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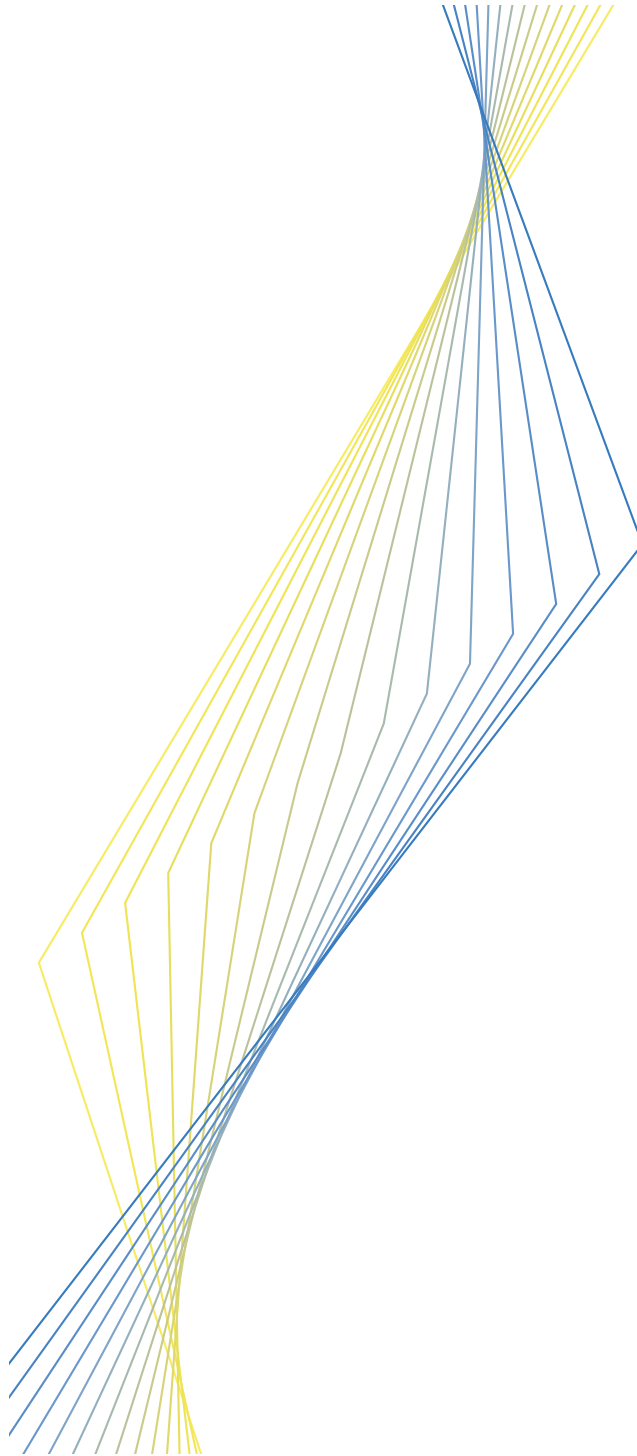
MONTHLY BULLETIN May 2003

**M O N T H L Y  
B U L L E T I N**

May 2003



EUROPEAN CENTRAL BANK



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B U L L E T I N**

May 2003

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## Abbreviations

### Countries

BE	Belgium
DK	Denmark
DE	Germany
GR	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PT	Portugal
FI	Finland
SE	Sweden
UK	United Kingdom
JP	Japan
US	United States

### Others

BIS	Bank for International Settlements
BPM5	IMF Balance of Payments Manual (5th edition)
CDs	certificates of deposit
c.i.f.	cost, insurance and freight at the importer's border
CPI	Consumer Price Index
ECB	European Central Bank
ECU	European Currency Unit
EER	effective exchange rate
EMI	European Monetary Institute
EMU	Economic and Monetary Union
ESA 95	European System of Accounts 1995
ESCB	European System of Central Banks
EU	European Union
EUR	euro
f.o.b.	free on board at the exporter's border
GDP	gross domestic product
HICP	Harmonised Index of Consumer Prices
ILO	International Labour Organization
IMF	International Monetary Fund
MFIs	monetary financial institutions
NACE Rev. 1	Statistical classification of economic activities in the European Community
NCBs	national central banks
PPI	Producer Price Index
repos	repurchase agreements
SITC Rev. 3	Standard International Trade Classification (revision 3)
ULCM	Unit Labour Costs in Manufacturing

**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.**

Four and a half years after it was first announced, the monetary policy strategy of the ECB underwent a thorough evaluation by the Governing Council. The Governing Council concluded its discussions of the ECB's monetary policy strategy at its meeting on 8 May 2003. It took the following decisions (the details of which are contained in the press release reproduced below):

- First, regarding the primary objective of price stability, the Governing Council confirmed that it defines price stability as announced in 1998, namely as a year-on-year increase in the HICP for the euro area of below 2%. At the same time, it clarified that in the pursuit of price stability it aims to maintain inflation rates at levels close to 2% over the medium term. This clarification underlines the ECB's commitment to provide a sufficient safety margin to guard against the risks of deflation. It also addresses the issue of the possible presence of a measurement bias in the HICP and the implications of inflation differentials within the euro area.
- Second, in order to underscore the longer-term nature of the reference value for a broad monetary aggregate, the Governing Council decided to discontinue the practice of conducting the review of the reference value for M3 on an annual basis.
- Third, in its communication on monetary policy decisions, the Governing Council will stress the way in which it cross-checks information and analysis under the two pillars of its strategy when making an overall assessment of the risks to price stability. To reflect this decision, the Editorial has been restructured. Henceforth, it will first present the economic analysis, which identifies short to medium-term risks to price stability, and then turn to the monetary analysis, which assesses medium to long-term trends in inflation. It will conclude by cross-checking the analyses conducted under these two pillars.

Turning now to the discussion on the monetary policy stance, the Governing Council of the ECB decided on 8 May to leave the minimum bid rate on the main refinancing operations of the Eurosystem unchanged at 2.50%. The interest rates on the marginal lending facility and the deposit facility were also left unchanged, at 3.50% and 1.50% respectively.

Taking due account of new economic and monetary information as well as the latest geopolitical developments, the Governing Council concluded that the monetary policy stance remains consistent with the preservation of price stability over the medium term. At the same time, the stance contributes to a monetary environment that is conducive to economic growth. With the end of the military action in Iraq, important downside risks to the economic recovery have diminished. The Governing Council made clear that it will carefully monitor future developments and assess whether conditions for price stability continue to develop favourably.

Turning to the more detailed assessment underlying the decision on key ECB interest rates, in the context of the economic analysis recently published survey data and the latest information from conjunctural indicators suggest that economic activity in the euro area has remained subdued so far this year. Looking ahead, a gradual strengthening of real GDP growth is expected to start later in 2003 and to gather more pace in the course of next year. Factors supporting this outlook are an expected recovery of global demand, the prospect of falling consumer price inflation benefiting real disposable income growth, and the low level of interest rates. Moreover, the recent unwinding of uncertainties associated with geopolitical tensions should contribute to an economic recovery. Such an assessment also seems to be reflected in recent financial market reactions. Following the end of the war in Iraq, financial market volatility has declined significantly, with a notable increase in stock prices.

Nevertheless, there continue to be downside risks. First, there are the risks originating from the past accumulation of macroeconomic imbalances outside the euro area, and lately concerns have arisen with regard to the SARS virus. Moreover, there is also some uncertainty over the extent of the adjustment still needed in the euro area corporate sector in order to enhance productivity and profitability, which could have an impact on employment growth and thus private consumption.

