.3	165.9
Shares and other equity	446.7	481.3	615.4	668.2	684.0	711.4	677.5	662.3
Insurance technical reserves	3,775.0	4,120.8	4,595.9	4,996.7	5,094.2	5,193.8	5,252.8	5,333.4
	3,194.2	3,488.6	3,926.0	4,273.7	4,352.8	4,443.5	4,495.8	4,558.1
Net equity of households in life insurance and pension fund reserves Prepayments of insurance premiums and reserves	5,174.2	<i>,</i>						
	580.8	632.2	669.9	723.0	741.4	750.3	757.0	775.3

Source: ECB. 1) Securities issued by MFIs with a maturity of less than two years and by other sectors with a maturity of less than one year.





## FINANCIAL MARKETS

**4.1** Securities, other than shares, by original maturity, residency of the issuer and currency (EUR billions and period growth rates: seasonally adjusted: transactions during the month and end-of-period outstanding amounts: nom

	-	Fotal in euro <sup>1)</sup>					By e	uro area resido	ents			
		rotar in curo			In euro				In all cu	rrencies		
	Outstanding amounts	Gross issues	Net issues	Outstanding amounts	Gross issues	Net issues	Outstanding amounts	Gross issues	Net issues	Annual growth rates	Seasonally a	djusted <sup>2)</sup>
										0	Net issues g	
	1	2	3	4	5	6	7	8	9	10	11	12
						Total						
2007 Feb.	11,961.3	1,046.2	110.8	10,077.9	959.8	97.4	11,346.9	1,027.4	124.5	8.2	95.7	9.3
Mar.	12,193.3	1,258.9	230.8	10,215.5	1,120.2	136.3	11,490.2	1,174.2	142.5	8.6	108.1	10.1
Apr.	12,216.4 12,430.3	1,041.5 1,217.7	23.3 214.3	10,271.0 10,432.6	983.1 1.115.2	55.7 161.9	11,555.3 11,744.9	1,039.6 1,178.8	72.5 183.6	8.6 9.0	63.7 137.7	9.1 9.8
May June	12,430.3	1,217.7	130.4	10,432.0	1,069.0	44.4	11,744.9	1,178.8	58.7	9.0	52.6	9.8 9.7
July	12,564.7	1,076.2	2.8	10,506.4	1,009.0	28.4	11,850.4	1,068.0	46.2	9.2	62.0	9.4
Aug.	12,593.2	1,184.3	28.8	10,533.1	1,131.6	26.9	11,871.6	1,181.5	27.0	9.2	84.2	9.1
Sep.	12,685.7	1,243.7	90.8	10,590.7	1,153.8	56.0	11,901.4	1,201.6	46.3	9.1	57.8	8.1
Oct.	12,793.9	1,349.9	107.0	10,719.6	1,277.7	127.9	12,045.9	1,346.6	145.1	9.2	129.0	9.3
Nov.	12,882.4	1,176.0	86.7	10,790.5	1,107.6	69.0	12,090.4	1,159.6	63.7	8.7	47.4	7.6
Dec.	12,907.6	1,036.5	28.2	10,785.0	954.7	-2.6	12,068.9	997.7	-20.0	9.1	104.5	8.4
2008 Jan.				10,839.5	1,129.8	58.7	12,137.6	1,195.0	68.0	8.5	20.0	7.7
Feb.		•	•	10,911.6	964.9	72.2	12,197.6	1,032.6	75.1	8.0	42.0	6.9
						Long-term						
2007 Feb.	10,923.8	237.9	99.9	9,158.8	190.1	83.6	10,255.9	223.7	105.1	8.4	82.9	9.6
Mar.	11,061.4	277.8	137.4	9,255.5	213.2	96.5	10,355.8	234.3	101.9	8.6	78.7	9.9
Apr.	11,103.2	182.6	41.9	9,287.2	156.1	31.8	10,392.5	177.9	45.3	8.6	53.5	9.0
May	11,290.3	267.0	188.4 99.2	9,422.9	199.3	136.9 64.0	10,549.5 10.630.9	225.6	151.9 77.8	9.1	108.1	9.2
June July	11,390.9 11,417.5	259.3 198.4	26.2	9,488.2 9,499.9	190.9 162.2	11.5	10,654.6	217.8 188.2	25.6	9.0 8.8	47.3 46.8	8.9 8.4
Aug.	11,417.3	198.4	-5.8	9,499.9	86.9	-6.8	10,653.3	104.2	-1.7	8.6	51.4	8.4 7.6
Sep.	11,437.9	157.5	24.3	9,511.4	132.2	16.4	10,644.5	146.6	15.2	8.0	10.7	6.2
Oct.	11,513.3	235.7	76.5	9,573.8	199.5	63.6	10,705.0	223.7	70.5	7.8	79.0	6.7
Nov.	11,593.9	174.7	78.8	9,633.9	141.1	58.4	10,746.9	155.8	55.1	7.2	35.5	5.2
Dec.	11,649.5	194.7	56.3	9,679.0	160.7	45.6	10,778.9	171.8	34.4	7.4	78.5	5.8
2008 Jan.				9,672.1	166.1	-3.4	10,776.2	189.1	1.1	6.7	11.6	5.1
Feb.				9,721.1	161.2	48.9	10,817.7	185.2	50.8	6.1	27.1	4.6
		ading ana	unte end			:4:00.04	how them	charac icc	und hur or			

CI5 Total outstanding amounts and gross issues of securities, other than shares, issued by euro area residents (EUR billions)



Sources: ECB and BIS (for issues by non-euro area residents).

1) Total euro-denominated securities, other than shares, issued by euro area residents and non-euro area residents.

2) For the calculation of the growth rates, see the Technical notes. The 6-month growth rates have been annualised.

# **4.2** Securities, other than shares, issued by euro area residents, by sector of the issuer and instrument type (EUR billions ; transactions during the month and end-of-period outstanding amounts; nominal values)

## 1. Outstanding amounts and gross issues

			Outstandi	ng amounts					Gross	issues		
	Total	MFIs (including	Non-MFI co	orporations	General go	vernment	Total	MFIs (including	Non-MFI c	orporations	General go	overnment
		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
	1	2	3	4	5	6 Total	7	8	9	10	11	12
2006	11,101	4,573	1,171	636	4,417	305	11,360	8,396	422	1,114	1,342	85
2007 2007 Q1	12,069 11,490	5,052 4,768	1,487 1,265	685 648	4,530	315 309	13,619 3,317	10,085	542	1,459 285	1,453	80
Q2 Q3	11,806 11,901	4,878 4,960	1,325 1,357	684 679	4,610 4,595	308 310	3,347 3,451	2,369 2,604	118 89	453 394	389 346	18 19
Q4	12,069	5,052	1,487	685	4,530	315	3,504	2,661	193	327	302	21
2007 Nov. Dec.	12,090 12,069	5,062 5,052	1,421 1,487	693 685	4,597 4,530	317 315	1,160 998	897 761	37 88	109 91	110 52	6 5
2008 Jan. Feb.	12,138 12,198	5,103 5,105	1,478 1,494	696 695	4,546 4,590	315 314	1,195 1,033	887 743	7 32	108 102	181 148	12 8
	12,170	5,105	1,131	0,0	1,030	Short-term	1,000	7.10		102	110	
2006 2007	1,015 1,290	575 787	12 18	94 122	330 357	4 7	9,194 11,348	7,392 9,052	59 58	1,023 1,367	688 832	31 38
2007 Q1	1,134	626	12	106	386	4	2,657	2,138	16	271	223	8
Q2 Q3	1,175 1,257	632 715	11 9	120 117	407 409	5 7	2,726 3,012	2,081 2,406	12 10	413 378	210 207	9 11
Q4 2007 Nov.	1,290 1,344	787	18	122	357 408	7	2,953	2,427	20	304	192 69	10
Dec.	1,290	787	18	122	357	7	826	694	5	86	39	3
2008 Jan. Feb.	1,361 1,380	825 819	17 30	131 132	380 392	7 7	1,006 847	793 649	3 15	104 98	101 82	5 4
	Long-term <sup>1)</sup>											
2006 2007	10,086 10,779	3,998 4,265	1,158 1,469	542 564	4,087 4,173	301 309	2,166 2,271	1,004 1,033	363 484	90 92	654 621	54 42
2007 Q1 Q2	10,356 10,631	4,142 4,246	1,253 1,314	542 564	4,114 4,203	304 304	660 621	314 287	125 106	13 40	193 179	14 8
Q3 Q4	10,644 10,779	4,245 4,265	1,348 1,469	562 564	4,186 4,173	304 309	439 551	198 233	79 173	16 23	138 110	8 11
2007 Nov.	10.747	4,277	1,406	566	4,190	309	156	69	34	8	41	4 2
Dec. 2008 Jan.	10,779 10,776	4,265	1,469	564 565	4,173	309 308	172 189	67 94	83	6	14 80	2 7
Feb.	10,818	4,286	1,464	563	4,198	306	185	94	17	4	66	5
2006	7,059	2,136	544	413	3,729	th long-term fi 237	xed rate 1,292	475	143	56	579	39
2007	7,325	2,272	589	427	3,787	250	1,280	530	117	58	540	36
2007 Q1 Q2 Q3	7,176 7,319	2,211 2,256	570 584	414 426	3,739 3,809	243 244	404 339	172 132	40 29	9 24	170 147	13 7 7
Q3 Q4	7,319 7,325	2,254 2,272	591 589	423 427	3,805 3,787	246 250	263 274	100 126	25 23	8 17	123 99	7 8
2007 Nov. Dec.	7,350 7,325	2,282 2,272	587 589	431 427	3,799 3,787	252 250	95 56	41 31	4 8	83	39 13	4
2008 Jan.	7,303	2,278	587	426	3,766	247	122	48	2	2	65	4
Feb.	7,323	2,280	585	424	3,789 Of which	244 long-term var	120 riable rate	51	5	2	58	3
2006	2,607	1,512	604	115	312	64	719	408	216	31	49	15
2007 2007 Q1	2,998 2,729	1,615	861 671	126	338	58	819 213	372	358	33	51	5
Q2 Q3	2,850 2,871	1,608 1,610	716 740	126 128	341 336	60 57	228 138	112 71	76 51	16 7	23 8	1
Q4	2,998	1,615	861	126	338	58	239	74	147	7	8	3
2007 Nov. Dec.	2,936 2,998	1,611 1,615	801 861	124 126	343 338	57 58	51 104	20 26	28 74	1 3	2 0	0
2008 Jan. Feb.	3,007 3,025	1,618 1,625	855 859	127 128	346 351	60 62	46 53	32 35	2 10	1 1	8 5	3 1

Source: ECB.
1) The residual difference between total long-term debt securities and fixed and variable rate long-term debt securities consists of zero coupon bonds and revaluation effects.



## **4.2** Securities, other than shares, issued by euro area residents, by sector of the issuer and instrument type (EUR billions unless otherwise indicated; transactions during the period; nominal values)

2.1(01155)	uco											
			Non-season	ally adjusted		Seasonally adjusted						
	Total	MFIs (including	Non-MFI corporations		General government		Total	MFIs (including	Non-MFI corporations		General government	
		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
	1	2	3	4	5	6	7	8	9	10	11	12
						Total						
2006 2007	811.4 1,007.4	422.3 483.1	244.0 337.7	32.6 55.0	90.3 120.6	22.3 10.9	813.2 1,018.4	427.8 493.4	240.3 333.0	32.8 57.7	89.9 123.4	22.3 10.9
2007 Q1 Q2 Q3	384.2 314.8 119.6 188.7	188.1 105.9 95.3 93.8	96.1 60.8 36.5	13.0 36.4 -3.2 8.9	83.1 111.9 -11.3 -63.1	3.9 -0.1 2.3 4.9	279.4 254.0 204.1 280.9	123.2 114.2 120.9 135.1	113.5 47.4 64.8 107.2	10.6 28.2 3.8 15.1	29.5 65.1 8.3 20.6	2.6 -0.9 6.3 2.9
Q4 2007 Nov.	63.7	93.8	144.2	5.0	-63.1	4.9	47.4	135.1	107.2			
Dec.	-20.0	-10.2	66.6	-6.8	-67.8	-1.8 -1.9	104.5	53.8	41.7	5.6 3.5	8.3 5.9	-1.4 -0.4
2008 Jan. Feb.	68.0 75.1	48.8 13.7	-8.3 18.5	11.1 -0.1	16.7 44.2	-0.4 -1.2	20.0 42.0	16.3 -12.8	15.8 18.2	9.6 -1.6	-20.6 40.3	-1.1 -2.1
						Long-term						
2006 2007	760.1 743.2	347.4 283.5	238.6 331.7	29.2 27.6	121.6 92.3	23.3 8.1	760.1 740.7	349.3 285.3	235.1 327.2	29.0 27.6	123.4 92.7	23.3 8.0
2007 Q1 Q2 Q3 Q4	269.2 275.0 39.1 159.9	141.5 101.2 14.2 26.6	96.4 61.9 38.3 135.1	1.0 22.3 0.1 4.3	27.0 90.2 -14.0 -11.0	3.3 -0.6 0.4 4.9	230.0 208.9 108.9 192.9	107.5 97.0 27.9 52.9	113.5 48.3 66.9 98.4	7.5 15.8 2.7 1.7	-0.6 49.1 7.1 37.1	2.1 -1.3 4.2 2.9
2007 Nov. Dec.	55.1 34.4	3.7 -10.3	24.6 64.0	4.6	20.7 -16.9	1.6 -0.9	35.5 78.5	5.4 16.8	15.8 39.9	4.3	11.4 23.4	-1.5 0.5
2008 Jan. Feb.	1.1 50.8	14.9 14.6	-7.4 5.6	1.3 -0.7	-6.9 32.6	-0.8 -1.2	11.6 27.1	17.9 -8.8	15.9 4.9	6.0 1.0	-26.9 31.7	-1.3 -1.8

### 2. Net issues

C16 Net issues of securities, other than shares, seasonally adjusted and non-seasonally adjusted (EUR billions; transactions during the month; nominal values)



Source: ECB.



		Annual g	growth rates (n	on-seasonally	adjusted)	6-month seasonally adjusted growth rates						
-	Total	MFIs (including	Non-MFI co	orporations	General g	General government		MFIs (including	Non-MFI corporations		General government	
		Eurosystem)	corporations other than MFIs	Non-financial corporations	Central government	Other general government		Eurosystem)	corporations other than MFIs	Non-financial corporations	Central government	Other general government
	1	2	3	4	5	6	7	8	9	10	11	12
						Total						
2007 Feb.	8.2	10.8	27.6	4.7	2.1	5.8	9.3	12.3	31.0	7.5	2.3	2.1
Mar.	8.6	10.5	30.3	5.7	2.4	6.6	10.1	11.8	37.2	7.3	3.1	5.1
Apr.	8.6 9.0	10.7 10.5	28.3 30.1	6.0 6.0	2.6 3.5	7.2 5.0	9.1 9.8	10.9 11.5	28.6 30.6	7.8 8.2	3.0 3.7	6.1 3.3
May June	9.0	10.5	28.6	8.2	3.8	3.3	9.8 9.7	11.5	29.9	12.5	4.3	5.5
July	9.2	10.8	28.0	10.1	3.3	2.5	9.4	9.7	29.9	12.5	3.8	0.7
Aug.	9.2	11.0	29.0	9.8	3.1	2.6	9.1	9.8	27.2	12.1	3.8	3.1
Sep.	9.1	10.9	27.4	8.6	3.2	4.3	8.1	10.1	18.6	10.1	3.3	3.5
Oct.	9.2	11.0	27.4	9.0	3.0	5.6	9.3	11.1	26.2	10.2	3.0	5.5
Nov.	8.7	10.4	26.2	9.0	2.7	4.3	7.6	9.4	21.8	9.8	1.6	5.3
Dec.	9.1	10.6	29.0	8.7	2.7	3.6	8.4	10.8	28.1	5.7	1.3	6.1
2008 Jan.	8.5	9.9	27.5	10.4	2.2	3.0	7.7	10.2	25.1	6.0	0.6	5.3
Feb.	8.0	8.6	24.8	9.7	3.0	2.7	6.9	7.4	22.6	7.4	2.1	2.3
						Long-term						
2007 Feb.	8.4	10.3	27.4	4.8	2.8	5.9	9.6	12.4	31.2	6.2	2.6	2.6
Mar.	8.6	10.4	30.0	5.3	2.4	6.9	9.9	12.1	37.4	5.7	2.1	5.2
Apr.	8.6	10.6	28.2	4.7	2.4	7.4	9.0	11.9	29.0	5.8	1.7	5.8
May	9.1	10.8	30.1	4.2	3.2	5.1	9.2	11.1	31.0	6.0	2.5	2.8
June July	9.0 8.8	10.5 10.3	28.8 29.3	6.3 7.2	3.3 2.9	3.4 2.7	8.9 8.4	10.4 9.3	30.4 30.6	8.8 8.3	2.4 2.1	0.6 0.6
Aug.	8.6	10.3	29.3	7.1	2.9	2.7	8.4 7.6	8.0	27.7	8.0	2.1	2.8
Sep.	8.0	9.0	27.9	6.3	2.4	3.5	6.2	6.1	19.3	6.9	2.7	2.0
Oct.	7.8	8.8	27.3	5.9	2.0	4.6	6.7	5.9	25.5	5.9	2.4	3.7
Nov.	7.2	7.7	26.1	6.2	1.9	3.1	5.2	4.3	21.3	6.3	1.3	3.4
Dec.	7.4	7.1	28.8	5.1	2.3	2.7	5.8	3.9	27.2	1.5	2.1	4.8
2008 Jan.	6.7	6.5	27.3	5.8	1.6	2.2	5.1	3.9	24.1	3.3	1.0	3.7
Feb.	6.1	5.2	23.5	5.6	2.4	1.9	4.6	2.5	19.4	3.3	2.6	0.9

## 4.3 Growth rates of securities, other than shares, issued by euro area residents 1)

(annual percentage changes)



Source: ECB.

1) For the calculation of the growth rates, see the Technical notes. The 6-month growth rates have been annualised.



(per	centage chai	iges)										
			Long-tern	n fixed rate		Long-term variable rate						
	Total	MFIs (including	Non-MFI co	orporations	General government		Total	MFIs (including	Non-MFI corporations		General government	
		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government		Eurosystem)	Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
	13	14	15	16	17	18	19	20	21	22	23	24
	In all currencies combined											
2006	4.5	4.7	13.9	0.8	3.2	13.4	16.4	11.9	41.2	28.0	5.0	4.5
2007	5.2	7.1	17.8	3.8	2.4	6.6	15.8	11.1	37.6	18.3	3.8	-1.8
2007 Q1	5.3	6.3	20.7	2.7	3.0	7.7	15.2	12.2	33.5	21.9	1.0	4.6
Q2	5.5	7.5	19.9	2.7	2.7	7.5	16.5	12.1	37.9	18.9	5.1	-0.3
Q3	5.4	8.0	17.6	4.7	2.3	5.0	16.2	11.1	39.3	19.6	4.4	-4.7
Q4	4.5	6.7	13.5	5.0	1.8	6.3	15.1	9.0	39.2	13.5	4.8	-6.5
2007 Sep.	5.1	6.8	16.7	4.2	2.5	5.6	15.2	10.6	37.8	18.9	1.3	-4.3
Oct.	4.6	6.9	13.9	5.1	1.7	6.8	15.6	9.9	39.3	13.2	4.9	-3.4
Nov.	4.3	6.5	12.6	5.5	1.7	6.4	14.2	8.3	37.6	13.1	4.6	-9.3
Dec.	4.3	6.7	11.5	4.6	1.7	5.8	15.4	7.1	43.4	9.7	8.3	-8.8
2008 Jan.	3.4	5.9	10.5	4.8	0.7	4.0	15.3	6.7	41.6	11.9	11.6	-4.6
Feb.	3.1	4.7	7.0	4.6	1.5	2.4	13.7	5.2	37.2	11.6	12.2	-0.2
						In euro						
2006	3.8	3.1	11.3	0.1	3.2	13.6	15.2	10.1	37.7	30.9	5.2	3.7
2007	4.6	6.4	14.6	2.2	2.7	6.7	15.1	10.2	35.4	18.3	3.9	-2.4
2007 Q1	4.7	5.4	16.2	1.0	3.3	7.7	14.0	10.9	30.0	23.3	1.0	4.1
Q2	4.9	6.8	16.4	0.8	2.9	7.4	15.8	11.2	35.4	19.7	5.2	-0.8
Q3	4.7	7.1	14.6	3.3	2.5	5.2	15.6	10.3	37.5	18.8	4.5	-5.6
Q4	4.1	6.2	11.4	3.6	2.1	6.6	14.9	8.6	37.7	12.3	4.9	-7.2
2007 Sep.	4.5	5.9	13.5	2.4	2.9	5.9	14.7	9.8	36.2	17.9	1.5	-5.2
Oct.	4.1	6.3	11.9	3.4	1.9	7.1	15.3	9.5	37.4	11.9	5.1	-4.2
Nov.	4.0	6.1	10.6	4.4	1.9	6.8	14.1	8.1	35.9	11.8	4.8	-10.0
Dec.	3.9	6.2	9.8	3.5	1.9	6.2	15.8	6.9	43.4	8.8	8.6	-8.9
2008 Jan.	2.9	5.3	9.1	3.6	0.9	4.3	15.9	6.6	41.7	11.1	11.9	-5.0
Feb.	2.9	4.4	6.2	3.4	1.7	2.5	14.4	5.1	37.9	10.8	12.5	-1.5

## 4.3 Growth rates of securities, other than shares, issued by euro area residents <sup>1</sup>) (cont'd) (percentage changes)

C18 Annual growth rates of short-term debt securities, by sector of the issuer, in all currencies combined (annual percentage changes)



Source: ECB. 1) For the calculation of the growth rates, see the Technical notes.
# **4.4 Quoted shares issued by euro area residents** <sup>(1)</sup> (EUR billions, unless otherwise indicated; market values)

### 1. Outstanding amounts and annual growth rates

(outstanding amounts as end-of-period)

	Total Total Annual			МІ	Is	Financial corporations	other than MFIs	Non-financial o	orporations
	Total	Index Dec. 01 = 100	Annual growth rates (%)	Total	Annual growth rates (%)	Total	Annual growth rates (%)	Total	Annual growth rates (%)
	1	2	3	4	5	6	7	8	9
2006 Feb.	5,455.3	103.6	1.2	947.5	1.2	567.7	3.4	3,940.0	0.9
Mar.	5,656.9	103.7	1.2	971.1	1.8	585.1	3.5	4,100.7	0.7
Apr.	5,681.7	103.8	1.1	957.5	1.4	579.1	2.1	4,145.1	0.8
May	5,390.8	103.9	1.2	901.3	1.6	543.6	2.2	3,945.8	0.9
June	5,402.3	104.0	1.1	909.8	1.5	539.7	1.4	3,952.8	1.0
July	5,399.1	104.1	1.2	923.0	2.1	553.7	1.6	3,922.4	1.0
Aug.	5,580.7	104.2	1.2	963.8	1.8	604.6	1.6	4,012.4	1.1
Sep.	5,722.5	104.2	1.2	991.8	1.7	616.7	1.6	4,114.0	1.0
Oct.	5,911.5	104.3	1.1	1,022.4	2.0	623.8	1.1	4,265.2	0.9
Nov.	5,966.3	104.4	0.9	1,031.8	2.0	613.6	1.1	4,320.9	0.6
Dec.	6,184.5	104.6	1.1	1,063.9	2.4	633.2	0.9	4,487.4	0.8
2007 Jan.	6,364.1	104.7	1.1	1,123.5	2.4	646.2	0.9	4.594.4	0.8
Feb.	6,278.9	104.8	1.2	1,092.8	2.8	637.8	1.0	4,548.3	0.8
Mar.	6,504.8	104.8	1.1	1,111.4	2.2	649.3	1.0	4,744.1	0.9
Apr.	6,754.5	105.0	1.2	1,168.6	2.2	675.5	1.1	4,910.4	1.0
May	7,034.1	105.1	1.2	1,174.5	2.1	688.8	1.0	5,170.7	1.0
June	6,955.9	105.4	1.4	1,128.6	2.1	677.1	1.1	5,150.1	1.2
July	6,725.7	105.6	1.4	1,099.8	1.7	608.8	1.0	5,017.0	1.4
Aug.	6,612.3	105.6	1.3	1,060.2	1.6	583.8	0.9	4,968.4	1.3
Sep.	6,675.8	105.6	1.3	1,048.8	1.9	597.2	0.7	5,029.8	1.3
Oct.	6,929.5	105.9	1.5	1,072.8	1.3	629.2	3.0	5,227.5	1.4
Nov.	6,615.1	105.9	1.5	1,032.7	1.1	579.2	2.9	5,003.2	1.4
Dec.	6,571.3	106.1	1.4	1,017.2	1.2	579.0	2.6	4,975.2	1.3
2008 Jan.	5,749.8	106.1	1.3	887.9	0.8	497.3	2.4	4,364.6	1.3
Feb.	5,803.3	106.1	1.3	858.2	0.5	492.4	2.2	4,452.8	1.3

C19 Annual growth rates for quoted shares issued by euro area residents



#### Source: ECB.

1) For the calculation of the index and the growth rates, see the Technical notes.



# **4.4 Quoted shares issued by euro area residents** <sup>1)</sup> (EUR billions; market values)

### 2. Transactions during the month

	Total Gross issues Redemptions Net issue				MFIs		Financial cor	porations othe	er than MFIs	-		
	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues
	1	2	3	4	5	6	7	8	9	10	11	12
2006 Feb.	1.7	1.7	0.0	0.3	0.1	0.2	0.0	0.0	0.0	1.3	1.6	-0.3
Mar.	8.3	5.4	2.9	5.7	0.0	5.7	0.1	0.0	0.1	2.5	5.4	-2.9
Apr.	5.9	0.5	5.4	0.0	0.2	-0.1	0.0	0.0	0.0	5.9	0.3	5.5
May	8.5	2.2	6.3	1.4	0.0	1.4	0.6	0.0	0.6	6.5	2.2	4.3
June	9.4	2.7	6.7	0.8	0.3	0.5	0.1	0.1	0.0	8.5	2.4	6.2
July	13.6	6.6	7.0	4.7	0.0	4.7	5.0	3.5	1.5	3.9	3.1	0.8
Aug.	3.2	1.8	1.4	0.5	0.0	0.5	0.0	0.1	-0.1	2.7	1.6	1.1
Sep.	4.2	0.5	3.7	0.0	0.0	0.0	1.5	0.0	1.4	2.7	0.5	2.2
Oct.	5.8	1.2	4.6	2.5	0.0	2.5	0.5	0.0	0.5	2.8	1.2	1.6
Nov.	6.9	2.0	5.0	3.1	0.0	3.1	0.5	0.2	0.3	3.4	1.8	1.6
Dec.	17.7	5.1	12.6	0.9	0.3	0.6	0.5	0.0	0.5	16.3	4.7	11.6
2007 Jan.	8.5	3.9	4.6	4.0	0.1	3.8	0.4	0.0	0.4	4.1	3.8	0.3
Feb.	8.4	2.0	6.3	5.0	0.0	5.0	0.9	0.0	0.9	2.5	2.0	0.5
Mar.	3.2	1.7	1.5	0.2	0.0	0.2	0.6	0.4	0.2	2.4	1.4	1.0
Apr.	12.9	0.4	12.5	0.1	0.3	-0.2	0.2	0.0	0.1	12.7	0.2	12.5
May	6.6	1.9	4.7	0.1	0.0	0.1	0.5	0.0	0.5	6.0	1.9	4.2
June	22.6	1.6	21.0	1.1	0.0	1.1	0.7	0.0	0.7	20.8	1.6	19.3
July	15.8	1.8	13.9	1.2	0.0	1.2	1.3	0.3	1.0	13.3	1.5	11.8
Aug.	2.5	6.6	-4.2	0.0	0.1	-0.1	1.0	1.4	-0.5	1.5	5.1	-3.6
Sep.	4.5	2.5	2.0	2.6	0.0	2.6	0.3	0.3	-0.1	1.6	2.1	-0.5
Oct.	26.0	8.0	18.0	0.3	3.2	-2.9	14.9	0.5	14.4	10.8	4.3	6.5
Nov.	7.0	3.3	3.6	0.9	0.0	0.9	1.0	1.3	-0.3	5.0	2.0	3.0
Dec.	13.1	4.6	8.5	0.9	0.0	0.9	0.5	2.2	-1.6	11.6	2.5	9.2
2008 Jan.	3.9	1.4	2.6	0.1	0.0	0.1	0.3	0.7	-0.4	3.5	0.7	2.8
Feb.	2.7	1.9	0.8	1.0	0.0	1.0	0.1	0.3	-0.2	1.6	1.6	0.1

# **C20 Gross issues of quoted shares by sector of the issuer** (EUR billions; transactions during the month; market values)



### Source: ECB.

1) For the calculation of the index and the growth rates, see the Technical notes.



# **4.5** MFI interest rates on euro-denominated deposits and loans by euro area residents <sup>1</sup>) (percentages per annum; outstanding amounts as end-of-period, new business as period average, unless otherwise indicated)

### 1. Interest rates on deposits (new business)

			Deposits fr	om households	5		Depos	its from non-fi	nancial corpor	ations	Repos
	Overnight <sup>2)</sup>	Wit	h agreed matur	ity	Redeemable a	t notice <sup>2),3)</sup>	Overnight <sup>2)</sup>	Wit	h agreed matur	ity	
		Up to 1 year	Over 1 and up to 2 years	Over 2 years	Up to 3 months	Over 3 months		Up to 1 year	Over 1 and up to 2 years	Over 2 years	
	1	2	3	4	5	6	7	8	9	10	11
2007 Mar.	1.02	3.51	3.65	2.68	2.39	3.14	1.71	3.67	3.83	3.72	3.64
Apr.	1.04	3.59	3.68	2.78	2.42	3.20	1.75	3.74	4.01	3.87	3.70
May	1.06	3.62	3.51	2.72	2.43	3.25	1.78	3.74	3.80	3.72	3.73
June	1.08	3.78	3.79	2.64	2.42	3.32	1.77	3.94	4.09	4.16	3.90
July	1.10	3.86	3.90	2.97	2.45	3.40	1.81	4.01	4.16	4.51	3.95
Aug.	1.14	3.93	3.93	3.01	2.53	3.46	1.89	4.08	4.33	4.20	3.93
Sep.	1.16	4.07	3.98	2.92	2.58	3.50	1.91	4.14	4.34	4.41	3.97
Oct.	1.17	4.11	4.16	3.31	2.53	3.57	1.97	4.07	4.37	4.63	3.93
Nov.	1.18	4.08	4.22	3.20	2.54	3.64	2.01	4.10	4.41	4.04	3.98
Dec.	1.18				2.57	3.68	1.95	4.26	4.40	4.03	3.95
2008 Jan.	1.20	) 4.19 4.32 3.43			2.57	3.75	2.01	4.13	4.39	4.68	3.95
Feb.	1.21	4.12	4.19	3.25	2.65	3.77	2.01	4.07	4.18	4.32	3.93

### 2. Interest rates on loans to households (new business)

	Bank overdrafts <sup>2)</sup>		Consumer				Lending	for house pu		Other lending by initial rate fixation			
		By initi	al rate fixatio	on	Annual percentage	H	By initial rat	e fixation		Annual percentage	, i i i i i i i i i i i i i i i i i i i		
		Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years	rate of charge <sup>4)</sup>	Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 and up to 10 years	Over 10 years	rate of charge <sup>4)</sup>	Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9	10	11	12	13
2007 Mar.	10.22	7.51	6.68	8.34	8.14	4.79	4.76	4.71	4.62	4.94	5.26	5.60	5.20
Apr.	10.29	7.77	6.69	8.24	8.15	4.85	4.73	4.75	4.67	5.00	5.29	5.57	5.21
May	10.32	8.10	6.73	8.30	8.27	4.88	4.80	4.81	4.74	5.02	5.38	5.65	5.32
June	10.38	8.07	6.66	8.25	8.26	5.00	4.93	4.90	4.82	5.15	5.49	5.77	5.37
July	10.49	8.06	6.76	8.30	8.35	5.06	4.93	5.02	4.91	5.26	5.54	5.80	5.41
Aug.	10.55	8.43	6.85	8.31	8.48	5.15	4.98	5.08	4.90	5.24	5.36	5.93	5.47
Sep.	10.53	8.48	6.83	8.39	8.54	5.23	5.04	5.09	5.02	5.31	5.46	5.87	5.51
Oct.	10.64	8.10	6.88	8.40	8.38	5.29	5.07	5.08	5.11	5.38	5.63	6.05	5.59
Nov.	10.50	8.38	6.90	8.36	8.47	5.28	5.03	5.10	5.11	5.38	5.60	5.95	5.49
Dec.	10.46	8.05	6.93	8.17	8.26	5.32	5.03	5.07	5.18	5.40	5.67	5.83	5.43
2008 Jan. Feb.	10.46 10.44	8.11 8.52	7.00 7.21	8.50 8.44	8.48 8.71	5.32 5.26	5.02 4.96	5.07 5.01	5.14 5.09	5.37 5.40	5.59 5.55	5.93 5.86	5.49 5.51

### 3. Interest rates on loans to non-financial corporations (new business)

	Bank overdrafts <sup>2)</sup>		ans up to EUR 1 milli nitial rate fixation	ion		loans over EUR 1 mi y initial rate fixation	
		Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years	Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years
	1	2	3	4	5	6	7
2007 Mar.	6.04	5.30	5.45	4.88	4.66	4.81	4.87
Apr.	6.12	5.37	5.47	4.88	4.70	4.99	4.90
May	6.12	5.43	5.57	4.95	4.72	5.10	5.12
June	6.17	5.53	5.70	5.03	4.89	5.28	5.17
July	6.30	5.58	5.77	5.09	4.90	4.95	5.17
Aug.	6.35	5.77	5.86	5.17	5.01	5.46	5.29
Sep.	6.49	5.93	5.90	5.23	5.20	5.60	5.41
Oct.	6.53	5.95	6.00	5.26	5.11	5.19	5.31
Nov.	6.50	5.96	5.90	5.29	5.08	5.28	5.36
Dec.	6.62	6.08	5.96	5.30	5.35	5.62	5.48
2008 Jan.	6.62	5.93	5.92	5.27	5.12	5.35	5.25
Feb.	6.51	5.84	5.85	5.23	5.04	5.46	5.14

Source: ECB.

Data refer to the changing composition of the euro area. For further information, see the General notes.
 For this instrument category, new business and outstanding amounts coincide. End-of-period.

3) For this instrument category, households and non-financial corporations are merged and allocated to the household sector, since the outstanding amounts of non-financial

corporations are negligible compared with those of the household sector in all participating Member States combined.
4) The annual percentage rate of charge covers the total cost of a loan. The total cost comprises an interest rate component and a component of other (related) charges, such as the cost of inquiries, administration, preparation of documents, guarantees, etc.



# **4.5** MFI interest rates on euro-denominated deposits and loans by euro area residents (percentages per annum; outstanding amounts as end-of-period, new business as period average, unless otherwise indicated)

### 4. Interest rates on deposits (outstanding amounts)

		Depos	sits from househo	olds		Deposits from	n non-financial co	rporations	Repos
	Overnight 1)	With agreed	maturity	Redeemable a	at notice 1),2)	Overnight <sup>1)</sup>	With agreed	maturity	
		Up to 2 years	Over 2 years	Up to 3 months	Over 3 months	-	Up to 2 years	Over 2 years	
	1	2	3	4	5	6	7	8	9
2007 Mar.	1.02	3.16	3.05	2.39	3.14	1.71	3.61	3.93	3.54
Apr.	1.04	3.23	3.06	2.42	3.20	1.75	3.67	3.93	3.59
May	1.06	3.30	3.03	2.43	3.25	1.78	3.72	3.96	3.66
June	1.08	3.39	3.04	2.42	3.32	1.77	3.87	3.99	3.79
July	1.10	3.49	3.02	2.45	3.40	1.81	3.92	4.00	3.85
Aug.	1.14	3.58	3.03	2.53	3.46	1.89	4.03	4.07	3.89
Sep.	1.16	3.68	3.06	2.58	3.50	1.91	4.13	4.09	3.93
Oct.	1.17	3.79	3.04	2.53	3.57	1.97	4.18	4.11	3.93
Nov.	1.18	3.85	3.06	2.54	3.64	2.01	4.21	4.18	3.97
Dec.	1.18	3.95	3.03	2.57	3.68	1.95	4.34	4.16	4.01
2008 Jan.	1.20	3.98	3.06	2.57	3.75	2.01	4.27	4.20	4.01
Feb.	1.21	3.99	3.11	2.65	3.77	2.01	4.23	4.24	3.97

### 5. Interest rates on loans (outstanding amounts)

			Loans to h	ouseholds			Loans to no	on-financial corpo	rations
	Lendi	ng for house purch with maturity	ase,	Consume	er credit and other with maturity	loans,		With maturity	
	5.14 4.48 4. 5.16 4.48 4.			Up to 1 year	Over 1 and up to 5 years	Over 5 years	Up to 1 year	Over 1 and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9
2007 Mar.	5.14	4.45	4.79	8.62	6.88	5.95	5.44	4.90	4.84
Apr.		5.14 4.48 4.80			6.96	5.97	5.50	4.95	4.87
May	5.16	5.144.484.805.164.484.82			6.95	5.97	5.50	4.99	4.90
June	5.20	5.14         4.48         4.80           5.16         4.48         4.82           5.20         4.53         4.86			6.94	6.01	5.62	5.09	4.96
July	5.28	5.16 4.48 4.82 5.20 4.53 4.86			6.95	6.06	5.70	5.15	5.00
Aug.	5.35	4.58	4.90	8.85	6.97	6.08	5.76	5.24	5.05
Sep.	5.44	4.64	4.94	8.99	7.00	6.13	5.91	5.35	5.14
Oct.	5.49	4.68	4.98	9.02	7.10	6.16	5.96	5.44	5.22
Nov.	5.48	4.72	4.99	8.86	7.12	6.21	5.96	5.49	5.22
Dec.	5.53	4.75	5.00	8.97	7.13	6.22	6.08	5.57	5.28
2008 Jan.	5.61 4.76 5.01			1 9.00 7.16 6.2			6.06	5.55	5.27
Feb.	5.60	4.82	5.04	9.06	7.22	6.28	5.98	5.52	5.31

# C21 New deposits with agreed maturity









loans at floating rate and up to I year initial **C22** New fixation



- to households for house purchase
- to non-financial corporations, up to EUR 1 million





# **4.6** Money market interest rates (percentages per annum; period averages)

			Euro area 1),2)			United States	Japan
	Overnight	1-month	3-month	6-month	12-month	3-month	3-month
	deposits	deposits	deposits	deposits	deposits	deposits	deposits
	(EONIA)	(EURIBOR)	(EURIBOR)	(EURIBOR)	(EURIBOR)	(LIBOR)	(LIBOR)
	1	2	3	4	5	6	7
2005	2.09	2.14	2.18	2.23	2.33	3.56	0.06
2006	2.83	2.94	3.08	3.23	3.44	5.19	0.30
2007	3.87	4.08	4.28	4.35	4.45	5.30	0.79
2007 Q1	3.61	3.71	3.82	3.94	4.09	5.36	0.62
Q2	3.86	3.96	4.07	4.20	4.38	5.36	0.69
Q3	4.05	4.28	4.49	4.56	4.65	5.45	0.89
Q4	3.95	4.37	4.72	4.70	4.68	5.02	0.96
2008 Q1	4.05	4.23	4.48	4.48	4.48	3.26	0.92
2008 QI 2007 Apr. May June	3.82 3.79 3.96	4.23 3.86 3.92 4.10	4.48 3.98 4.07 4.15	4.48 4.10 4.20 4.28	4.48 4.25 4.37 4.51	5.35 5.36 5.36	0.92 0.66 0.67 0.73
July	4.06	4.11	4.22	4.36	4.56	5.36	0.77
Aug.	4.05	4.31	4.54	4.59	4.67	5.48	0.92
Sep.	4.03	4.43	4.74	4.75	4.72	5.49	0.99
Oct.	3.94	4.24	4.69	4.66	4.65	5.15	0.97
Nov.	4.02	4.22	4.64	4.63	4.61	4.96	0.91
Dec.	3.88	4.71	4.85	4.82	4.79	4.97	0.99
2008 Jan.	4.02	4.20	4.48	4.50	4.50	3.92	0.89
Feb.	4.03	4.18	4.36	4.36	4.35	3.09	0.90
Mar.	4.09	4.30	4.60	4.59	4.59	2.78	0.97
Apr.	3.99	4.37	4.78	4.80	4.82	2.79	0.92



Source: ECB.

Before January 1999 synthetic euro area rates were calculated on the basis of national rates weighted by GDP. For further information, see the General notes. Data refer to the changing composition of the euro area. For further information, see the General notes.

1) 2)



# **4.7 Euro area yield curves**<sup>1)</sup> (AAA-rated euro area central government bonds; end-of-period; rates in percentages per annum; spreads in percentage points)

				Spot rate		Instantaneous forward rates						
	3 months	1 year	2 years	5 years	7 years	10 years	10 years - 3 months (spread)	10 years - 2 years (spread) 8	1 year 9	2 years	5 years	10 years
2006 D	2.44		5	2.92	2.96		0.47		-		2.00	
2006 Dec.	3.44	3.76	3.82	3.83	3.86	3.91	0.47	0.09	3.92	3.85	3.88	4.08
2007 Jan.	3.54	3.84	3.92	3.96	4.00	4.06	0.53	0.15	4.01	3.97	4.05	4.25
Feb.	3.63	3.79	3.80	3.81	3.85	3.92	0.29	0.12	3.85	3.77	3.90	4.13
Mar.	3.70	3.92	3.95	3.93	3.96	4.02	0.33	0.08	4.03	3.93	3.97	4.25
Apr.	3.81	4.01	4.06	4.06	4.08	4.13	0.32	0.07	4.14	4.08	4.08	4.33
May	3.86	4.21	4.31	4.32	4.33	4.37	0.51	0.06	4.44	4.37	4.33	4.51
June	3.90	4.26	4.38	4.43	4.46	4.51	0.61	0.13	4.51	4.48	4.49	4.68
July	3.98	4.23	4.28	4.28	4.30	4.36	0.38	0.08	4.36	4.28	4.32	4.53
Aug.	3.86	3.98	4.03	4.12	4.20	4.32	0.47	0.29	4.07	4.09	4.32	4.67
Sep.	3.80	3.96	4.03	4.15	4.25	4.38	0.57	0.35	4.08	4.13	4.39	4.75
Oct.	3.87	4.01	4.06	4.10	4.17	4.29	0.42	0.23	4.11	4.08	4.25	4.63
Nov.	3.86	3.84	3.82	3.91	4.03	4.21	0.35	0.39	3.81	3.80	4.19	4.76
Dec.	3.85	4.00	4.01	4.11	4.23	4.38	0.52	0.36	4.06	4.02	4.40	4.78
2008 Jan.	3.81	3.55	3.42	3.59	3.79	4.05	0.24	0.62	3.32	3.34	4.08	4.80
Feb.	3.83	3.42	3.20	3.43	3.72	4.06	0.23	0.86	3.04	3.03	4.16	4.99
Mar.	3.87	3.70	3.60	3.70	3.87	4.13	0.26	0.54	3.53	3.49	4.10	4.91
Apr.	3.90	3.89	3.86	3.95	4.10	4.32	0.42	0.46	3.86	3.81	4.29	4.95



Source: ECB, underlying data provided by EuroMTS, ratings provided by Fitch Ratings.Data refer to the changing composition of the euro area. For further information, see the General notes.



# **4.8 Stock market indices** (index levels in points; period averages)

	Bench	ımark			Dow Jo	ones EUR	O STOXX i Main indus						United States	Japan
	Broad	50	Basic materials	Consumer services	Consumer goods	Oil & gas		Industrials	Technology	Utilities		Health care	Standard & Poor's 500	Nikkei 225
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2005	293.8	3,208.6	307.0	181.3	245.1	378.6	287.7	307.3	297.2	334.1	433.1	457.0	1,207.4	12,421.3
2006	357.3	3,795.4	402.3	205.0	293.7	419.8	370.3	391.3	345.3	440.0	416.8	530.2	1,310.5	16,124.0
2007	416.4	4,315.8	543.8	235.4	366.5	449.6	408.3	488.4	383.4	561.4	492.7	519.2	1,476.5	16,984.4
2007 Q1	402.5	4,150.5	489.9	233.3	335.7	422.8	418.6	462.7	349.4	512.3	472.8	527.2	1,424.8	17,363.9
Q2	429.0	4,416.2	549.6	246.8	373.0	454.1	434.2	512.5	376.6	556.0	475.8	536.7	1,496.6	17,678.7
Q3	416.4	4,317.6	568.3	233.5	373.3	465.6	399.8	494.4	400.9	556.3	476.7	503.8	1,489.8	16,907.5
Q4	417.8	4,377.9	567.3	228.3	383.8	455.7	381.2	484.1	406.3	620.0	544.8	509.2	1,494.6	16,002.5
2008 Q1	361.8	3,809.4	520.9	194.0	327.1	412.0	318.1	413.3	339.2	573.3	490.1	454.4	1,351.7	13,372.7
2007 Apr.	421.7	4,330.7	531.7	247.6	363.9	437.2	432.7	493.8	362.4	540.4	477.4	531.5	1,462.7	17,466.5
May	431.7	4,444.8	545.5	248.5	374.4	454.1	439.8	514.4	374.5	559.2	476.2	547.7	1,511.3	17,577.7
June	433.4	4,470.2	571.9	244.2	380.4	471.1	429.4	529.0	393.1	568.2	473.8	529.9	1,514.5	18,001.4
July	431.3	4,449.0	585.9	242.6	384.7	491.4	418.7	529.3	399.8	563.1	467.1	513.1	1,520.9	17,986.8
Aug.	406.4	4,220.6	550.8	227.8	362.5	444.5	393.5	479.0	390.0	544.4	469.2	495.4	1,454.6	16,461.0
Sep.	411.3	4,284.4	569.1	230.1	373.2	461.5	386.3	473.8	414.7	562.7	495.9	503.2	1,496.0	16,233.9
Oct.	427.1	4,430.8	587.6	234.9	394.6	463.8	399.4	492.9	419.5	602.4	527.9	507.6	1,539.7	16,910.4
Nov.	411.4	4,314.9	549.1	225.3	380.2	450.3	369.1	477.1	400.8	624.1	555.0	501.9	1,461.3	15,514.0
Dec.	414.5	4,386.0	564.0	224.1	375.8	452.5	374.0	481.8	397.8	634.9	552.6	518.6	1,480.0	15,520.1
2008 Jan.	380.2	4,042.1	529.7	202.3	338.7	431.4	339.7	426.3	351.2	602.9	528.4	492.9	1,380.3	13,953.4
Feb.	360.6	3,776.6	520.7	194.0	323.8	407.6	311.9	417.7	356.2	573.9	493.2	452.6	1,354.6	13,522.6
Mar.	342.9	3,587.3	511.4	184.7	317.6	395.2	300.8	394.7	308.9	540.2	444.9	414.1	1,317.5	12,586.6
Apr.	359.6	3,768.1	553.9	189.3	324.6	423.2	326.5	406.2	312.8	550.2	449.3	429.6	1,370.5	13,382.1

**C27 Dow Jones EURO STOXX Broad, Standard & Poor's 500 and Nikkei 225** (January 1994 = 100; monthly averages)



### Source: ECB.

1) Data refer to the changing composition of the euro area. For further information, see the General notes.





# PRICES, OUTPUT, DEMAND AND LABOUR MARKETS

# 5.1 HICP, other prices and costs

#### 1. Harmonised Index of Consumer Prices<sup>1)</sup>

			Total				Fotal (s.a., p	ercentage char	nge on previou	s period)		Memo item: Administered prices <sup>2)</sup>		
	Index 2005 = 100		Total Total excl. unprocessed food and energy	Goods	Services	Total	Processed food	Unprocessed food	Non-energy industrial goods	Energy (n.s.a.)	Services	Total HICP excluding administered prices	Administered prices	
% of total 3)	100.0	100.0	82.6	59.1	40.9	100.0	11.9	7.6	29.8	9.8	40.9	87.8	12.2	
	1	2	3	4	5	6	7	8	9	10	11	12	13	
2004 2005 2006 2007	97.9 100.0 102.2 104.4	2.1 2.2 2.2 2.1	2.1 1.5 1.5 2.0	1.8 2.1 2.3 1.9	2.6 2.3 2.0 2.5	- - -	-			-	-	1.9 2.1 2.1 2.2	3.6 2.5 2.6 2.0	
2006 Q4 2007 Q1 Q2 Q3 Q4	102.8 102.9 104.4 104.4 105.7	1.8 1.9 1.9 1.9 2.9	1.6 1.9 1.9 2.0 2.3	1.6 1.6 1.5 1.5 3.2	2.1 2.4 2.6 2.5 2.5	0.0 0.5 0.8 0.5 1.0	0.7 0.3 0.5 1.1 2.6	0.6 0.1 0.8 0.9 1.2	0.2 0.4 0.2 0.2 0.3	-4.2 1.0 3.3 0.7 2.9	0.6 0.7 0.7 0.6 0.6	1.6 1.8 1.9 1.9 3.1	2.7 2.4 2.1 1.7 1.8	
2007 Nov. Dec.	105.8 106.2	3.1 3.1	2.3 2.3	3.4 3.4	2.5 2.5	0.6 0.1	0.8 0.6	0.3 0.1	0.1 0.0	3.4 -0.3	0.2 0.2	3.2 3.3	1.8 1.8	
2008 Jan. Feb. Mar. Apr. 4)	105.8 106.2 107.2	3.2 3.3 3.6 3.3	2.3 2.4 2.7	3.7 3.8 4.1	2.5 2.4 2.8	0.4 0.2 0.6	0.8 0.7 0.3	0.3 -0.3 0.7	0.0 0.2 0.1	1.6 0.1 2.3	0.2 0.2 0.5	3.4 3.4 3.7	2.1 2.1 2.4	

			Goods	5			Services					
	Food (incl. al	coholic beverage	es and tobacco)		Industrial good	s	Hous	ing	Transport	Communication	Recreation and	Miscellaneous
	Total	Processed food	Unprocessed food	Total	Non-energy industrial goods	Energy		Rents			personal	
% of total 3)	19.5	11.9	7.6	39.6	29.8	9.8	10.1	6.0	6.1	3.3	14.7	6.8
	14	15	16	17	18	19	20	21	22	23	24	25
2004 2005 2006 2007	2.3 1.6 2.4 2.8	3.4 2.0 2.1 2.8	0.6 0.8 2.8 3.0	1.6 2.4 2.3 1.4	0.8 0.3 0.6 1.0	4.5 10.1 7.7 2.6	2.4 2.6 2.5 2.7	1.9 2.0 2.1 2.0	2.8 2.7 2.5 2.6	-2.0 -2.2 -3.3 -1.9	2.4 2.3 2.3 2.9	5.1 3.1 2.3 3.2
2006 Q4 2007 Q1 Q2 Q3 Q4	2.9 2.5 2.5 2.5 3.9	2.2 2.1 2.0 2.5 4.5	4.1 3.1 3.3 2.4 3.1	1.0 1.1 1.0 0.9 2.8	0.8 1.1 1.0 1.0 1.0	1.5 1.1 0.5 0.7 8.1	2.5 2.6 2.7 2.7 2.7	2.1 2.0 2.0 2.0 2.0	2.3 2.9 2.6 2.4 2.6	-2.5 -2.1 -1.9 -1.5 -2.1	2.4 2.8 2.9 3.0 3.0	2.4 2.5 3.6 3.4 3.2
2007 Oct. Nov. Dec.	3.5 4.0 4.3	3.8 4.6 5.1	3.1 3.0 3.1	2.1 3.2 3.0	1.1 1.1 1.0	5.5 9.7 9.2	2.7 2.7 2.6	2.0 2.0 2.0	2.5 2.6 2.8	-2.1 -1.9 -2.3	2.9 3.0 3.0	3.2 3.2 3.2
2008 Jan. Feb. Mar.	4.9 5.2 5.6	5.9 6.5 6.8	3.3 3.3 3.8	3.1 3.1 3.4	0.7 0.8 0.9	10.6 10.4 11.2	2.6 2.5 2.5	1.9 1.9 1.9	3.1 3.0 3.3	-2.9 -3.1 -1.5	3.0 3.1 3.7	3.3 3.2 3.1

Sources: Eurostat and ECB calculations.

1) Data refer to the changing composition of the euro area. For further information, see the General notes.

2) ECB estimates based on Eurostat data; these experimental statistics can only provide an approximate measure of price administration since changes in administered prices cannot be fully isolated from other influences. Please refer to http://www.ecb.europa.eu/stats/prices/hicp/html/index.en.html for a note explaining the methodology used in the compilation of this indicator. Referring to the index period 2008.

3)

4) Estimate based on provisional national releases usually covering around 95% of the euro area, as well as on early information on energy prices.



# 5.1 HICP, other prices and costs

### 2. Industry, construction, residential property and commodity prices

		ion <sup>1)</sup> property pri												d market s of raw	Oil prices <sup>4)</sup> (EUR per
	Total (index	Т	`otal		Industry exc	luding co	nstructio	on and ener	·gy	Energy		prices <sup>2</sup> )	mat	erials <sup>3)</sup>	barrel)
	2000 = 100)		Manu- facturing	Total	Intermediate goods	Capital goods		Consumer	goods				1	Total	
					goods	50040	Total	Durable	Non-durable					Total excluding energy	
% of total 5)	100.0	100.0	89.5	82.4	31.6	21.2	29.6	4.0	25.6	17.6			100.0	32.8	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2004	105.8	2.3	2.6	2.0	3.5	0.7	1.3	0.7	1.4	4.0	4.1	7.5	18.4	10.8	30.5
2005	110.1	4.1	3.2	1.9	2.9	1.4	1.1	1.3	1.1	13.6	3.1	7.8	28.5	9.4	44.6
2006	115.8	5.1	3.4	2.8	4.8	1.4	1.7	1.6	1.7	13.3	4.1	6.5	19.7	24.8	52.9
2007	119.1	2.8	3.1	3.2	4.8	1.8	2.3	1.9	2.4	1.7	3.8	4.5	3.9	9.2	52.8
2007 Q1	117.3	2.9	2.5	3.4	6.0	2.0	1.6	2.0	1.5	1.2	4.4	- ,	-5.5	15.7	44.8
Q2	118.5	2.4	2.6	3.2	5.4	2.0	1.7	1.8	1.7	-0.4	4.3	5.0 <sup>6</sup>		13.8	51.0
Q3	119.3	2.1	2.7	3.0	4.3	1.6	2.4	1.8	2.5	-0.7	3.5	-	2.0	6.7	54.2
Q4 2008 Q1	121.2 123.6	4.0 5.4	4.5 5.4	3.2 3.6	3.7 4.1	1.5 1.5	3.6 4.4	1.9 2.3	3.9 4.7	7.0 11.7	3.1	4.0 <sup>6</sup>	23.5 36.5	1.6 11.9	61.0 64.2
											•	-			
2007 Nov.	121.6	4.3	4.8	3.2	3.7	1.5	3.7	1.9	4.0	8.1	-	-	26.9	-0.1	62.8
Dec.	121.7	4.4	4.8	3.2	3.5	1.5	3.9	2.0	4.3	8.6	-	-	24.1	1.4	62.8
2008 Jan.	122.7	5.0	5.1	3.4	3.8	1.3	4.2	2.3	4.6	10.8	-	-	37.5	10.4	62.4
Feb.	123.6	5.4	5.4	3.6	4.2	1.5	4.3	2.3	4.7	11.7	-	-	37.2	15.0	64.1
Mar.	124.4	5.7	5.6	3.7	4.2	1.5	4.6	2.5	5.0	12.7	-	-	34.8	10.3	66.1
Apr.											-	-	32.7	5.8	69.8

### 3. Hourly labour costs 7)

	Total (s.a. index	Total	By c	component	By sele	cted economic activ	vity	Memo: indicator
	2000 = 100)		Wages and salaries	Employers' social contributions	Mining, manufacturing and energy	Construction	Services	of negotiated wages <sup>8)</sup>
% of total <sup>5</sup>	100.0	100.0	73.1	26.9	34.6	9.1	56.3	
	1	2	3	4	5	6	7	8
2004	113.7	2.5	2.3	3.1	2.9	2.6	2.2	2.1
2005	116.8	2.7	2.7	2.8	2.6	2.4	2.9	2.1
2006 2007	119.7 122.7	2.5 2.5	2.6 2.6	2.2 2.2	3.3 2.6	2.1 3.0	2.1 2.4	2.3 2.2
2006 Q4	120.7	2.1	2.2	1.7	2.7	2.3	1.7	2.5
2007 Q1	121.5 122.3	2.2 2.6	2.3 2.8	2.0 2.3	2.5 2.9	1.9 3.1	2.1 2.4	2.0 2.3
Q2 Q3	122.5	2.6	2.8 2.6	2.3	2.9	3.4	2.4	2.3
$\widetilde{Q}_{4}^{3}$	124.0	2.7	2.9	2.2	2.8	3.7	2.5	2.1

Sources: Eurostat, HWWI (columns 13 and 14 in Table 2 in Section 5.1), ECB calculations based on Thomson Financial Datastream data (column 15 in Table 2 in Section 5.1), ECB calculations based on Eurostat data (column 6 in Table 2 in Section 5.1 and column 7 in Table 3 in Section 5.1) and ECB calculations (column 12 in Table 2 in Section 5.1 and column 8 in Table 3 in Section 5.1).

1) Input prices for residential buildings.

Experimental data based on non-harmonised national sources (see the ECB website for further details).

3) Refers to the prices expressed in euro.

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

5) In 2000.

6) The quarterly data for the second (fourth) quarter refer to semi-annual averages of the first (second) half of the year, respectively. Since some national data are only available at annual frequency, the semi-annual estimate is partially derived from annual results; therefore, the accuracy of semi-annual data is lower than the accuracy of annual data.
7) Hourly labour costs for the whole economy, excluding agriculture, public administration, education, health and services not elsewhere classified. Owing to differences in coverage, the estimates for the components may not be consistent with the total.

8) Experimental data (see the ECB website for further details).



# 5.1 HICP, other prices and costs

### 4. Unit labour costs, compensation per employee and labour productivity (seasonally adjusted)

	Total (index	Total				By economic activity		
	2000 = 100)		Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
	1	2	3	4	5	6	7	8
			·	l	Jnit labour costs	1)	· · ·	
2004	107.6	0.8	-11.3	-1.2	3.3	0.3	2.2	2.1
2005	108.8	1.1	7.7	-0.6	3.3	0.8	1.6	1.9
2006	109.9	1.0	1.0	-0.6	1.6	0.6	2.2	2.5
2007	111.6	1.5	0.6	-0.6	4.2	0.4	3.3	1.7
2006 Q4	109.9	0.2	-0.5	-1.3	2.0	-0.2	2.0	0.7
2007 Q1	110.9	1.0	0.6	-1.2	1.7	-0.4	3.5	1.9
Q2	111.6	1.4	1.3	0.1	4.8	0.1	3.8	0.7
Q3	111.5	1.4	1.6	-1.3	5.4	0.7	2.8	1.9
Q4	112.1	2.0	-0.3	-0.4	5.0	1.4	3.1	2.3
<u>+</u>	112.1	2.0	-0.5		ensation per emp		5.1	2.5
2004	110.0	2.1	1.3	2.8	3.0	1.4	1.8	2.4
2005	112.0	1.8	2.0	1.6	2.5	1.7	2.1	1.8
2006	114.5	2.2	1.4	3.3	3.3	1.7	1.8	1.8
2007	117.1	2.3	2.7	2.4	3.4	1.8	2.6	2.1
2007 2006 Q4 2007 Q1 Q2 Q3 Q4	117.1 115.2 116.3 116.9 117.2 118.0	1.8 2.4 2.2 2.2 2.5	2.7 2.5 2.5 3.0 3.1 2.1	2.4 2.8 2.1 2.8 2.1 2.8 2.1 2.6	3.4 3.7 2.6 3.5 3.5	1.8 2.0 1.8 1.9 1.8 1.8	2.0 3.2 2.8 2.3 2.4	0.3 2.3 1.4 2.1 2.6
				La	bour productivit	y <sup>2)</sup>		
2004	102.2	1.3	14.2	4.0	-0.3	1.1	-0.4	0.3
2005	102.9	0.7	-5.3	2.2	-0.8	0.8	0.5	-0.1
2006	104.1	1.2	0.3	3.9	1.7	1.1	-0.4	-0.7
2007	105.0	0.8	2.1	3.0	-0.8	1.3	-0.6	0.4
2006 Q4	104.8	1.6	3.0	4.2	1.3	2.2	0.0	-0.5
2007 Q1	104.9	1.4	1.9	3.3	2.0	2.2	-0.3	0.4
Q2	104.8	0.8	1.7	2.8	-2.1	1.8	-0.9	0.7
Q3	105.1	0.8	1.5	3.4	-1.8	1.0	-0.5	0.3
Q4	105.3	0.5	2.5	3.0	-1.4	0.3	-0.7	0.3

### 5. Gross domestic product deflators

	Total (s.a. index	Total		Domest	ic demand		Exports <sup>3)</sup>	Imports <sup>3)</sup>
	(3.3.  mdex) 2000 = 100)	F	Total	Private consumption	Government	Gross fixed capital formation		
	1	2	3	4	5	6	7	8_
2004	109.4	1.9	2.1	2.1	2.2	2.5	1.0	1.4
2005	111.5	1.9	2.3	2.1	2.5	2.4	2.4	3.6
2006	113.6	1.9	2.3	2.2	1.9	2.7	2.7	3.8
2007	116.1	2.2	2.1	2.0	1.5	2.7	1.3	1.1
2006 Q4	114.4	1.7	1.8	1.9	0.5	2.7	1.8	1.8
2007 Ò1	115.1	2.1	1.8	1.8	1.5	3.0	1.3	0.4
Q2	115.9	2.2	1.9	1.8	0.8	2.8	1.4	0.6
Q3	116.3	2.1	2.0	1.8	1.6	2.5	1.0	0.6
Q4	116.9	2.2	2.7	2.6	2.1	2.4	1.5	2.7

Sources: ECB calculations based on Eurostat data.

Compensation (at current prices) per employee divided by value added (volumes) per person employed.
 Value added (volumes) per person employed.
 Deflators for exports and imports refer to goods and services and include cross-border trade within the euro area.



### 1. GDP and expenditure components

					GDP				
-	Total		D	omestic demand			Exter	rnal balance 1)	
		Total	Private consumption	Government consumption	Gross fixed capital formation	Changes in inventories 2)	Total	Exports 1)	Imports <sup>1)</sup>
	1	2	3	4	5	6	7	8	9
			Curre	ent prices (EUR bill	ions, seasonally ad	justed)			
2004 2005 2006 2007	7,792.6 8,075.0 8,463.9 8,873.2	7,641.6 7,967.6 8,373.6 8,740.3	4,467.7 4,634.8 4,823.4 4,991.2	1,590.8 1,654.9 1,721.1 1,785.0	1,576.0 1,664.5 1,800.8 1,925.9	7.0 13.3 28.4 38.2	151.0 107.4 90.3 132.8	2,849.7 3,063.2 3,398.9 3,650.9	2,698.7 2,955.9 3,308.7 3,518.1
2006 Q4 2007 Q1 Q2 Q3 Q4	2,154.6 2,185.1 2,207.1 2,231.2 2,249.8	2,118.6 2,153.3 2,170.2 2,199.0 2,217.9	1,221.0 1,227.1 1,242.6 1,254.4 1,267.1	434.0 441.2 444.0 448.8 451.0	463.8 474.4 477.2 484.1 490.2 ge of GDP	-0.2 10.5 6.4 11.8 9.5	36.0 31.8 36.9 32.2 32.0	880.7 890.2 904.2 923.6 933.0	844.7 858.4 867.3 891.4 901.0
2007	100.0	98.5	56.3	20.1	21.7	0.4	1.5		
2007	100.0	70.5		umes (prices of the			1.5		
				quarter-on-quarter					
2006 Q4 2007 Q1 Q2 Q3 Q4	0.8 0.7 0.3 0.7 0.4	0.2 0.9 0.1 0.9 0.0	0.5 0.1 0.6 0.5 -0.1	0.5 1.0 0.2 0.6 -0.1	1.5 1.5 1.3 0.0 1.1 0.8	- - - -		3.3 0.8 0.9 2.0 0.6	1.7 1.3 0.3 2.5 -0.3
<u>v</u> ·	0.1	0.0	0.1		ntage changes			0.0	0.5
2004	2.1	1.9	1.6	1.4	2.4	-	-	7.2	7.0
2005 2006 2007	1.6 2.8 2.6	1.8 2.6 2.2	1.6 1.8 1.5	1.5 2.0 2.2	3.0 5.0 4.3	- -	- -	4.7 7.9 6.0	5.5 7.7 5.2
2006 Q4 2007 Q1 Q2 Q3 Q4	3.2 3.2 2.5 2.7 2.2	2.4 2.9 2.0 2.1 1.9	2.1 1.4 1.6 1.7 1.1	2.3 2.2 2.2 2.4 1.8	5.5 6.3 3.5 3.9 3.2	- - - -	- - - -	9.0 6.6 6.0 7.2 4.4	7.1 5.9 5.0 5.9 3.8
		con	tributions to quarte	er-on-quarter percer	ntage changes of G	DP in percentage poir	nts		
2006 Q4 2007 Q1 Q2 Q3 Q4	0.8 0.7 0.3 0.7 0.4	0.2 0.9 0.1 0.9 0.0	0.3 0.0 0.4 0.3 0.0	$0.1 \\ 0.2 \\ 0.0 \\ 0.1 \\ 0.0$	0.3 0.3 0.0 0.2 0.2	-0.5 0.4 -0.3 0.2 -0.1	0.6 -0.2 0.2 -0.1 0.4		
			contributions to	annual percentage o	changes of GDP in	percentage points			
2004 2005 2006 2007	2.1 1.6 2.8 2.6	1.9 1.8 2.6 2.2	0.9 0.9 1.0 0.9	0.3 0.3 0.4 0.4	0.5 0.6 1.0 0.9	0.2 0.0 0.1 0.0	0.2 -0.2 0.2 0.4	- - -	- - -
2006 Q4 2007 Q1 Q2 Q3 Q4	3.2 3.2 2.5 2.7 2.2	2.4 2.8 2.0 2.1 1.9	1.2 0.8 0.9 1.0 0.6	0.5 0.5 0.5 0.5 0.5 0.4	1.1 1.3 0.7 0.8 0.7	-0.4 0.2 -0.1 -0.2 0.2	0.8 0.3 0.5 0.6 0.3	- - - -	

Sources: Eurostat and ECB calculations.
Exports and imports cover goods and services and include cross-border intra-euro area trade. They are not fully consistent with Tables 7.1.2 and 7.3.1.
Including acquisitions less disposals of valuables.
Annual data are not adjusted for the variations in the number of working days.



### 2. Value added by economic activity

			Gross va	lue added (basic p	rices)			Taxes less subsidies on
	Total	Agriculture, hunting, forestry and fishing activities	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business activities	Public administration, education, health and other services	products
	1	2	3	4 EUR billions, seasor	5	6	7	8
2004	6 005 0	153.1		412.9		1.911.4	1,599,9	796.7
2004 2005 2006 2007	6,995.9 7,235.5 7,558.0 7,920.3	141.6 138.7 150.1	1,434.7 1,467.5 1,531.9 1,614.0	412.9 439.9 482.8 520.3	1,483.9 1,520.3 1,572.0 1,633.2	2,004.2 2,110.3 2,218.9	1,599.9 1,662.0 1,722.4 1,783.8	839.5 905.9 952.9
2006 Q4 2007 Q1 Q2 Q3 Q4	1,921.8 1,948.1 1,969.9 1,995.0 2,007.2	35.3 35.8 36.4 38.6 39.3	389.6 397.2 402.4 407.5 406.9	125.0 128.7 128.9 130.8 131.9	400.4 403.3 406.9 411.3 411.7	536.9 542.8 551.1 558.4 566.6	434.7 440.3 444.3 448.5 450.8	232.8 236.9 237.1 236.2 242.7
			perc	entage of value add	ed			
2007	100.0	1.9	20.4	6.6	20.6	28.0	22.5	-
		Chain-	linked volumes (price	es of the previous ye	ar, seasonally adjusted	1 <sup>1)</sup> )		
			quarter-on	-quarter percentage	changes			
2006 Q4 2007 Q1 Q2 Q3 Q4	0.8 0.9 0.5 0.7 0.4	0.3 1.7 -1.2 -0.5 1.4	0.9 1.1 0.6 1.3 0.4	1.2 1.7 -1.4 0.3 0.2	0.8 0.7 0.7 0.9 0.0	0.9 0.8 0.7 0.7 0.7	0.3 0.6 0.5 0.3 0.2	1.3 -0.5 -0.9 0.7 0.2
			annu	al percentage chan	ges			
2004	2.2	10.9	2.7	0.9	2.3	1.8	1.6	1.0
2005 2006 2007	1.6 2.7 2.8	-6.1 -1.1 1.3	1.0 3.5 3.6	1.7 4.5 3.0	1.6 2.6 3.1	2.9 3.3 3.1	1.3 1.2 1.7	1.5 3.1 0.5
2006 Q4 2007 Q1 Q2 Q3 Q4	3.3 3.4 2.7 2.9 2.5	0.6 2.0 0.5 0.3 1.4	4.1 3.7 3.3 4.0 3.5	5.3 7.0 2.4 1.8 0.8	3.6 3.6 3.1 3.2 2.4	3.7 3.6 3.0 3.2 3.0	1.4 1.7 1.8 1.8 1.6	2.9 1.5 0.2 0.7 -0.4
				ercentage changes	of value added in perc			
2006 Q4 2007 Q1 Q2 Q3 Q4	0.8 0.9 0.5 0.7 0.4	$\begin{array}{c} 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\end{array}$	0.2 0.2 0.1 0.3 0.1	0.1 0.1 -0.1 0.0 0.0	0.2 0.2 0.2 0.2 0.2 0.0	0.2 0.2 0.2 0.2 0.2	0.1 0.1 0.1 0.1 0.0	
		contributi	ons to annual percent	tage changes of valu	e added in percentage	points		
2004 2005 2006 2007	2.2 1.6 2.7 2.8	0.2 -0.1 0.0 0.0	0.6 0.2 0.7 0.7	0.1 0.1 0.3 0.2	0.5 0.3 0.6 0.6	0.5 0.8 0.9 0.9	0.4 0.3 0.3 0.4	- - -
2006 Q4 2007 Q1 Q2 Q3 Q4	3.3 3.4 2.7 2.9 2.5	0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.8 0.7 0.8 0.7	0.3 0.4 0.2 0.1 0.1	0.8 0.7 0.7 0.7 0.5	1.0 1.0 0.8 0.9 0.8	0.3 0.4 0.4 0.4 0.4	-

Sources: Eurostat and ECB calculations. 1) Annual data are not adjusted for the variations in the number of working days.