Looking at price developments, the annual rate of HICP inflation generally fluctuated at around 2.3-2.4% between the autumn of last year and March 2003. Broadly speaking, declining inflation rates for services and non-energy industrial goods have been offset by rising rates for energy and processed food prices. Conversely, in April energy prices are expected to reflect the decline in oil prices following the developments in Iraq. This expectation is in line with Eurostat's flash estimate for the inflation rate in April, which was 2.1%, i.e. 0.3 percentage point lower than in March.

Looking ahead, current indications do not point to further strong declines in the inflation rate in the immediate future, but lower oil prices, an environment of moderate economic growth, and the effects of the significantly higher exchange rate of the euro should all contribute to reducing inflationary pressure beyond the short term. Since the end of the military conflict in Iraq, the exchange rate of the euro has resumed an upward trend that started in early 2002. As a consequence, the nominal effective exchange rate of the euro is now close to the average level of early 1999.

The outlook for inflation will also depend to a significant extent on wage developments. The available indicators suggest that labour cost growth has shown signs of stabilising in the course of 2002. Moderate wage trends are indeed crucial both to maintain price stability and to foster employment growth.

In the context of the monetary analysis, the broad monetary aggregate M3 has been growing strongly over a protracted period. Moreover, the data for more recent months do not suggest that a process of correction has started. As a consequence, the euro area economy continued to accumulate liquidity significantly above the amount needed to sustain non-inflationary growth. The strong monetary expansion contrasted with the more moderate growth in loans to the private sector. This is consistent with the assessment that monetary developments continue to be fostered by portfolio shifts, reflecting a sustained preference on the part of investors for liquid and secure assets in an environment of high uncertainty. However, the low level of interest rates has also contributed to strong monetary growth.

When interpreting monetary trends, particular account needs to be taken of the portfolio shifts driven by increased demand for monetary assets for precautionary reasons. The reduction in geopolitical tensions should support an unwinding of these portfolio shifts. A reversal in monetary trends would in any case dampen the concerns regarding the medium to long-term implications of recent monetary dynamics. As a consequence, monetary developments will continue to be monitored closely.

Overall, it currently appears that inflation rates should decline to below 2% over the medium term, in particular given the outlook for economic activity and the significant appreciation of the euro. It also appears that the strong expansion of M3 and the build up of liquidity should not translate into inflationary pressure, at least as long as economic growth remains modest. Hence, the cross-checking of the information from the two pillars indicates that the risks to price stability over the medium term remain limited.

Regarding fiscal policy, developments in 2002 were generally not satisfactory. In particular, countries that had not achieved sound fiscal positions in earlier years when the economic

conditions were more favourable are now struggling to keep their budgets under control. Looking ahead, it is crucial to underpin the fiscal policy framework with decisive action, strong peer pressure and consistent implementation of the rules of the Treaty and of the Stability and Growth Pact. Countries should maintain budgetary positions close to balance or in surplus over the cycle, and, where this is not yet the case, take the required structural consolidation measures. This also creates the necessary room for the operation of automatic stabilisers. At the same time, governments are advised to place the emphasis on growth-oriented consolidation policies that strengthen the productive forces of the economy. By strengthening confidence, a credible medium-term fiscal consolidation strategy will also support economic growth in the short term.

Structural reforms are essential to increase the euro area's growth potential and enhance

its ability to better withstand economic shocks. Indeed, such reforms, which should aim to reduce rigidities in labour and goods markets, could significantly strengthen the degree of resilience of economic activity to such shocks, both in the euro area as a whole and in its regions. Renewed momentum in the process of structural reform will be important to foster consumer and investor confidence in medium and long-term growth and employment opportunities in the euro area. This, in turn, should also have a positive short-term effect on spending and investment decisions in the euro area.

This issue of the Monthly Bulletin contains three articles. The first reviews the recent dynamics of residential property prices in the euro area. The second examines the electronification of payments in Europe. The third describes the adjustment of voting modalities in the Governing Council, as approved by the EU Council, in connection with future enlargements of the euro area.



## Press release of 8 May 2003 on the ECB's monetary policy strategy

After more than four years of conducting monetary policy for the euro area, the Governing Council of the ECB has undertaken a thorough evaluation of the ECB's monetary policy strategy.

This strategy, which was announced on 13 October 1998, consists of three main elements: a quantitative definition of price stability, a prominent role for money in the assessment of risks to price stability, and a broadly based assessment of the outlook for price developments.

More than four years of implementation have worked satisfactorily. Nevertheless, the Governing Council deemed it useful to evaluate the strategy in the light of this experience, taking into account the public debate and a series of studies undertaken by staff of the Eurosystem.

“Price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%. Price stability is to be maintained over the medium term.” Today, the Governing Council confirmed this definition (which it announced in 1998). At the same time, the Governing Council agreed that in the pursuit of price stability it will aim to maintain inflation rates close to 2% over the medium term. This clarification underlines the ECB's commitment to provide a sufficient safety margin to guard against the risks of deflation. It also addresses the issue of the possible presence of a measurement bias in the HICP and the implications of inflation differentials within the euro area.

The Governing Council confirmed that its monetary policy decisions will continue to be based on a comprehensive analysis of the risks to price stability. Over time, analysis under both pillars of the monetary policy strategy has been deepened and extended. This practice will be continued. However, the Governing Council wishes to clarify communication on the cross-checking of information in coming to its unified overall judgement on the risks to price stability.

To this end, the introductory statement of the President will henceforth follow a new structure. It will start with the economic analysis to identify short to medium-term risks to price stability. As in the past, this will include an analysis of shocks hitting the euro area economy and projections of key macroeconomic variables.

The monetary analysis will then follow to assess medium to long-term trends in inflation in view of the close relationship between money and prices over extended horizons. As in the past, monetary analysis will take into account developments in a wide range of monetary indicators including M3, its components and counterparts, notably credit, and various measures of excess liquidity.

This new structure of the introductory statement will better illustrate that these two perspectives offer complementary analytical frameworks to support the Governing Council's overall assessment of risks to price stability. In this respect, the monetary analysis mainly serves as a means of cross-checking, from a medium to long-term perspective, the short to medium-term indications coming from economic analysis.

To underscore the longer-term nature of the reference value for monetary growth as a benchmark for the assessment of monetary developments, the Governing Council also decided to no longer conduct a review of the reference value on an annual basis. However, it will continue to assess the underlying conditions and assumptions.

The ECB will today publish on its website a number of background studies prepared by its staff which, together with papers published earlier, served as input into the Governing Council's reflections on the ECB's monetary policy strategy.

# Economic developments in the euro area

## I Monetary and financial developments

### Monetary policy decisions of the Governing Council of the ECB

At its meeting on 8 May 2003 the Governing Council of the ECB decided to leave the minimum bid rate in the main refinancing operations, conducted as variable rate tenders, unchanged at 2.50%. The interest rates on both the marginal lending facility and the deposit facility were also kept unchanged, at 3.50% and 1.50% respectively (see Chart 1).