### **3. Industrial production**

	Total				Indu	stry excluding c	onstruction					Construction
		Total (s.a. index	То	otal		Industry ex	cluding cons	struction an	d energy		Energy	
		$(3.a. mdex){2000 = 100}$	ſ	Manu- facturing	Total	Intermediate goods	Capital goods	C	onsumer go	ods		
						8	8	Total	Durable	Non-durable		
% of total 1)	100.0	82.8	82.8	74.8	73.7	29.9	22.2	21.6	3.6	18.0	9.0	17.2
	1	2	3	4	5	6	7	8	9	10	11	12
2005 2006 2007	1.3 4.0 3.5	103.9 108.1 111.8	1.3 4.0 3.4	1.3 4.4 4.0	1.1 4.4 3.9	0.8 4.9 3.8	2.9 5.9 5.8	0.4 2.5 2.4	-0.9 4.2 1.2	0.7 2.2 2.6	1.4 0.8 -0.4	0.4 4.2 3.4
2007 Q1 Q2 Q3 Q4	4.7 3.0 3.7 2.7	110.5 111.0 112.6 113.0	3.9 2.8 3.9 3.1	5.9 3.3 4.2 2.6	5.9 3.2 4.1 2.4	6.7 3.2 3.5 1.9	7.0 4.8 6.6 5.0	3.8 2.1 3.0 0.9	4.5 1.5 2.0 -2.7	3.6 2.2 3.1 1.6	-7.6 -0.2 1.3 5.9	10.9 2.7 1.9 -0.5
2007 Sep. Oct. Nov. Dec.	2.9 4.4 2.5 1.1	112.4 113.2 112.8 112.9	3.3 4.4 3.1 1.8	3.1 4.0 2.4 1.4	2.9 3.9 2.1 1.1	2.8 3.3 1.7 0.6	5.4 7.1 4.9 3.0	1.8 2.0 0.7 0.0	0.6 0.3 -3.8 -5.0	2.0 2.3 1.5 0.8	3.7 7.0 6.4 4.6	0.5 3.2 -1.4 -3.6
2008 Jan. Feb.	3.2 3.5	113.6 114.1	3.4 3.4	3.3 3.2	3.2 3.5	2.3 2.4	6.8 7.2	1.6 0.7	0.2 -1.1	1.9 1.0	3.3 4.2	2.3 4.4
				month-o	n-month p	ercentage change	rs (s.a.)					
2007 Sep. Oct. Nov. Dec.	-1.0 1.0 -0.6 0.2	- - -	-1.0 0.8 -0.4 0.1	-1.3 0.7 -0.5 0.3	-1.4 0.7 -0.6 0.4	-1.5 0.8 -0.9 0.7	-1.2 1.1 -0.2 -0.3	-1.6 0.2 -0.4 0.1	-3.9 0.0 -2.0 -0.2	-1.2 0.3 -0.2 0.2	0.4 0.9 0.2 0.4	-0.3 1.8 -1.7 -0.1
2008 Jan. Feb.	0.9 0.7	-	0.7 0.4	1.1 0.4	1.2 0.6	0.8 0.5	2.4 1.0	0.7 -0.3	2.4 -0.5	0.5 -0.3	-4.3 1.1	2.2 1.5

### 4. Industrial new orders and turnover, retail sales and new passenger car registrations

	Industrial n	ew orders	Industrial t	urnover			ŀ	Retail sales				New passeng registrati	
	Manufacto (current p		Manufac (current p		Current prices			Constan	t prices			8	
	Total (s.a. index	Total	Total (s.a. index	Total	Total	Total (s.a. index	Total	Food, beverages,		Non-food		Total (s.a., thousands) <sup>3)</sup>	Total
	2000 = 100)		2000 = 100)			2000 = 100)		tobacco		Textiles, clothing, footwear	Household equipment	,	
% of total 1)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	43.7	56.3	10.6	14.8		
	1	2	3	4	5	6	7	8	9	10	11	12	13
2005 2006 2007	109.2 119.3 128.9	3.9 9.3 8.4	110.8 118.9 126.1	3.6 7.3 6.3	2.2 2.9 2.4	106.7 108.4 109.4	1.2 1.6 0.9	0.6 0.3 -0.3	1.7 2.5 1.8	2.3 2.8 3.2	1.2 4.4 1.8	939 968 963	0.9 3.0 -0.5
2007 Q2 Q3 Q4 2008 Q1	129.4 129.1 131.9	10.6 6.6 8.4	125.8 127.4 127.1	6.3 6.3 5.2	2.2 2.6 2.1	109.3 109.9 109.1	1.0 1.4 -0.4	-0.2 -0.6 -0.8	1.8 2.8 0.0	3.2 5.7 0.1	2.6 2.5 -1.6	950 965 981 950	-2.6 2.1 0.3 -0.6
2007 Oct. Nov. Dec.	131.9 134.3 129.4	11.3 11.4 2.2	127.5 128.0 125.9	9.4 4.6 1.6	3.1 2.2 1.3	109.4 108.9 108.9	0.9 -0.5 -1.3	0.7 -1.1 -1.8	1.3 -0.2 -0.8	2.1 -0.8 -1.0	-0.1 -2.3 -2.3	973 960 1,009	0.9 -3.7 4.1
2008 Jan. Feb. Mar.	132.3 133.1	7.2 10.0	132.1 131.7	7.4 10.0	3.6 4.2	109.5 109.3	0.7 1.0	-1.7 -0.4	2.4 1.8	2.9 3.8	0.3 -0.8	955 981 913	-1.3 5.7 -4.8
					month-on-m	onth percentag	e changes (	(s.a.)					
2007 Oct. Nov. Dec.	-	2.9 1.8 -3.7	-	0.6 0.4 -1.6	-0.1 -0.1 0.3	-	-0.5 -0.5 0.1	-0.3 -0.8 -0.2	-0.6 -0.3 0.1	-3.1 -0.6 0.3	-0.5 -0.8 0.6	- -	0.2 -1.3 5.1
2008 Jan. Feb. Mar.		2.3 0.5	- - -	4.9 -0.3	0.9 0.0	- - -	0.5 -0.2	0.0 0.0	1.0 -0.3	1.9 1.0	0.5 -0.4	- -	-5.4 2.8 -6.9

Sources: Eurostat, except columns 12 and 13 in Table 4 in Section 5.2 (ECB calculations based on data from the ACEA, European Automobile Manufacturers' Association).

1) In 2000.

Includes manufacturing industries working mainly on the basis of orders, representing 62.6% of total manufacturing in 2000.
 Annual and quarterly figures are averages of monthly figures in the period concerned.



#### 5. Business and Consumer Surveys

	Economic sentiment		Manu	ifacturing ind	lustry			Consun	ner confidence	indicator	
	indicator <sup>2)</sup> (long-term	Ind	ustrial confid	ence indicator		Capacity utilisation 3)	Total <sup>4)</sup>	Financial situation	Economic situation	Unemployment situation	Savings over next
	average = 100)	Total <sup>4)</sup>	Order books	Stocks of finished products	Production expectations	(percentages)		over next 12 months	over next 12 months	over next 12 months	12 months
	1	2	3	4	5	6	7	8	9	10	11
2004	98.7	-5	-15	8	10	81.5	-14	-4	-14	30	-9
2005	97.4	-7	-17	11	6	81.2	-14	-4	-15	28	-9
2006	106.3	2	0	6	13	83.2	-9	-3	-9	15	-9
2007	108.4	4	5	5	13	84.2	-5	-2	-4	5	-8
2007 Q1	109.4	6	7	4	14	84.4	-5	-2	-5	6	-8
Q2	111.0	6	8	4	15	84.3	-3	-1	0	2	-7
Q3	108.7	4	5	6	13	84.0	-4	-2	-3	3	-7
Q4	104.3	2	1	7	11	84.0	-8	-4	-10	7	-10
2008 Q1	100.5	0	- 1	7	10	83.7	-12	-7	-17	11	-12
2007 Nov.	104.1	3	2	6	12	-	-8	-4	-11	7	-11
Dec.	103.4	2	0	7	11	-	-9	-5	-12	8	-10
2008 Jan.	101.7	1	-1	7	12	83.9	-12	-7	-17	11	-11
Feb.	100.2	0	-2	7	10	-	-12	-7	-18	12	-12
Mar.	99.6	0	-1	7	8	-	-12	-7	-17	11	-13
Apr.	97.1	-2	-5	9	8	83.5	-12	-8	-19	11	-12

	Construction	n confidence	indicator	Reta	ul trade confid	lence indicator		Ser	vices confide	ence indicator	
	Total <sup>4)</sup>	Order books	Employment expectations	Total <sup>4)</sup>	Present business situation	Volume of stocks	Expected business situation	Total <sup>4)</sup>	Business climate	Demand in recent months	Demand in the months ahead
	12	13	14	15	16	17	18	19	20	21	22
2004	-12	-19	-4	-8	-12	14	2	11	6	8	18
2005	-7	-11	-2	-7	-12	13	4	11	5	10	18
2006	1	-4	5	1	3	14	13	18	13	18	24
2007	-1	-8	7	1	4	15	12	19	16	19	23
2007 Q1	1	-8	9	-1	2	16	12	21	16	21	25
Q2	0	-6	6	2	4	13	14	22	19	22	25
Q3	0	-8	7	1	7	14	11	20	16	20	24
Q4	-3	-11	4	0	4	16	13	15	11	14	20
2008 Q1	-7	-14	-1	-1	2	16	12	10	4	12	15
2007 Nov.	-4	-12	4	2	7	16	15	13	10	12	18
Dec.	-5	-11	2	1	4	17	15	14	9	13	19
2008 Jan.	-6	-13	1	-3	-2	18	10	13	6	12	19
Feb.	-7	-13	-2	1	5	16	14	10	3	13	13
Mar.	-9	-15	-3	1	5	15	11	9	2	11	13
Apr.	-12	-17	-6	-5	-4	18	7	7	1	7	12

Source: European Commission (Economic and Financial Affairs DG).

1) Difference between the percentages of respondents giving positive and negative replies.

Directed outween the percentages of respondents giving positive and negative reprises.
 The economic sentiment indicator is composed of the industrial, services, consumer, construction and retail trade confidence indicators; the industrial confidence indicator has a weight of 40%, the services confidence indicator a weight of 30%, the consumer confidence indicator a weight of 20% and the two other indicators a weight of 5% each. Values of the economic sentiment indicator above (below) 100 indicate above-average (below-average) economic sentiment, calculated for the period 1990 to 2007.
 Data are collected in January, April, July and October each year. The quarterly figures shown are averages of two successive surveys. Annual data are derived from quarterly

averages.

4) The confidence indicators are calculated as simple averages of the components shown; the assessments of stocks (columns 4 and 17) and unemployment (column 10) are used with inverted signs for the calculation of confidence indicators.



# 5.3 Labour markets <sup>1)</sup>

### 1. Employment

	Whole ec	conomy	By employ	ment status			By ec	onomic activity		
	Millions (s.a.)		Employees	Self- employed	Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
% of total 2)	100.0	100.0	85.0	15.0	4.1	17.1	7.7	25.4	15.7	30.0
	1	2	3	4	5	6	7	8	9	10
2004 2005 2006 2007	137.871 139.146 141.343 143.827	0.7 0.9 1.6 1.8	0.7 1.0 1.7 1.9	0.9 0.4 0.8 0.9	-2.9 -0.9 -1.4 -0.8	-1.3 -1.2 -0.4 0.5	1.2 2.5 2.8 3.8	1.2 0.8 1.5 1.7	2.3 2.4 3.7 3.8	1.3 1.4 1.8 1.3
2006 Q4 2007 Q1 Q2 Q3 Q4	142.087 142.940 143.638 144.230 144.501	1.6 1.8 1.7 1.9 1.7	1.7 2.0 1.9 1.9 1.9	1.0 0.6 0.6 1.8 0.5	-2.6 0.1 -1.0 -1.1 -1.2	-0.3 0.5 0.7 0.4 0.3	3.9 5.0 4.6 3.6 2.2	1.3 1.3 1.3 2.2 2.1	3.7 3.9 3.9 3.6 3.7	1.8 1.3 1.1 1.5 1.3
				quarter	-on-quarter per	centage changes (	(s.a.)			
2006 Q4 2007 Q1 Q2 Q3 Q4	0.527 0.853 0.698 0.592 0.271	0.4 0.6 0.5 0.4 0.2	0.4 0.6 0.5 0.4 0.4	0.3 0.5 0.4 0.5 -0.9	-0.5 1.2 -0.6 -1.1 -0.5	0.1 0.2 0.1 0.1 0.0	1.5 1.9 0.4 -0.2 0.2	0.1 0.5 0.8 0.8 0.0	0.7 1.2 1.0 0.7 0.8	0.4 0.2 0.4 0.5 0.2

# 2. Unemployment (seasonally adjusted)

	Tota	al		B	y age <sup>3)</sup>			By	gender 4)	
	Millions	% of labour force	Ad	lult	Yo	outh	Ν	Aale	F	emale
			Millions	% of labour force						
% of total 2)	100.0		78.1		21.9		49.6		50.4	
	1	2	3	4	5	6	7	8	9	10
2004 2005	13.097 13.285	8.8 8.8	10.157 10.339	7.7 7.8	2.939 2.946	17.0 17.1	6.557 6.697	7.9 8.0	6.540 6.588	9.9 9.9
2006 2007	12.509 11.365	8.2 7.4	9.769 8.890	7.2 6.5	2.740 2.476	16.1 14.8	6.213 5.587	7.4 6.6	6.297 5.778	9.3 8.4
2007 Q1	11.615 11.434	7.6 7.5	9.101 8.951	6.7 6.6	2.514 2.483	15.0 14.8	5.697 5.598	6.7 6.6	5.918 5.836	8.7 8.5
Q2 Q3 Q4	11.293 11.119	7.3 7.2	8.837 8.669	6.5 6.3	2.469 2.456 2.449	14.6 14.6	5.567 5.486	6.6 6.4	5.726 5.633	8.3 8.2
2008 Q1	10.967	7.1	8.528	6.2	2.438	14.5	5.383	6.3	5.584	8.1
2007 Oct. Nov. Dec.	11.182 11.115 11.060	7.3 7.2 7.2	8.722 8.669 8.617	6.4 6.3 6.3	2.460 2.445 2.443	14.7 14.6 14.6	5.513 5.485 5.458	6.5 6.4 6.4	5.669 5.629 5.602	8.2 8.2 8.1
2008 Jan. Feb. Mar.	11.014 10.956 10.930	7.1 7.1 7.1	8.569 8.522 8.495	6.2 6.2 6.2	2.445 2.434 2.436	14.6 14.5 14.5	5.403 5.375 5.370	6.3 6.3 6.3	5.611 5.581 5.560	8.1 8.1 8.0

Source: Eurostat.
1) Data for employment refer to persons and are based on the ESA 95. Data for unemployment refer to persons and follow ILO recommendations.
2) In 2006.
3) Adult: 25 years of age and over; youth: below 25 years of age; rates are expressed as a percentage of the labour force for the relevant age group.
4) Rates are expressed as a percentage of the labour force for the relevant gender.





# **GOVERNMENT FINANCE**

6.1 Revenue, expenditure and deficit/surplus <sup>1</sup>)

### 1. Euro area - revenue

	Total					Curre	ent revenue					Capital	revenue	Memo: fiscal
		Γ	Direct			Indirect		Social			Sales		Capital	burden <sup>2)</sup>
			taxes	Households	Corporations	taxes	Received by EU	contributions	Employers I	Employees			taxes	
							institutions							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1999	47.0	46.7	12.5	9.3	2.9	14.1	0.6	16.1	8.3	4.9	2.3	0.3	0.3	43.0
2000	46.5	46.2	12.7	9.4	3.0	13.9	0.6	15.8	8.2	4.8	2.2	0.3	0.3	42.6
2001	45.7	45.5	12.3	9.2	2.7	13.5	0.5	15.6	8.1	4.7	2.2	0.2	0.3	41.7
2002	45.2	44.8	11.8	9.1	2.5	13.5	0.4	15.6	8.2	4.6	2.1	0.3	0.3	41.2
2003	45.0	44.4	11.4	8.8	2.3	13.5	0.4	15.7	8.2	4.6	2.1	0.6	0.5	41.0
2004	44.6	44.1	11.3	8.5	2.5	13.5	0.3	15.6	8.1	4.5	2.1	0.5	0.4	40.8
2005	44.9	44.4	11.6	8.6	2.6	13.7	0.3	15.4	8.1	4.5	2.2	0.5	0.3	41.0
2006	45.5	45.2	12.1	8.8	3.0	13.9	0.3	15.4	8.1	4.5	2.1	0.3	0.3	41.6
2007	45.7	45.4	12.5	9.0	3.2	13.9	0.3	15.2	8.0	4.4	2.1	0.3	0.3	41.9

#### 2. Euro area - expenditure

	Total				Current	expenditure					Capital ex	<b>xpenditure</b>		Memo: primary
		Total	Compensation		Interest	Current		a			Investment	· · ·	5 1 1 1 5 T	expenditure 3)
				consumption		transfers		Subsidies				transfers	Paid by EU	
			employees				payments		Paid by EU				institutions	
			2		-		-		institutions	10		10	10	
	1	2	3	4	5	6	1	8	9	10	11	12	13	14
1999	48.4	44.5	10.6	4.8	4.1	25.1	22.1	2.1	0.5	3.9	2.5	1.4	0.1	44.3
2000	46.5	43.8	10.4	4.8	3.9	24.7	21.7	2.0	0.5	2.8	2.5	1.3	0.0	42.6
2001	47.6	43.7	10.3	4.8	3.8	24.8	21.7	1.9	0.5	3.9	2.5	1.4	0.0	43.8
2002	47.7	43.9	10.4	4.9	3.5	25.1	22.2	1.9	0.5	3.8	2.4	1.4	0.0	44.2
2003	48.1	44.2	10.5	4.9	3.3	25.4	22.6	1.9	0.5	3.9	2.5	1.4	0.1	44.8
2004	47.5	43.6	10.4	5.0	3.1	25.1	22.4	1.8	0.5	3.9	2.5	1.4	0.0	44.4
2005	47.4	43.5	10.4	5.1	3.0	25.1	22.3	1.7	0.5	3.9	2.5	1.4	0.0	44.4
2006	46.8	43.0	10.2	5.0	2.9	24.9	22.1	1.7	0.5	3.9	2.5	1.4	0.0	43.9
2007	46.3	42.5	10.1	5.0	3.0	24.5	21.7	1.6	0.4	3.8	2.5	1.3	0.0	43.3

# 3. Euro area - deficit/surplus, primary deficit/surplus and government consumption

		Deficit (	-)/surplu	ıs (+)		Primary deficit (-)/			0	Government o	consumption <sup>4)</sup>			
	Total	Central	State	Local	Social		Total						Collective	Individual
		gov.	gov.	gov.	security	• • • • •		Compensation	Intermediate	Transfers	Consumption	Sales	consumption	consumption
					funds			of employees	consumption	in kind	of fixed	(minus)		
										via market	capital			
		2			_		_			producers				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1999	-1.4	-1.7	-0.1	0.1	0.4	2.7	19.9	10.6	4.8	4.8	1.8	2.3	8.3	11.6
2000	0.0	-0.4	-0.1	0.1	0.5	3.9	19.7	10.4	4.8	4.9	1.8	2.2	8.2	11.6
2001	-1.8	-1.7	-0.4	-0.1	0.3	2.0	19.8	10.3	4.8	5.0	1.8	2.2	8.1	11.7
2002	-2.6	-2.1	-0.5	-0.2	0.2	0.9	20.2	10.4	4.9	5.1	1.8	2.1	8.2	12.0
2003	-3.1	-2.4	-0.5	-0.2	0.0	0.2	20.5	10.5	4.9	5.2	1.8	2.1	8.3	12.2
2004	-2.9	-2.5	-0.4	-0.3	0.2	0.2	20.4	10.4	5.0	5.1	1.9	2.1	8.3	12.1
2005	-2.6	-2.2	-0.3	-0.2	0.2	0.4	20.5	10.4	5.1	5.2	1.9	2.2	8.2	12.3
2006	-1.3	-1.4	-0.1	-0.2	0.4	1.6	20.3	10.2	5.0	5.2	1.9	2.1	8.0	12.3
2007	-0.6	-1.1	0.0	0.0	0.5	2.3	20.1	10.1	5.0	5.2	1.9	2.1	7.9	12.2

### 4. Euro area countries – deficit (-)/surplus (+)<sup>5)</sup>

	<b>BE</b> 1	<b>DE</b> 2	<b>IE</b> 3	<b>GR</b> 4	ES 5	FR 6	<b>IT</b> 7	<b>CY</b> 8	<b>LU</b> 9	<b>MT</b> 10	<b>NL</b> 11	<b>AT</b> 12	<b>PT</b> 13	<b>SI</b> 14	<b>FI</b> 15
2004	0.0	-3.8	1.4	-7.4	-0.3	-3.6	-3.5	-4.1	-1.2	-4.6	-1.7	-3.7	-3.4	-2.3	2.4
2005	-2.3	-3.4	1.6	-5.1	1.0	-2.9	-4.2	-2.4	-0.1	-3.0	-0.3	-1.5	-6.1	-1.5	2.9
2006	0.3	-1.6	3.0	-2.6	1.8	-2.4	-3.4	-1.2	1.3	-2.5	0.5	-1.5	-3.9	-1.2	4.1
2007	-0.2	0.0	0.3	-2.8	2.2	-2.7	-1.9	3.3	2.9	-1.8	0.4	-0.5	-2.6	-0.1	5.3

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' deficit/surplus. 1) The data refer to the Euro 15. Revenue, expenditure and deficit/surplus are based on the ESA 95. Transactions involving the EU budget are included and consolidated.

Transactions among Member States' governments are not consolidated.

The fiscal burden comprises taxes and social contributions.
 Comprises total expenditure minus interest expenditure.
 Corresponds to final consumption expenditure (P.3) of general government in the ESA 95.
 Includes proceeds from the sale of UMTS licences and settlements under swaps and forward rate agreements.



# 6.2 Debt <sup>1)</sup>

### 1. Euro area - by financial instrument and sector of the holder

	Total		Financial in	struments				Holders		
		Currency and	Loans	Short-term securities	Long-term securities		Domestic c	reditors <sup>2)</sup>		Other creditors <sup>3)</sup>
		deposits				Total	MFIs	Other financial corporations	Other sectors	
	1	2	3	4	5	6	7	8	9	10
1998	72.8	2.7	15.2	5.3	49.5	52.4	26.5	14.5	11.4	20.4
1999	72.0	2.9	14.4	4.3	50.5	48.8	25.4	13.8	9.7	23.2
2000	69.3	2.7	13.1	3.7	49.7	44.2	22.0	12.4	9.8	25.1
2001	68.2	2.8	12.4	4.0	49.0	42.0	20.6	11.1	10.4	26.2
2002	68.0	2.7	11.8	4.5	49.0	40.2	19.3	10.7	10.1	27.9
2003	69.2	2.1	12.4	5.0	49.7	39.4	19.5	11.2	8.7	29.7
2004	69.6	2.2	11.9	5.0	50.5	37.6	18.4	10.8	8.3	32.0
2005	70.2	2.4	11.8	4.7	51.3	35.5	17.2	11.1	7.2	34.7
2006	68.5	2.5	11.4	4.1	50.5	33.8	17.5	9.4	6.9	34.6
2007	66.4	2.2	10.8	4.3	49.1	32.3	17.0	8.5	6.9	34.1

### 2. Euro area - by issuer, maturity and currency denomination

	Total		Issued	by <sup>4)</sup>		0	riginal matu	rity	F	Residual matur	ity	Currer	cies
		Central gov.	State gov.	Local gov.	Social security funds	Up to 1 year	Over 1 year	Variabl interest rat		Over 1 year and up to 5 years	Over 5 years	Euro or participating currencies	
	1	2	3	4	5	6	7		8 9	10	11	12	13
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007	$\begin{array}{c} 72.8 \\ 72.0 \\ 69.3 \\ 68.2 \\ 68.0 \\ 69.2 \\ 69.6 \\ 70.2 \\ 68.5 \\ 66.4 \end{array}$	$\begin{array}{c} 61.1 \\ 60.5 \\ 58.1 \\ 57.0 \\ 56.6 \\ 57.0 \\ 57.4 \\ 57.7 \\ 56.0 \\ 54.3 \end{array}$	$\begin{array}{c} 6.1 \\ 6.0 \\ 5.9 \\ 6.1 \\ 6.3 \\ 6.5 \\ 6.6 \\ 6.7 \\ 6.5 \\ 6.3 \end{array}$	5.2 5.1 4.9 4.7 5.1 5.1 5.3 5.4 5.3	$\begin{array}{c} 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.6 \\ 0.4 \\ 0.5 \\ 0.5 \\ 0.5 \end{array}$	8.2 7.3 6.5 7.0 7.6 7.8 7.8 7.8 7.9 7.5 7.5	$\begin{array}{c} 64.6\\ 64.7\\ 62.7\\ 61.2\\ 60.4\\ 61.4\\ 61.7\\ 62.3\\ 61.0\\ 58.9\end{array}$	7.8 6.8 5.2 5.0 4.0 4.0 4.0 4.0	3         13.6           1         13.4           2         13.7           1         15.3           0         14.8           7         14.7           5         14.4	26.4 27.9 27.8 26.5 25.0 25.8 26.2 25.7 24.5 23.4	30.9 30.6 28.0 27.7 28.6 28.7 29.6 29.6 28.8	71.0 69.9 67.3 66.5 66.6 68.0 68.5 68.9 67.5 65.6	2.2 1.9 1.7 1.5 1.1 1.1 1.2 1.0
3. Euro	area coun	tries											
	BE	DE	IE	GR	ES	FR	IT	CY	LU	AT NL	AT	РТ	SI FI
	1	2	3	4	5	6	7	8	9	10 11	12	13	14 15
2004 2005 2006 2007	94.2 92.1 88.2 84.9	65.6 67.8 67.6 65.0	29.5 27.4 25.1 25.4	98.6 98.0 95.3 94.5	46.2 43.0 39.7 36.2	64.9 66.4 63.6 64.2	103.8 105.8 106.5 104.0	70.2 69.1 64.8 59.8	6.1 70 6.6 64	2.652.40.452.34.247.92.645.4	63.8 63.5 61.8 59.1	63.6 2 64.7 2	7.6     44.1       7.5     41.3       7.2     39.2       4.1     35.4

95.3 94.5

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' debt. 1) The data refer to the Euro 15. Gross general government debt at nominal value and consolidated between sub-sectors of government. Holdings by non-resident governments are not consolidated. Data are partially estimated.

2) 3) 4) 5) Holders resident in the country whose government has issued the debt.

Includes residents of euro area countries other than the country whose government has issued the debt. Excludes debt held by general government in the country whose government has issued it. Before 1999, this comprises debt in ECU, in domestic currency and in the currencies of other Member States which have adopted the euro.



# 6.3 Change in debt <sup>1)</sup>

### 1. Euro area - by source, financial instrument and sector of the holder

	Total		Source of cl	hange		F	'inancial	instruments	5		Ho	lders	
	-	Borrowing requirement <sup>2)</sup>	Valuation effects <sup>3)</sup>	Other changes in volume <sup>4)</sup>	Aggregation effect <sup>5)</sup>	Currency and deposits	Loans	Short-term securities	Long-term securities	Domestic creditors <sup>6)</sup>	MFIs	Other financial corporations	Other creditors <sup>7)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12	13
1999	2.0	1.6	0.4	0.0	0.0	0.2	-0.2	-0.9	2.8	-1.6	-0.2	-0.2	3.6
2000	1.0	1.1	0.0	-0.1	-0.1	0.0	-0.5	-0.3	1.8	-2.1	-2.0	-0.6	3.1
2001	1.9	1.9	-0.1	0.1	0.0	0.2	-0.2	0.4	1.4	-0.3	-0.5	-0.8	2.2
2002	2.1	2.7	-0.5	0.0	0.0	0.0	-0.2	0.7	1.6	-0.5	-0.5	-0.1	2.6
2003	3.1	3.3	-0.2	0.0	0.0	-0.6	0.9	0.6	2.1	0.4	0.7	0.8	2.7
2004	3.1	3.2	-0.1	0.0	0.0	0.2	0.1	0.1	2.7	-0.3	-0.3	0.1	3.4
2005	3.1	3.1	0.0	0.0	0.0	0.3	0.3	-0.1	2.6	-0.8	-0.6	0.7	3.9
2006	1.5	1.4	0.1	0.0	0.0	0.2	0.1	-0.4	1.5	0.0	1.1	-1.2	1.5
2007	1.1	1.1	0.0	0.0	0.0	-0.1	-0.1	0.4	0.9	0.1	0.3	-0.5	1.0

# 2. Euro area - deficit-debt adjustment

		Deficit (-) / surplus (+) <sup>8)</sup>						Deficit-de	bt adjustment <sup>9)</sup>					
	ucor	surprus (1)	Total		Transactio	ons in main	n financial asse	ts held by ger	neral government	t	Valuation effects	F 1	Other	Other <sup>10)</sup>
				Total	Exchange rate	changes in volume								
					and			other	Privatisations	Equity injections		effects		
					deposits			equity		injections				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1999	2.0	-1.4	0.6	0.0	0.5	0.1	0.0	-0.5	-0.7	0.1	0.4	0.2	0.0	0.2
2000	1.0	0.0	1.0	1.0	0.7	0.2	0.2	0.0	-0.4	0.2	0.0	0.1	-0.1	0.0
2001	1.9	-1.8	0.0	-0.5	-0.6	0.1	0.1	-0.1	-0.3	0.1	-0.1	0.0	0.1	0.6
2002	2.1	-2.6	-0.5	0.1	0.1	0.0	0.0	0.0	-0.3	0.1	-0.5	-0.1	0.0	-0.1
2003	3.1	-3.1	0.0	0.1	0.1	0.0	0.0	0.1	-0.2	0.1	-0.2	-0.1	0.0	0.1
2004	3.1	-2.9	0.2	0.3	0.2	0.0	0.1	0.0	-0.5	0.2	-0.1	-0.1	0.0	0.0
2005	3.1	-2.6	0.5	0.7	0.4	0.1	0.1	0.1	-0.3	0.2	0.0	0.0	0.0	-0.2
2006	1.5	-1.3	0.1	0.4	0.4	-0.1	0.3	-0.1	-0.3	0.1	0.1	0.0	0.0	-0.3
2007	1.1	-0.6	0.4	0.5	0.2	0.0	0.2	0.1	-0.3	0.2	0.0	0.0	0.0	-0.1

Source: ECB.

1) The data refer to the Euro 15 and are partially estimated. Annual change in gross nominal consolidated debt is expressed as a percentage of GDP, i.e. [debt(t) - debt(t-1)] ÷ GDP(t).
2) The borrowing requirement is by definition equal to transactions in debt.
3) Includes, in addition to the impact of foreign exchange movements, effects arising from measurement at nominal value (e.g. premia or discounts on securities issued).

4) Includes, in particular, the impact of the reclassification of units and certain types of debt assumption.

5) The difference between the changes in the aggregated debt, resulting from the aggregation of countries' debt, and the aggregation of countries' change in debt is due to variations in the exchange rates used for aggregation before 2001.

Holders resident in the country whose government has issued the debt. 6)

Includes residents of euro area countries other than the country whose government has issued the debt. 7)

Including proceeds from sales of UMTS licences. 8)

9) The difference between the annual change in gross nominal consolidated debt and the deficit as a percentage of GDP.

10) Mainly composed of transactions in other assets and liabilities (trade credits, other receivables/payables and financial derivatives).

11) Excluding financial derivatives.

# 6.4 Quarterly revenue, expenditure and deficit/surplus <sup>1</sup>) (as a percentage of GDP)

### 1. Euro area - quarterly revenue

	Total			Current revenue			1	Capital re	venue	Memo: fiscal
			Direct taxes	Indirect taxes	Social contributions	Sales	Property income		Capital taxes	burden <sup>2)</sup>
	1	2	3	4	5	6	7	8	9	10
2001 Q4	49.0	48.6	13.5	13.9	16.3	2.9	1.1	0.5	0.3	43.9
2002 Q1	41.8	41.4	10.1	12.7	15.4	1.7	0.8	0.4	0.2	38.4
Q2	45.5	45.0	12.5	12.7	15.5	1.9	1.5	0.5	0.3	41.0
Q3 Q4	43.4	43.0	11.1	12.7	15.4	1.9	0.8	0.4	0.3	39.5
	49.1	48.5	13.4	14.1	16.2	2.9	0.9	0.6	0.3	44.0
2003 Q1	41.9	41.4	9.7	12.8	15.5	1.7	0.7	0.5	0.2	38.3
Q2	45.9	44.4	12.0	12.7	15.7	2.0	1.3	1.5	1.2	41.6
Q3 Q4	42.8 49.2	42.3 48.2	10.8 13.1	12.7 14.2	15.5 16.2	1.9 2.9	0.7 0.8	0.5 1.0	0.2 0.3	39.2 43.8
2004 Q1	41.3 45.0	40.8	9.5 12.1	12.8	15.3 15.3	1.7 2.0	0.6 0.9	0.4 0.8	0.3 0.6	37.9 41.0
Q2 Q3	45.0	44.2 42.1	12.1	13.0 12.7	15.5	2.0	0.9	0.8	0.6	38.9
Q4	49.3	48.3	13.0	14.4	16.2	2.9	0.8	1.0	0.4	43.9
2005 Q1	41.9	41.4	9.9	12.9	15.3	1.7	0.6	0.5	0.3	38.3
2005 Q1	44.6	44.0	11.8	13.2	15.2	2.0	1.0	0.5	0.3	40.5
Q2 Q3	43.2	42.6	11.0	12.9	15.2	2.0	0.8	0.7	0.3	39.4
Q4	49.4	48.6	13.4	14.3	16.1	2.9	0.9	0.8	0.3	44.1
2006 Q1	42.5	42.0	10.2	13.3	15.2	1.7	0.8	0.5	0.3	38.9
Q2	45.7	45.3	12.5	13.6	15.2	2.0	1.2	0.5	0.3	41.6
Q2 Q3	43.5	43.0	11.4	12.9	15.2	1.9	0.8	0.5	0.3	39.8
Q4	49.8	49.1	14.2	14.4	15.9	2.9	0.9	0.6	0.3	44.8
2007 Q1	42.4	42.0	10.3	13.5	14.9	1.6	0.9	0.4	0.3	39.0
Q2 Q3 Q4	46.3	45.8	13.1	13.6	15.2	1.9	1.2	0.4	0.3	42.1
Q3	43.8	43.3	12.1	12.8	15.0	1.9	0.8	0.5	0.3	40.1
Q4	49.8	49.3	14.5	14.2	15.9	2.8	0.9	0.6	0.3	44.9

## 2. Euro area - quarterly expenditure and deficit/surplus

	Total			Curren	ıt expendi	ture			Capi	tal expenditu	ire	Deficit (-)/ surplus (+)	Primary deficit (-)/
		Total	Compensation of employees	Intermediate consumption	Interest	Current transfers	Social benefits	Subsidies		Investment	Capital transfers	Surprus (1)	surplus (+)
	1	2	3	4	5	6	7	8	9	10	11	12	13
2001 Q4	51.1	46.2	11.0	5.7	3.6	25.9	22.1	1.7	4.9	3.2	1.7	-2.1	1.5
2002 Q1	46.1	42.7	10.3	4.3	3.7	24.5	21.1	1.3	3.4	2.0	1.5	-4.3	-0.6
Q2	46.5	43.1	10.3	4.9	3.5	24.3	21.1	1.3	3.4	2.3	1.1	-1.1	2.5
Q3	46.7	43.1	10.0	4.7	3.5	24.8	21.4	1.4	3.7	2.5	1.2	-3.3	0.2
Q4	50.8	46.4	11.0	5.7	3.3	26.3	22.7	1.6	4.4	2.8	1.6	-1.7	1.6
2003 Q1	46.8	43.3	10.3	4.5	3.5	25.0	21.5	1.3	3.5	1.9	1.6	-5.0	-1.5
Q2	47.2	43.7	10.4	4.8	3.4	25.1	21.7	1.3	3.6	2.4	1.2	-1.4	2.0
Q3	47.0	43.3	10.2	4.8	3.3	25.0	21.6	1.3	3.7	2.5	1.2	-4.2	-0.9
Q4	51.2	46.3	11.0	5.7	3.1	26.5	22.9	1.5	4.8	3.3	1.6	-1.9	1.2
2004 Q1	46.4	43.0	10.3	4.6	3.1	24.9	21.4	1.2	3.4	1.9	1.5	-5.1	-1.9
Q2	46.6	43.3	10.4	4.9	3.3	24.8	21.4	1.3	3.3	2.3	1.0	-1.7	1.6
Q3	46.0	42.6	9.9	4.7	3.1	24.9	21.5	1.3	3.4	2.4	1.0	-3.4	-0.2
Q4	51.0	45.8	11.0	5.7	2.9	26.2	22.7	1.4	5.2	3.1	2.1	-1.7	1.2
2005 Q1	46.8	43.1	10.2	4.7	3.1	25.1	21.3	1.2	3.7	1.9	1.9	-4.9	-1.8
Q2	46.3	42.9	10.2	5.0	3.2	24.5	21.3	1.1	3.4	2.3	1.1	-1.7	1.5
Q3	45.7	42.3	9.9	4.8	2.9	24.7	21.3	1.2	3.4	2.5	1.0	-2.5	0.5
Q4	50.7	45.9	11.1	5.8	2.8	26.2	22.6	1.4	4.8	3.1	1.7	-1.3	1.4
2006 Q1	45.4	42.3	10.1	4.5	2.9	24.8	21.2	1.2	3.1	1.9	1.2	-2.9	0.0
Q2	45.7	42.5	10.3	4.9	3.1	24.2	21.2	1.1	3.3	2.3	1.0	0.0	3.1
Q3	45.3	41.8	9.8	4.7	2.9	24.4	21.1	1.2	3.5	2.5	1.0	-1.8	1.1
Q4	50.6	45.2	10.7	5.8	2.7	25.9	22.3	1.3	5.4	3.3	2.2	-0.8	1.9
2007 Q1	44.6	41.4	9.9	4.5	2.9	24.1	20.6	1.2	3.2	2.0	1.2	-2.2	0.8
Q2	45.0	41.8	10.0	4.9	3.2	23.8	20.8	1.1	3.2	2.4	0.9	1.3	4.4
Q3	44.7	41.2	9.6	4.7	2.9	24.0	20.8	1.2	3.5	2.6	0.9	-0.9	2.0
Q4	50.6	45.2	10.7	5.8	2.8	25.9	22.2	1.4	5.3	3.4	2.0	-0.7	2.0

Source: ECB calculations based on Eurostat and national data.

The data refer to the Euro 15. Revenue, expenditure and deficit/surplus are based on the ESA 95. Transactions between the EU budget and entities outside the government sector are not included. Otherwise, and except for different data transmission deadlines, the quarterly data are consistent with the annual data. The data are not seasonally adjusted.
 The fiscal burden comprises taxes and social contributions.



# 6.5 Quarterly debt and change in debt <sup>1)</sup>

# 1. Euro area – Maastricht debt by financial instrument<sup>2)</sup>

	Total		Financial ins	struments	
	1	Currency and deposits 2	Loans 3	Short-term securities 4	Long-term securities 5
2005 Q1 Q2 Q3 Q4	70.9 71.5 71.1 70.2	2.2 2.3 2.4 2.4	12.0 11.7 11.8 11.8	5.2 5.2 5.2 4.7	51.5 52.3 51.8 51.3
2006 Q1 Q2 Q3 Q4	70.6 70.6 70.1 68.5	2.5 2.5 2.5 2.5 2.5	11.7 11.6 11.6 11.4	4.9 4.9 4.7 4.1	51.4 51.6 51.3 50.5
2007 Q1 Q2 Q3 Q4	68.9 69.0 68.1 66.4	2.4 2.2 2.1 2.2	11.4 11.2 11.0 10.8	4.8 5.1 5.2 4.3	50.2 50.6 49.7 49.1

# 2. Euro area - deficit-debt adjustment

	Change in debt	Deficit (-)/ surplus (+)				Deficit-de	bt adjustment				Memo: Borrowing
			Total	Transacti	ons in main fina	ncial assets he	ld by general go	vernment	Valuation effects and other changes	Other	requirement
				Total	Currency	Loans	Securities	Shares and	in volume		
	1	2	3	4	and deposits 5	6	7	other equity 8	9	10	11
2005 Q1	7.3	-4.9	2.4	2.4	1.3	0.3	0.3	0.5	-0.1	0.0	7.3
Q2	5.4	-1.7	3.7	3.3	2.5	0.0	0.3	0.5	0.1	0.3	5.3
Q3	0.6	-2.5	-1.9	-2.4	-2.3	0.0	0.3	-0.4	0.1	0.4	0.5
Q4	-0.6	-1.3	-2.0	-0.4	0.0	0.0	-0.3	-0.1	0.0	-1.5	-0.6
2006 Q1	4.8	-2.9	1.9	1.3	1.0	0.1	0.7	-0.5	-0.4	1.0	5.2
Q2	3.3	0.0	3.3	3.2	2.5	0.0	0.4	0.2	0.6	-0.5	2.6
Q3	1.2	-1.8	-0.6	-0.8	-0.7	-0.1	0.2	-0.2	0.2	0.1	1.0
Q3 Q4	-3.1	-0.8	-3.9	-2.1	-1.2	-0.6	-0.2	-0.2	-0.1	-1.7	-3.0
2007 Q1	5.1	-2.2	2.9	2.0	1.0	0.1	0.6	0.2	-0.1	1.0	5.2
Q2	3.7	1.3	5.0	4.7	4.1	0.0	0.5	0.1	0.1	0.1	3.6
Q3	-0.6	-0.9	-1.5	-1.6	-2.1	0.0	0.4	0.1	0.0	0.1	-0.6
Q3 Q4	-3.6	-0.7	-4.3	-2.9	-2.0	-0.1	-0.6	-0.1	-0.1	-1.4	-3.5

### C28 Deficit, borrowing requirement and change in debt (four-quarter moving sum as a percentage of GDP)

#### deficit \_ \_ change in debt . . . . borrowing requirement 4.5 4.5 4.0 4.0 3.5 3.5 3.0 3.0 2.5 2.5 2.0 2.0 1.5 1.5 1.0 1.0 0.5 0.5 0.0 0.0 2002 2003 2004 2005 2006 2007 2001





Source: ECB calculations based on Eurostat and national data.

1) The data refer to the Euro 15.

2) The stock data in quarter t are expressed as a percentage of the sum of GDP in t and the previous three quarters.





# **EXTERNAL TRANSACTIONS AND POSITIONS**

# **7.1** Summary balance of payments <sup>1</sup>) (EUR billions; net transactions)

		Cu	rrent accou	ınt		Capital	Net lending/			Financial	account			Errors and
	Total	Goods	Services	Income	Current transfers	account	borrowing to/from rest of the world (columns 1+6)	Total	Direct investment	Portfolio investment	Financial derivatives	Other investment	Reserve assets	omissions
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2005 2006 2007	18.1 -1.3 26.4	48.3 19.2 55.6	37.3 42.3 51.5	5.4 15.1 3.0	-72.9 -77.9 -83.6	11.4 9.2 14.1	29.5 7.9 40.5	9.2 112.4 102.8	-216.4 -144.7 -94.8	131.4 266.3 253.9	-18.2 2.4 -110.1	94.6 -10.3 58.9	17.8 -1.4 -5.2	-38.8 -120.3 -143.3
2006 Q4 2007 Q1 Q2 Q3 Q4	18.9 3.7 -2.0 13.6 11.0	16.2 8.6 20.1 17.1 9.7	8.2 9.4 14.0 17.2 10.9	10.6 6.9 -19.4 5.0 10.4	-16.2 -21.3 -16.7 -25.6 -20.1	4.6 4.6 2.1 1.6 5.8	23.5 8.4 0.1 15.2 16.8	-29.6 29.4 49.8 97.5 -74.0	-50.9 -14.3 -57.9 -40.9 18.2	117.7 142.6 90.4 65.1 -44.2	-3.3 -15.2 -19.7 -26.8 -48.3	-90.4 -82.2 41.4 104.4 -4.7	-2.6 -1.4 -4.4 -4.3 4.9	6.1 -37.8 -50.0 -112.7 57.2
2007 Feb. Mar. Apr. May	-3.7 9.4 -2.5 -13.2	2.5 10.2 4.9 4.0	3.2 4.5 3.7 3.8	2.8 2.7 -3.4 -16.0	-12.1 -7.9 -7.7 -5.0	1.2 1.2 0.6 1.5	-2.5 10.6 -1.9 -11.7	9.1 -26.8 51.8 7.0	-0.4 -2.4 -5.1 -25.9	22.6 76.8 6.5 11.3	-6.5 -3.8 -9.5 -1.9	-6.1 -99.4 61.4 24.3	-0.6 2.0 -1.6 -0.8	-6.6 16.2 -49.8 4.7
June July Aug. Sep. Oct.	13.7 6.3 1.1 6.2 4.6	11.2 7.8 3.6 5.7 6.9	6.5 5.6 4.3 7.2 4.1	0.0 0.7 1.6 2.8 3.6	-4.0 -7.7 -8.5 -9.4 -10.0	0.0 0.9 0.2 0.4 1.3	13.8 7.2 1.3 6.7 6.0	-9.0 48.0 66.5 -17.0 -49.1	-26.9 -0.1 0.5 -41.2 29.5	72.6 20.6 3.8 40.7 -44.1	-8.3 -12.9 -5.2 -8.8 -6.0	-44.3 43.4 66.2 -5.2 -28.6	-2.0 -3.0 1.1 -2.4 0.0	-4.8 -55.3 -67.8 10.3 43.2
Nov. Dec.	4.0 3.6 2.7	5.1 -2.3	4.1 3.5 3.3	5.0 1.7 5.1	-10.0 -6.6 -3.4	1.5 1.0 3.5	4.7 6.1	-49.1 -1.6 -23.2	29.5 9.5 -20.8	-44.1 9.9 -10.1	-31.4 -11.0	-28.0 10.1 13.9	0.0 0.2 4.7	43.2 -3.0 17.1
2008 Jan. Feb.	-17.9 5.0	-7.3 2.9	2.6 3.6	-3.2 3.3	-10.1 -4.9	2.4 2.3	-15.5 7.3	27.3 -9.9	-29.9 -13.8	49.3 34.8	-13.0 2.4	27.7 -38.0	-6.8 4.7	-11.7 2.6
						12-mo	nth cumulated	transaction	s					
2008 Feb.	19.1	52.8	52.9	-1.2	-85.3	15.4	34.6	63.8	-126.7	272.2	-109.1	31.4	-3.9	-98.4

# **C30 B.o.p. current account balance** (EUR billions)



Source: ECB.

1) The sign convention is explained in the general notes.



# **7.2 Current and capital accounts** (EUR billions; transactions)

### 1. Summary current and capital accounts

						Currer	nt account	:						Capital ac	count
		Total		Goo	ds	Servio	ces	Incom	ne		Current t	ransfers			
	Credit	Debit	Net	Credit	Debit	Credit	Debit	Credit	Debit	Cre	edit	De	bit	Credit	Debit
	1	2	3	4	5	6	7	8	9	10	Workers remit- tances 11	12	Workers remit- tances 13	14	15
2005 2006 2007	2,090.7 2,401.1 2,639.4	2,072.6 2,402.4 2,613.0	18.1 -1.3 26.4	1,220.3 1,391.2 1,503.6	1,172.0 1,372.0 1,448.1	405.9 437.0 494.8	368.5 394.8 443.3	378.7 483.7 550.8	373.3 468.6 547.8	85.8 89.2 90.2	5.3 5.4 6.1	158.8 167.0 173.8	14.6 16.9 20.1	24.3 23.7 25.7	12.9 14.5 11.6
2006 Q4 2007 Q1 Q2 Q3 Q4	646.8 627.5 656.0 665.5 690.3	627.9 623.7 658.0 651.9 679.4	18.9 3.7 -2.0 13.6 11.0	374.4 361.5 373.6 376.1 392.4	358.2 352.8 353.5 359.0 382.7	112.0 111.4 120.2 135.4 127.8	103.8 101.9 106.2 118.2 116.9	131.9 127.6 142.7 137.6 142.9	121.2 120.6 162.0 132.6 132.6	28.6 27.0 19.5 16.4 27.1	1.4 1.4 1.6 1.7 1.4	44.7 48.3 36.2 42.1 47.2	4.7 4.6 4.9 5.2 5.3	8.9 7.7 4.6 4.3 9.1	4.3 3.1 2.5 2.8 3.2
2007 Dec.	228.7	226.0	2.7	116.8	119.0	43.7	40.4	51.8	46.7	16.4		19.9		4.8	1.4
2008 Jan. Feb.	213.4 230.8	231.3 225.8	-17.9 5.0	124.7 131.4	131.9 128.5	37.5 37.7	34.9 34.0	44.3 46.2	47.4 42.9	7.0 15.5	· ·	17.1 20.4	:	3.3 3.0	1.0 0.7
							ally adjus								
2006 Q4 2007 Q1 Q2 Q3 Q4	631.5 639.8 652.2 675.5 669.8	627.4 630.4 642.0 665.7 673.6	4.1 9.3 10.1 9.8 -3.8	367.2 366.3 372.7 384.4 380.8	353.6 351.6 354.5 368.7 374.7	111.8 120.7 121.1 125.7 127.2	102.3 106.7 110.1 111.6 114.6	129.1 130.6 136.1 144.0 140.3	127.3 130.3 136.9 141.7 138.5	23.4 22.1 22.3 21.5 21.6		44.2 41.8 40.5 43.8 45.9			•
2007 Sep. Oct. Nov. Dec.	227.1 225.2 224.3 220.3	224.9 222.7 223.4 227.5	2.2 2.5 0.9 -7.2	128.9 128.3 128.0 124.4	124.5 122.7 124.2 127.8	42.4 41.7 42.9 42.6	37.1 37.6 38.0 38.9	48.9 48.3 47.5 44.5	48.6 46.4 47.4 44.6	7.0 6.9 5.9 8.8		14.6 15.9 13.7 16.2			
2008 Jan. Feb.	225.6 236.0	233.6 231.7	-7.9 4.3	131.4 133.3	129.6 130.2	40.8 41.6	36.0 36.5	47.6 50.3	51.7 49.8	5.8 10.8		16.2 15.2			

# **C31 B.o.p. goods** (EUR billions, seasonally

....

exports (credit)

imports (debit)







# 7.2 Current and capital accounts (EUR billions)

### 2. Income account

(transactions)

	Compen of empl								Investmer	t income						
	Credit	Debit	Tota	al			Direct in	nvestment				Portfolio i	nvestment		Other inve	stment
			Credit	Debit		Equ	ity		Det	ot	Equ	ity	Deb	ot	Credit	Debit
					Cı	edit	D	ebit	Credit	Debit	Credit	Debit	Credit	Debit		
					ſ	Reinv.	[	Reinv.								
	1	2	3	4	5	earnings 6	7	earnings 8	9	10	11	12	13	14	15	16
2004	15.3	7.7	276.3	294.1	99.3	36.6	78.7	31.7	12.9	12.6	23.8	54.2	72.8	75.5	67.4	73.0
2005	15.7	9.3	363.1	364.0	140.2	38.5	97.6	-14.3	15.4	14.4	31.5	69.4	82.2	81.1	93.8	101.5
2006	16.5	10.0	467.2	458.6	171.4	36.8	106.0	39.0	19.7	17.3	39.1	99.2	102.2	85.6	134.7	150.5
2006 Q4	4.3	2.6	127.6	118.7	47.8	10.3	28.4	8.8	5.5	5.0	8.2	19.0	28.2	23.1	37.9	43.2
2007 Q1	4.2	2.0	123.4	118.6	39.7	18.4	27.0	6.5	5.5	4.8	9.8	18.3	27.9	24.1	40.4	44.4
Q2	4.2	2.6	138.5	159.4	44.4	6.2	27.7	1.0	6.3	5.4	15.2	52.5	28.9	26.4	43.7	47.5
Q3	4.3	3.2	133.3	129.4	40.4	16.4	23.5	10.7	5.9	5.0	10.9	23.9	30.4	26.7	45.7	50.2
Q4	4.6	2.7	138.3	129.8	44.0	12.2	22.4	0.7	6.9	5.5	9.0	20.8	30.8	28.9	47.5	52.2

# **3. Geographical breakdown** (cumulated transactions)

	Total	Eu	ropean U	J <b>nion 27</b> (	outside tl	ne euro are	a)	Brazil	Canada	China	India	Japan	Russia	Switzer- land	United States	Other
2007 Q1 to		Total	Den- mark	Sweden	-	Other EU countries	EU insti- tutions								~	
2007 Q1 to 2007 Q4	1	2	3	4	5	6	1011011S 7	8	9	10	11	12	13	14	15	16
		LI						C	redits							
Current account	2,639.4	1,005.3	54.6	84.9	531.4	275.7	58.8	32.3	34.7	76.2	30.6	57.0	87.9	171.6	410.1	733.6
Goods	1,503.6	545.2	34.4	55.0	236.7	219.0	0.0	18.3	18.3	60.1	22.9	34.0	67.3	84.8	194.9	457.7
Services	494.8	174.8	9.8	13.4	117.9	28.1	5.7	5.2	7.0	13.1	5.9	10.8	11.2	48.0	84.0	134.8
Income	550.8	219.4	9.7	15.2	162.4	25.7	6.5	8.7	8.7	2.8	1.8	11.7	9.2	32.8	123.2	132.5
investment income	533.5	213.5	9.6	15.1	160.4	25.5	2.9	8.6	8.6	2.7	1.8	11.7	9.2	26.3	121.5	129.7
Current transfers	90.2	65.9	0.7	1.3	14.4	2.8	46.5	0.2	0.7	0.2	0.0	0.5	0.2	6.0	8.0	8.5
Capital account	25.7	22.3	0.0	0.1	1.1	0.1	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	2.2
								Γ	Debits							
Current account	2,613.0	865.2	44.1	80.5	427.1	214.2	99.2	-	29.2	-	-	95.0	-	166.6	361.2	-
Goods	1,448.1	423.8	28.1	50.5	174.1	171.2	0.0	24.9	12.9	164.4	18.4	56.1	90.2	74.4	135.2	447.7
Services	443.3	142.2	9.5	11.2	92.1	29.2	0.2	4.2	6.8	10.4	3.9	8.1	8.2	35.4	91.9	132.2
Income	547.8	190.1	5.9	17.4	149.7	9.7	7.4	-	7.5	-	-	30.4	-	51.1	126.7	-
investment income	537.2	183.7	5.8	17.3	148.3	4.9	7.4	-	7.4	-	-	30.3	-	50.6	125.6	-
Current transfers	173.8	109.1	0.7	1.5	11.1	4.2	91.6	1.5	2.0	2.4	0.7	0.4	0.5	5.7	7.4	44.1
Capital account	11.6	1.9	0.0	0.1	1.0	0.3	0.5	0.1	0.1	0.1	0.2	0.1	0.1	0.6	1.2	7.3
									Net							
Current account	26.4	140.2	10.5	4.4	104.3	61.4	-40.4	-	5.5	-	-	-38.0	-	4.9	49.0	-
Goods	55.6	121.4	6.3	4.6	62.6	47.9	0.0	-6.7	5.4	-104.3	4.5	-22.1	-22.9	10.5	59.7	10.1
Services	51.5	32.6	0.4	2.2	25.7	-1.1	5.5	1.0	0.2	2.7	2.0	2.7	3.0	12.6	-7.8	2.6
Income	3.0	29.3	3.8	-2.2	12.6	16.0	-0.9	-	1.2	-	-	-18.6	-	-18.3	-3.5	-
investment income	-3.7	29.7	3.7	-2.2	12.1	20.6	-4.5	-	1.2	-	-	-18.6	-	-24.4	-4.1	-
Current transfers	-83.6	-43.2	0.0	-0.1	3.3	-1.4	-45.0	-1.3	-1.3	-2.1	-0.6	0.0	-0.3	0.2	0.6	-35.6
Capital account	14.1	20.4	0.0	0.0	0.1	-0.1	20.5	-0.1	-0.1	0.0	-0.2	-0.1	0.0	-0.2	-0.4	-5.2
Source: ECB.																



# **7.3 Financial account** (EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions and other changes during period)

### 1. Summary financial account

1. Summary	financial	account												
		Total <sup>1)</sup>		as	Total a % of GD	Р		rect tment		tfolio tment	Net financial derivatives		her tment	Reserve assets
	Assets	Liabilities	Net	Assets	Liabilities	Net	Assets	Liabilities	Assets	Liabilities	uerivatives	Assets	Liabilities	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
				0	Outstanding a	amounts (in		investment	position)					
2003 2004 2005 2006	7,817.7 8,609.8 10,737.9 12,195.1	8,608.3 9,497.9 11,575.7 13,226.4	-790.7 -888.1 -837.8 -1,031.3	104.0 110.1 132.6 143.8	114.5 121.4 142.9 156.0	-10.5 -11.4 -10.3 -12.2	2,169.3 2,314.6 2,796.4 3,050.2	2,084.2 2,242.0 2,444.5 2,654.1	2,655.4 3,042.7 3,887.5 4,459.0	3,585.9 4,076.4 5,105.7 5,960.7	-19.8 -37.3 -46.2 -43.6	2,706.1 3,007.8 3,778.7 4,402.3	2,938.3 3,179.5 4,025.5 4,611.5	306.7 282.0 321.4 327.3
2007 Q3 Q4	13,645.2 13,709.3	14,948.0 15,052.9	-1,302.8 -1,343.6	155.3 154.3	170.1 169.4	-14.8 -15.1	3,385.9 3,428.3	2,896.4 2,987.8	4,784.6 4,730.9	6,707.8 6,705.1	-0.5 45.1	5,134.3 5,156.3	5,343.9 5,360.1	340.8 348.8
						hanges to c								
2003 2004 2005 2006	509.9 792.2 2,128.0 1,457.3	593.8 889.6 2,077.8 1,650.7	-83.9 -97.4 50.3 -193.5	6.8 10.1 26.3 17.2	7.9 11.4 25.7 19.5	-1.1 -1.2 0.6 -2.3	162.6 145.3 481.8 253.8	257.7 157.8 202.5 209.6	363.5 387.3 844.9 571.5	341.4 490.6 1,029.3 855.1	-7.2 -17.6 -8.8 2.6	50.4 301.8 770.8 623.6	-5.2 241.2 846.0 586.1	-59.4 -24.7 39.4 5.8
2007 Q3 Q4	233.1 64.2	366.0 104.9	-133.0 -40.7	10.6 2.8	16.6 4.5	-6.0 -1.8	68.9 42.3	79.3 91.4	-21.1 -53.7	49.3 -2.7	11.1 45.6	159.8 22.0	237.5 16.2	14.5 8.0
							ansactions							
2004 2005 2006 2007	812.4 1,326.1 1,598.4 1,807.3	798.3 1,335.3 1,710.8 1,910.0	14.2 -9.2 -112.4 -102.8	10.4 16.5 18.8 20.5	10.2 16.6 20.2 21.7	0.2 -0.1 -1.4 -1.2	161.5 364.7 346.0 401.8	93.9 148.3 201.3 307.0	345.8 412.6 535.9 422.5	416.5 544.0 802.2 676.4	8.3 18.2 -2.4 110.1	309.2 548.4 717.6 867.7	287.8 643.0 707.3 926.6	-12.4 -17.8 1.4 5.2
2007 Q2 Q3 Q4	483.2 390.7 310.9	533.0 488.3 236.9	-49.8 -97.5 74.0	21.8 17.7 13.4	24.1 22.2 10.2	-2.2 -4.4 3.2	113.8 115.8 78.3	56.0 75.0 96.6	149.4 33.9 94.6	239.8 99.0 50.4	19.7 26.8 48.3	195.8 209.9 94.5	237.2 314.3 89.9	4.4 4.3 -4.9
2007 Oct. Nov. Dec.	235.6 172.5 -97.2	186.4 170.9 -120.5	49.1 1.6 23.2		•		24.6 28.9 24.8	54.1 38.4 4.0	73.7 43.0 -22.1	29.6 53.0 -32.2	6.0 31.4 11.0	131.3 69.4 -106.2	102.7 79.5 -92.3	0.0 -0.2 -4.7
2008 Jan. Feb.	282.0 117.6	309.3 107.6	-27.3 9.9			•	46.0 27.3	16.0 13.5	14.9 17.1	64.2 51.9	13.0 -2.4	201.4 80.3	229.0 42.3	6.8 -4.7
							er changes							
2003 2004 2005 2006	-154.8 -20.2 802.0 -141.1	-55.6 91.3 742.5 -60.0	-99.2 -111.5 59.5 -81.1	-2.1 -0.1 9.9 -1.7	-0.8 1.3 9.2 -0.7	-1.3 -1.4 0.7 -1.0	15.7 -16.2 117.1 -92.2	121.2 63.9 54.3 8.3	82.0 41.5 432.3 35.6	4.1 74.1 485.2 52.9	-21.0 -25.9 -27.0 5.0	-200.0 -7.4 222.4 -94.0	-180.9 -46.7 203.0 -121.3	-31.6 -12.2 57.2 4.4
2007 Q3 Q4	-157.7 -246.7	-122.2 -131.9	-35.5 -114.7	-7.2 -10.6	-5.6 -5.7	-1.6 -4.9	-47.0 -36.0	4.3 -5.2	-55.0 -148.3	-49.7 -53.1	-15.7 -2.7	-50.1 -72.6	-76.8 -73.7	10.1 12.9
					Other c		to exchang	e rate chan						
2003 2004 2005 2006	-446.7 -182.4 372.0 -292.5	-174.5 -138.3 221.6 -140.6	-272.3 -44.1 150.3 -151.9	-5.9 -2.3 4.6 -3.5	-2.3 -1.8 2.7 -1.7	-3.6 -0.6 1.9 -1.8	-110.8 -34.5 83.2 -65.9	32.2 8.2 -21.0 14.4	-108.3 -67.5 120.7 -85.0	-49.8 -92.0 125.4 -51.0		-195.5 -70.9 149.5 -126.4	-156.9 -54.5 117.2 -104.0	-32.2 -9.4 18.7 -15.2
						her changes								
2003 2004 2005 2006	135.3 119.1 286.8 317.2	158.6 243.0 351.2 272.1	-23.2 -123.9 -64.4 45.1	1.8 1.5 3.5 3.7	2.1 3.1 4.3 3.2	-0.3 -1.6 -0.8 0.5	59.8 37.7 73.5 74.8	32.7 28.2 55.8 46.1	95.8 110.4 196.5 220.9	125.8 214.8 295.4 226.0	-21.0 -25.9 -25.3 5.1	· · ·	· · ·	0.7 -3.1 42.2 16.4
					Othe	r changes d	ue to other	adjustment	\$					
2003 2004 2005 2006	156.6 42.2 138.0 -144.9	-39.7 -13.4 146.2 -181.9	196.3 55.6 -8.3 37.0	2.1 0.5 1.7 -1.7	-0.5 -0.2 1.8 -2.1	2.6 0.7 -0.1 0.4	66.7 -19.3 -25.9 -78.8	56.2 27.5 22.0 -43.4	94.5 -1.4 114.4 -100.2	-72.0 -48.7 56.4 -129.3		-4.5 63.5 53.4 30.9	-24.0 7.8 67.9 -9.2	-0.1 -0.5 -3.9 3.2
2002	0.7				Gro	owth rates o		0	10	10 -		0.5		
2003 2004 2005 2006	9.2 10.3 14.9 15.1	8.2 9.2 13.7 14.9	- - -				7.4 7.4 15.4 12.6	7.4 4.4 6.6 8.3	12.4 12.8 13.0 13.9	10.5 11.4 12.8 15.8	- - - -	9.5 11.3 17.7 19.3	6.1 9.7 19.7 17.7	-7.9 -4.1 -5.8 0.4
2007 Q2 Q3 Q4	17.2 17.0 14.8	16.5 16.7 14.4	- -				12.7 13.4 13.1	7.6 9.0 11.5	13.9 11.0 9.5	17.2 15.6 11.3		24.3 25.1 19.7	20.9 22.8 20.2	3.5 3.9 1.6

Source: ECB. 1) Net financial derivatives are included in assets.

ECB Monthly Bulletin May 2008 **5**63

# **7.3 Financial account** (EUR billions and annual

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during period)

## 2. Direct investment

			By resid	ent units a	broad				By	v non-resid	ent units in	the euro are	a	
	Total		ity capital vested earn	ings		her capital er-company	loans)	Total		quity capita invested ear			Other capita nter-compar	
		Total	MFIs	Non- MFIs	Total	MFIs	Non- MFIs		Total	into MFIs	into Non-MFIs	Total	to MFIs	to Non-MFIs
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
					Oustanding	amounts (in	ternational	investment	position)					
2005	2,796.4	2,278.8	176.0	2,102.8	517.6	4.0	513.5	2,444.5	1,839.6	56.2	1,783.4	605.0	8.5	596.4
2006	3,050.2	2,484.8	203.3	2,281.6	565.3	3.7	561.7	2,654.1	2,037.8	61.7	1,976.0	616.4	7.9	608.4
2007 Q3	3,385.9	2,735.1	239.3	2,495.8	650.9	7.8	643.1	2,896.4	2,204.9	60.5	2,144.4	691.5	12.8	678.6
Q4	3,428.3	2,773.0	235.0	2,538.1	655.2	8.4	646.8	2,987.8	2,252.9	61.7	2,191.2	735.0	13.7	721.2
						Tr	ansactions							
2005	364.7	305.9	19.7	286.2	58.8	0.2	58.6	148.3	117.8	0.9	116.9	30.5	-0.3	30.8
2006	346.0	271.5	38.6	232.9	74.5	0.0	74.5	201.3	171.7	5.8	165.9	29.5	0.1	29.5
2007 Q1	93.8	64.8	6.6	58.2	29.0	-2.1	31.1	79.5	50.6	0.9	49.8	28.9	-0.6	29.5
Q2	113.8	94.0	8.4	85.6	19.9	1.5	18.3	56.0	54.4	-1.3	55.7	1.6	0.9	0.7
Q3	115.8	85.9	18.0	68.0	29.9	-0.6	30.5	75.0	51.7	0.4	51.3	23.3	0.3	22.9
Q4	78.3	65.4	-6.9	72.2	12.9	0.6	12.3	96.6	53.6	1.4	52.2	43.0	0.7	42.3
2007 Oct.	24.6	23.3	-11.3	34.6	1.2	-0.4	1.6	54.1	35.1	0.2	35.0	19.0	-1.3	20.2
Nov.	28.9	20.6	3.6	17.0	8.3	-0.6	8.9	38.4	12.7	0.3	12.4	25.7	1.7	24.1
Dec.	24.8	21.4	0.8	20.6	3.4	1.6	1.8	4.0	5.8	1.0	4.8	-1.8	0.2	-2.0
2008 Jan.	46.0	33.3	6.9	26.4	12.6	0.3	12.4	16.0	6.9	0.3	6.6	9.1	0.9	8.3
Feb.	27.3	16.5	3.8	12.8	10.8	-0.5	11.3	13.5	4.8	0.4	4.4	8.7	0.2	8.5
						Gr	owth rates							
2005	15.4	15.8	13.4	16.0	13.4	-1.1	13.5	6.6	7.0	1.7	7.2	5.2	-4.4	5.3
2006	12.6	12.1	23.2	11.2	14.7	-2.2	14.8	8.3	9.3	10.4	9.3	5.0	-0.2	5.0
2007 Q2	12.7	12.1	23.7	11.1	15.5	-48.7	15.8	7.6	7.7	4.5	7.8	7.2	-8.9	7.4
Q3	13.4	12.2	24.2	11.2	18.7	-38.4	18.9	9.0	8.7	2.1	8.9	10.1	1.7	10.2
Q4	13.1	12.4	12.4	12.4	15.9	-43.5	16.2	11.5	10.3	2.3	10.6	15.4	8.1	15.4

# **C33 B.o.p. net direct and portfolio investment** (EUR billions)





# **7.3 Financial account** (EUR billions and annual growth rate

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during peric

# 3. Portfolio investment assets

	Total			Equit	y						Debt instr	uments				
								E	onds and	notes			Mone	y market in	struments	
		Total	M	FIs	Non	-MFIs	Total	M	FIs	Non	-MFIs	Total	М	FIs	Non	-MFIs
				Euro- system		General government		[	Euro- system		General government			Euro- system		General government
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					0	utstanding an	nounts (int	ernationa	al investm	ent positio	n)					
2005 2006	3,887.5 4,459.0	1,726.5 2,014.1	102.5 122.0	3.0 2.8	1,624.0 1,892.1	27.2 37.0	1,845.1 2,067.5	710.6 846.0	8.8 11.0	1,134.4 1,221.5	11.6 13.4	316.0 377.4	263.0 310.4	0.8 8.7	53.0 67.0	0.4 0.3
2007 Q3 Q4	4,784.6 4,730.9	2,120.5 2,049.6	139.7 144.4	2.8 2.8	1,980.9 1,905.1	42.6 41.8	2,263.1 2,277.6	935.4 929.0	11.6 11.3	1,327.7 1,348.6	15.3 15.5	400.9 403.7	315.1 323.5	8.1 8.2	85.8 80.2	9.6 0.4
							Tra	insactions	5							
2005 2006	412.6 535.9	134.2 153.0	14.4 18.3	$\begin{array}{c} 0.1 \\ 0.0 \end{array}$	119.8 134.7	3.4 6.1	261.3 314.5	118.5 173.2	0.8 2.6	142.7 141.3	0.8 1.1	17.1 68.4	14.7 56.2	-0.1 8.0	2.4 12.2	-0.1 -0.1
2007 Q2 Q3 Q4	149.4 33.9 94.6	11.4 7.5 11.4	4.8 -8.3 13.4	0.0 0.0 0.0	6.6 15.8 -1.9	1.4 2.1 0.9	114.5 42.3 77.2	65.3 12.2 20.1	0.3 0.4 0.3	49.2 30.1 57.1	0.4 0.7 0.3	23.5 -16.0 6.0	13.6 -14.2 18.3	0.1 0.0 0.8	10.0 -1.7 -12.3	4.2 -0.2 -9.1
2007 Oct. Nov. Dec.	73.7 43.0 -22.1	10.8 8.7 -8.0	9.5 2.3 1.5	0.0 0.0 0.0	1.3 6.3 -9.6		38.2 42.7 -3.7	13.7 33.6 -27.2	0.2 0.2 0.0	24.5 9.1 23.5		24.6 -8.3 -10.3	27.7 -2.3 -7.1	0.0 -0.1 0.9	-3.1 -6.0 -3.3	:
2008 Jan. Feb.	14.9 17.1	-19.2 -16.3	-10.0 -2.9	0.0 0.0	-9.2 -13.4	:	-3.4 20.1	9.7 10.6	-0.3 -0.2	-13.1 9.5	· ·	37.5 13.3	37.9 14.6	0.0 0.0	-0.4 -1.3	:
								owth rates								
2005 2006	13.0 13.9	9.8 8.9	18.2 18.3	5.9 0.9	9.3 8.3	19.7 21.7	17.0 17.4	20.9 24.9	9.3 30.5	14.7 12.7	8.0 10.6	5.9 21.9	6.2 22.3	-6.6 1,022.8	3.5 22.1	-8.3 -20.8
2007 Q2 Q3 Q4	13.9 11.0 9.5	4.9 3.4 2.3	36.3 29.1 23.7	0.2 0.1 0.4	3.1 1.9 0.9	15.1 17.3 13.8	19.5 17.3 16.0	28.4 21.6 17.9	56.1 52.4 16.3	13.6 14.3 14.6	20.3 24.0 16.9	33.2 19.0 13.1	30.6 14.4 13.2	12.3 11.3 1.9	45.4 40.7 13.6	56.9 157.3 70.1