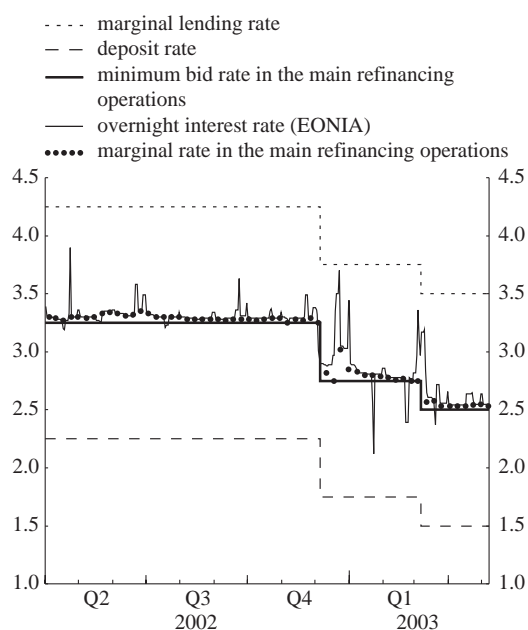
### M3 growth remained strong in March

In March 2003 the annual growth rate of the broad monetary aggregate M3 stood at 7.9%, unchanged from the previous month (see Chart 2). The three-month average of the annual growth rates of M3 increased to 7.7% in the period from January to March 2003, from 7.3% in the period from December 2002 to February 2003.

**Chart 1**

### ECB interest rates and money market rates

(percentages per annum; daily data)

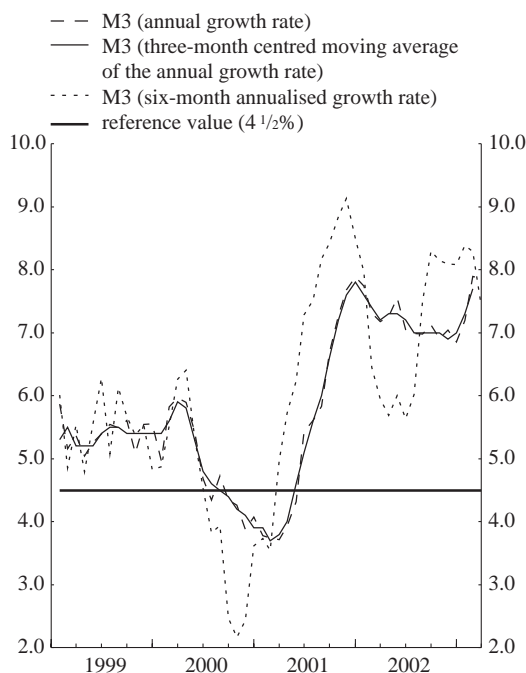


Sources: ECB and Reuters.

**Chart 2**

### M3 growth and the reference value

(adjusted for seasonal and calendar effects)



Source: ECB.

The strong M3 growth continued to be linked to the high economic, financial and geopolitical uncertainty, which was particularly pronounced in March due to the military activities in Iraq at that time. In addition, the low opportunity costs of holding assets included in M3 are also likely to have contributed to the aggregate's buoyant growth. As a consequence of the extended period of strong M3 growth, more liquidity has been accumulated in the euro area than is needed to finance sustainable non-inflationary growth. Such high liquidity levels – if not corrected – could become a matter of concern with regard to price stability in the medium term and therefore deserve closer monitoring. However, part of this excess liquidity is likely to reflect higher precautionary demand, which is expected to unwind once uncertainty diminishes, and hence to be less of a concern.

Turning to the main components of M3, the annual growth rate of the narrow monetary

aggregate M1 increased to 11.6% in March, from 10.3% in February (see Table I). Among M1 components, the annual growth rate of overnight deposits rose to 7.9%, from 6.4% in February. The annual growth rate of currency in circulation was 39.9% in March, compared with 41.4% in the previous month. The short-run dynamics of currency in circulation remained strong, with a seasonally adjusted monthly increase of €9 billion in March, which is in line with the average monthly increase since March 2002. This upward trend in currency in circulation reflects the gradual rebuilding of currency holdings by both euro area and non-euro area residents after the steep fall in the run-up to the euro cash changeover. Taking currency and overnight deposits together, the continuing strong demand for the most liquid assets included in M3 over recent months can be explained both by the low opportunity costs of holding these instruments, given the low level of interest rates prevailing across all maturities, and by portfolio shifts as a reaction to high financial market uncertainty.

The annual rate of growth of short-term deposits other than overnight deposits

declined to 4.5% in March, from 4.7% in the previous month. Of these deposits, the annual rate of change of deposits with an agreed maturity of up to two years became negative (-0.5% in March, compared with 1.2% in the previous month), while the annual growth rate of deposits redeemable at a period of notice of up to three months increased to 8.3% in March, from 7.7% in February. These different dynamics probably continued to reflect the reduction in the spread between the retail interest rates on these types of deposits in recent months, which made the holding of short-term savings deposits (i.e. deposits redeemable at a period of notice of up to three months) relatively more attractive.

The annual rate of growth of marketable instruments declined to 7.9% in March, from 11.3% in the previous month. This fall was due to a sharp decline in the annual rate of change of both debt securities issued with a maturity of up to two years (to -10.3% from -3.2% in February) and repurchase agreements (to 1.4% from 10.2% in the previous month). By contrast, the annual growth rate of money market fund shares and units continued to be strong (unchanged

**Table I**  
**Summary table of monetary variables in the euro area**

(annual percentage changes; quarterly averages)

	2002 Q3	2002 Q4	2003 Q1	2002 Dec.	2003 Jan.	2003 Feb.	2003 Mar.
<i>Adjusted for seasonal and calendar effects</i>							
<b>M1</b>	7.6	8.8	10.2	9.9	9.5	10.3	11.6
<i>of which: currency in circulation</i>	-7.6	12.9	39.1	42.7	34.8	41.4	39.9
<i>of which: overnight deposits</i>	10.3	8.1	6.5	5.9	6.1	6.4	7.9
M2 - M1 (= other short-term deposits)	5.5	4.9	4.2	3.7	4.0	4.7	4.5
<b>M2</b>	6.5	6.7	7.0	6.6	6.5	7.3	7.9
M3 - M2 (= marketable instruments)	10.2	8.5	10.2	8.6	11.1	11.3	7.9
<b>M3</b>	7.0	7.0	7.5	6.9	7.2	7.9	7.9
<i>Not adjusted for seasonal and calendar effects</i>							
<b>Longer-term financial liabilities</b>							
<b>(excluding capital and reserves)</b>							
<b>Credit to euro area residents</b>	5.1	5.2	4.7	4.9	4.6	4.9	4.6
<b>Credit to general government</b>	4.2	4.1	4.2	4.1	4.1	4.3	4.0
<i>of which: loans to general government</i>	1.1	1.9	2.0	1.7	1.8	2.4	1.9
<i>of which: loans to general government</i>	-0.9	-1.2	-1.2	-1.2	-0.8	-1.3	-1.7
<b>Credit to other euro area residents</b>	5.0	4.8	4.8	4.7	4.8	4.9	4.6
<i>of which: loans to the private sector</i>	5.3	4.8	4.9	4.7	4.9	5.0	4.5

Source: ECB.

at 16.4%). Given that the latter instruments are particularly attractive to investors seeking safe interest-bearing assets at times of financial market uncertainty, this strong growth supports the hypothesis of higher demand for monetary assets for precautionary reasons (see Box I on “Estimating the size of portfolio shifts from equity to money”).

As regards counterparts of M3 in the MFI balance sheet, the annual rate of growth of MFIs’ longer-term financial liabilities (excluding capital and reserves) fell to 4.6% in March, from 4.9% in February. This development may be related to the low level of long-term interest rates and possibly also to the relatively high volatility in bond markets in March.

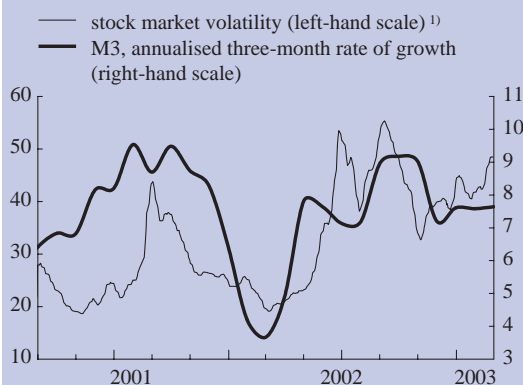
## Box I

### Estimating the size of portfolio shifts from equity to money

Since the second half of 2001, M3 has been growing strongly. This development seems to have been largely caused by sizeable portfolio shifts from equity to money. As a reaction to the high degree of financial market uncertainty during this period, private economic agents have restructured their portfolios in order to increase the share of safe and liquid assets (see Chart A).

#### Chart A: Implied stock market volatility and short-term dynamics of M3

(in percentages)



Sources: ECB and Bloomberg.

1) The implied volatility series reflects the expected standard deviation of percentage stock price changes over a period of up to three months, as implied in the prices of options on stock price indices. The equity index to which the implied volatility refers is the Dow Jones EURO STOXX 50.

The identification, and in particular the quantification, of portfolio shifts is complicated by the fact that there is no direct evidence available. Financial aggregates encompass a variety of individual transactions, which reflect different portfolio allocation strategies; therefore, it is not easy to single out an exclusive relationship between two macro aggregates. Moreover, in a dynamic economy where the flows of financing and financial investment are constantly growing over time, it is not simple to disentangle the change in the holdings of financial instruments which is due to portfolio reallocation from the trend increase in financial investment in the economy. Finally, portfolio changes due to speculative or precautionary behaviour cannot be readily separated from changes in the holdings of money related to transaction motives.

Nevertheless, this box attempts to derive a rough approximation of the size of portfolio shifts by putting together information from various statistics, such as money and banking statistics, flow of funds statistics and balance of payment statistics, and combining it with the results of some model-based tools.

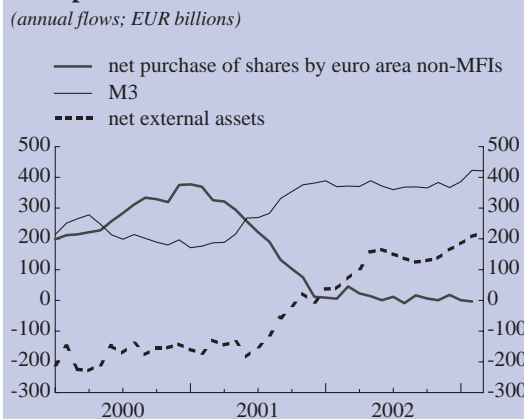
#### Stylised facts from the analysis of financial flows

Chart B shows a tentative estimate of the net purchase of equity by euro area non-MFIs<sup>1</sup> in comparison with M3 developments. It gives an indication of the close link between these two variables in the last few years. In

1 No direct data exist on equity held by non-MFIs in the euro area on a monthly basis. An estimation has therefore been derived from a combination of different statistics: balance of payments, MFI balance sheets and the Thomson Financial IFR Platinum database. This means that the result of this exercise must be interpreted with caution. Shares held by non-MFIs is derived from the total issuance of domestic shares by domestic sectors less the purchase of shares by banks and non-residents, plus foreign shares held by euro area non-MFIs. It should be noted that an increase in equity held by non-MFIs has no impact on money holdings if these shares have been newly issued by non-MFIs.

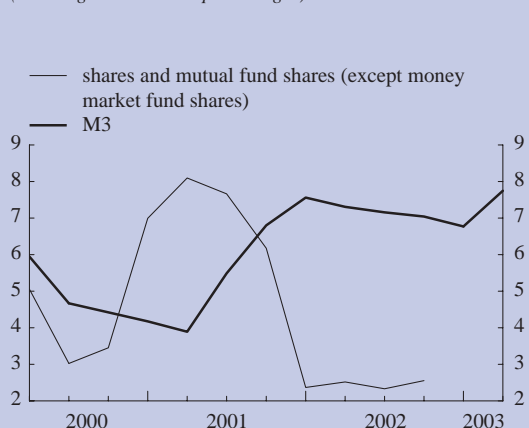
particular, it seems to confirm the hypothesis of strong portfolio shifts out of equity and into M3 since spring 2001. Balance of payments data suggest that these portfolio shifts were mostly related to a significant decrease in the net purchase of foreign shares by non-MFIs. This trend is mirrored by the exceptional increase in the net external assets of the MFI sector since the second half of 2001. The two trends are closely linked since changes in the net external assets of the MFI sector mirror the settling of mainly financial transactions by non-MFIs with residents of non-euro area countries.<sup>2</sup> These substitution effects are also reflected in the strong decline in the annual growth of quoted shares and mutual fund shares (except money market fund shares) held by the non-financial sector (see Chart C and, for more details, Box 1 on page 9 of the Monthly Bulletin of March 2003). Developments in the components of M3 confirm this analysis. Money market fund shares/units, which are often used to park funds, have increased particularly strongly over the past two years. All these observations of financial flows, while not sufficient to quantify portfolio shifts into M3, are strongly suggestive of substantial shifts from equity to money since spring 2001.

**Chart B: Net purchase of shares by euro area non-MFIs against M3 and net external asset position of MFIs**  
(annual flows; EUR billions)



Source: ECB calculations. Net purchases of shares estimated from IFR Platinum data, MFI balance sheet data and balance of payment data.

**Chart C: Financial investment of the non-financial sector**  
(annual growth rates in percentages)



Source: ECB.

### Model-based evidence of the impact of portfolio shifts on M3 developments

Evidence of portfolio shifts can also be gained from money demand models. These models typically do not include stock market variables as explanatory variables for money demand. Thus, if recent developments in money demand cannot be explained by traditional factors (real GDP, prices, interest rates), the unexplained parts of the models might mainly reflect the influence of stock market developments. In fact, the results from money demand models suggest that non-standard factors played a crucial role in the build-up of liquidity in 2001, 2002 and early 2003, as the residuals (e.g. the new unexplained shocks in the most recent quarter) of such models remained positive between 2001 Q2 and 2003 Q1. This was most significant in 2001 Q3 (after 11 September) and 2002 Q4 (at a time of heightened geopolitical uncertainty). Assuming that the positive shocks are solely caused by portfolio shifts and that no other shocks affected money demand, the accumulated shocks between 2001 Q2 and 2003 Q1 suggest that portfolio shifts in this period would amount to around €180 billion. However, these estimates are marked by a large degree of uncertainty, partly due to the assumptions mentioned.

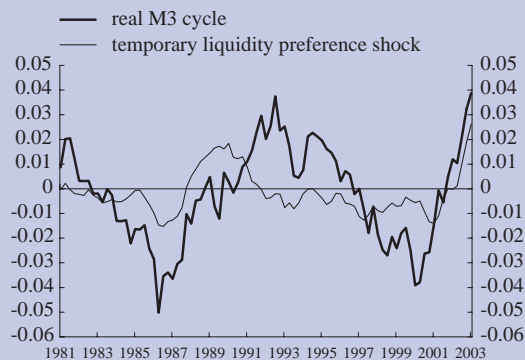
Insights into the importance of portfolio shifts might also be gained by using the structural VAR model of Cassola/Morana<sup>3</sup>, which analyses the link between several nominal variables (inflation and nominal interest

<sup>2</sup> For more details, see the Monthly Bulletin of May 2001, page 55.