# 4. Portfolio investment liabilities

	Total		Equity					Debt instrun	ients			
				-		Bonds an	d notes		Moi	ney market i	nstrument	s
	-	Total	MFIs	Non-MFIs	Total	MFIs	Non-	MFIs	Total	MFIs	Non	n-MFIs
							Γ	General government				General government
	1	2	3	4	5	6	7	8	9	10	11	12
				Outstanding	amounts (inter	national inve	stment positi	on)				
2005 2006	5,105.7 5,960.7	2,433.7 2,931.4	533.5 671.0	1,900.1 2,260.4	2,365.6 2,732.3	723.0 845.3	1,642.6 1,887.0	1,175.6 1,253.7	306.4 297.0	108.5 127.6	198.0 169.4	158.5 138.6
2007 Q3 Q4	6,707.8 6,705.1	3,300.5 3,232.0	783.1 743.7	2,519.1 2,494.0	3,039.9 3,129.7	1,047.5 1,061.4	1,992.4 2,067.2	1,285.9 1,303.7	367.4 343.4	148.7 180.1	218.8 164.6	193.8 147.0
					Trans	actions						
2005 2006	544.0 802.2	255.3 302.4	95.1	207.3	235.6 498.1	212.9	285.1	149.1	53.2 1.6	28.2	-26.5	-20.1
2007 Q2 Q3 Q4	239.8 99.0 50.4	75.8 33.3 -6.8	15.8 21.7 -37.5	60.0 11.8 30.9	123.8 50.1 78.9	56.9 28.4 20.5	66.8 21.7 56.8	47.5 24.8 28.5	40.2 15.6 -21.7	15.4 4.1 26.3	24.8 11.5 -47.3	22.7 12.4 -43.5
2007 Oct. Nov. Dec.	29.6 53.0 -32.2	6.4 -3.2 -10.0	•		26.4 55.7 -3.2				-3.2 0.5 -19.0	•	•	
2008 Jan. Feb.	64.2 51.9	36.5 28.4	:		24.9 19.1	•	:		2.8 4.3	•	•	:
					Grow	th rates						
2005 2006	12.8 15.8	13.0 12.3	17.7	10.8	11.2 21.8	31.4	17.7	13.1	23.6 0.5	26.7	-13.1	-12.5
2007 Q2 Q3 Q4	17.2 15.6 11.3	12.1 10.6 7.1	21.9 17.4 8.2	9.3 8.6 6.8	22.5 20.3 15.0	37.5 31.9 21.3	16.3 15.3 12.1	12.0 13.3 11.0	20.3 24.4 19.2	43.6 39.8 40.8	8.1 16.0 3.7	15.0 23.6 10.2



# **7.3 Financial account** (EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during period)

## 5. Other investment assets

	Total		Eurosystem		(exclu	MFIs ding Eurosy	vstem)		Gene govern				Other se	ectors	
		Total	Loans/ currency and	Other assets	Total	Loans/ currency and	Other assets	ſ	Trade credits	Loans/c and de			Trade credits		currency eposits
		2	deposits 3		5	deposits	7	8	9	10	Currency and deposits	12	13		Currency and deposits
	1	2	3	4	5	6 g amounts (in	/	-		10	11	12	13	14	15
2005 2006	3,778.7 4,402.3	6.8 10.2	6.5 9.8	0.4 0.4	2,522.1 2,946.2	2,466.0 2,887.1	56.2 59.1	127.6 117.1	19.7 14.2	60.8 57.8	11.8 15.4	1,122.1 1,328.7	188.9 187.2	802.7 990.3	347.9 377.7
2007 Q3 Q4	5,134.3 5,156.3	20.5 22.3	20.2 22.0	0.3 0.3	3,359.1 3,355.2	3,291.7 3,283.4	67.4 71.8	108.5 108.1	13.6 13.4	48.2 48.3	13.3 13.2	1,646.3 1,670.7		1,317.0 1,345.2	446.7 422.8
							ansactions								
2005 2006	548.4 717.6	1.2 3.3	1.1 3.2	$\begin{array}{c} 0.0\\ 0.0\end{array}$	397.4 521.4	394.3 517.2	3.2 4.2	-4.6 -2.0	0.0 0.0	-5.8 -2.7	2.4 3.1	154.4 194.9	8.9 5.2	128.6 176.2	3.5 25.0
2007 Q2 Q3 Q4	195.8 209.9 94.5	3.5 1.8 0.7	3.5 1.8 0.7	0.0 0.0 0.0	135.4 75.9 57.5	131.2 78.7 55.8	4.2 -2.8 1.8	17.6 -18.2 2.3	0.0 -0.1 -0.2	17.1 -18.4 1.7	17.4 -14.1 -0.1	39.3 150.4 33.9	0.6 3.1 3.6	32.5 147.1 31.4	-1.4 5.1 -21.2
2007 Oct. Nov. Dec.	131.3 69.4 -106.2	1.8 -1.5 0.4	•		100.3 55.4 -98.2		•	-4.3 3.4 3.3		•	-4.4 4.1 0.1	33.6 12.1 -11.7	· ·		5.8 -12.4 -14.6
2008 Jan. Feb.	201.4 80.3	2.3 0.6	•	:	186.2 62.0	•	•	-3.6 1.0	:	•	-3.8 4.1	16.5 16.6	•	•	10.6 -5.5
						G	rowth rates								
2005 2006	17.7 19.3	22.0 47.7	22.6 50.0	13.6 9.8	19.3 21.1	19.7 21.3	6.0 7.6	-3.5 -1.6	0.2 0.0	-9.1 -4.5	12.7 26.1	17.1 17.5	5.2 2.8	20.3 22.3	1.3 7.0
2007 Q2 Q3 Q4	24.3 25.1 19.7	98.0 125.8 107.3	101.2 130.2 111.2	11.2 10.2 0.1	28.8 26.0 19.1	28.9 26.2 19.1	22.6 15.1 18.9	2.6 -2.7 -5.1	0.0 -0.8 -2.2	3.9 -7.6 -12.5	32.8 11.4 -13.3	16.3 24.7 22.3	1.6 4.7 5.5	19.7 30.4 26.9	4.5 7.9 4.7

### 6. Other investment liabilities

	Total		Eurosyste	m	(exclu	MFIs ding Euros	ystem)			neral mment			Other s	ectors	
		Total	Loans/ currency and deposits	Other liabilities	Total	Loans/ currency and deposits	Other liabilities	Total	Trade credits	Loans	Other liabilities	Total	Trade credits	Loans	Other liabilities
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Out	standing am	ounts (interi	national inv	estment po	osition)					
2005 2006	4,025.5 4,611.5	82.4 100.2	82.2 100.0	0.2 0.2	3,114.2 3,487.0	3,061.8 3,433.1	52.4 53.9	44.9 48.3	0.0 0.0	41.1 44.4	3.8 3.8	784.0 976.1	133.1 144.5	581.0 744.1	70.0 87.5
2007 Q3 Q4	5,343.9 5,360.1	114.2 138.2	113.9 137.9	0.3 0.2	3,958.6 3,944.2	3,896.1 3,875.3	62.6 68.9	55.3 54.4	0.0 0.0	49.1 49.1	6.1 5.3	1,215.7 1,223.3	155.6 158.7	938.0 954.0	122.1 110.7
							Trans	actions							
2005 2006	643.0 707.3	6.7 18.6	6.7 18.5	0.0 0.0	487.9 496.1	486.3 492.8	1.6 3.2	-2.1 2.0	0.0 0.0	-1.8 2.1	-0.3 -0.1	150.5 190.8	13.6 11.7	130.4 167.2	6.5 11.9
2007 Q2 Q3 Q4	237.2 314.3 89.9	10.9 -1.3 25.0	10.9 -1.3 25.1	-0.1 0.0 -0.1	179.7 139.1 52.5	177.5 138.4 52.2	2.2 0.8 0.3	0.2 3.8 -1.7	0.0 0.0 0.0	-0.9 3.1 -0.7	1.1 0.7 -0.9	46.4 172.6 14.0	6.0 3.1 4.4	40.0 174.7 27.0	0.5 -5.2 -17.3
2007 Oct. Nov. Dec.	102.7 79.5 -92.3	4.1 5.2 15.8			91.7 61.6 -100.7		•	1.9 2.6 -6.2				5.0 10.1 -1.1	•		:
2008 Jan. Feb.	229.0 42.3	6.9 -12.9	:	:	200.3 94.9	•	•	4.0 -3.7	:	:	:	17.8 -36.1	•	· ·	:
							Grow	th rates							
2005 2006	19.7 17.7	8.9 22.6	8.9 22.6	4.3 6.6	19.2 16.2	19.5 16.3	4.3 6.1	-4.6 4.2	10.3 -24.1	-4.4 5.0	-7.2 -3.2	24.9 24.0	11.5 8.7	30.2 28.3	13.1 16.8
2007 Q2 Q3 Q4	20.9 22.8 20.2	28.7 20.6 40.2	28.7 20.6 40.3	14.4 8.4 -3.3	21.9 20.3 18.5	22.0 20.5 18.6	14.4 10.5 9.6	10.2 3.4 5.8	7.9 17.8 42.3	10.6 2.1 6.8	0.0 9.9 -8.2	16.9 33.2 24.7	7.4 7.4 7.8	18.8 42.3 33.3	18.0 5.1 -13.1



**7.3** Financial account (EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during period)

## 7. Reserve assets

							Reserve	assets							N	Iemo
															Assets	Liabilities
	Total	Monet	ary gold	Special drawing	Reserve position				Foreig	ı exchang	e			Other claims	Claims on euro	Predetermined short-term
		In EUR billions	In fine troy ounces	rights	in the IMF	Total	Currency deposit			Seci	urities		Financial derivatives		area residents in	net drains in
			(millions)				With monetary authorities and the BIS	With banks	Total	Equity	and	Money market instruments			foreign currency	foreign currency
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Outstanding amounts (international investment position)           206.7         120.0         202.542         4.4         22.2         140.0         100.0         20.4         107.0         1.0         20.5         26.5         0.7														
2003 2004 2005 2006	306.7 281.0 320.1 325.8	130.0 125.4 163.4 176.3	393.543 389.998 375.861 365.213	4.4 3.9 4.3 4.6	23.3 18.6 10.6 5.2	149.0 133.0 141.7 139.7	10.0 12.5 12.6 6.3	30.4 25.5 21.4 22.5	107.9 94.7 107.9 110.7	1.0 0.5 0.6 0.5	80.5 56.6 69.4 79.3	26.5 37.6 38.0 30.8	0.7 0.4 -0.2 0.3	$\begin{array}{c} 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \end{array}$	20.3 19.1 25.6 24.6	-16.3 -12.8 -17.9 -21.5
2007 Q2 Q3 Q4	325.3 340.5 347.3	172.8 187.0 201.0	358.768 356.925 353.688	4.7 4.7 4.6	4.3 3.8 3.6	143.5 144.9 138.2	5.7 7.5 7.2	27.7 27.5 22.0	110.1 109.6 108.5	0.2 0.3 0.4	85.4 85.8 87.7	24.5 23.5 20.4	0.0 0.4 0.5	0.0 0.0 0.0	26.6 26.2 44.1	-24.6 -26.8 -38.5
2008 Jan. Feb. Mar.	374.8 375.4 356.3	219.6 226.3 208.4	353.655 353.285 353.060	4.7 4.6 4.3	3.6 3.5 3.4	146.9 140.9 140.1	12.1 7.3 6.6	26.7 26.6 26.8	107.8 106.6 105.9	-	-	-	0.3 0.5 0.9	0.0 0.1 0.1	38.5 28.1 36.6	-43.4 -27.3 -37.2
							Tra	ansaction								
2005 2006 2007	-17.8 1.4 5.2	-3.9 -4.2 -2.9	-	0.2 0.5 0.3	-8.6 -5.2 -0.8	-5.5 10.3 8.6	-0.3 -6.1 2.8	-7.0 2.8 0.7	1.7 13.7 5.2	$\begin{array}{c} 0.0 \\ 0.0 \\ 0.0 \end{array}$	4.8 19.4 14.3	-3.2 -5.7 -9.1	0.0 0.0 0.0	$\begin{array}{c} 0.0 \\ 0.0 \\ 0.0 \end{array}$	-	-
2007 Q2 Q3 Q4	4.4 4.3 -4.9	-0.7 -0.3 -1.5	-	0.1 0.1 0.1	0.5 -0.3 -0.2	4.4 4.9 -3.3	0.8 2.0 1.5	0.5 0.8 -5.3	3.1 2.1 0.5	0.1 0.1 0.1	2.3 2.2 3.8	0.7 -0.2 -3.5	0.0 0.0 0.0	0.0 0.0 0.0	-	-
							Gro	owth rate	es							
2005 2006	-5.8 0.4	-2.8 -2.4	-	4.4 11.6	-44.5 -48.7	-3.9 7.7	-2.4 -48.5	-24.0 12.7	1.6 13.3	2.2 0.0	7.2 29.2	-7.9 -15.4	20.0 -75.3	6.7 -8.9	-	- -
2007 Q2 Q3 Q4	3.5 3.9 1.6	-1.8 -1.4 -1.6	- - -	15.5 10.7 6.8	-34.1 -32.4 -17.4	12.5 12.5 6.1	5.7 75.0 45.3	25.1 14.2 2.0	10.0 9.4 4.8	-52.6 -29.8 1.1	22.3 19.0 18.2	-17.8 -14.6 -30.3	-70.8 -98.8 -96.2	0.0 0.0 0.0	- -	- - -



**7.3 Financial account** (EUR billions; outstanding amounts at end of period, transactions during period)

# 8. Geographical breakdown

	Total	1	European	Union 2'	7 (outside t	he euro ar	ea)	Canada	China	Japan	Switzer- land	United States	<b>Offshore</b> financial	Internat. organisa-	Other countries
		Total	Denmark	Sweden	United	Other EU	EU				hind	States	centres	tions	countries
					Kingdom	countries	institutions								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2006			I		C	Outstanding	amounts (in	ternation	al invest	ment pos	ition)				
Direct investment	396.0	-63.7	-7.2	-21.0	-219.6	184.4	-0.3	37.0	22.1	-6.2	77.4	-24.8	-6.1	-0.2	360.5
Abroad	3,050.2	1,120.0	35.1	83.4	804.4	197.0	0.0	90.2	24.9	68.2	300.3	608.0	329.7	0.0	508.9
Equity/reinvested earnings	2,484.8	906.9	32.0	58.1	644.9	171.8	0.0	71.0	20.1	63.5	250.4	453.1	307.4	0.0	412.4
Other capital	565.3	213.1	3.1	25.3	159.4	25.3	0.0	19.2	4.8	4.7	49.9	154.9	22.3	0.0	96.5
In the euro area	· ·	1,183.7	42.3	104.5	1,024.0	12.7	0.3	53.1	2.7	74.4	222.9	632.8	335.8	0.3	148.4
Equity/reinvested earnings	2,037.8	951.9	36.8	86.3	826.7	1.8	0.2	47.3	0.3	60.7	164.8	477.1	209.6	0.0	126.1
Other capital	616.4	231.8	5.5	18.2	197.2	10.9	0.1	5.9	2.5	13.7	58.0	155.7	126.2	0.3	22.3
Portfolio investment assets	4,459.0	· ·	65.7	141.4	1,006.1	93.5	68.6	85.1	37.6	262.8	141.2	1,455.5	529.2	32.2	540.1
Equity	2,014.1	486.5	12.3	58.4	393.2	22.4	0.1	22.6	35.2	181.0	128.7	671.0	216.6	1.4	271.1
Debt instruments	2,444.9	888.9	53.4	83.0	612.9	71.2	68.4	62.4	2.4	81.8	12.5	784.5	312.6	30.8	269.0
Bonds and notes	2,067.5	732.6	48.6	71.1	474.4	70.4	68.2	60.2	2.3	62.3	8.5	660.3	273.0	29.8	238.5
Money market instruments		156.3	4.9	11.9	138.5	0.8	0.2	2.3	0.0	19.6	4.0	124.2	39.5	1.0	30.5
Other investment	-209.3	92.8	86.4	13.5	116.3	25.2	-148.6	-1.6	3.9	-37.5	-50.2	-5.1	-215.7	-20.0	24.1
Assets	4,402.3	2,291.6	111.4	69.2	1,988.1	113.3	9.5	19.5	25.3	73.7	263.5	586.7	438.6	45.7	657.9
General government	117.1	25.2	2.1	0.1	14.2	1.5	7.4	0.0	1.9	0.2	0.1	3.1	1.4	38.5	46.7
MFIs	2,956.4	1,718.0	95.7	47.9	1,490.9	82.8	0.8	11.0	12.0	38.9	162.7	344.7	274.7	6.6	387.8
Other sectors	1,328.7	548.3	13.6	21.2	483.0	29.1	1.4	8.4	11.4	34.7	100.7	238.9	162.5	0.6	223.3
Liabilities	4,611.5	2,198.8	25.0	55.7	1,871.8	88.1	158.1	21.0	21.3	111.2	313.6	591.8	654.3	65.7	633.8
General government	48.3	24.1	0.0	0.3	2.4	0.0	21.4	0.0	0.0	0.7	0.0	6.2	0.2	2.7	14.3
MFIs	3,587.2	1,659.8	19.5	35.0	1,440.4	67.9	97.0	14.2	8.5	60.3	253.7	416.6	583.6	60.4	530.2
Other sectors	976.1	514.9	5.5	20.4	429.0	20.2	39.8	6.8	12.8	50.3	59.9	169.0	70.5	2.6	89.3
2007 Q1 to 2007 Q4							Cumulated	l transactio	ons						
Direct investment	94.8	37.9	-2.2	2.4	12.3	25.4	0.0	16.8	0.8	-7.7	10.8	-47.4	24.5	-0.2	59.3
Abroad	401.8	134.1	0.3	2.9	100.2	30.7	0.0	20.6	1.2	0.7	29.6	69.5	70.3	-0.1	78.2
Equity/reinvested earnings	310.1	97.1	-0.5	1.0	70.9	25.7	0.0	13.0	-0.8	2.5	16.7	54.2	59.8	0.0	67.6
Other capital	91.7	37.0	0.7	2.0	29.3	5.0	0.0	7.6	1.9	-1.8	12.9	15.4	10.5	-0.1	8.3
In the euro area	307.0	96.2	2.5	0.5	87.8	5.3	0.0	3.8	0.4	8.4	18.8	117.0	45.8	0.1	16.6
Equity/reinvested earnings	210.3	81.0	2.4	2.3	75.8	0.5	0.0	-0.6	0.4	8.5	8.9	76.8	24.8	0.0	10.5
Other capital	96.7	15.2	0.1	-1.7	12.0	4.8	0.0	4.4	0.0	-0.1	9.9	40.2	21.1	0.1	6.1
Portfolio investment assets	422.5	98.5	5.2	15.7	67.8	4.6	5.2	8.6	-6.3	-12.2	-5.6	171.7	61.4	-2.1	108.6
Equity	46.7	-15.8	1.4	1.0	-16.1	-2.3	0.1	-1.3	-7.0	-9.6	-7.1	23.5	32.1	0.0	31.9
Debt instruments	375.7	114.3	3.8	14.7	83.8	6.9	5.1	9.9	0.7	-2.6	1.4	148.2	29.3	-2.1	76.7
Bonds and notes	326.6	87.9	3.7	11.5	61.5	6.8	4.5	7.9	0.4	4.0	2.4	122.8	21.1	-2.3	82.5
Money market instruments	49.2	26.4	0.1	3.2	22.4	0.1	0.6	2.0	0.3	-6.6	-0.9	25.4	8.2	0.2	-5.8
Other investment	-58.9	-11.7	35.2	-6.7	-70.2	42.4	-12.4	0.6	6.6	-28.4	-64.5	-115.3	51.8	10.0	92.0
Assets	867.7	320.5	15.8	1.4	247.9	51.8	3.5	2.9	5.6	-2.6	-33.2	290.7	124.6	12.0	147.2
General government	-5.9	-4.5	-1.4	0.0	-3.9	-0.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	-2.5
MFIs	571.6	237.6	17.1	4.2	163.6	52.8	0.0	-0.2	2.3	8.6	-32.8	118.6	107.5	10.8	119.2
Other sectors	302.0	87.4	0.2	-2.8	88.2	-0.7	2.5	3.1	3.3	-11.2	-0.4	172.1	17.2	0.0	30.5
Liabilities	926.6	332.2	-19.4	8.1	318.1	9.4	15.9	2.3	-1.0	25.8	31.3	406.0	72.8	2.0	55.2
General government	2.9	3.1	-0.3	0.1	-2.4	0.0	5.7	0.0	0.0	-0.2	0.8	0.2	0.1	-0.8	-0.3
MFIs	681.0	315.1	-19.1	6.1	317.4	5.0	5.8	1.7	-1.9	26.4	15.5	221.1	62.7	2.8	37.5
Other sectors	242.7	13.9	0.0	2.0	3.1	4.4	4.4	0.6	0.8	-0.5	15.1	184.8	10.0	0.1	17.9



External transactions and positions

(EUK billions; transactions)													
	B.o.p. items balancing transactions in the external counterpart of M3												
	Current and capital	Direct inv	estment	Ро	ortfolio inves	tment	Other in	nvestment	Financial derivatives	Errors and	Total of	Transactions in the external	
	accounts	By resident	By non- resident	Assets	Liabilities		Assets	Liabilities	denvatives	omissions	columns 1 to 10	counterpart of M3	
		units abroad (non-MFIs)	units in the euro area	Non-MFIs	Equity 2)	Debt instruments 3)	Non-MFIs	Non-MFIs					
	1	2	3	4	5	6	7	8	9	10	11	12	
2005	29.9	-349.1	149.6	-264.8	212.4	266.2	-150.8	148.2	-18.2	-33.9	-10.6	-0.1	
2006	9.7	-313.5	206.6	-288.3	242.1	445.2	-192.9	192.8	2.4	-114.8	189.4	200.4	
2007	41.4	-377.0	305.8	-205.5	166.2	380.4	-296.2	245.7	-110.2	-136.3	14.4	16.1	
2006 Q4	23.9	-63.6	28.1	-68.0	66.0	161.8	-56.1	71.7	-3.3	11.0	171.4	176.3	
2007 Q1	8.7	-90.2	80.0	-52.4	91.4	165.4	-70.9	10.5	-15.2	-36.1	91.1	101.6	
Q2 Q3	-0.1	-101.3	53.8	-67.4	65.6	134.1	-56.8	46.7	-19.8	-56.7	-2.0	-8.7	
Q3	14.9	-99.5	76.1	-42.9	25.3	48.1	-132.1	176.7	-26.8	-104.8	-65.1	-69.0	
Q4	18.0	-86.1	96.0	-42.7	-16.0	32.8	-36.3	11.9	-48.3	61.4	-9.6	-7.7	
2007 Feb.	-2.2	-41.0	35.2	-23.1	37.6	48.5	-21.7	27.1	-6.6	-6.3	47.7	40.1	
Mar.	10.6	-22.6	28.8	-12.8	18.1	65.8	-12.2	-20.2	-3.8	17.0	68.7	84.7	
Apr.	-2.0	-23.2	20.7	-20.2	-11.9	41.1	-8.7	23.1	-9.5	-50.6	-41.2	-38.5	
May	-11.9	-42.7	21.5	-19.8	12.1	47.3	-24.9	6.2	-1.9	4.5	-9.7	-17.2	
June	13.8	-35.4	11.5	-27.4	65.3	45.7	-23.1	17.4	-8.4	-10.7	48.8	46.9	
July	7.0	-25.5	26.7	-22.3	33.1	19.5	32.2	4.9	-12.9	-53.7	9.0	5.6	
Aug.	1.2 6.6	-28.5 -45.5	33.3 16.0	-11.1 -9.5	-14.7 7.0	23.6 5.0	-12.6 -151.7	31.8 139.9	-5.1 -8.8	-66.9 15.8	-49.0 -25.1	-51.3 -23.4	
Sep. Oct.	6.2	-36.8	55.3	-9.5	-17.8	2.3	-131.7	6.5	-8.8 -6.0	44.6	-23.1	-25.4	
Nov.	5.1	-26.4	37.0	-22.3	-17.8	61.9	-29.5	12.8	-31.4	-1.0	33.6	28.1	
Dec.	6.7	-20.4	3.6	-10.9	1.1	-31.5	-13.5 8.4	-7.5	-11.0	17.8	-46.1	-47.4	
2008 Jan.	-15.6	-38.8	15.2	22.8	3.0	15.5	-12.9	21.8	-13.0	-11.7	-13.7	-20.8	
Feb.	7.2	-24.1	13.3	5.3	20.8	21.8	-12.9	-39.8	2.4	2.7	-13.7	-14.1	
		2	1010	510		h cumulated tran		5710	2	217	011		
2008 Feb.	35.0	-372.3	283.0	-137.8	116.7	318.1	-268.1	197.0	-109.2	-92.1	-29.8	-35.7	

# 7.4 Monetary presentation of the balance of payments <sup>1</sup>) (EUR billions: transactions)

**C34 Main b.o.p. transactions underlying the developments in MFI net external assets**<sup>1</sup>) (EUR billions; 12-month cumulated transactions)

direct and portfolio equity investment abroad by non-MFIs



Source: ECB.

1) Data refer to the changing composition of the euro area. For further information, see the General notes.

Excluding money market fund shares/units.

2) 3) Excluding debt securities with a maturity of up to two years issued by euro area MFIs.



MFI net external assets 

current and capital accounts balance . . . .

# 7.5 Trade in goods (seasonally adjusted, unless otherwise indicated)

# 1. Values, volumes and unit values by product group

	Total (	n.s.a.)	Exports (f.o.b.)						Imports (c.i.f.)						
				Tota	1		Memo:		Tota	al		Memo:			
	Exports	Imports	Г	Intermediate	Capital	Consumption	Manufactures		Intermediate	Capital	Consumption	Manufactures	Oil		
	1	2	3	4	5	6		8	9	10	11	12	13		
							centage changes								
2004 2005	9.0 7.8	9.3 13.4	1,142.6 1,237.0	543.5 589.4	246.5 269.1	313.7 334.1	995.1 1,068.7	1,075.9 1,227.5	604.5 705.5	184.3 208.2	256.9 277.2	771.4 846.8	130.0 187.0		
2006 2007	11.6 8.3	13.7 5.6	1,383.5 1,497.9	669.6 722.2	292.7 315.8	371.5 395.2	1,182.9 1,275.4	1,397.1 1,473.1	833.4 883.9	213.2 208.5	308.2 325.2	943.4 1,009.6	224.5 221.9		
2006 Q3 Q4	8.3 12.3	10.4 7.6	347.0 363.1	169.2 176.7	71.7 76.1	92.4 97.1	296.7 312.5	353.7 356.7	213.7 212.5	52.0 52.8	77.0 79.4	237.0 246.5	60.3 51.8		
2007 Q1	9.0	5.2	367.0	176.9	77.6	96.9	311.9	358.4	212.8	53.0	79.9	251.0	47.4		
Q2 Q3	9.4	3.6	369.9	178.1	78.2	97.8	316.4	360.2	217.6	50.5	79.6	248.9	52.5		
Q3 Q4	10.1 5.0	6.4 7.1	380.5 380.4	183.8 183.3	79.8 80.1	100.5 100.0	325.7 321.3	375.4 379.0	223.7 229.9	53.2 51.9	83.3 82.4	259.3 250.4	57.5 64.4		
2007 Sep.	4.0	3.2	127.0	61.0	27.1	33.4	109.3	124.1	73.6	17.5	28.0	86.3	18.6		
Oct. Nov.	10.6 4.7	9.1 7.1	128.5 128.0	62.3 61.4	27.1 27.3	33.9 33.5	108.6 108.9	126.9 126.6	75.4 76.9	17.9 17.4	27.9 27.6	84.6 83.7	20.2 21.6		
Dec.	-0.7	4.9	123.9	59.6	25.8	32.6	103.8	125.5	77.6	16.7	26.8	82.1	22.7		
2008 Jan. Feb.	9.9 13.3	12.4 11.1	132.3 134.9	63.4	27.7	34.9	110.7 112.2	133.4 132.8	80.8	18.2	27.9	85.9 84.8	24.5		
				Volume inc	dices (200	0 = 100; annual	percentage char	nges for col	lumns 1 and 2)						
2004 2005	9.0	6.4	117.4	114.9 119.6	120.2	118.6	118.6	108.1	104.1	108.8 123.5	117.6	109.0	106.2		
2005	4.7 7.8	5.0 6.0	123.5 133.5	130.3	129.8 138.4	123.7 133.4	124.7 134.4	$114.1 \\ 121.0$	107.5 114.7	125.5	123.6 132.9	117.1 126.0	110.6 110.0		
2007	5.9	4.0	141.3	136.0	147.2	140.0	142.0	125.7	118.1	127.0	138.9	133.6	106.9		
2006 Q3 Q4	5.3 9.5	4.6 5.9	133.8 139.4	131.4 136.5	136.8 143.6	132.6 139.4	135.0 140.9	120.6 125.2	114.9 119.0	124.6 127.1	131.8 136.6	125.9 131.0	110.9 111.4		
2007 Q1 Q2	7.2 6.5	6.3 3.4	139.8 139.3	134.5 133.8	145.3 145.4	137.4 138.8	139.4 140.4	125.9 124.4	119.2 118.0	127.8 123.7	137.1 137.6	132.8 131.8	107.9 105.8		
Q2 Q3 Q4	0.3 7.3	5.4	139.5	135.8	143.4	138.8	140.4	124.4	117.8	125.7	137.0	131.8	105.8		
	3.0	1.4	143.2	137.8	149.5	141.9	143.6	125.9	117.3	126.6	140.3	133.3	107.6		
2007 Sep. Oct.	1.5 8.2	0.7 4.3	143.2 145.2	137.2 140.3	151.3 152.2	142.5 144.0	146.1 145.4	125.2 128.1	115.9 117.6	127.2 131.0	141.4 143.3	135.9 134.9	103.1 107.7		
Nov.	2.6	0.9	144.6	138.2	153.2	142.8	146.2	125.7	117.0	126.7	141.4	133.5	105.6		
Dec.	-2.5	-1.4	139.8	134.9	143.1	138.8	139.2	123.9	117.1	122.1	136.2	131.4	109.6		
2008 Jan. Feb.	6.6	2.2	147.5	140.4	152.5	147.6	147.5	128.4	118.7	132.1	139.5	135.2	118.9		
				Unit value indic	es (n.s.a.	; 2000 = 100; an	nual percentage	changes fo	or columns 1 and	2)					
2004	-0.1	2.7	97.6	96.6	95.7	101.2	97.3	97.4	98.3	92.3	99.0	96.3	99.6		
2005 2006	2.9 3.6	8.0 7.4	100.4 104.0	100.6 104.9	96.8 98.7	103.3 106.5	99.4 102.0	105.2 113.0	111.1 123.1	91.8 91.9	101.5 105.1	98.5 101.9	137.7 166.5		
2007	2.2	1.4	106.3	108.4	100.2	108.0	104.1	114.6	126.8	89.5	106.0	102.9	169.2		
2006 Q3 Q4	2.9 2.6	5.6 1.5	104.1 104.5	105.2 105.8	97.9 99.0	106.7 106.6	101.9 102.9	114.8 111.5	126.0 121.0	91.1 90.5	105.9 105.3	102.6 102.4	177.2 151.5		
2007 Q1	1.7	-1.0	105.4	107.5	99.8	107.9	103.8	111.4	120.9	90.3	105.6	103.0	143.5		
Q2 Q3	2.7 2.5	0.2 1.0	106.5 106.7	108.8 108.8	100.5 100.3	107.8 108.3	104.5 104.4	113.3 115.9	124.9 128.7	88.9 89.3	104.9 107.3	102.8 103.5	162.1 176.2		
Q4	2.0	5.7	106.6	108.7	100.1	100.9	103.7	117.8	132.8	89.4	106.4	102.3	195.2		
2007 Sep.	2.5 2.2	2.5	106.7	109.0	100.2	107.6	104.1	116.3	129.0 130.3	90.1	107.7 106.0	103.7	176.5		
Oct. Nov.	2.0	4.6 6.1	106.5 106.6	108.8 108.8	99.7 99.7	108.1 107.8	103.9 103.6	116.3 118.2	130.3	89.4 89.6	106.0	102.4 102.5	183.1 200.0		
Dec.	1.8	6.4	106.7	108.4	100.9	107.8	103.7	118.9	134.6	89.3	107.0	102.1	202.6		
2008 Jan. Feb.	3.1	9.9	108.0	110.7	101.7	108.7	104.4	121.9	138.3	90.0	108.6	103.8	201.6		

Source: Eurostat.



External transactions and positions

# **7.5 Trade in goods** (EUR billions, unless otherwise indicated; seasonally adjusted)

# 2. Geographical breakdown

	Total	European	<b>Union 27</b> (	outside the	euro area)	Russia	Switzer- land	Turkey	United States		Asia		Africa	Latin America	Other countries
		Denmark	Sweden	United Kingdom	Other EU countries						China	Japan			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2004	1.1.10.6	25.0	(2.2	2015	100.0	25.0	Exports (1		172.0	225.5	10.1	22.2		10 7	
2004 2005	1,142.6 1,237.0	25.8 29.0	42.2 45.2	204.5 203.3	133.9 153.2	35.9 43.7	66.6 70.8	31.8 34.7	172.8 185.3	225.7 244.2	40.4 43.3	33.3 34.1	64.6 73.4	40.7 46.9	98.1 107.2
2006 2007	1,383.5 1,497.9	31.7 33.7	49.8 55.2	216.8 228.7	189.9 219.7	55.2 67.0	77.2 81.8	38.8 40.9	199.8 194.8	271.7 295.8	53.7 60.1	34.5 34.2	77.7 87.1	54.4 61.3	120.5 131.8
2006 Q3 Q4	347.0 363.1	7.9 8.2	12.7 13.2	54.6 54.8	48.2 51.3	14.2 15.7	19.4 20.8	9.7 9.7	49.5 51.2	67.9 72.1	13.6 14.8	8.6 8.7	19.2 20.1	13.5 14.2	30.2 31.8
2007 Q1	367.0	8.3	13.5	56.6	52.4	15.7	20.5	10.2	49.8	72.1	14.3	8.7	21.4	14.8	31.8
Q2 Q3	369.9 380.5	8.4 8.5	13.9 14.1	56.0 58.7	53.8 56.3	16.7 17.2	20.0 20.6	9.9 10.3	48.6 49.4	73.0 74.9	14.9 15.3	8.8 8.4	21.4 22.2	15.4 15.6	32.9 32.8
Q4	380.4	8.5	13.7	57.5	57.2	17.5	20.0	10.5	47.1	75.8	15.6	8.2	22.1	15.6	34.2
2007 Sep. Oct.	127.0 128.5	2.8 2.8	4.6 4.8	19.2 19.4	18.8 19.2	5.7 5.8	7.0 6.9	3.5 3.4	16.6 16.2	24.9 25.2	5.2 5.3	2.7 2.8	7.3 7.3	5.1 5.3	11.5 12.1
Nov.	128.0	2.9	4.6	19.2	19.1	5.9	7.0	3.6	15.9	25.3	5.1	2.7	7.3	5.2	12.1
Dec. 2008 Jan.	123.9 132.3	2.8 2.9	4.3	18.9 19.6	18.9 20.1	5.8	6.7	3.5	15.0 16.5	25.3 26.4	5.2 5.8	2.6	7.5	5.0 5.3	10.1
Feb.	132.5	. 2.9	4.7		20.1	6.2 6.5	6.9	4.0	16.5	26.4	5.5	3.0	7.8 8.0	5.4	
							share of tot	•							
2007	100.0	2.3	3.7	15.3	14.7	4.5	5.5	2.7	13.0	19.8	4.0	2.3	5.8	4.1	8.8
2004	1,075.9	25.4	39.8	144.9	115.5	56.6	Imports ( 53.4	23.2	113.4	309.3	92.4	54.1	72.9	45.2	76.3
2005	1,227.5	26.4	42.3	153.2	127.8	76.3	58.1	25.5	120.2	363.6	118.2	53.2	96.0	53.8	84.3
2006 2007	1,397.1 1,473.1	28.5 28.1	47.7 51.7	167.2 167.5	152.2 174.4	95.6 97.3	62.3 67.1	29.4 32.2	125.9 130.8	418.6 444.8	144.5 170.0	57.0 58.3	110.5 112.6	66.3 74.5	93.0 92.2
2006 Q3 Q4	353.7 356.7	7.2 7.1	12.1 12.6	41.6 41.0	38.9 40.9	24.0 22.1	16.0 16.0	7.5 7.6	31.4 32.5	105.2 108.1	35.7 39.9	14.4 14.4	28.4 27.7	16.8 17.4	24.7 23.6
2007 Q1	358.4	7.0	12.9	40.7	41.4	22.6	16.9	7.9	33.5	110.7	42.4	14.9	26.4	18.1	20.3
Q2 Q3	360.2 375.4	7.1 7.3	12.8 12.8	41.5 42.8	42.5 44.8	23.8 23.6	16.5 17.2	7.9 8.1	32.1 33.3	107.5 114.5	39.6 44.6	14.3 14.8	27.0 28.1	18.4 18.8	23.3 24.1
Q4	379.0	6.7	13.3	42.5	45.6	27.3	16.5	8.3	32.0	112.1	43.4	14.3	31.1	19.2	24.4
2007 Sep. Oct.	124.1 126.9	2.4 2.3	4.3 4.4	13.9 14.2	15.2 15.3	7.6 9.0	5.7 5.6	2.7 2.7	11.3 10.7	37.4 37.7	14.8 14.8	4.9 4.9	9.4 9.5	6.4 6.4	7.9 9.1
Nov. Dec.	126.6 125.5	2.3 2.2	4.5 4.5	14.2 14.1	15.4 14.9	9.2 9.2	5.5 5.4	2.8 2.8	10.9 10.4	37.0 37.5	14.4 14.1	4.6 4.7	10.1 11.4	6.5 6.3	8.4 6.9
2008 Jan.	123.3	2.2	4.5	14.1	14.9	9.2	5.5	2.8	10.4	37.5	14.1	4.7	11.4	6.5	9.2
Feb.	132.8					8.9	5.8	2.7	10.9	38.0	14.6	4.9	11.1	6.3	
2007	100.0	1.9	3.5	11.4	11.8	6.6	share of tot 4.6	al imports 2.2	8.9	30.2	11.5	4.0	7.6	5.1	6.3
2007	100.0	1.9	5.5	11.4	11.0	0.0	Balan		0.9	50.2	11.5	4.0	7.0	5.1	0.3
2004	66.6	0.4	2.4	59.7	18.4	-20.7	13.3	8.6	59.3	-83.6	-52.0	-20.8	-8.4	-4.5	21.8
2005 2006	9.5 -13.6	2.6 3.2	2.9 2.1	50.1 49.7	25.4 37.7	-32.6 -40.4	12.7 15.0	9.2 9.4	65.2 73.9	-119.4 -146.9	-74.9 -90.8	-19.1 -22.5	-22.7 -32.8	-6.9 -11.9	22.9 27.5
2000	24.8	5.7	3.5	61.3	45.3	-30.3	13.0	8.7	64.0	-149.0	-109.9	-22.5	-25.5	-13.2	39.6
2006 Q3 Q4	-6.7 6.3	0.7 1.1	0.6 0.6	13.0 13.8	9.3 10.3	-9.9 -6.4	3.4 4.9	2.2 2.1	18.2 18.7	-37.2 -36.1	-22.1 -25.1	-5.7 -5.6	-9.1 -7.7	-3.3 -3.2	5.5 8.1
2007 Q1 Q2	8.6 9.7	1.3 1.4	0.6 1.1	15.9 14.5	10.9 11.3	-7.0 -7.1	3.5 3.6	2.3 1.9	16.3 16.5	-38.5 -34.5	-28.1 -24.8	-6.2 -5.4	-5.0 -5.6	-3.3 -3.1	11.5
Q2 Q3 Q4	5.1 1.3	1.4 1.3 1.8	1.1 1.3 0.4	14.3 15.9 14.9	11.5 11.5 11.6	-7.1 -6.4 -9.8	3.4 4.2	2.2 2.3	16.5 16.1 15.1	-34.5 -39.6 -36.3	-24.8 -29.3 -27.7	-5.4 -6.4 -6.1	-5.0 -6.0 -8.9	-3.1 -3.2 -3.7	9.6 8.7 9.8
2007 Sep.	2.9	0.4	0.3	5.3	3.6	-1.9	1.3	0.8	5.3	-12.5	-9.5	-2.2	-2.1	-1.3	3.6
Oct. Nov.	1.5 1.4	0.5 0.6	0.4 0.1	5.1 5.0	3.8 3.8	-3.2 -3.3	1.3 1.5	0.7 0.8	5.5 5.0	-12.5 -11.7	-9.6 -9.3	-2.1 -1.9	-2.2 -2.8	-1.1 -1.3	3.0
Dec.	-1.6	0.6	-0.1	4.8	4.0	-3.3	1.4	0.7	4.6	-12.2	-8.9	-2.1	-3.9	-1.3	3.6 3.2
2008 Jan. Feb.	-1.0 2.1	0.7	0.2	4.8	4.2	-3.2 -2.5	1.4 1.2	1.2 1.2	5.1 5.8	-13.0 -11.3	-9.2 -9.1	-1.8 -2.0	-3.7 -3.1	-1.2 -0.9	2.6

Source: Eurostat.



# **EXCHANGE RATES**

# 8.1 Effective exchange rates <sup>1</sup>) (period averages; index 1999 Q1=100)

			<b>EER-22</b>				<b>EER-42</b>	
	Nominal	Real CPI 2	Real PPI 3	Real GDP deflator 4	Real ULCM 5	Real ULCT 6	Nominal 7	Real CPI 8
2005 2006 2007	103.3 103.6 107.7	104.2 104.6 108.3	102.5 103.0 106.9	102.2 102.2 105.7	98.6 99.4 102.1	101.8 101.3 104.5	109.7 110.0 114.2	103.7 103.4 106.6
2007 Q1 Q2 Q3 Q4 2008 Q1	105.5 107.1 107.6 110.5 112.7	106.2 107.7 108.2 111.2 113.1	104.9 106.2 106.8 109.6 111.4	103.7 105.2 105.6 108.2	99.8 102.4 101.7 104.6	102.2 104.3 104.4 107.0	112.1 113.5 114.1 117.0 119.4	104.9 106.0 106.4 109.0 110.8
2007 Apr. May June July	107.2 107.3 106.9 107.6	107.8 107.9 107.4 108.1	106.4 106.2 105.9 106.5	- - -	- - -	- - -	113.7 113.6 113.2 113.9	106.3 106.1 105.6 106.2
Aug. Sep. Oct. Nov. Dec.	107.1 108.2 109.4 111.0 111.2	107.7 108.9 110.1 111.7 111.7	106.4 107.5 108.7 110.0 110.0				113.7 114.8 115.8 117.6 117.6	106.0 107.0 107.9 109.6 109.4
2008 Jan. Feb. Mar. Apr.	112.0 111.8 114.6 116.0	112.3 111.9 115.0 116.6	110.5 110.5 113.0 114.5	- - -	- - -	- - -	118.3 118.2 121.5 123.1	109.9 109.5 112.9 114.4
2008 Apr.	1.3	1.3	1.3	us previous month - 	-	-	1.3	1.3
2008 Apr.	8.3	8.1	7.7	-	-	-	8.3	7.6

# **C35 Effective exchange rates** (monthly averages; index 1999 Q1=100)

# **C36 Bilateral exchange rates** (monthly averages; index 1999 Q1=100)





Source: ECB. 1) For the definition of the trading partner groups and other information, please refer to the General notes.



# 8.2 Bilateral exchange rates (period averages; units of national currency per euro)

	Danish krone	Swedish krona	Pound sterling	US dollar	Japanese yen	Swiss franc	South Korean won	Hong Kong dollar	Singapore dollar	Canadian dollar	Norwegian krone	Australian dollar
	1	2	3	4	5	6	7	8	9	10	11	12
2005 2006 2007	7.4518 7.4591 7.4506	9.2822 9.2544 9.2501	0.68380 0.68173 0.68434	1.2441 1.2556 1.3705	136.85 146.02 161.25	1.5483 1.5729 1.6427	1,273.61 1,198.58 1,272.99	9.6768 9.7545 10.6912	2.0702 1.9941 2.0636	1.5087 1.4237 1.4678	8.0092 8.0472 8.0165	1.6320 1.6668 1.6348
2007 Q3 Q4 2008 Q1	7.4446 7.4557 7.4534	9.2639 9.2899 9.3996	0.68001 0.70782 0.75698	1.3738 1.4486 1.4976	161.90 163.83 157.80	1.6473 1.6596 1.6014	1,274.31 1,334.12 1,430.84	10.7250 11.2639 11.6737	2.0841 2.1061 2.1107	1.4374 1.4201 1.5022	7.9175 7.8778 7.9583	1.6229 1.6279 1.6533
2007 Oct. Nov. Dec.	7.4534 7.4543 7.4599	9.1735 9.2889 9.4319	0.69614 0.70896 0.72064	1.4227 1.4684 1.4570	164.95 162.89 163.55	1.6706 1.6485 1.6592	1,301.67 1,348.46 1,356.79	11.0327 11.4211 11.3619	2.0849 2.1242 2.1108	1.3891 1.4163 1.4620	7.6963 7.9519 8.0117	1.5837 1.6373 1.6703
2008 Jan. Feb. Mar. Apr.	7.4505 7.4540 7.4561 7.4603	9.4314 9.3642 9.4020 9.3699	0.74725 0.75094 0.77494 0.79487	1.4718 1.4748 1.5527 1.5751	158.68 157.97 156.59 161.56	1.6203 1.6080 1.5720 1.5964	1,387.66 1,392.57 1,523.14 1,555.98	11.4863 11.4996 12.0832 12.2728	2.1062 2.0808 2.1489 2.1493	1.4862 1.4740 1.5519 1.5965	7.9566 7.9480 7.9717 7.9629	1.6694 1.6156 1.6763 1.6933
					% chan	ge versus	previous month					
2008 Apr.	0.1	-0.3	2.6	1.4	3.2 % cha	1.5 nge versus	2.2 s previous year	1.6	0.0	2.9	-0.1	1.0
2008 Apr.	0.1	1.4	17.0	16.5	0.5	-2.5	23.7	16.2	5.0	4.1	-1.9	3.7

	Czech	Estonian	Latvian	Lithuanian	Hungarian	Polish	Slovak	Bulgarian	New Roma-	Croatian N	ew Turkish	
	koruna	kroon	lats	litas	forint	zloty	koruna	lev	nian leu	kuna	lira	
	13	14	15	16	17	18	19	20	21	22	23	
2005	29.782	15.6466	0.6962	3.4528	248.05	4.0230	38.599	1.9558	3.6209	7.4008	1.6771	
2006	28.342	15.6466	0.6962	3.4528	264.26	3.8959	37.234	1.9558	3.5258	7.3247	1.8090	
2007	27.766	15.6466	0.7001	3.4528	251.35	3.7837	33.775	1.9558	3.3353	7.3376	1.7865	
2007 Q3	27.941	15.6466	0.6988	3.4528	251.82	3.7900	33.579	1.9558	3.2321	7.3080	1.7685	
Q4	26.826	15.6466	0.7005	3.4528	252.86	3.6584	33.424	1.9558	3.4489	7.3281	1.7261	
2008 Q1	25.564	15.6466	0.6973	3.4528	259.30	3.5759	33.069	1.9558	3.6887	7.2852	1.8036	
2007 Oct.	27.335	15.6466	0.7030	3.4528	251.02	3.7062	33.624	1.9558	3.3537	7.3284	1.7089	
Nov.	26.733	15.6466	0.7005	3.4528	254.50	3.6575	33.232	1.9558	3.4739	7.3365	1.7498	
Dec.	26.317	15.6466	0.6975	3.4528	253.18	3.6015	33.404	1.9558	3.5351	7.3178	1.7195	
2008 Jan.	26.050	15.6466	0.6982	3.4528	256.03	3.6092	33.546	1.9558	3.6937	7.3155	1.7322	
Feb.	25.377	15.6466	0.6967	3.4528	262.15	3.5768	33.085	1.9558	3.6557	7.2707	1.7632	
Mar.	25.208	15.6466	0.6970	3.4528	259.94	3.5363	32.499	1.9558	3.7194	7.2662	1.9309	
Apr.	25.064	15.6466	0.6974	3.4528	253.75	3.4421	32.374	1.9558	3.6428	7.2654	2.0500	
				%	change versus p	revious mon	th					
2008 Apr.	-0.6	0.0	0.1	0.0	-2.4	-2.7	-0.4	0.0	-2.1	0.0	6.2	
	% change versus previous year											
2008 Apr.	-10.5	0.0	-0.9	0.0	3.2	-9.8	-3.3	0.0	9.3	-1.8	11.6	

	Brazilian	Chinese	Icelandic	Indonesian	Malaysian	Mexican	New Zealand	Philippine	Russian	South African	Thai
	real <sup>1)</sup>	yuan renminbi	krona	rupiah	ringgit	peso <sup>1)</sup>	dollar	peso	rouble	rand	baht
	24	25	26	27	28	29	30	31	32	33	34
2005	3.0360	10.1955	78.23	12,072.83	4.7119	13.5643	1.7660	68.494	35.1884	7.9183	50.068
2006	2.7333	10.0096	87.76	11,512.37	4.6044	13.6936	1.9373	64.379	34.1117	8.5312	47.594
2007	2.6603	10.4178	87.63	12,528.33	4.7076	14.9801	1.8627	63.026	35.0183	9.6596	44.214
2007 Q3	2.6333	10.3834	86.71	12,705.62	4.7608	15.0578	1.8508	63.035	35.0350	9.7645	43.220
Q4	2.5863	10.7699	88.69	13,374.03	4.8613	15.7217	1.8965	62.330	35.6947	9.8088	45.097
2008 Q1	2.6012	10.7268	101.09	13,861.78	4.8325	16.1862	1.8960	61.211	36.3097	11.2736	46.461
2007 Oct.	2.5653	10.6741	86.30	12,945.80	4.8005	15.4044	1.8739	62.894	35.4008	9.6371	44.898
Nov.	2.5920	10.8957	89.34	13,608.92	4.9279	15.9776	1.9231	63.271	35.9174	9.8553	46.120
Dec.	2.6050	10.7404	90.82	13,620.45	4.8576	15.8096	1.8930	60.556	35.7927	9.9626	44.153
2008 Jan.	2.6111	10.6568	94.50	13,839.19	4.8090	16.0639	1.9054	60.079	36.0300	10.3101	44.758
Feb.	2.5516	10.5682	98.06	13,542.26	4.7548	15.8786	1.8513	59.845	36.1357	11.2899	46.085
Mar.	2.6445	10.9833	112.08	14,241.09	4.9455	16.6678	1.9344	64.031	36.8259	12.3712	48.848
Apr.	2.6602	11.0237	116.65	14,497.21	4.9819	16.5608	1.9960	65.790	37.0494	12.2729	49.752
				% cha	ange versus previ	ious month					
2008 Apr.	0.6	0.4	4.1	1.8	0.7	-0.6	3.2	2.7	0.6	-0.8	1.9
	% change versus previous year										
2008 Apr.	-3.2	5.6	32.0	17.9	7.3	11.5	8.5	2.1	6.1	27.7	13.0

Source: ECB. 1) For these currencies the ECB computes and publishes euro reference exchange rates as from 1 January 2008. Previous data are indicative.





# **DEVELOPMENTS OUTSIDE THE EURO AREA**

# 9.1 In other EU Member States (annual percentage changes, unless otherwise indicated)

### 1. Economic and financial developments

	Bulgaria	Czech Republic	Denmark	Estonia	Latvia	Lithuania	Hungary	Poland	Romania	Slovakia	Sweden	United Kingdom
	1	2	3	4	5	6	7	8	9	10	11	12
						HICP						
2006 2007	7.4 7.6	2.1 3.0	1.9 1.7	4.4 6.7	6.6 10.1	3.8 5.8	4.0 7.9	1.3 2.6	6.6 4.9	4.3 1.9	1.5 1.7	2.3 2.3
2007 Q3	9.0	2.7	1.0	6.7	10.4	5.9	7.3	2.4	5.1	1.4	1.4	1.8
Q4 2008 Q1	11.2 12.4	4.9 7.6	2.2 3.2	9.2 11.3	13.7 16.3	7.9 10.8	7.1 6.9	3.7 4.5	6.8 8.0	2.4 3.4	2.3 3.1	2.1 2.4
2003 Q1 2007 Nov.	11.4	5.1	2.5	9.3	13.7	7.9	7.2	3.7	6.8	2.3	2.4	2.1
Dec.	11.6	5.5	2.4	9.7	14.0	8.2	7.4	4.2	6.7	2.5	2.5	2.1
2008 Jan. Feb.	11.7 12.2	7.9 7.6	3.0 3.3	11.3 11.5	15.6 16.5	10.0 10.9	7.4 6.7	4.4 4.6	7.3 8.0	3.2 3.4	3.0 2.9	2.2 2.5
Mar.	13.2	7.1	3.3	11.2	16.6	11.4	6.7	4.4	8.7	3.6	3.2	2.5
				0		ficit (-)/surplus						
2005 2006	1.8 3.0	-3.6 -2.7	5.0 4.8	1.8 3.4	-0.4 -0.2	-0.5 -0.5	-7.8 -9.2	-4.3 -3.8	-1.2 -2.2	-2.8 -3.6	2.2 2.3	-3.4 -2.6
2007	3.4	-1.6	4.4	2.8	0.0	-1.2	-5.5	-2.0	-2.5	-2.2	3.5	-2.9
					-	ent gross debt a						
2005 2006	29.2 22.7	29.7 29.4	36.4 30.4	4.5 4.2	12.4 10.7	18.6 18.2	61.6 65.6	47.1 47.6	15.8 12.4	34.2 30.4	50.9 45.9	42.1 43.1
2007	18.2	28.7	26.0	3.4	9.7	17.3	66.0	45.2	13.0	29.4	40.6	43.8
				ng-term gover		yield as a % p		-				
2007 Nov. Dec.	4.94 5.08	4.55 4.68	4.21 4.33	-	5.12 5.10	4.57 4.94	6.74 6.93	5.70 5.86	6.96 7.05	4.59 4.61	4.22 4.31	4.74 4.70
2008 Jan.	5.07	4.56	4.15	-	5.71	4.73	7.11	5.81	7.15	4.48	4.09	4.26
Feb. Mar.	5.24 4.85	4.53 4.68	4.08 4.04	-	5.11 5.25	4.51 4.36	7.58 8.41	5.82 5.99	7.29 7.34	4.36 4.34	4.02 3.92	4.45 4.42
Apr.	4.0.5	4.08	4.29	-		4.50	8.02	5.99	7.54	4.54	4.06	4.63
				3-month in	nterest rate a	is a % per annu	ım, period ave	rage				
2007 Oct.	5.59	3.55	4.84	5.22	12.75	5.93	7.60	5.13	7.25	4.33	4.37	6.27
Nov. Dec.	6.32 6.56	3.73 4.05	4.82 4.92	5.36 7.23	11.69 10.78	6.50 7.07	7.51 7.63	5.36 5.67	7.71 7.93	4.35 4.31	4.61 4.74	6.41 6.36
2008 Jan.	6.55	3.96	4.73	7.03	9.01	5.69	7.78	5.64	8.43	4.32	4.52	5.66
Feb. Mar.	6.65 6.68	3.94 4.04	4.61 4.81	6.62 6.35	7.52 6.49	4.90 4.82	8.21	5.74 6.03	9.67 10.54	4.28 4.29	4.62 4.84	5.64 5.89
						Real GDP						
2006	7.1	6.4	3.9	11.2	12.2	7.7	3.9	6.2	7.9	8.5	4.1	2.9
2007 2007 Q3	6.2	6.5	1.8	7.1	10.3 10.9	8.8	1.3	6.6	6.0 5.7	10.4 9.4	2.6	3.0
Q4	4.9 6.9	6.6	1.0	4.8	8.1	8.5	0.9	6.9	6.6	14.3	2.6	2.8 2.5
2008 Q1			•		1 2 1	6.2			•	•	•	2.5
2006	-17.1	-2.9	2.7	-13.2	-21.3	ccounts balanc	-5.4	-2.1	-10.5	-7.1	7.8	-3.8
2007	-20.3	-2.9	1.1	-15.2	-20.9	-11.9	-3.9	-2.6	-13.5	-4.7	8.3	-4.8
2007 Q2	-19.0	-4.0	2.9	-14.0	-22.9	-15.1	-5.8	-4.0	-15.3	-6.7	5.9	-4.2
Q3 Q4	-11.8 -25.1	-4.4 -2.1	2.5 0.9	-16.5 -11.0	-24.5 -13.2	-10.1 -10.2	-2.8 -2.5	-2.0 -1.8	-10.8 -13.5	-6.3 -6.8	7.0 9.6	-6.2
					Un	it labour costs						
2006	4.4	1.7	1.7	8.1	15.3	8.8		-1.0		1.7	-0.2	2.5
2007 2007 Q2	14.2	2.0	3.7	18.9 20.1	24.9	7.0	•	•	•	-0.4	3.9 3.3	1.5
Q3 Q4	16.7	2.3	4.2	20.7	-	5.9	-	-	-	0.3	3.4	2.0
Q4	14.5	1.5	3.1	19.1	-	9.1	-	-	-	-1.6	4.7	2.2
2006	8.9	7.1	3.9	5.9	6.9	ent rate as a %	7.5	13.8	7.3	13.4	7.0	5.4
2008	8.9 6.9	5.3	3.9	4.7	6.0	4.3	7.3	9.6	6.4	13.4	6.1	5.3
2007 Q3	6.7	5.1	3.9	4.6	6.0	4.1	7.3	9.3	6.3	11.2	5.8	5.3
Q4 2008 Q1	6.0 6.0	4.9 4.6	3.4 3.1	4.6 5.4	5.4 5.3	4.2 4.5	7.8 7.6	8.6 8.0	6.2	10.5 9.9	5.9 5.7	5.1
2007 Nov.	6.0	4.9	3.4	4.6	5.4	4.2	7.8	8.6	6.2	10.4	6.0	5.0
Dec.	5.9	4.7	3.3	4.6	5.4	4.3	7.9	8.2	6.2	10.3	5.8	5.0
2008 Jan. Feb.	6.1 6.0	4.7 4.6	3.2 3.1	5.3 5.4	5.4 5.3	4.6 4.5	7.6 7.6	8.3 8.0	•	10.1 9.9	5.7 5.6	5.1
Mar.	5.9	4.5	3.0	5.5	5.3	4.5	7.6	7.7		9.8	5.6	

Sources: European Commission (Economic and Financial Affairs DG and Eurostat), national data, Reuters and ECB calculations.



# 9.2 In the United States and Japan

### 1. Economic and financial developments

		-									
	Consumer price index	Unit labour costs <sup>1)</sup> (manufacturing)	Real GDP	Industrial production index (manufacturing)	Unemployment rate as a % of labour force (s.a.)	Broad money <sup>2)</sup>	3-month interbank deposit rate <sup>3)</sup>	10-year zero coupon government bond yield <sup>3)</sup> end-of- period	Exchange rate <sup>4)</sup> as national currency per euro	Fiscal deficit (-)/ surplus (+) as a % of GDP	Gross public debt <sup>5)</sup> as a % of GDP
	1	2	3	4	5	6	7	8	9	10	11
					United States						
2004 2005 2006 2007	2.7 3.4 3.2 2.9	-0.2 -0.4 -1.5 1.7	3.6 3.1 2.9 2.2	3.1 4.2 2.8 1.8	5.5 5.1 4.6 4.6	4.7 4.4 4.8 5.9	1.62 3.56 5.19 5.30	4.80 5.05 5.26 4.81	1.2439 1.2441 1.2556 1.3705	-4.4 -3.6 -2.6 -3.0	48.9 49.2 48.6 49.2
2007 Q1 Q2 Q3 Q4 2008 Q1	2.4 2.7 2.4 4.0 4.1	0.9 2.4 2.8 0.5	1.5 1.9 2.8 2.5 2.5	0.9 1.8 2.2 2.5 2.1	4.5 4.5 4.7 4.8 4.9	5.4 6.1 6.3 5.8 6.4	5.36 5.36 5.45 5.02 3.26	5.27 5.78 5.34 4.81 4.24	1.3106 1.3481 1.3738 1.4486 1.4976	-3.0 -2.7 -3.1 -3.3	49.5 48.3 48.7 49.2
2007 Dec.	4.1	-	-	1.9	5.0	5.6	4.97	4.81	1.4570		
2008 Jan. Feb. Mar. Apr.	4.3 4.0 4.0	- - -	- - -	2.8 2.1 1.4	4.9 4.8 5.1 5.0	5.6 6.7 7.0	3.92 3.09 2.78 2.79	4.37 4.47 4.24 4.59	1.4718 1.4748 1.5527 1.5751	- - -	
					Japan						
2004 2005 2006 2007	0.0 -0.3 0.2 0.1	-4.9 -0.6 -2.6	2.7 1.9 2.4 2.0	5.5 1.1 4.8 2.7	4.7 4.4 4.1 3.8	1.9 1.8 1.1 1.6	0.05 0.06 0.30 0.79	1.53 1.66 1.85 1.70	134.44 136.85 146.02 161.25	-6.2 -6.7 -1.4	156.8 163.2 159.5
2007 Q1 Q2 Q3 Q4 2008 Q1	-0.1 -0.1 -0.1 0.5 1.0	-2.2	2.9 1.7 1.9 1.7	3.0 2.4 2.7 2.9	4.0 3.8 3.8 3.8 3.9	1.0 1.5 1.9 2.0 2.2	0.62 0.69 0.89 0.96 0.92	1.85 2.11 1.88 1.70 1.48	156.43 162.89 161.90 163.83 157.80		· · · ·
2007 Dec.	0.7	•	-	0.8	3.8	2.1	0.99	1.70	163.55	-	-
2008 Jan. Feb. Mar. Apr.	0.7 1.0 1.2	- - - -	- - -	2.2 4.2	3.8 3.9 3.8	2.1 2.3 2.3	0.89 0.90 0.97 0.92	1.63 1.60 1.48 1.76	158.68 157.97 156.59 161.56	- - -	-

C37 Real gross domestic product





euro area 6)



Sources: National data (columns 1, 2 (United States), 3, 4, 5 (United States), 6, 9 and 10); OECD (column 2 (Japan)); Eurostat (column 5 (Japan), euro area chart data); Reuters (columns 7 and 8); ECB calculations (column 11).

1) Data for the United States are seasonally adjusted.

Average-of-period values; M2 for US, M2+CDs for Japan. 2)

3) 4) Percentages per annum. For further information on 3-month interbank deposit rate, see Section 4.6. For more information, see Section 8.2.

5) Gross consolidated general government debt (end of period).

6) Data refer to the changing composition of the euro area. For further information, see the General notes.


# LIST OF CHARTS

C1	Monetary aggregates	S   2
C2	Counterparts	\$12
C3	Components of monetary aggregates	\$13
C4	Components of longer-term financial liabilities	\$13
C5	Loans to financial intermediaries and non-financial corporations	S I 4
C6	Loans to households	S I 5
C7	Loans to government and non-euro area residents	S I 6
	Total deposits by sector (financial intermediaries)	S I 7
	Total deposits and deposits included in M3 by sector (financial intermediaries)	S I 7
	Total deposits by sector (non-financial corporations and households)	\$18
	Total deposits and deposits included in M3 by sector (non-financial corporations and households)	\$18
	Deposits by government and non-euro area residents	\$19
	MFI holdings of securities	<b>S20</b>
	Total assets of investment funds	<b>S24</b>
	Total outstanding amounts and gross issues of securities, other than shares, issued by euro area residents	\$35
	Net issues of securities, other than shares, seasonally adjusted and non-seasonally adjusted	\$37
	Annual growth rates of long-term debt securities, by sector of the issuer, in all currencies combined	\$38
	Annual growth rates of short-term debt securities, by sector of the issuer, in all currencies combined	\$39
	Annual growth rates for quoted shares issued by euro area residents	<b>S40</b>
	Gross issues of quoted shares by sector of the issuer	S 4 I
	New deposits with agreed maturity	<b>S43</b>
	New loans at floating rate and up to 1 year initial rate fixation	<b>S43</b>
	Euro area money market rates	<b>S44</b>
	3-month money market rates	<b>S44</b>
	Euro area spot yield curves	<b>S45</b>
	Euro area spot rates and spreads	<b>S45</b>
C27	Dow Jones EURO STOXX Broad, Standard & Poor's 500 and Nikkei 225	<b>S46</b>
	Deficit, borrowing requirement and change in debt	\$59
C29	Maastricht debt	\$59
C30	B.o.p. current account balance	<b>S60</b>
C31	B.o.p. goods	<b>S 6 I</b>
C32	B.o.p. services	S 6 1
C33	B.o.p. net direct and portfolio investment	<b>S64</b>
C34	Main b.o.p. transactions underlying the developments in MFI net external assets	<b>S69</b>
	Effective exchange rates	<b>S72</b>
C36	Bilateral exchange rates	<b>S72</b>
C37	Real gross domestic product	S 7 5
C38	Consumer price indices	\$75





# **TECHNICAL NOTES**

#### **RELATING TO THE EURO AREA OVERVIEW**

# CALCULATION OF GROWTH RATES FOR MONETARY DEVELOPMENTS

The average growth rate for the quarter ending in month t is calculated as:

a) 
$$\left(\frac{0.5I_{t} + \sum_{i=1}^{2} I_{t-i} + 0.5I_{t-3}}{0.5I_{t-12} + \sum_{i=1}^{2} I_{t-i-12} + 0.5I_{t-15}} - 1\right) \times 100$$

where  $I_t$  is the index of adjusted outstanding amounts as at month t (see also below). Likewise, for the year ending in month t, the average growth rate is calculated as:

b) 
$$\left(\frac{0.5I_{t} + \sum_{i=1}^{11} I_{t-i} + 0.5I_{t-12}}{0.5I_{t-12} + \sum_{i=1}^{11} I_{t-i-12} + 0.5I_{t-24}} - 1\right) \times 100$$

#### **RELATING TO SECTIONS 2.1 TO 2.6**

#### **CALCULATION OF TRANSACTIONS**

Monthly transactions are calculated from monthly differences in outstanding amounts adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

If  $L_t$  represents the outstanding amount at the end of month t,  $C_t^M$  the reclassification adjustment in month t,  $E_t^M$  the exchange rate adjustment and  $V_t^M$  the other revaluation adjustments, the transactions  $F_t^M$  in month t are defined as:

c) 
$$F_{t}^{M} = (L_{t} - L_{t-1}) - C_{t}^{M} - E_{t}^{M} - V_{t}^{M}$$

Similarly, the quarterly transactions  $F_t^Q$  for the quarter ending in month t are defined as:

d) 
$$F_t^Q = (L_t - L_{t-3}) - C_t^Q - E_t^Q - V_t^Q$$

where L<sup>t-3</sup> is the amount outstanding at the end of month t-3 (the end of the previous quarter) and, for example,  $C_t^Q$  is the reclassification adjustment in the quarter ending in month t.

For those quarterly series for which monthly observations are now available (see below), the quarterly transactions can be derived as the sum of the three monthly transactions in the quarter.

# CALCULATION OF GROWTH RATES FOR MONTHLY SERIES

Growth rates may be calculated from transactions or from the index of adjusted outstanding amounts. If  $F_t^M$  and  $L_t$  are defined as above, the index  $I_t$  of adjusted outstanding amounts in month t is defined as:

e) 
$$I_t = I_{t-1} \times \left(1 + \frac{F_t^M}{L_{t-1}}\right)$$

The base of the index (of the non-seasonally adjusted series) is currently set as December 2006 = 100. Time series of the index of adjusted outstanding amounts are available on the ECB's website (www.ecb.europa.eu) under the "Money, banking and financial markets" subsection of the "Statistics" section.

The annual growth rate  $a_t$  for month t - i.e.the change in the 12 months ending in month t - may be calculated using either of the following two formulae:

f) 
$$a_t = \left[\prod_{i=0}^{11} \left(1 + \frac{F_{t-i}^M}{L_{t-1-i}}\right) - 1\right] \times 100$$

g) 
$$a_t = \begin{pmatrix} I_t \\ I_{t-12} \end{pmatrix} \times 100$$

Unless otherwise indicated, the annual growth rates refer to the end of the indicated period. For example, the annual percentage change for the year 2002 is calculated in g) by dividing the index of December 2002 by the index of December 2001.



Growth rates for intra-annual periods may be derived by adapting formula g). For example, the month-on-month growth rate  $a_t^M$  may be calculated as:

h) 
$$a_t^{\mathrm{M}} = \begin{pmatrix} I_t \\ I_{t-1} \end{pmatrix} \times 100$$

Finally, the three-month moving average (centred) for the annual growth rate of M3 is obtained as  $(a_{t+1} + a_t + a_{t-1})/3$ , where  $a_t$  is defined as in f) or g) above.

# CALCULATION OF GROWTH RATES FOR QUARTERLY SERIES

If  $F_t^Q$  and  $L_{t-3}$  are defined as above, the index  $I_t$  of adjusted outstanding amounts for the quarter ending in month t is defined as:

i) 
$$I_t = I_{t-3} \times \left(1 + \frac{F_t^Q}{L_{t-3}}\right)$$

The annual growth rate in the four quarters ending in month t, i.e.  $a_t$ , may be calculated using formula g).

# SEASONAL ADJUSTMENT OF THE EURO AREA MONETARY STATISTICS '

The approach used relies on a multiplicative decomposition through X-12-ARIMA.<sup>2</sup> The seasonal adjustment may include a day-of-the-week adjustment, and for some series is carried out indirectly by means of a linear combination of components. In particular, this is the case for M3, derived by aggregating the seasonally adjusted series for M1, M2 less M1, and M3 less M2.

The seasonal adjustment procedures are first applied to the index of adjusted outstanding amounts.<sup>3</sup> The resulting estimates of the seasonal factors are then applied to the levels and to the adjustments arising from reclassifications and revaluations, in turn yielding seasonally adjusted transactions. Seasonal (and trading day) factors are revised at annual intervals or as required.

#### **RELATING TO SECTIONS 3.1 TO 3.5**

#### EQUALITY OF USES AND RESOURCES

In Table 3.1 the data conform to a basic accounting identity. As regards non-financial transactions, total uses equal total resources for each transaction category. Likewise in the financial account, this accounting identity is also reflected, i.e. for each financial instrument category, total transactions in financial assets equal total transactions in liabilities. In the other changes in assets account and the financial balance sheets, total financial assets equal total liabilities for each financial instrument category, with the exception of monetary gold and special drawing rights, which are by definition not a liability of any sector.

## **CALCULATION OF BALANCING ITEMS**

The balancing items at the end of each account in Tables 3.1 and 3.2 are computed as follows:

The trade balance equals imports minus exports of goods and services vis-à-vis the euro area rest of the world.

- 1 For details, see "Seasonal adjustment of monetary aggregates and HICP for the euro area", ECB (August 2000) and the "Statistics" section of the ECB's website (www.ecb.europa.eu), under the "Money, banking and financial markets" sub-section.
- 2 For details, see Findley, D., Monsell, B., Bell, W., Otto, M., and Chen, B. C. (1998), "New Capabilities and Methods of the X-12-ARIMA Seasonal Adjustment Program", Journal of Business and Economic Statistics, 16, 2, pp.127-152, or "X-12-ARIMA Reference Manual", Time Series Staff, Bureau of the Census, Washington, D.C.