<sup>3</sup> N. Cassola, C. Morana, (2002), "Monetary policy and the stock market in the euro area", ECB Working Paper No. 119.

rates) and real variables (output, real M3 and real stock prices) for the euro area. In this model, the historical decomposition of the cyclical dynamics of the economic variables into the contributions of their underlying determinants seems especially suitable for studying the effect of stock market dynamics on the cyclical dynamics of M3. As shown in Chart D, within the terminology of the model, it is a “liquidity preference shock”, i.e. the temporary shift from equity to money, that dominated the cyclical dynamics of M3 from 2001 to early 2003. In addition, Chart D shows that the contribution of the liquidity preference shock variable to the cyclical behaviour of M3 in past periods was not very significant, except for the periods around the stock market crash in autumn 1987. The model suggests that an increase in M3 of around €230 billion between 2001 Q2 and 2003 Q1 can be attributed to portfolio shifts related to stock market developments. However, as with any model, the results should be treated with caution, as the liquidity preference shock variable in the model may capture elements other than portfolio shifts, and since variables not included in the model might also contain relevant information on portfolio shifts.

**Chart D: Real M3 cycle and the contribution of the temporary liquidity preference shock**  
(in logarithms)



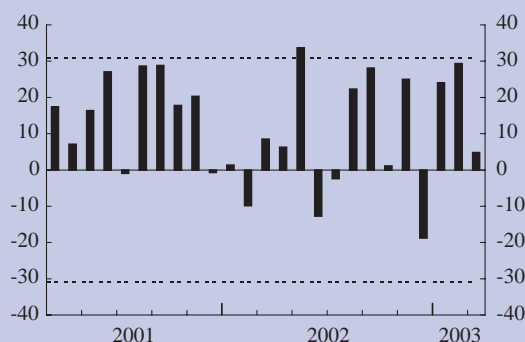
Note: The chart shows the deviation of real M3 from its long-term trend, which can be interpreted as the “real money cycle”. The contribution of “liquidity preference shocks” to this cycle is also plotted, which corresponds to the cyclical deviation explained by a temporary shift from equity into money.

#### Quantification of portfolio shifts with a time series model

The impact of portfolio shifts on M3 growth can also be roughly quantified with a simple time series model.<sup>4</sup> Without taking into account portfolio shifts, the one-step-ahead out-of-sample forecast errors of the time series model were basically always positive between spring 2001 and late 2001 as well as in the second half of 2002 and early 2003 (see Chart E). The stylised pattern is very similar to that of money demand models. Based on the analysis of the forecast performance of the univariate time series model and the analysis of financial flows as described above, the increasing tendency of economic agents to shift from equity to liquid assets from March 2001 to October 2001 and from September 2002 to early 2003 is captured in the model by two truncated linear trends.<sup>5</sup> The resulting estimates suggest that

**Chart E: One-step-ahead forecast error<sup>1)</sup> for M3**

(EUR billions, with 95% confidence interval (dotted lines))



1) The difference between the observed level of M3 and the level expected by the model.

between 2001 Q2 and 2003 Q1 there were significant portfolio shifts into money, which can be estimated to be around €250 billion. It should be remembered, however, that the construction of the variables is to some extent arbitrary and that the univariate model cannot distinguish portfolio shifts from effects of other variables such as the low level of interest rates. The results should therefore be viewed with caution.

<sup>4</sup> See page 56 of the Monthly Bulletin of May 2001 for further details. The time series model used is a univariate ARIMA model allowing for additional regression effects for the non-seasonally adjusted M3.

<sup>5</sup> A deviation from the linearity assumption was modelled for September and October 2001 by assuming a double intensity for the increase in September and only half the intensity for October. A similar deviation was modelled for November and December 2002, for which only half the regular intensity was assumed.



## Conclusion

This box shows that various techniques can be employed to estimate the size of the portfolio shifts from equity holdings into M3 driven by weak stock market developments and major financial market uncertainty in the last few years, which are likely to have been the main factor behind high M3 growth since the second quarter of 2001. The results of all the techniques point in the same direction, namely that the shifts have been very large, even though the estimates derived on the basis of different methods differ significantly, being in a range of €180 billion to €250 billion between 2001 Q2 and 2003 Q1. These estimates would translate into an effect on annual M3 growth of between 2½ and 3 percentage points in 2003 Q1. However, these estimates are characterised by conceptual and measurement problems and should therefore be taken only as rough indications rather than at face value.

## Growth of loans to the private sector declined in March

Turning to the asset side of the consolidated balance sheet of the MFI sector, the annual growth rate of total credit granted to euro area residents declined to 4.0% in March, from 4.3% in February. This was due to falls in the annual growth rates of both credit extended to general government (to 1.9%, from 2.4% in February) and credit extended to the private sector (to 4.6%, from 4.9% in the previous month). The annual growth rate of loans to the private sector also declined in March to 4.5%, from 5.0% in February. As for the short-run dynamics, after strong month-on-month growth in January and February, loan growth increased only modestly in March (0.1%). However, from a longer-term perspective, the annual growth rate of MFI loans to the private sector does not appear to be unusually low given the current economic environment and does not seem to be pointing to widespread credit constraints in the euro area as a whole.

For the first time in this issue of the Monthly Bulletin, the ECB is publishing the results of the Eurosystem's bank lending survey (see Box 2). The results indicate some tightening of credit standards, especially for loans to enterprises, in the first quarter of 2003. However, the April survey showed a smaller percentage of banks reporting such tightening than in the January survey, which referred to the fourth quarter of 2002. For the time being, these results need to be interpreted cautiously, as knowledge of the relationship between the answers to the survey

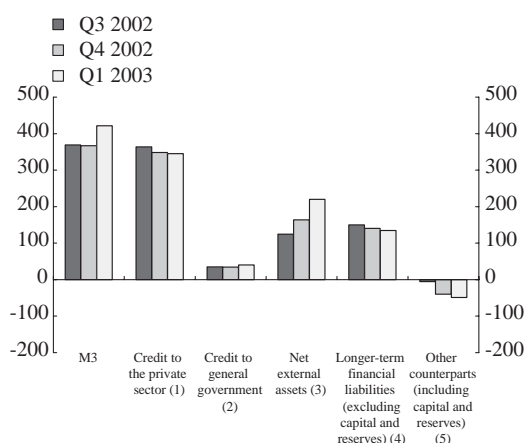
and actual credit and economic developments remains insufficient.

In March, the net external asset position of the euro area MFI sector increased by €7 billion, in absolute and non-seasonally adjusted terms. Over the 12 months to March, the net external assets of the MFI sector rose by €220 billion, compared with a rise of €207 billion over the 12 months to February. Euro area balance of payments data suggest that the strong increase in the net external asset position of the euro area MFI sector over the 12 months to February was due to net inflows into the euro area of combined direct and portfolio investment and, to a lesser extent, to an improvement in the euro area current account balance.

### Chart 3

#### Movements in M3 and its counterparts

(annual flows, end of period; EUR billions; not adjusted for seasonal and calendar effects)



Source: ECB.

$M3 = 1 + 2 + 3 - 4 + 5$

**Box 2****First results of the bank lending survey for the euro area**

As indicated in the article entitled “The bank lending survey for the euro area”, published in the April 2003 issue of the ECB’s Monthly Bulletin, a quarterly bank lending survey has been developed by the Eurosystem in order to enhance the understanding of bank lending behaviour in the euro area. The bank lending survey was carried out for the first time in January 2003, and was followed by a second survey cycle in April 2003. This box contains the main results of the first two surveys. A more extensive report is published on the ECB’s website.