For internal purposes, the model-based approach of TRAMO-SEATS is also used. For details on TRAMO-SEATS, see Gomez, V. and Maravall, A. (1996), "Programs TRAMO and SEATS: Instructions for the User", Banco de España, Working Paper No. 9628, Madrid.

3 It follows that for the seasonally adjusted series, the level of the index for the base period, i.e. December 2001, generally differs from 100, reflecting the seasonality of that month.



Net operating surplus and mixed income is defined for resident sectors only and is calculated as gross value added (gross domestic product at market prices for the euro area) minus compensation of employees (uses) minus other taxes less subsidies on production (uses) minus consumption of fixed capital (uses).

Net national income is defined for resident sectors only and is computed as net operating surplus and mixed income plus compensation of employees (resources) plus taxes less subsidies on production (resources) plus net property income (resources minus uses).

Net disposable income is also only defined for resident sectors and equals net national income plus net current taxes on income and wealth (resources minus uses) plus net social contributions (resources minus uses) plus net social benefits other than social transfers in kind (resources minus uses) plus net other current transfers (resources minus uses).

Net saving is defined for resident sectors and is calculated as net disposable income plus the net adjustment for the change in net equity of households in pension funds reserves (resources minus uses) minus final consumption expenditure (uses). For the rest of the world, current external account is compiled as the trade balance plus all net income (resources minus uses).

Net lending/net borrowing is computed from the capital account as net saving plus net capital transfers (resources minus uses) minus gross capital formation (uses) minus acquisitions less disposals of non-produced non-financial assets (uses) plus consumption of fixed capital (resources). It can also be calculated in the financial account as total transactions in financial assets minus total transactions in liabilities (also known as changes in netfinancial worth (wealth) due to transactions). For the household and non-financial corporation sectors, there is a statistical discrepancy between these balancing items computed from the capital account and the financial account, respectively. Changes in net worth (wealth) are calculated as changes in net worth (wealth) due to savings and capital transfers plus other changes in net financial worth (wealth). It currently excludes other changes in non-financial assets due to unavailability of data.

Net financial worth (wealth) is calculated as total financial assets minus total liabilities, whereas changes in net financial worth (wealth) are equal to the sum of changes in net financial worth (wealth) due to transactions (lending/ net borrowing from the financial account) and other changes in net financial worth (wealth).

Finally, changes in net financial worth (wealth) due to transactions are computed as total transactions in financial assets minus total transactions in liabilities and other changes in net financial worth (wealth) are calculated as total other changes in financial assets minus total other changes in liabilities.

#### **RELATING TO SECTION 4.3 AND 4.4**

# CALCULATION OF GROWTH RATES FOR DEBT SECURITIES AND QUOTED SHARES

Growth rates are calculated on the basis of financial transactions and therefore exclude reclassifications, revaluations, exchange rate variations and any other changes which do not arise from transactions. They may be calculated from transactions or from the index of notional stocks. If  $N_t^M$  represents the transactions (net issues) in month t and  $L_t$  the level outstanding at the end of the month t, the index  $I_t$  of notional stocks in month t is defined as:

j) 
$$I_t = I_{t-1} \times \left(1 + \frac{N_t}{L_{t-1}}\right)$$

As a base, the index is set equal to 100 on December 2001. The growth rate  $a_t$  for month t corresponding to the change in the 12 months ending in month t, may be calculated using either of the following two formulae:

k) 
$$a_{t} = \left[\prod_{i=0}^{11} \left(1 + \frac{N_{t-i}^{M}}{L_{t-1-i}}\right) - 1\right] \times 100$$
  
l)  $a_{t} = \left(\frac{I_{t}}{I_{t-12}} - 1\right) \times 100$ 

The method used to calculate the growth rates for securities other than shares is the same as that used for the monetary aggregates, the only difference being that an "N" is used rather than an "F". The reason for this is to distinguish between the different ways of obtaining "net issues" for securities issues statistics and the equivalent "transactions" calculated used for the monetary aggregates.

The average growth rate for the quarter ending in month t is calculated as:

m) 
$$\left(\frac{0.5I_{t} + \sum_{i=1}^{2} I_{t-i} + 0.5I_{t-3}}{0.5I_{t-12} + \sum_{i=1}^{2} I_{t-i-12} + 0.5I_{t-15}} - 1\right) \times 100$$

where  $I_t$  is the index of notional stocks as at month t. Likewise, for the year ending in month t, the average growth rate is calculated as:

n) 
$$\left(\frac{0.5I_{t} + \sum_{i=1}^{11} I_{t-i} + 0.5I_{t-12}}{0.5I_{t-12} + \sum_{i=1}^{11} I_{t-i-12} + 0.5I_{t-24}} - 1\right) \times 100$$

The calculation formula used for Section 4.3 is also used for Section 4.4 and is likewise based on that used for the monetary aggregates. Section 4.4 is based on market values and the basis for the calculation are financial transactions, which exclude reclassifications, revaluations or any other changes that do not arise from transactions. Exchange rate variations are not included as all quoted shares covered are denominated in euro.

# SEASONAL ADJUSTMENT OF SECURITIES ISSUES STATISTICS<sup>4</sup>

The approach used relies on a multiplicative decomposition through X-12-ARIMA. The

seasonal adjustment for the securities issues total is carried out indirectly by means of a linear combination of sector and maturity component breakdowns.

The seasonal adjustment procedures are applied to the index of notional stocks. The resulting estimates of the seasonal factors are then applied to the outstanding amounts, from which seasonally adjusted net issues are derived. Seasonal factors are revised at annual intervals or as required.

Similar as depicted in formula l) and m), the growth rate  $a_t$  for month t corresponding to the change in the 6 months ending in month t, may be calculated using either of the following two formulae:

o) 
$$a_t = \left[\prod_{i=0}^{5} \left(1 + \frac{N_{t-i}^M}{L_{t-1-i}}\right) - 1\right] \times 100$$
  
p)  $a_t = \left(\frac{I_t}{I_{t-6}} - 1\right) \times 100$ 

#### **RELATING TO TABLE I IN SECTION 5.1**

### **SEASONAL ADJUSTMENT OF THE HICP<sup>4</sup>**

The approach used relies on multiplicative decomposition through X-12-ARIMA (see footnote 2 on page S78). The seasonal adjustment of the overall HICP for the euro area is carried out indirectly by aggregating the seasonally adjusted euro area series for processed food, unprocessed food, industrial goods excluding energy, and services. Energy is added without adjustment since there is no statistical evidence of seasonality. Seasonal factors are revised at annual intervals or as required.



For details, see "Seasonal adjustment of monetary aggregates and HICP for the euro area", ECB (August 2000) and the "Statistics" section of the ECB's website (www.ecb.europa.eu), under the "Money, banking and financial markets" sub-section.

Technical notes

## **RELATING TO TABLE 2 IN SECTION 7.1**

# SEASONAL ADJUSTMENT OF THE BALANCE OF PAYMENTS CURRENT ACCOUNT

The approach relies on multiplicative decomposition through X-12-ARIMA (see footnote 2 on page S78). The raw data for goods, services and income are pre-adjusted to take a working-day effect into account. The working-day adjustment in goods and services is corrected for national public holidays. Data on goods credits are also pre-adjusted for Easter. The seasonal adjustment for these items is carried out using these pre-adjusted series. The seasonal adjustment of the total current account is carried out by aggregating the seasonally adjusted euro area series for goods, services, income and current transfers. Seasonal (and trading day) factors are revised at semi-annual intervals or as required.

## **RELATING TO SECTION 7.3**

# CALCULATION OF GROWTH RATES FOR THE QUARTERLY AND ANNUAL SERIES

The annual growth rate for quarter t is calculated on the basis of quarterly transactions ( $F_t$ ) and positions (L<sub>i</sub>), as follows:

$$a_{t} = \left(\prod_{i=t-3}^{t} \left(1 + \frac{F_{i}}{L_{i-1}}\right) - 1\right) \times 100$$

The growth rate for the annual series is equal to the growth rate in the last quarter of the year.



# **GENERAL NOTES**

The "Euro area statistics" section of the Monthly Bulletin focuses on statistics for the euro area as a whole. More detailed and longer runs of data, with further explanatory notes, are available in the "Statistics" section of the ECB's website (www.ecb.europa.eu). This allows user-friendly access to data via the ECB's Statistical Data Warehouse (http://sdw.ecb.europa.eu/), which includes search and download facilities. Further services available under the "Data services" sub-section include the subscription to different datasets and a repository of compressed Comma Separated Value (CSV) files. For further information, please contact us at: statistics@ ecb.europa.eu.

In general, the cut-off date for the statistics included in the Monthly Bulletin is the day preceding the first meeting in the month of the ECB's Governing Council. For this issue, the cut-off date was 6 May 2008.

Unless otherwise indicated, all data series covering observations for 2008 relate to the Euro 15 (i.e. the euro area including Cyprus and Malta) for the whole time series. For interest rates, monetary statistics and the HICP (and, for consistency reasons, the components and counterparts of M3 and the components of the HICP), the statistical series refer to the changing composition of the euro area. Where applicable, this is indicated in the tables by means of a footnote. In such cases, where underlying data are available, absolute and percentage changes for 2001, 2007 and 2008, calculated from bases in 2000, 2006 and 2007, use a series which takes into account the impact of the entry of Greece, Slovenia, and Cyprus and Malta, respectively, into the euro area. Historical data referring to the euro area before the entry of Cyprus and Malta are available on the ECB's website at http:// www.ecb.europa.eu/stats/services/downloads/ html/index.en.html.

The statistical series referring to the changing composition of the euro area are based on the euro area composition at the time to which the statistics relate. Thus, data prior to 2001 refer to the Euro 11, i.e. the following 11 EU Member States: Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. Data from 2001 to 2006 refer to the Euro 12, i.e. the Euro 11 plus Greece. Data for 2007 refer to the Euro 13, i.e. the Euro 12 plus Slovenia, and data after 2008 refer to the Euro 15, i.e. the Euro 13 plus Cyprus and Malta.

Given that the composition of the European currency unit (ECU) does not coincide with the former currencies of the countries that have adopted the single currency, pre-1999 amounts originally expressed in the participating currencies and converted into ECU at current ECU exchange rates are affected by movements in the currencies of EU Member States that have not adopted the euro. To avoid this effect on the monetary statistics, the pre-1999 data in Sections 2.1 to 2.8 are expressed in units converted from national currencies at the irrevocable euro exchange rates established on 31 December 1998. Unless otherwise indicated, price and cost statistics before 1999 are based on data expressed in national currency terms.

Methods of aggregation and/or consolidation (including cross-country consolidation) have been used where appropriate.

Recent data are often provisional and may be revised. Discrepancies between totals and their components may arise from rounding.

The group "Other EU Member States" comprises Bulgaria, the Czech Republic, Denmark, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia, Sweden and the United Kingdom.

In most cases, the terminology used within the tables follows international standards, such as those contained in the European System of Accounts 1995 (ESA 95) and the IMF Balance of Payments Manual. Transactions refer to voluntary exchanges (measured directly or derived), while flows also encompass changes in outstanding amounts owing to price and exchange rate changes, write-offs, and other changes.

In the tables, the term "up to (x) years" means "up to and including (x) years".

#### **OVERVIEW**

Developments in key indicators for the euro area are summarised in an overview table.

#### **MONETARY POLICY STATISTICS**

Section 1.4 shows statistics on minimum reserve and liquidity factors. Annual and quarterly observations refer to averages of the last reserve maintenance period of the year/quarter. Until December 2003, the maintenance periods started on the 24th calendar day of a month and ran to the 23rd of the following month. On 23 January 2003, the ECB announced changes to the operational framework, which were implemented on 10 March 2004. As a result of these changes, maintenance periods start on the settlement day of the main refinancing operation (MRO) following the Governing Council meeting at which the monthly assessment of the monetary policy stance is scheduled. A transitional maintenance period was defined to cover the period from 24 January to 9 March 2004.

Table 1 in Section 1.4 shows the components of the reserve base of credit institutions subject to reserve requirements. The liabilities visà-vis other credit institutions subject to the ESCB's minimum reserve system, the ECB and participating national central banks (NCBs) are excluded from the reserve base. When a credit institution cannot provide evidence of the amount of its issues of debt securities with a maturity of up to two years held by the institutions mentioned above, it may deduct a certain percentage of these liabilities from its reserve base. The percentage for calculating the reserve base was 10% until November 1999 and 30% thereafter.

Table 2 in Section 1.4 contains average data for completed maintenance periods. The amount of the reserve requirement of each individual credit institution is first calculated by applying the reserve ratio for the corresponding categories of liabilities to the eligible liabilities, using the balance sheet data from the end of each calendar month. Subsequently, each credit institution deducts from this figure a lump-sum allowance of €100,000. The resulting required reserves are then aggregated at the euro area level (column 1). The current account holdings (column 2) are the aggregate average daily current account holdings of credit institutions, including those that serve the fulfilment of reserve requirements. The excess reserves (column 3) are the average current account holdings over the maintenance period in excess of the required reserves. The deficiencies (column 4) are defined as the average shortfalls of current account holdings from required reserves over the maintenance period, computed on the basis of those credit institutions that have not fulfilled their reserve requirement. The interest rate on minimum reserves (column 5) is equal to the average, over the maintenance period, of the ECB's rate (weighted according to the number of calendar days) on the Eurosystem's MROs (see Section 1.3).

Table 3 in Section 1.4 shows the banking system's liquidity position, which is defined as the current account holdings in euro of credit institutions in the euro area with the Eurosystem. All amounts are derived from the consolidated financial statement of the Eurosystem. The other liquidity-absorbing operations (column 7) exclude the issuance of debt certificates initiated by NCBs in Stage Two of EMU. The net other factors (column 10) represent the netted remaining items in the consolidated financial statement of the Eurosystem. The credit institutions' current accounts (column 11) are equal to the difference between the sum of liquidity-providing factors (columns 1 to 5) and the sum of liquidity-absorbing factors (columns 6 to 10). The base money (column 12) is calculated as the sum of the deposit facility (column 6), the banknotes in circulation (column 8) and the credit institutions' current account holdings (column 11).

### MONEY, BANKING AND INVESTMENT FUNDS

Section 2.1 shows the aggregated balance sheet of the monetary financial institution (MFI)

sector, i.e. the sum of the harmonised balance sheets of all MFIs resident in the euro area. MFIs are central banks, credit institutions as defined under Community law, money market funds and other institutions whose business it 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 credits and/or make investments in securities. A complete list of MFIs is published on the ECB's website.

Section 2.2 shows the consolidated balance sheet of the MFI sector, which is obtained by netting the aggregated balance sheet positions between MFIs in the euro area. Due to limited heterogeneity in recording practices, the sum of the inter-MFI positions is not necessarily zero; the balance is shown in column 10 of the liabilities side of Section 2.2. Section 2.3 sets out the euro area monetary aggregates and counterparts. These are derived from the consolidated MFI balance sheet, and include positions of non-MFIs resident in the euro area held with MFIs resident in the euro area; they also take account of some monetary assets/liabilities of central government. Statistics on monetary aggregates and counterparts are adjusted for seasonal and trading-day effects. The external liabilities item of Sections 2.1 and 2.2 shows the holdings by non-euro area residents of (i) shares/units issued by money market funds located in the euro area and (ii) debt securities issued with a maturity of up to two years by MFIs located in the euro area. In Section 2.3, however, these holdings are excluded from the monetary aggregates and contribute to the item "net external assets".

Section 2.4 provides an analysis by sector, type and original maturity of loans granted by MFIs other than the Eurosystem (the banking system) resident in the euro area. Section 2.5 shows an analysis, by sector and instrument, of deposits held with the euro area banking system. Section 2.6 shows the securities held by the euro area banking system, by type of issuer.

Sections 2.2 to 2.6 include transactions, which are derived as differences in outstanding amounts

adjusted for reclassifications, revaluations, exchange rate variations and any other changes that do not arise from transactions. Section 2.7 shows selected revaluations that are used in the derivation of transactions. Sections 2.2 to 2.6 also provide growth rates in terms of annual percentage changes based on the transactions. Section 2.8 shows a quarterly currency breakdown of selected MFI balance sheet items.

Details of the sector definitions are set out in the "Monetary Financial Institutions and Markets Statistics Sector Manual - Guidance for the statistical classification of customers. Third Edition" (ECB, March 2007). The "Guidance Notes to the Regulation ECB/2001/13 on the MFI Balance Sheet Statistics" (ECB, November 2002) explains practices that NCBs recommended to follow. Since are 1 January 1999, the statistical information has been collected and compiled on the basis of Regulation ECB/1998/16 of 1 December 1998 concerning the consolidated balance sheet of the Monetary Financial Institutions sector<sup>1</sup>, as last amended by Regulation ECB/2003/10<sup>2</sup>.

In line with this Regulation, the balance sheet item "money market paper" has been merged with the item "debt securities" on both the assets and liabilities side of the MFI balance sheet.

Section 2.9 shows end-of-quarter outstanding amounts for the balance sheet of the euro area investment funds (other than money market funds). The balance sheet is aggregated and therefore includes, among the liabilities, holdings by investment funds of shares/units issued by other investment funds. Total assets/ liabilities are also broken down by investment policy (equity funds, bond funds, mixed funds, real estate funds and other funds) and by type of investor (general public funds and special investors' funds). Section 2.10 shows the aggregated balance sheet for each investment fund sector, as identified by investment policy and type of investor.

1 OJ L 356, 30.12.1998, p. 7.

2 OJ L 250, 2.10.2003, p. 19

#### **EURO AREA ACCOUNTS**

Section 3.1 shows quarterly integrated euro area accounts data, which provide comprehensive information on the economic activities of households (including non-profit institutions serving households), non-financial corporations, financial corporations and general government, as well as on the interaction between these sectors and both the euro area and the rest of the world. The non-seasonally adjusted data on current prices are displayed for the last available quarter, following a simplified sequence of accounts in accordance with the methodological framework of the European System of Accounts 1995 (ESA 95).

In short, the sequence of accounts (transactions) comprises: (1) the generation of income account, which shows how the production activity translates into various categories of income; (2) the allocation of primary income account, which records receipts and expenses relating to various forms of property income (for the economy as a whole, the balancing item of the primary income account is the national income); (3) the secondary distribution of income account, which shows how the national income of an institutional sector changes because of current transfers; (4) the use of income account, which shows how disposable income is spent on consumption or saved; (5) the capital account, which shows how savings and net capital transfers are spent in the acquisition of non-financial assets (the balancing item of the capital account is net lending/ net borrowing); and (6) the financial account, which records the net acquisitions of financial assets and the net incurrence of liabilities. As each non-financial transaction is mirrored by a financial transaction, the balancing item of the financial account conceptually also equals net lending/net borrowing as calculated from the capital account.

In addition, opening and closing financial balance sheets are presented, which provide a picture of the financial wealth of each individual sector at a given point in time. Finally, other changes in financial assets and liabilities (e.g. those resulting from the impact of changes in asset prices) are also shown.

The sector coverage of the financial account and of the financial balance sheets is more detailed for the financial corporations sector, showing a breakdown into MFIs, other financial intermediaries (including financial auxiliaries), and insurance corporations and pension funds.

Section 3.2 shows four-quarter cumulated flows (transactions) for the so-called non-financial accounts of the euro area (i.e. accounts (1) to (5) above) also following the simplified sequence of accounts.

Section 3.3 shows four-quarter cumulated flows (transactions and other changes) for households' income, expenditure and accumulation accounts, and outstanding amounts for the financial balance sheet accounts, following a more analytical presentation. Sector-specific transactions and balancing items are arranged so as to more easily depict financing and investment decisions of households, whilst respecting the account identities as presented in Sections 3.1 and 3.2.

Section 3.4 displays four-quarter cumulated flows (transactions) for non-financial corporations' income and accumulation accounts, and outstanding amounts for the financial balance sheet accounts, following a more analytical presentation.

Section 3.5 shows four-quarter cumulated financial flows (transactions and other changes) and outstanding amounts for the financial balance sheets of insurance corporations and pension funds.

#### **FINANCIAL MARKETS**

The series on financial market statistics for the euro area cover the EU Member States that had adopted the euro at the time to which the statistics relate (changing composition), with the exception of statistics on securities issues (Tables 4.1 to 4.4), which relate to the Euro 15 (i.e. the Euro 13 plus Cyprus and Malta) for the whole time series (fixed composition).

Statistics on securities other than shares and quoted shares (Sections 4.1 to 4.4) are produced by the ECB using data from the ESCB and the BIS. Section 4.5 presents MFI interest rates on euro-denominated deposits and loans by euro area residents. Statistics on money market interest rates, long-term government bond yields and stock market indices (Sections 4.6 to 4.8) are produced by the ECB using data from wire services.

Statistics on securities issues cover securities other than shares (debt securities), which are presented in Sections 4.1, 4.2 and 4.3, and quoted shares, which are presented in Section 4.4. Debt securities are broken down into short-term and long-term securities. "Short-term" means securities with an original maturity of one year or less (in exceptional cases two years or less). Securities with a longer maturity, or with optional maturity dates, the latest of which is more than one year away, or with indefinite maturity dates, are classified as "long-term". Long-term debt securities issued by euro area residents are broken down further into fixed and variable rate issues. Fixed rate issues consist of issues where the coupon rate does not change during the life of the issues. Variable rate issues include all issues where the coupon is periodically re-fixed by reference to an independent interest rate or index. The statistics on debt securities are estimated to cover approximately 95% of total issues by euro area residents. The euro-denominated securities indicated in Sections 4.1, 4.2 and 4.3 also include items expressed in national denominations of the euro.

Section 4.1 shows securities other than shares, by original maturity, residency of the issuer and currency. The section presents outstanding amounts, gross issues and net issues of securities other than shares denominated in euro and securities other than shares issued by euro area residents in euro and in all currencies for total and long-term debt securities. Net issues differ from the changes in outstanding amounts owing to valuation changes, reclassifications and other adjustments. This section also presents seasonally adjusted statistics, including annualised sixmonth seasonally adjusted growth rates for total and long-term debt securities. The latter are calculated from the seasonally adjusted index of notional stocks, from which the seasonal effects have been removed. See the Technical notes for details.

Section 4.2 contains a sectoral breakdown of outstanding amounts, gross issues and net issues for issuers resident in the euro area in line with the ESA 95. The ECB is included in the Eurosystem.

The total outstanding amounts for total and long-term debt securities in column 1 of Table 1 in Section 4.2 corresponds to the data on outstanding amounts for total and long-term debt securities issued by euro area residents in column 7 of Section 4.1. The outstanding amounts for total and long-term debt securities issued by MFIs in column 2 of Table 1 in Section 4.2 are broadly comparable with data for debt securities issued, as shown on the liabilities side of the aggregated MFI balance sheet in column 8 of Table 2 in Section 2.1. The total net issues for total debt securities in column 1 of Table 2 in Section 4.2 correspond to the data on total net issues by euro area residents in column 9 of Section 4.1. The residual difference between long-term debt securities and total fixed and variable rate long-term debt securities in Table 1 in Section 4.2 consists of zero coupon bonds and revaluation effects.

Section 4.3 shows non-seasonally and seasonally adjusted growth rates for debt securities issued by euro area residents (broken down by maturity, type of instrument, sector of the issuer and currency), which are based on financial transactions that occur when an institutional unit incurs or redeems liabilities. The growth rates therefore exclude reclassifications, revaluations, exchange rate variations and any other changes that do not arise from transactions. The seasonally adjusted growth rates have been annualised for presentational purposes. See the Technical notes for details.

Section 4.4, columns 1, 4, 6 and 8, show the outstanding amounts of quoted shares issued by euro area residents broken down by issuing sector. The monthly data for quoted shares issued by non-financial corporations correspond to the quarterly series shown in Section 3.2 (main liabilities, column 21).

Section 4.4, columns 3, 5, 7 and 9, show annual growth rates for quoted shares issued by euro area residents (broken down by the sector of the issuer), which are based on financial transactions that occur when an issuer sells or redeems shares for cash excluding investments in the issuers' own shares. Transactions include the quotation of an issuer on a stock exchange for the first time and the creation or deletion of new instruments. The calculation of annual growth rates excludes reclassifications, revaluations and any other changes that do not arise from transactions.

Section 4.5 presents statistics on all the interest rates that MFIs resident in the euro area apply to euro-denominated deposits and loans vis-àvis households and non-financial corporations resident in the euro area. Euro area MFI interest rates are calculated as a weighted average (by corresponding business volume) of the euro area countries' interest rates for each category.

MFI interest rate statistics are broken down by type of business coverage, sector, instrument category and maturity, period of notice or initial period of interest rate fixation. The new MFI interest rate statistics replace the ten transitional statistical series on euro area retail interest rates that have been published in the Monthly Bulletin since January 1999.

Section 4.6 presents money market interest rates for the euro area, the United States and Japan. For the euro area, a broad spectrum of money market interest rates is covered, ranging from interest rates on overnight deposits to those on twelve-month deposits. Before January 1999, synthetic euro area interest rates were calculated on the basis of national rates weighted by GDP. With the exception of the overnight rate to December 1998, monthly, quarterly and yearly values are period averages. Overnight deposits are represented by interbank deposit bid rates up to December 1998. From January 1999, column 1 of Section 4.6 shows the euro overnight index average (EONIA). These are end-of-period rates up to December 1998 and period averages thereafter. From January 1999, interest rates on one-, three-, six- and twelve-month deposits are euro interbank offered rates (EURIBOR); until December 1998, London interbank offered rates (LIBOR) where available. For the United States and Japan, interest rates on three-month deposits are represented by LIBOR.

Table 4.7 shows end-of-period rates estimated from nominal spot yield curves based on AAArated euro-denominated bonds issued by euro area central governments. The yield curves are estimated using the Svensson model<sup>3</sup>. Spreads between the ten-year rates and the three-month and two-year rates are also released. Additional yield curves (daily releases, including charts and tables) and the corresponding methodological information are available at http://www.ecb. europa.eu/stats/money/yc/html/index.en.html. Daily data may also be downloaded.

Section 4.8 shows stock market indices for the euro area, the United States and Japan.

#### PRICES, OUTPUT, DEMAND AND LABOUR MARKETS

Most of the data described in this section are produced by the European Commission (mainly Eurostat) and national statistical authorities. Euro area results are obtained by aggregating data for individual countries. As far as possible, the data are harmonised and comparable. Statistics on hourly labour costs, GDP and expenditure components, value added by economic activity, industrial production, retail sales and passenger

Svensson, L. E., 1994, "Estimating and Interpreting Forward Interest Rates: Sweden 1992-1994", Centre for Economic Policy Research, Discussion Paper No 1051.

car registrations are adjusted for the variations in the number of working days.

The Harmonised Index of Consumer Prices (HICP) for the euro area (Table 1 in Section 5.1) is available from 1995 onwards. It is based on national HICPs, which follow the same methodology in all euro area countries. The breakdown by goods and services components is derived from the classification of individual consumption by purpose (Coicop/HICP). The HICP covers monetary expenditure by households on final consumption in the economic territory of the euro area. The table includes seasonally adjusted HICP data and experimental HICP-based estimates of administered prices, which are compiled by the ECB.

Industrial producer prices (Table 2 in Section 5.1), industrial production, industrial new orders, industrial turnover and retail sales (Section 5.2) are covered by Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term statistics<sup>4</sup>. The breakdown by enduse of products for industrial producer prices and industrial production is the harmonised sub-division of industry excluding construction (NACE sections C to E) into main industrial groupings (MIGs), as defined by Commission Regulation (EC) No 586/2001 of 26 March 20015. Industrial producer prices reflect the ex-factory gate prices of producers. They include indirect taxes except VAT and other deductible taxes. Industrial production reflects the value added of the industries concerned.

World market prices of raw materials (Table 2 in Section 5.1) measures price changes of eurodenominated euro area imports compared with the base period.

The labour cost indices (Table 3 in Section 5.1) measure the changes in labour costs per hour worked in industry (including construction) and market services. Their methodology is laid down in Regulation (EC) No 450/2003 of the European Parliament and of the Council of 27 February 2003 concerning the labour cost index<sup>6</sup> and in the implementing Commission Regulation (EC)

No 1216/2003 of 7 July 2003<sup>7</sup>. A breakdown of hourly labour costs for the euro area is available by labour cost component (wages and salaries, and employers' social contributions plus employment-related taxes paid by the employer less subsidies received by the employer) and by economic activity. The ECB calculates the indicator of negotiated wages (memo item in Table 3 of Section 5.1) on the basis of nonharmonised, national-definition data.

Unit labour cost components (Table 4 in Section 5.1), GDP and its components (Tables 1 and 2 in Section 5.2), GDP deflators (Table 5 in Section 5.1) and employment statistics (Table 1 in Section 5.3) are results of the ESA 95 quarterly national accounts.

Industrial new orders (Table 4 in Section 5.2) measure the orders received during the reference period and cover industries working mainly on the basis of orders – in particular the textile, pulp and paper, chemical, metal, capital goods and durable consumer goods industries. The data are calculated on the basis of current prices.

Indices for turnover in industry and for the retail trade (Table 4 in Section 5.2) measure the turnover, including all duties and taxes with the exception of VAT, invoiced during the reference period. Retail trade turnover covers all retail trade (excluding sales of motor vehicles and motorcycles), except repairs. New passenger car registrations cover registrations of both private and commercial passenger cars. The series for the euro area excludes Cyprus and Malta.

Qualitative business and consumer survey data (Table 5 in Section 5.2) draw on the European Commission Business and Consumer Surveys.

Unemployment rates (Table 2 in Section 5.3) conform to International Labour Organization (ILO) guidelines. They refer to persons actively seeking work as a share of the labour force,

OJ L 162, 5.6.1998, p. 1.

<sup>5</sup> OJ L 86, 27.3.2001, p. 11.

<sup>6</sup> OJ L 69, 13.3.2003, p. 1.

<sup>7</sup> OJ L 169, 8.7.2003, p. 37.

using harmonised criteria and definitions. The labour force estimates underlying the unemployment rate are different from the sum of the employment and unemployment levels published in Section 5.3.

#### **GOVERNMENT FINANCE**

Sections 6.1 to 6.5 show the general government fiscal position in the euro area. The data are mainly consolidated and are based on the ESA 95 methodology. The annual euro area aggregates in Sections 6.1 to 6.3 are compiled by the ECB on the basis of harmonised data provided by the NCBs, which are regularly updated. The deficit and debt data for the euro area countries may therefore differ from those used by the European Commission within the excessive deficit procedure. The quarterly euro area aggregates in Sections 6.4 and 6.5 are compiled by the ECB on the basis of Eurostat and national data.

Section 6.1 presents annual figures on general government revenue and expenditure on the basis of definitions laid down in Commission Regulation (EC) No 1500/2000 of 10 July 20008 amending the ESA 95. Section 6.2 shows details of general government gross consolidated debt at nominal value in line with the Treaty provisions on the excessive deficit procedure. Sections 6.1 and 6.2 include summary data for the individual euro area countries owing to their importance in the framework of the Stability and Growth Pact. The deficits/surpluses presented for the individual euro area countries correspond to excessive deficit procedure B.9, as defined by Commission Regulation (EC) No 351/2002 of 25 February 2002 amending Council Regulation (EC) No 3605/93 as regards references to the ESA 95. Section 6.3 presents changes in general government debt. The difference between the change in the government debt and the government deficit - the deficit-debt adjustment - is mainly explained by government transactions in financial assets and by foreign exchange valuation effects. Section 6.4 presents quarterly figures on general government revenue

and expenditure on the basis of definitions laid down in Regulation (EC) No 1221/2002 of the European Parliament and of the Council of 10 June 2002 on quarterly non-financial accounts for general government<sup>9</sup>. Section 6.5 presents quarterly figures on gross consolidated government debt, the deficit-debt adjustment and the government borrowing requirement. These figures are compiled using data provided by the Member States under Regulations (EC) No 501/2004 and No 222/2004 and data provided by the NCBs.

#### **EXTERNAL TRANSACTIONS AND POSITIONS**

The concepts and definitions used in balance of payments (b.o.p.) and international investment position (i.i.p.) statistics (Sections 7.1 to 7.4) are generally in line with the IMF Balance of Payments Manual (fifth edition, October 1993), the ECB Guideline of 16 July 2004 on the statistical reporting requirements of the ECB (ECB/2004/15)<sup>10</sup> and the amending ECB Guideline of 31 May 2007 (ECB/2007/3)11. Additional references about the methodologies and sources used in the euro area b.o.p. and i.i.p. statistics can be found in the ECB publication entitled "European Union balance of payments/ international investment position statistical methods" (May 2007), and in the following Task Force reports: "Portfolio investment collection systems" (June 2002), "Portfolio investment income" (August 2003) and "Foreign direct investment" (March 2004), all of which can be downloaded from the ECB's website. In addition, the report by the ECB/European Commission (Eurostat) Task Force on Quality of balance of payments and international investment position statistics (June 2004) is available on the website of the Committee on Monetary, Financial and Balance of Payments Statistics (www.cmfb.org). The annual quality report on the euro area b.o.p./i.i.p., which is

- 8 OJ L 172, 12.7.2000, p. 3.
- 9 OJ L 179, 9.7.2002, p. 1.
- 10 OJ L 354, 30.11.2004, p. 34.
- 11 OJ L 159, 20.6.2007, p. 48.

based on the Task Force's recommendations, is available on the ECB's website.

The tables in Sections 7.1 and 7.4 follow the sign convention in the IMF Balance of Payments Manual, i.e. surpluses in the current account and in the capital account have a plus sign, while in the financial account a plus sign denotes an increase in liabilities or a decrease in assets. In the tables in Section 7.2, both credit and debit transactions are presented with a plus sign. Furthermore, starting with the February 2008 issue of the Monthly Bulletin, the tables in Section 7.3 have been restructured in order to allow the data on balance of payments, the international investment position and related growth rates to be presented together; in the new tables, transactions in assets and liabilities that correspond to increases in positions are shown with a plus sign.

The euro area b.o.p. is compiled by the ECB. Recent monthly figures should be regarded as provisional. Data are revised when figures for the following month and/or the detailed quarterly b.o.p. are published. Earlier data are revised periodically, or as a result of methodological changes in the compilation of the source data.

In Section 7.2, Table 1 also contains seasonally adjusted data for the current account. Where appropriate, the adjustment also covers workingday, leap-year and/or Easter effects. Table 3 in Section 7.2 and Table 8 in Section 7.3 present a breakdown of the euro area b.o.p. and i.i.p. vis-à-vis main partner countries individually or as a group, distinguishing between EU Member States outside the euro area and countries or areas outside the European Union. The breakdown also shows transactions and positions vis-à-vis EU institutions (which, apart from the ECB, are treated statistically as outside the euro area, regardless of their physical location) and, for some purposes, also offshore centres and international organisations. The breakdown does not cover transactions or positions in portfolio investment liabilities, financial derivatives and international reserves. In addition, separate data

are not provided for investment income payable to Brazil, mainland China, India and Russia. The geographical breakdown is described in the article entitled "Euro area balance of payments and international investment position vis-à-vis main counterparts" in the February 2005 issue of the Monthly Bulletin.

The data on the euro area b.o.p. financial account and i.i.p. in Section 7.3 are based on transactions and positions vis-à-vis non-residents of the euro area, considering the euro area as a single economic entity (see also Box 9 in the December 2002 issue of the Monthly Bulletin, Box 5 in the January 2007 issue of the Monthly Bulletin and Box 6 in the January 2008 issue of the Monthly Bulletin). The i.i.p. is valued at current market prices, with the exception of direct investment, where book values are used for unquoted shares, and other investments (e.g. loans and deposits). The quarterly i.i.p. is compiled on the basis of the same methodological framework as the annual i.i.p. As some data sources are not available on a quarterly basis (or are available with a delay), the quarterly i.i.p. is partly estimated on the basis of financial transactions, asset prices and foreign exchange developments.