The bank lending survey includes 18 regular questions on past and expected developments regarding credit markets. The former cover developments over the “past three months”, while the latter focus on developments over the “next three months”. Questions are classified according to loans to the two sectors that are the central focus of the survey, i.e. “enterprises” and “households”. The questions are addressed to senior credit officers, typically at or just below board level, from a sample group of banks in the euro area.

The results of the April 2003 bank lending survey indicate, on balance, a tightening of credit standards over the past three months by respondent banks. This is primarily the case for credit standards on loans or credit lines to enterprises, and to a lesser extent for those on loans to households. However, for both sectors, the percentages of banks reporting a tightening of credit standards fell between January and April.

As regards loans to enterprises, the April survey indicates that overall, for the euro area as a whole, the net percentage of respondents reporting a tightening of credit standards on loans to enterprises declined to 46% in April, from 65% in January (see Table A). The net tightening in April applied in particular to credit standards on loans to large enterprises (51% of respondents, compared with 67% in January). In April, 31% of banks tightened net credit standards on loans to small and medium-sized enterprises, which was significantly below the net figure of 59% recorded in the January survey. Focusing on original maturity of loans, the net tightening in April was more pronounced for long-term loans than for short-term loans (as was the case in January).

**Table A: Changes in credit standards applied to enterprises over the past three months**

(in percentages)

	Overall		Loans to small and medium-sized enterprises		Loans to large enterprises		Short-term loans		Long-term loans	
	April	January	April	January	April	January	April	January	April	January
Tightened considerably	1	4	0	6	8	12	0	2	8	16
Tightened somewhat	45	61	34	54	43	55	32	44	35	43
Remained basically unchanged	54	35	64	39	49	32	68	53	57	41
Eased somewhat	0	0	3	1	0	1	0	0	0	1
Eased considerably	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100
<b>Net percentage<sup>1)</sup></b>	<b>46</b>	<b>65</b>	<b>31</b>	<b>59</b>	<b>51</b>	<b>67</b>	<b>32</b>	<b>47</b>	<b>43</b>	<b>59</b>
Number of banks responding	83	76	80	77	80	76	83	77	83	79

1) Refers 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”.

Responses to the survey suggest that the tightening of credit standards recorded in both April and January was primarily driven by increased perceptions of risk, in particular related to the general economic outlook. The tightening took place primarily through a widening of margins, although non-price conditions and terms were also tightened.

As regards loan demand by enterprises, the net percentage of banks experiencing a decrease over the previous three months remained unchanged in April from January (at 31%; see Table B). The net percentage indicating



a decrease in the demand for loans or credit lines to large enterprises was 26% in April (compared with 24% in January). The net percentage for decreasing demand for loans by small and medium-sized enterprises was 19% in April, down from 29% in January. The lower net demand for loans applied to long-term loans to a greater extent than to short-term loans.

**Table B: Changes in demand for loans or credit lines to enterprises over the past three months**

(in percentages)

	Overall		Loans to small and medium-sized enterprises		Loans to large enterprises		Short-term loans		Long-term loans	
	April	January	April	January	April	January	April	January	April	January
Decreased considerably	0	5	2	9	7	11	0	5	1	15
Decreased somewhat	41	41	34	34	34	32	18	28	41	32
Remained basically unchanged	48	39	47	41	45	39	67	54	29	29
Increased somewhat	10	12	16	12	15	17	14	11	28	22
Increased considerably	0	3	0	3	0	1	0	3	0	3
Total	100	100	100	100	100	100	100	100	100	100
<b>Net percentage <sup>1)</sup></b>	<b>-31</b>	<b>-31</b>	<b>-19</b>	<b>-29</b>	<b>-26</b>	<b>-24</b>	<b>-4</b>	<b>-19</b>	<b>-14</b>	<b>-22</b>
Number of banks responding	82	77	81	77	80	76	83	77	83	77

1) The net percentages for the questions on demand for loans are defined as 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".

With respect to expectations of credit standards over the next three months, the net percentage of banks expecting a tightening of credit standards declined to 39% in April, from 46% in January (see Table C). This expected further net tightening of credit standards applies more or less equally to small and medium-sized enterprises and to large enterprises.

**Table C: Expected changes in credit standards applied to enterprises over the next three months**

(in percentages)

	Overall		Loans to small and medium-sized enterprises		Loans to large enterprises		Short-term loans		Long-term loans	
	April	January	April	January	April	January	April	January	April	January
Tighten considerably	2	2	2	2	4	9	3	2	4	9
Tighten somewhat	36	43	35	40	33	41	26	30	37	43
Remain basically unchanged	61	54	61	55	61	48	71	67	58	47
Ease somewhat	0	0	3	2	2	2	0	1	2	2
Ease considerably	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100
<b>Net percentage <sup>1)</sup></b>	<b>39</b>	<b>46</b>	<b>35</b>	<b>40</b>	<b>36</b>	<b>48</b>	<b>29</b>	<b>31</b>	<b>39</b>	<b>50</b>
Number of banks responding	83	78	81	77	80	76	83	78	83	79

1) See footnote in Table A.

Turning to loans to households, the results of the April survey indicate, on balance, a tightening of credit standards applied to the approval of loans to households (see Table D). However, the net percentage of banks reporting a tightening of credit standards applied to loans for house purchase declined to 14% in April, from 20% in January. As regards consumer credit and other loans to households, the net percentage of banks reporting a tightening of credit standards was 15% in April, compared with 23% in January.

**Table D: Changes in credit standards applied to households over the past three months**

(in percentages)

	Loans for house purchase		Consumer credit and other lending	
	April	January	April	January
Tightened considerably	0	4	0	1
Tightened somewhat	19	22	17	27
Remained basically unchanged	77	69	81	68
Eased somewhat	5	5	2	5
Eased considerably	0	0	0	0
Total	100	100	100	100
<b>Net percentage <sup>1)</sup></b>	<b>14</b>	<b>20</b>	<b>15</b>	<b>22</b>
Number of banks responding	80	77	77	76

1) See footnote in Table A.

**Table E: Changes in demand for loans to households over the past three months**

(in percentages)

	Loans for house purchase		Consumer credit and other lending	
	April	January	April	January
Decreased considerably	5	3	3	1
Decreased somewhat	18	16	24	31
Remained basically unchanged	35	34	47	45
Increased somewhat	33	35	20	19
Increased considerably	9	13	5	5
Total	100	100	100	100
<b>Net percentage <sup>1)</sup></b>	<b>19</b>	<b>29</b>	<b>-2</b>	<b>-8</b>
Number of banks responding	80	77	78	75

1) See footnote in Table B.

On the demand side, the results of the April survey indicate that banks recorded an increase in the demand for loans to households for house purchase over the past three months. The net percentage of banks reporting an increase in the demand for loans for house purchase was 19% in April, down from 29% in January (see Table E). Meanwhile, a slight decrease in the demand for consumer credit and other loans to households was observed over the same period. This pattern was also observed in the January survey. The net percentage of banks reporting a decrease in the demand for consumer credit and other loans to households over the past three months was 2% in April, compared with 8% in January.

Regarding expectations for the next three months of 2003, the results of the April survey indicate that, on balance, banks expect a further tightening of credit standards applied to the approval of loans to households, albeit to a lesser extent than in the January survey (see Table F). This expectation is, on balance, somewhat more pronounced for consumer credit and other lending to households (14%) than for loans to households for house purchase (8%), which is similar to the pattern indicated in January (23% and 12% respectively).

Given that the survey is in its early stages, the results need to be interpreted very cautiously. Further time and experience will be required before it is possible to make a precise assessment of the survey results and to judge the relation between them and actual economic and financial developments.

**Table F: Expected changes in credit standards applied to households over the next three months**

(in percentages)

	Loans for house purchase		Consumer credit and other lending	
	April	January	April	January
Tighten considerably	2	2	1	3
Tighten somewhat	16	14	20	21
Remain basically unchanged	71	79	73	75
Ease somewhat	10	4	7	1
Ease considerably	0	0	0	0
Total	100	100	100	100
<b>Net percentage <sup>1)</sup></b>	<b>8</b>	<b>12</b>	<b>14</b>	<b>23</b>
Number of banks responding	80	77	78	75

1) See footnote in Table A.

## Debt securities issuance rose in February

The annual growth of the amount outstanding of debt securities issued by euro area residents rose to 7.1% in February 2003, from 6.5% in January (see Chart 4). The annual growth of the amount outstanding of long-term debt securities increased slightly, from 5.6% in January to 5.9% in February. In the same period, the annual growth of the amount outstanding of short-term debt securities increased by 3.3 percentage points, to reach 19.0% in February. Underlying this development was a strong increase in short-term debt securities issuance in the MFI sector.

The currency breakdown shows that the annual growth of the amount outstanding of euro-denominated debt securities issued by euro area residents rose slightly, from 6.0% in January to 6.5% in February. The annual growth of non-euro denominated debt securities issued by euro area residents, which represent around 9% of the total amount outstanding of debt securities issued

by euro area residents, increased to 13.3% in February 2003, from 11.2% in January.

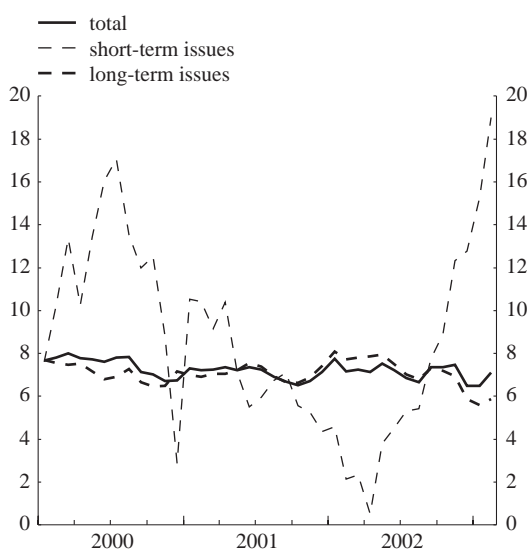
Turning to the sectoral breakdown of euro-denominated debt securities issuance, the annual growth of the amount outstanding of debt securities issued by MFIs, which accounts for the largest part of outstanding non-government issues, was 4.8% in February, broadly unchanged from the previous month. This was broadly similar to the rate of growth of MFI loans to the private sector. However, the consolidated balance sheet of the MFI sector indicates that a substantial proportion of issuance does not constitute net financing for the sector as a whole, as many securities issued by MFIs are acquired by other MFIs. Indeed, on a consolidated basis, the annual growth of outstanding debt securities issued by the MFI sector was 1.1% in February 2003.

In the non-MFI corporate sector, which includes both non-monetary financial and non-financial corporations, the annual growth of the amount outstanding of debt securities recorded its first increase since August 2002: it rose to 16.6% in February 2003 from 14.9% in January. Within this sector, the annual growth of the amount outstanding of debt securities issued by non-financial corporations increased from 4.8% in January to 6.2% in February. Among the bonds issued, the first issues of 30-year corporate bonds by telecommunications companies in January were followed by others in the utility sector in February, thus starting to enrich the sector composition at the very long end of the corporate bond yield curve. The rise in corporate bond issuance can be partly related to the fall in spreads between corporate bond yields and equivalent government bond yields in the euro area in the winter of 2002-03.

As for the non-monetary financial corporation sector, which accounts for broadly the same amount of debt securities outstanding as the non-financial corporation sector, the annual growth of the amount outstanding of debt securities increased from 27.3% in January to 29.2% in February. This was the first rise after a downward trend that began in January

**Chart 4**  
**Annual growth in debt securities issued by euro area residents**

(percentage changes)



Source: ECB.

Note: Annual growth rates are based on financial transactions and are corrected for reclassifications, revaluations, exchange rate variations and other changes that do not arise from transactions.

2002. Strong issuance in the non-monetary financial corporation sector partly reflects a shift by corporations from direct bond issuance to indirect issuance through specialised financial intermediaries. Companies in the telecommunications and automobile sectors, in particular, issued substantial amounts of securities via financial subsidiaries – classified in the non-monetary financial sector – in other euro area countries.

Turning to the government sector, the annual growth of the amount outstanding of debt securities issued by the general government sector increased from 4.8% in January to 5.4% in February. The annual growth of the amount outstanding of debt securities issued by central government increased slightly, from 4.0% in January to 4.3% in February. This development partly reflected issues which had been postponed from January. The annual growth of the amount outstanding of debt securities issued by regional and other general government institutions increased from 28.0% in January to 32.7% in February.

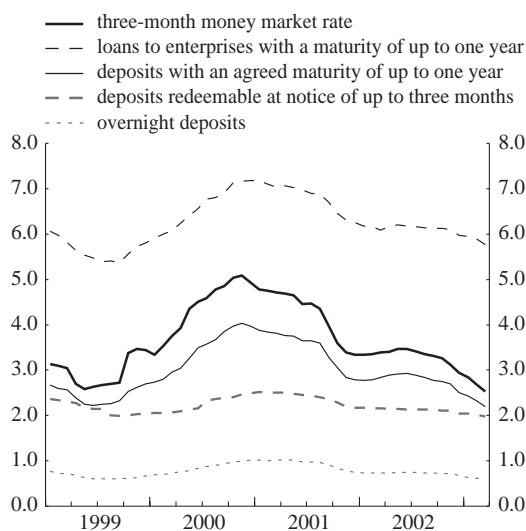
### Retail bank interest rates continued to decline in March

Short-term retail bank interest rates declined further in March 2003, supported by the reduction in key ECB interest rates on 6 March 2003 and continuing the downward trend that started in May 2002. Rates on deposits with an agreed maturity of up to one year and on loans to enterprises with a maturity of up to one year fell by around 13 basis points in March compared with the previous month. Overall, these declines left the respective short-term bank interest rates around 70 and 40 basis points lower than in May 2002 and brought them back to levels last seen in the second half of 1999 (see Chart 5).

Despite a slight rise in long-term government bond yields in March 2003, long-term retail bank interest rates continued to fall that month, following the trend seen since May 2002 (see Chart 6). Mortgage rates for

**Chart 5**  
Short-term retail bank interest rates and a comparable market rate

(percentages per annum; monthly averages)



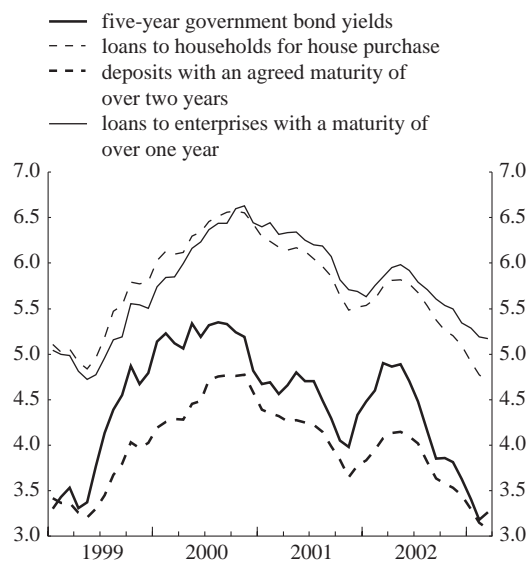
Sources: ECB aggregation of individual country data and Reuters.