Table 1 in Section 7.3 summarises the i.i.p. and financial transactions in the euro area b.o.p. The breakdown of the change in the annual i.i.p. is obtained by applying a statistical model to the i.i.p. changes other than transactions with information from the geographical breakdown and currency composition of assets and liabilities, as well as price indices for different financial assets. In this table, Columns 5 and 6 refer to direct investment by resident units abroad and direct investment by non-resident units in the euro area.

In Table 5 in Section 7.3, the breakdown into "loans" and "currency and deposits" is based on the sector of the non-resident counterpart, i.e. assets vis-à-vis non-resident banks are classified as deposits, whereas assets vis-à-vis other nonresident sectors are classified as loans. This breakdown follows the distinction made in other statistics, such as the MFI consolidated balance sheet, and conforms to the IMF Balance of Payments Manual.

The outstanding amounts of the Eurosystem's international reserves and related assets and liabilities are shown in Section 7.3, Table 7. These figures are not fully comparable with those of the Eurosystem's weekly financial statement owing to differences in coverage and valuation. The data in Table 7 are in line with the recommendations for the template on international reserves and foreign currency liquidity. Changes in the gold holdings of the Eurosystem (column 3) are due to transactions in gold within the terms of the Central Bank Gold Agreement of 26 September 1999, which was updated on 8 March 2004. More information on the statistical treatment of the Eurosystem's international reserves can be found in a publication entitled "Statistical treatment of reserves" Eurosystem's international the (October 2000), which can be downloaded from the ECB's website. The website also contains more comprehensive data in accordance with the template on international reserves and foreign currency liquidity.

Section 7.4 contains a monetary presentation of the euro area balance of payments, in which the balance of payments transactions mirror the transactions in the external counterpart to M3. In portfolio investment liabilities (Columns 5 and 6), the transactions include sales and purchases of equity and debt securities issued by MFIs in the euro area, excluding shares of money market funds and debt securities with a maturity of up to two years. A methodological note on the monetary presentation of the euro area balance of payments is available in the "Statistics" section of the ECB's website. See also Box 1 in the June 2003 issue of the Monthly Bulletin.

Section 7.5 shows data on euro area external trade in goods. The source is Eurostat. Unit value indices are shown without any adjustment, while value data and volume indices are seasonally and working day-adjusted. The breakdown by product group in columns 4 to 6 and 9 to

11 of Table 1 in Section 7.5 is in line with the classification by Broad Economic Categories. Manufactured goods (columns 7 and 12) and oil (column 13) are in line with the SITC Rev. 4 definition. The geographical breakdown (Table 2 in Section 7.5) shows main trading partners individually or in regional groups. China excludes Hong Kong. On account of differences in definitions, classification, coverage and time of recording, external trade data, in particular for imports, are not fully comparable with the goods item in the b.o.p. statistics (Sections 7.1 and 7.2). The difference for imports has been around 5% in recent years (ECB estimate), a significant part of which relates to the inclusion of insurance and freight services in the external trade data (c.i.f. basis).

## **EXCHANGE RATES**

Section 8.1 shows nominal and real effective exchange rate (EER) indices for the euro, calculated by the ECB on the basis of weighted averages of bilateral exchange rates of the euro against the currencies of the euro area's trading partners. A positive change denotes an appreciation of the euro. Weights are based on trade in manufactured goods with the trading partners in the periods 1995-1997 and 1999-2001, and are calculated to account for thirdmarket effects. The EER indices result from the linking at the beginning of 1999 of the indices based on 1995-1997 weights to those based on 1999-2001 weights. The EER-22 group of trading partners is composed of the 12 non-euro area EU Member States plus Australia, Canada, China, Hong Kong, Japan, Norway, Singapore, South Korea, Switzerland and the United States. The EER-42 group includes the EER-22 and the following countries: Algeria, Argentina, Brazil, Chile, Croatia, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, the Philippines, Russia, South Africa, Taiwan, Thailand, Turkey and Venezuela. Real EERs are calculated using consumer price indices, producer price indices, gross domestic product deflators, unit labour costs in manufacturing and unit labour costs in the total economy.

General notes

For more detailed information on the calculation of the EERs, see Box 8 entitled "The effective exchange rates of the euro following the recent euro area and EU enlargements" in the March 2007 issue of the Monthly Bulletin and the ECB's Occasional Paper No 2 ("The effective exchange rates of the euro" by Luca Buldorini, Stelios Makrydakis and Christian Thimann, February 2002), which can be downloaded from the ECB's website.

The bilateral rates shown in Section 8.2 are monthly averages of those published daily as reference rates for these currencies.

# **DEVELOPMENTS OUTSIDE THE EURO AREA**

Statistics on other EU Member States (Section 9.1) follow the same principles as those for data relating to the euro area. The data for the United States and Japan contained in Section 9.2 are obtained from national sources.



# ANNEXES

# CHRONOLOGY OF MONETARY POLICY MEASURES OF THE EUROSYSTEM'

#### 12 JANUARY AND 2 FEBRUARY 2006

# The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.25%, 3.25% and 1.25% respectively.

#### 2 MARCH 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 2.50%, starting from the operation to be settled on 8 March 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 3.50% and 1.50% respectively, both with effect from 8 March 2006.

#### 6 APRIL AND 4 MAY 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.50%, 3.50% and 1.50% respectively.

#### 8 JUNE 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 2.75%, starting from the operation to be settled on 15 June 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 3.75% and 1.75% respectively, both with effect from 15 June 2006.

#### 6 JULY 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.75%, 3.75% and 1.75% respectively.

#### **3 AUGUST 2006**

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.0%, starting from the operation to be settled on 9 August 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 4.0% and 2.0%, both with effect from 9 August 2006.

#### 31 AUGUST 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 3.0%, 4.0% and 2.0% respectively.

#### **5 OCTOBER 2006**

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.25%, starting from the operation to be settled on 11 October 2006. In addition, it decides to increase the interest rates on both the marginal

1 The chronology of monetary policy measures taken by the Eurosystem between 1999 and 2005 can be found in the ECB's Annual Report for the respective years.



lending facility and the deposit facility by 25 basis points, to 4.25% and 2.25%, both with effect from 11 October 2006.

## 2 NOVEMBER 2006

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 3.25%, 4.25% and 2.25% respectively.

### 7 DECEMBER 2006

The Governing Council of the ECB decides to increase the minimum bid rate on the main refinancing operations by 25 basis points to 3.50%, starting from the operation to be settled on 13 December 2006. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 4.50% and 2.50%, both with effect from 13 December 2006.

### 21 DECEMBER 2006

The Governing Council of the ECB decides to increase the allotment amount for each of the longer-term refinancing operations to be conducted in the year 2007 from €40 billion to €50 billion. This increased amount takes the following aspects into consideration: the liquidity needs of the euro area banking system have grown strongly in recent years and are expected to increase further in the year 2007. Therefore the Eurosystem has decided to increase slightly the share of the liquidity needs satisfied by the longer-term refinancing operations. The Eurosystem will, however, continue to provide the bulk of liquidity through its main refinancing operations. The Governing Council may decide to adjust the allotmennt amount again at the beginning of 2008.

#### **II 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.

Monthly Bulletin May 2008

FCR

# 5 JULY, 2 AUGUST, 6 SEPTEMBER, 4 OCTOBER, 8 NOVEMBER AND 6 DECEMBER 2007, AND 10 JANUARY, 7 FEBRUARY, 6 MARCH, 10 APRIL AND 8 MAY 2008

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 4.00%, 5.00% and 3.00% respectively.





# DOCUMENTS PUBLISHED BY THE EUROPEAN CENTRAL BANK SINCE 2007

This list is designed to inform readers about selected documents published by the European Central Bank since January 2007. For Working Papers, the list only refers to publications released between February and April 2008. 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 2006", April 2007. "Annual Report 2007", April 2008.

# **CONVERGENCE REPORT**

"Convergence Report May 2007".

"Convergence Report May 2008".

# **MONTHLY BULLETIN ARTICLES**

"The enlarged EU and euro area economies", January 2007.

"Developments in the structural features of the euro area labour markets over the last decade", January 2007.

"Putting China's economic expansion in perspective", January 2007.

"Challenges to fiscal sustainability in the euro area", February 2007.

"The EU arrangements for financial crisis management", February 2007.

"Migrant remittances to regions neighbouring the EU", February 2007.

"Communicating monetary policy to financial markets", April 2007.

"Output growth differentials in the euro area: sources and implications", April 2007.

"From government deficit to debt: bridging the gap", April 2007.

"Measured inflation and inflation perceptions in the euro area", May 2007.

"Competition in and economic performance of the euro area services sector", May 2007.

"Determinants of growth in the EU Member States of central and eastern Europe", May 2007.

"Share buybacks in the euro area", May 2007.

"Interpreting monetary developments since mid-2004", July 2007.

"Oil-exporting countries: key structural features, economic developments and oil revenue recycling", July 2007.

"Adjustment of global imbalances in a financially integrating world", August 2007.

"The financing of small and medium-sized enterprises in the euro area", August 2007.

"Leveraged buyouts and financial stability", August 2007.

"Long-term developments in MFI loans to households in the euro area: main patterns and determinants", October 2007.

"The collateral frameworks of the Federal Reserve System, the Bank of Japan and the Eurosystem", October 2007.

"Circulation and supply of euro banknotes and preparations for the second series of banknotes", October 2007.

"The stock market's changing structure and its consolidation: implications for the efficiency of the financial system and monetary policy", November 2007.

"The introduction of quarterly sectoral accounts statistics for the euro area", November 2007.

"Productivity developments and monetary policy", January 2008.

"Globalisation, trade and the euro area macroeconomy", January 2008.

"The Eurosystem's experience with forecasting autonomous factors and excess reserves", January 2008.

"The analysis of the euro money market from a monetary policy perspective", February 2008.

"Securitisation in the euro area", February 2008.

"The new euro area yield curves", February 2008.

"Business investment in the euro area and the role of firms' financial positions", April 2008.

"Short-term forecasts of economic activity in the euro area", April 2008.

"Developments in the EU arrangements for financial stability", April 2008.

"Price stability and growth", May 2008.

"The Eurosystem's open market operations during the recent period of financial market volatility", May 2008.

# STATISTICS POCKET BOOK

Available monthly since August 2003.

# **LEGAL WORKING PAPER SERIES**

- 4 "Privileges and immunities of the European Central Bank" by G. Gruber and M. Benisch, June 2007.
- 5 "Legal and institutional aspects of the currency changeover following the restoration of the independence of the Baltic States" by K. Drēviņa, K. Laurinavičius and A. Tupits, July 2007.

# **OCCASIONAL PAPER SERIES**

- 55 "Globalisation and euro area trade: interactions and challenges" by U. Baumann and F. di Mauro, February 2007.
- 56 "Assessing fiscal soundness: theory and practice" by N. Giammarioli, C. Nickel, P. Rother and J.-P. Vidal, March 2007.
- 57 "Understanding price developments and consumer price indices in south-eastern Europe" by S. Herrmann and E. K. Polgar, March 2007.
- 58 "Long-term growth prospects for the Russian economy" by R. Beck, A. Kamps and E. Mileva, March 2007.
- 59 "The ECB Survey of Professional Forecasters (SPF) A review after eight years' experience" by C. Bowles, R. Friz, V. Genre, G. Kenny, A. Meyler and T. Rautanen, April 2007.
- 60 "Commodity price fluctuations and their impact on monetary and fiscal policies in Western and Central Africa" by U. Böwer, A. Geis and A. Winkler, April 2007.
- 61 "Determinants of growth in the central and eastern European EU Member States A production function approach" by O. Arratibel, F. Heinz, R. Martin, M. Przybyla, L. Rawdanowicz, R. Serafini and T. Zumer, April 2007.
- 62 "Inflation-linked bonds from a central bank perspective" by J. A. Garcia and A. van Rixtel, June 2007.
- 63 "Corporate finance in the euro area including background material" by the Task Force of the Monetary Policy Committee of the ESCB, June 2007.
- 64 "The use of portfolio credit risk models in central banks", by the Task Force of the Market Operations Committee of the ESCB, July 2007.

- 65 "The performance of credit rating systems in the assessment of collateral used in Eurosystem monetary policy operations" by F. Coppens, F. González and G. Winkler, July 2007.
- 66 "Structural reforms in EMU and the role of monetary policy a survey of the literature" by N. Leiner-Killinger, V. López Pérez, R. Stiegert and G. Vitale, July 2007.
- 67 "Towards harmonised balance of payments and international investment position statistics the experience of the European compilers" by J.-M. Israël and C. Sánchez Muñoz, July 2007.
- 68 "The securities custody industry" by D. Chan, F. Fontan, S. Rosati and D. Russo, August 2007.
- 69 "Fiscal policy in Mediterranean countries developments, structures and implications for monetary policy" by M. Sturm and F. Gurtner, August 2007.
- 70 "The search for Columbus' egg: finding a new formula to determine quotas at the IMF" by M. Skala, C. Thimann and R. Wölfinger, August 2007.
- 71 "The economic impact of the Single Euro Payments Area" by H. Schmiedel, August 2007.
- 72 "The role of financial markets and innovation in productivity and growth in Europe" by P. Hartmann, F. Heider, E. Papaioannou and M. Lo Duca, September 2007.
- 73 "Reserve accumulation: objective or by-product?" by J. O. de Beaufort Wijnholds and L. Søndergaard, September 2007.
- 74 "Analysis of revisions to general economic statistics" by H. C. Dieden and A. Kanutin, October 2007.
- 75 "The role of the other financial intermediates in monetary and credit developments in the euro area" edited by P. Moutot and coordinated by D. Gerdesmeier, A. Lojschová and J. von Landesberger, October 2007.
- 76 "Prudential and oversight requirements for securities settlement" by D. Russo, G. Caviglia, C. Papathanassiou and S. Rosati, December 2007.
- 77 "Oil market structure, network effects and the choice of currency for oil invoicing" by E. Mileva and N. Siegfried, December 2007.
- 78 "A framework for assessing global imbalances" by T. Bracke, M. Bussière, M. Fidora and R. Straub, January 2008.
- 79 "The workings of the Eurosystem: monetary policy preparations and decision-making selected issues" by P. Moutot, A. Jung and F. P. Mongelli, January 2008.
- 80 "China's and India's roles in global trade and finance: twin titans for the new millennium?" by M. Bussière and A. Mehl, January 2008.
- 81 "Measuring financial integration in new EU Member States" by M. Baltzer, L. Cappiello, R. A. De Santis and S. Manganelli, March 2008.
- 82 "The sustainability of China's exchange rate policy and capital account liberalisation" by L. Cappiello and G. Ferrucci, March 2008.
- 83 "The predictability of monetary policy" by T. Blattner, M. Catenaro, M. Ehrmann, R. Strauch and J. Turunen, March 2008.
- 84 "Short-term forecasting of GDP using large monthly datasets: a pseudo real-time forecast evaluation exercise" by G. Rünstler, K. Barhoumi, R. Cristadoro, A. Den Reijer, A. Jakaitiene, P. Jelonek, A. Rua, K. Ruth, S. Benk and C. Van Nieuwenhuyze, May 2008.

## **RESEARCH BULLETIN**

"Research Bulletin", No 6, June 2007. "Research Bulletin", No 7, May 2008.

#### **WORKING PAPER SERIES**

- 862 "Stock market volatility and learning" by K. Adam, A. Marcet and J. P. Nicolini, February 2008.
- 863 "Population ageing and public pension reforms in a small open economy" by C. Nickel, P. Rother and A. Theophilopoulou, February 2008.
- 864 "Macroeconomic rates of return of public and private investment: crowding-in and crowdingout effects" by A. Afonso and M. St. Aubyn, February 2008.
- 865 "Explaining the Great Moderation: it is not the shocks" by D. Giannone, M. Lenza and L. Reichlin, February 2008.
- 866 "VAR analysis and the Great Moderation" by L. Benati and P. Surico, February 2008.
- 867 "Do monetary indicators lead euro area inflation?" by B. Hofmann, February 2008.
- 868 "Purdah: on the rationale for central bank silence around policy meetings" by M. Ehrmann and M. Fratzscher, February 2008.
- 869 "The reserve fulfilment path of euro area commercial banks: empirical testing using panel data" by N. Cassola, February 2008.
- 870 "Risk management in action: robust monetary policy rules under structured uncertainty" by P. Levine, P. McAdam, J. Pearlman and R. Pierse, February 2008.
- 871 "The impact of capital flows on domestic investment in transition economies" by E. Mileva, February 2008.
- 872 "Why do Europeans work part-time? A cross-country panel analysis" by H. Buddelmeyer, G. Mourre and M. Ward, February 2008.
- 873 "The Feldstein-Horioka fact" by D. Giannone and M. Lenza, February 2008.
- 874 "How arbitrage-free is the Nelson-Siegel model?" by L. Coroneo, K. Nyholm and R. Vidova-Koleva, February 2008.
- 875 "Global macro-financial shocks and expected default frequencies in the euro area" by O. Castrén, S. Dées and F. Zaher, February 2008.
- 876 "Are sectoral stock prices useful for predicting euro area GDP?" by M. Andersson and A. D'Agostino, February 2008.
- 877 "What are the effects of fiscal policy shocks? A VAR-based comparative analysis" by D. Caldara and C. Kamps, March 2008.
- 878 "Nominal and real interest rates during an optimal disinflation in New Keynesian models" by M. Hagedorn, March 2008.
- 879 "Government risk premiums in the bond market: EMU and Canada" by L. Schuknecht, J. von Hagen and G. Wolswijk, March 2008.
- 880 "On policy interactions among nations: when do cooperation and commitment matter?" by H. Kempf and L. von Thadden, March 2008.
- 881 "Imperfect predictability and mutual fund dynamics: how managers use predictors in changing systematic risk" by G. Amisano and R. Savona, March 2008.
- 882 "Forecasting world trade: direct versus "bottom-up" approaches" by M. Burgert and S. Dees, March 2008.
- 883 "Assessing the benefits of international portfolio diversification in bonds and stocks" by R. A. De Santis and L. Sarno, March 2008.
- 884 "A quantitative perspective on optimal monetary policy cooperation between the United States and the euro area" by S. Adjemian, M. Darracq Pariès and F. Smets, March 2008.
- 885 "Impact of bank competition on the interest rate pass-through in the euro area" by M. van Leuvensteijn, C. Kok Sørensen, J. A. Bikker and A. A. R. J. M. van Rixtel, March 2008.

ECB Monthly Bulletin May 2008

- 886 "International evidence on sticky consumption growth" by C. D. Carroll, J. Slacalek and M. Sommer, March 2008.
- 887 "Labour supply after transition: evidence from the Czech Republic" by A. Bičáková, J. Slacalek and M. Slavík, March 2008.
- 888 "House prices, money, credit and the macroeconomy" by C. Goodhart and B. Hofmann, April 2008.
- 889 "Credit and the natural rate of interest" by F. De Fiore and O. Tristani, April 2008.
- 890 "Globalisation, domestic inflation and global output gaps: evidence from the euro area" by A. Calza, April 2008.
- 891 "House prices and the stance of monetary policy" by M. Jarociński and F. Smets, April 2008.
- 892 "Identification of New Keynesian Phillips curves from a global perspective" by S. Dées, M. H. Pesaran, L. V. Smith and R. P. Smith, April 2008.

# **OTHER PUBLICATIONS**

"Government finance statistics guide", January 2007.

"Letter from the ECB President to Ms Pervenche Berès, Chairwoman of the Committee on Economic and Monetary Affairs, European Parliament", January 2007.

"Letter from the ECB President to Mr Jean-Marie Cavada, Chairman of the Committee on Civil Liberties, Justice and Home Affairs, European Parliament", January 2007.

"Euro area balance of payments and international investment position statistics – Annual quality report", February 2007.

"List of monetary financial institutions and institutions subject to minimum reserves", February 2007 (online only).

"Financial statistics for a global economy – proceedings of the 3rd ECB conference on statistics", February 2007.

"Euro Money Market Study 2006", February 2007 (online only).

"Letter from the ECB President to Ms Pervenche Berès, Chairwoman of the Committee on

Economic and Monetary Affairs, European Parliament", February 2007.

"Monetary financial institutions and markets statistics sector manual", March 2007.

"Financial integration in Europe", March 2007.

"TARGET2-Securities – The blueprint", March 2007 (online only).

"TARGET2-Securities - Technical feasibility", March 2007 (online only).

"TARGET2-Securities - Operational feasibility", March 2007 (online only).

"TARGET2-Securities – Legal feasibility", March 2007 (online only).

"TARGET2-Securities – Economic feasibility", March 2007 (online only).

"Risk measurement and systemic risk. Fourth joint central bank research conference

8-9 November 2005. In cooperation with the Committee on the Global Financial System", April 2007.

"How the euro became our money. A short history of the euro banknotes and coins", April 2007.

"Large banks and private equity-sponsored leveraged buyouts in the EU", April 2007.

"TARGET Annual Report 2006", May 2007 (online only).

"European Union balance of payments: international investment position statistical methods", May 2007.

"Bond markets and long-term interest rates in non-euro area Member States of the European

Union: statistical tables", May 2007 (online only).

"The euro bonds and derivatives markets", June 2007 (online only).

"Review of the international role of the euro", June 2007.

"Fourth Progress Report on TARGET2, General Functional Specifications", June 2007.

"Financial Stability Review", June 2007.

Vol. 1: euro area countries, Vol. 2: non-euro area countries, August 2007.

"Fifth progress report on TARGET2" with Annex 1 "Infomation guide for TARGET2 users" (version 1.0), Annex 2 "User information guide to TARGET2 pricing" and Annex 3 "TARGET2 compensation scheme, claim form", October 2007 (online only).

"EU banking sector stability", November 2007 (online only).

"Euro money market survey", November 2007 (online only).

"Review of the Lamfalussy framework: Eurosystem contribution", November 2007 (online only).

"Correspondent central banking model (CCBM): procedures for Eurosystem counterparties", December 2007.

"Financial Stability Review", December 2007.

"Bond markets and long-term interest rates in non-euro area Member States of the European Union", January 2008 (online only).

"Oversight framework for card payment schemes - standards", January 2008 (online only).

"The role of money – money and monetary policy in the twenty-first century – proceedings of the Fourth ECB Central Banking Conference 2006", February 2008.

"Euro area balance of payments and international investment position statistics – Annual quality report", March 2008 (online only).

"ECB statistics quality framework (SQF)", April 2008 (online only).

"Quality assurance procedures within the ECB statistical function", April 2008 (online only).

"ECB statistics – an overview", April 2008 (online only).

"TARGET Annual Report 2007", April 2008 (online only).

"Financial integration in Europe", April 2008.

# **INFORMATION BROCHURES**

"A single currency: an integrated market infrastructure", September 2007.



<sup>&</sup>quot;Monetary policy: a journey from theory to practice", June 2007.

<sup>&</sup>quot;Eurosystem staff macroeconomic projections for the euro area", June 2007 (online only).

<sup>&</sup>quot;The Eurosystem policy principles on the location and operation of infrastructures settling

euro-denominated payment transactions", July 2007 (online only).

<sup>&</sup>quot;Fifth SEPA progress report", July 2007 (online only).

<sup>&</sup>quot;Potential impact of Solvency II on financial stability", July 2007.

<sup>&</sup>quot;The role of central counterparties – issues related to central counterparty clearing", ECB-Fed Chicago conference, 3-4 April 2006, July 2007.

<sup>&</sup>quot;European legislation on financial markets: Settlement Finality Directive, Financial Collateral Directive, Winding-Up Directive for Credit Institutions", July 2007.

<sup>&</sup>quot;Payment and securities settlement systems in the European Union (Blue Book)",

<sup>&</sup>quot;EU banking structures", October 2007 (online only).

<sup>&</sup>quot;TARGET2-Securities progress report", October 2007 (online only).



# GLOSSARY

This glossary contains selected items that are frequently used in the Monthly Bulletin. A more comprehensive and detailed glossary can be found on the ECB's website (www.ecb.europa.eu/home/glossary/html/index.en.html).

**Autonomous liquidity factors:** liquidity factors that do not normally stem from the use of monetary policy instruments. Such factors are, for example, banknotes in circulation, government deposits with the central bank and the net foreign assets of the central bank.

**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.

**Bank lending survey (BLS):** a quarterly survey on lending policies that has been conducted by the Eurosystem since January 2003. It addresses qualitative questions on developments in credit standards, terms and conditions of loans and loan demand for both enterprises and households to a predefined sample group of banks in the euro area.

**Borrowing requirement (general government):** net incurrence of debt by general government.

**Capital account:** a b.o.p. account that covers all capital transfers and acquisitions/disposals of non-produced, non-financial assets between residents and non-residents.

**Central parity (or central rate):** the exchange rate of each ERM II member currency vis-à-vis the euro, around which the ERM II fluctuation margins are defined.

**Compensation per employee:** the total remuneration, in cash or in kind, that is payable by employers to employees, i.e. gross wages and salaries, as well as bonuses, overtime payments and employers' social security contributions, divided by the total number of employees.

**Consolidated balance sheet of the MFI sector:** a balance sheet obtained by netting out inter-MFI positions (e.g. inter-MFI loans and deposits) in the aggregated MFI balance sheet. It provides statistical information on the MFI sector's assets and liabilities vis-à-vis residents of the euro area not belonging to this sector (i.e. general government and other euro area residents) and vis-à-vis non-euro area residents. It is the main statistical source for the calculation of monetary aggregates, and it provides the basis for the regular analysis of the counterparts of M3.

**Current account:** a b.o.p. account that covers all transactions in goods and services, income and current transfers between residents and non-residents.

**Debt (financial accounts):** loans, deposit liabilities, debt securities issued and pension fund reserves of non-financial corporations (resulting from employers' direct pension commitments on behalf of their employees), valued at market value at the end of the period. However, due to data limitations, the debt given in the quarterly financial accounts does not include loans granted by non-financial sectors (e.g. inter-company loans) or by banks outside the euro area, whereas these components are included in the annual financial accounts.

**Debt (general government):** the gross debt (deposits, loans and debt securities excluding financial derivatives) at nominal value outstanding at the end of the year and consolidated between and within the sectors of general government.

**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) on 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.

**Debt-to-GDP ratio (general government):** the ratio of general government debt to GDP at current market prices. It is the subject of one of the fiscal criteria laid down in Article 104(2) of the Treaty establishing the European Community to define the existence of an excessive deficit.

**Deficit (general government):** the general government's net borrowing, i.e. the difference between total government revenue and total government expenditure.

**Deficit-debt adjustment (general government):** the difference between the general government deficit and the change in general government debt.

**Deficit ratio (general government):** the ratio of the general government deficit to GDP at current market prices. It is the subject of one of the fiscal criteria laid down in Article 104(2) of the Treaty establishing the European Community to define the existence of an excessive deficit. It is also referred to as the budget deficit ratio or the fiscal deficit ratio.

**Deflation:** a decline in the general price level, e.g. in the consumer price index.

**Deposit facility:** a standing facility of the Eurosystem which counterparties may use to make overnight deposits, remunerated at a pre-specified interest rate, at an NCB.

**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. The direct investment account records net transactions/positions in assets abroad by euro area residents (as "direct investment abroad") and net transactions/positions in euro area assets by non-residents (as "direct investment in the euro area").

Effective exchange rates (EERs) of the euro (nominal/real): weighted averages of bilateral euro exchange rates against the currencies of the euro area's main trading partners. The ECB publishes nominal EER indices for the euro against two groups of trading partners: the EER-22 (comprising the 12 non-euro area EU Member States and the 10 main trading partners outside the EU) and the EER-42 (composed of the EER-22 and 20 additional countries). The weights used reflect the share of each partner country in euro area trade and account for competition in third markets. Real EERs are nominal EERs deflated by a weighted average of foreign, relative to domestic, prices or costs. They are thus measures of price and cost competitiveness.

**EONIA** (euro overnight index average): a measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest



rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

**Equities:** securities representing ownership of a stake in a corporation. They comprise shares traded on stock exchanges (quoted shares), unquoted shares and other forms of equity. Equities usually produce income in the form of dividends.

**ERM II (exchange rate mechanism II):** the exchange rate arrangement that provides the framework for exchange rate policy cooperation between the euro area countries and the EU Member States not participating in Stage Three of EMU.

**EURIBOR (euro interbank offered rate):** the rate at which a prime bank is willing to lend funds in euro to another prime bank, computed daily for interbank deposits with different maturities of up to 12 months.

**Euro area:** the area formed by those EU Member States in which the euro has been adopted as the single currency in accordance with the Treaty establishing the European Community.

**European Commission surveys:** harmonised surveys of business and/or consumer sentiment conducted on behalf of the European Commission in each of the EU Member States. Such questionnaire-based surveys are addressed to managers in the manufacturing, construction, retail and services industries, as well as to consumers. From each monthly survey, composite indicators are calculated that summarise the replies to a number of different questions in a single indicator (confidence indicators).

**Eurosystem:** the central banking system made up of the ECB and the NCBs of those EU Member States that have already adopted the euro.

**Eurozone Purchasing Managers' Surveys:** surveys of business conditions in manufacturing and in services industries conducted for a number of countries in the euro area and used to compile indices. The Eurozone Manufacturing Purchasing Managers' Index (PMI) is a weighted indicator calculated from indices of output, new orders, employment, suppliers' delivery times and stocks of purchases. The services sector survey asks questions on business activity, expectations of future business activity, the amount of business outstanding, incoming new business, employment, input prices and prices charged. The Eurozone Composite Index is calculated by combining the results from the manufacturing and services sector surveys.

**External trade in goods:** exports and imports of goods with countries outside the euro area, measured in terms of value and as indices of volume and unit value. External trade statistics are not comparable with the exports and imports recorded in the national accounts, as the latter include both intra-euro area and extra-euro area transactions, and also combine goods and services. Nor are they fully comparable with the goods item in b.o.p. statistics. Besides methodological adjustments, the main difference is that imports in external trade statistics are recorded including insurance and freight services, whereas they are recorded free on board in the goods item in the b.o.p. statistics.

**Financial account:** a b.o.p. account that covers all transactions in direct investment, portfolio investment, other investment, financial derivatives and reserve assets, between residents and non-residents.

**Fixed rate tender:** a tender procedure in which the interest rate is specified in advance by the central bank and in which participating counterparties bid the amount of money they wish to transact at the fixed interest rate.

**General government:** a sector defined in the ESA 95 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.

**Gross domestic product (GDP):** the value of an economy's total output of goods and services less intermediate consumption, plus net taxes on products and imports. GDP can be broken down by output, expenditure or income components. The main expenditure aggregates that make up GDP are household final consumption, government final consumption, gross fixed capital formation, changes in inventories, and imports and exports of goods and services (including intra-euro area trade).

**Harmonised Index of Consumer Prices (HICP):** a measure of consumer prices that is compiled by Eurostat and harmonised for all EU Member States.

**Hourly labour cost index:** a measure of labour costs, including gross wages and salaries (in cash and in kind, including bonuses) and other labour costs (employers' social contributions plus employment-related taxes paid by the employer minus subsidies received by the employer), per hour actually worked (including overtime).

**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.

**Index of negotiated wages:** a measure of the direct outcome of collective bargaining in terms of basic pay (i.e. excluding bonuses) at the euro area level. It refers to the implied average change in monthly wages and salaries.

**Industrial producer prices:** factory-gate prices (transportation costs are not included) of all products sold by industry excluding construction on the domestic markets of the euro area countries, excluding imports.

Industrial production: the gross value added created by industry at constant prices.

**Inflation:** an increase in the general price level, e.g. in the consumer price index.

**Inflation-indexed government bonds:** debt securities issued by the general government, the coupon payments and principal of which are linked to a specific consumer price index.

**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.



**International reserves:** external assets readily available to and controlled by monetary authorities for directly financing or regulating the magnitude of payments imbalances through intervention in exchange markets. The international reserves of the euro area comprise non-euro denominated claims on non-euro area residents, gold, special drawing rights (SDRs) and the reserve positions in the IMF which are held by the Eurosystem.

**Job vacancies:** a collective term covering newly created jobs, unoccupied jobs or jobs about to become vacant in the near future, for which the employer has taken recent active steps to find a suitable candidate.

**Key ECB interest rates:** the interest rates, set by the Governing Council, which reflect the monetary policy stance of the ECB. They are the minimum bid rate on the main refinancing operations, the interest rate on the marginal lending facility and the interest rate on the deposit facility.

Labour force: the sum total of persons in employment and the number of unemployed.

**Labour productivity:** the output that can be produced with a given input of labour. It can be measured in several ways, but is commonly measured as GDP at constant prices divided by either total employment or total hours worked.

**Longer-term refinancing operation:** a regular open market operation executed by the Eurosystem in the form of reverse transactions. Such operations are carried out through a monthly standard tender and normally have a maturity of three months.

**M1:** a narrow monetary aggregate that comprises currency in circulation plus overnight deposits held with MFIs and central government (e.g. at the post office or treasury).

**M2:** an intermediate monetary aggregate that comprises M1 plus deposits redeemable at a period of notice of up to and including three months (i.e. short-term savings deposits) and deposits with an agreed maturity of up to and including two years (i.e. short-term time deposits) held with MFIs and central government.

**M3:** a broad monetary aggregate that comprises M2 plus marketable instruments, in particular repurchase agreements, money market fund shares and 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.

**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.

**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).

**MFIs (monetary financial institutions):** financial institutions which together form the moneyissuing sector of the euro area. These include the Eurosystem, resident credit institutions (as defined in Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The latter group consists predominantly of money market funds.

**Minimum bid rate:** the lower limit to the interest rates at which counterparties may submit bids in the variable tenders.

**Other investment:** an item in the b.o.p. and the i.i.p. that covers the financial transactions/ positions with non-residents in trade credits, deposits and loans, and other accounts receivable and payable.

**Portfolio investment:** euro area residents' net transactions and/or positions in securities issued by non-residents of the euro area ("assets") and non-residents' net transactions and/or positions in securities issued by euro area residents ("liabilities"). Included are equity securities and debt securities (bonds and notes, and money market instruments). Transactions are recorded at the effective price paid or received, less commissions and expenses. To be regarded as a portfolio asset, ownership in an enterprise must be equivalent to less than 10% of the ordinary shares or voting power.

**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 HICP 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.

**Purchasing power parity (PPP):** the rate at which one currency is converted into another so as to equalise the purchasing power of the two currencies by eliminating the differences in the price levels prevailing in the countries concerned. In their simplest form, PPPs show the ratio of the prices in national currency of the same good or service in different countries.



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  $4\frac{1}{2}$ %.

**Reserve requirement:** the minimum amount of reserves a credit institution is required to hold with the Eurosystem. Compliance is determined on the basis of the average of the daily balances over a maintenance period of around one month.

Survey of Professional Forecasters (SPF): a quarterly survey that has been conducted by the ECB since 1999 to collect macroeconomic forecasts on euro area inflation, real GDP growth and unemployment from a panel of experts affiliated to financial and non-financial organisations based in the EU

Unit labour costs: a measure of total labour costs per unit of output calculated for the euro area as the ratio of total compensation per employee to labour productivity (defined as GDP at constant prices per person employed).

Variable rate tender: a tender procedure where the counterparties bid both the amount of money they wish to transact with the central bank and the interest rate at which they wish to enter into the transaction.

Write-down: a downward adjustment to the value of loans recorded in the balance sheets of MFIs when it is recognised that the loans have become partly unrecoverable.

Write-off: the removal of the value of loans from the balance sheets of MFIs when the loans are considered to be totally unrecoverable.

**Yield curve:** a graphical representation of the relationship between the interest rate or yield and the residual maturity at a given point in time for debt securities with the same credit risk but different maturity dates. The slope of the yield curve can be measured as the difference between the interest rates or yield at two selected maturities.