Note: From January 2001, data include Greece.

households and long-term lending rates for enterprises were respectively around 115 and 80 basis points lower than in May 2002.

**Chart 6**  
Long-term retail bank interest rates and a comparable market rate

(percentages per annum; monthly averages)



Sources: ECB aggregation of individual country data and Reuters.

Note: From January 2001, data include Greece.

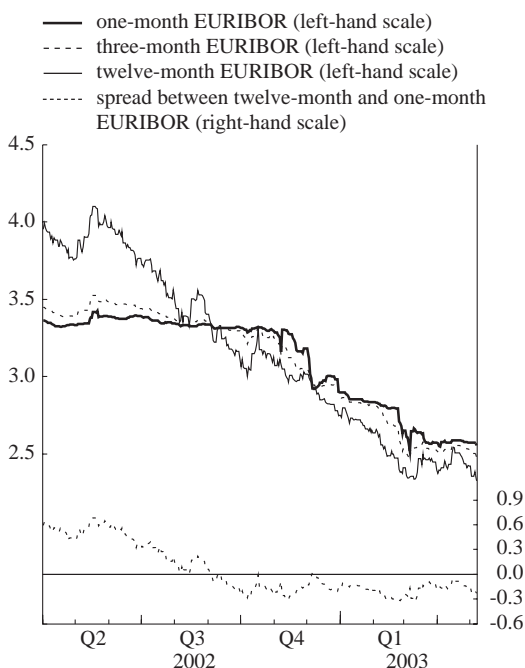
Overall, the movements in most retail bank interest rates over recent months seem to be broadly in line with historical patterns. For loans to enterprises, however, the spread to market rates was slightly higher than recorded in the past, probably reflecting credit risk perceptions.

### Money market interest rates decreased slightly at longer maturities in April

The decline in money market interest rates since mid-May 2002 came to a halt in the first half of March 2003, but in April and early May money market rates fell again somewhat, especially at the longer end of the curve (see Chart 7). Consequently, the slope of the money market yield curve, as measured by the difference between the twelve-month and the one-month EURIBOR, became slightly more negative in early May.

**Chart 7**  
Short-term interest rates in the euro area and the slope of the money market yield curve

(percentages per annum; percentage points; daily data)



Source: Reuters.

Between end-March and 7 May the overnight interest rate, as measured by the EONIA, fluctuated between 2.54% and 2.66%. In the same period the two-week EONIA swap rate varied between 2.50% and 2.56%, standing at 2.50% on 7 May. Both the marginal and average rates of allotment in the Eurosystem's main refinancing operations were, on average, 4 basis points above the minimum bid rate of 2.50% (see Box 3).

Between end-March and 7 May, the one-month EURIBOR remained practically unchanged at 2.56%, while the three-month EURIBOR decreased by 4 basis points, to stand at 2.48% on the latter date. Developments in the three-month EURIBOR determined, as usual, the interest rates of allotment in the longer-term refinancing operations of the Eurosystem. In the operation settled on 30 April, the marginal and average rates of allotment were 2.50% and 2.51% respectively, broadly unchanged from the rates in the longer-term refinancing operation settled on 27 March.

Between end-March and 7 May, both the six-month and twelve-month EURIBOR decreased by 6 basis points, to stand at 2.38% and 2.33% respectively on the latter date. On the same day, the slope of the money market yield curve, as measured by the difference between the twelve-month and the one-month EURIBOR, was -23 basis points, slightly steeper than at the end of March.

The expected path of the three-month EURIBOR, as implied in the futures prices on contracts with delivery dates in the second half of 2003 and early 2004, has shifted downwards somewhat since end-March. Between end-March and 7 May, while the implied futures rates on contracts with delivery dates in June 2003 remained practically unchanged, the rates on contracts with delivery dates in September and December 2003 and March 2004 decreased by between 6 and 16 basis points. On 7 May they stood at 2.32%, 2.18%, 2.17% and 2.21% respectively.

**Box 3****Monetary policy operations and liquidity conditions in the reserve maintenance period ending on 23 April 2003**

During the reserve maintenance period under review, the Eurosystem settled five main refinancing operations (MROs) and one longer-term refinancing operation (LTRO).

**Regular monetary policy operations**

(EUR billions; interest rates in percentages per annum)

Operation	Date of settlement	Date of maturity	Bids (amount)	Allotment (amount)	Bid-cover ratio	Number of participants	Minimum bid rate	Marginal rate	Weighted average rate
MRO	25/03/2003	09/04/2003	115.5	104.0	1.11	220	2.50	2.53	2.55
MRO	02/04/2003	16/04/2003	112.0	71.0	1.58	247	2.50	2.53	2.54
MRO	09/04/2003	23/04/2003	135.5	101.0	1.32	267	2.50	2.53	2.53
MRO	16/04/2003	30/04/2003	126.9	77.0	1.65	281	2.50	2.53	2.54
MRO	23/04/2003	07/05/2003	157.0	125.0	1.26	279	2.50	2.54	2.55
LTRO	27/03/2003	26/06/2003	33.4	15.0	2.23	133	-	2.49	2.51

Source: ECB.

The marginal and the weighted average rates in all MROs were between 2.53% and 2.55%. While in the first MRO the bid-cover ratio was somewhat low, it returned to more normal levels in the following operations.

In the first five days of the reserve maintenance period, the EONIA was 2.56%; it increased to 2.66% on Monday 31 March due to an end-of-quarter effect. From Tuesday 1 April until Wednesday 16 April, it was either 4 or 5 basis points above the minimum bid rate of 2.50%. Over the Easter weekend, 17 to 21 April, the EONIA increased to 2.64% and was 2.65% on 22 April, the penultimate day of the reserve maintenance period. This appears to reflect a stronger than expected liquidity absorption through the autonomous factors and a related market perception that the reserve maintenance period would end on the tight side, as well as a marginally higher demand for reserves because of the long Easter weekend. However, the MRO which was settled on the last day of the reserve maintenance period provided sufficient reserves for a smooth ending of

**Contributions to the banking system's liquidity**

(EUR billions)

Daily average during the reserve maintenance period from 24 March to 23 April 2003

	Liquidity providing	Liquidity absorbing	Net contribution
<b>(a) Monetary policy operations of the Eurosystem</b>	<b>224.5</b>	<b>0.2</b>	<b>+ 224.3</b>
Main refinancing operations	179.4	-	+ 179.4
Longer-term refinancing operations	45.0	-	+ 45.0
Standing facilities	0.1	0.2	-0.1
Other operations	0.0	-	0.0
<b>(b) Other factors affecting the banking system's liquidity</b>	<b>337.4</b>	<b>431.0</b>	<b>- 93.6</b>
Banknotes in circulation	-	358.5	- 358.5
Government deposits with the Eurosystem	-	52.1	- 52.1
Net foreign assets (including gold)	337.4	-	+ 337.4
Other factors (net)	-	20.5	- 20.5
<b>(c) Credit institutions' holdings on current accounts with the Eurosystem (a) + (b)</b>			<b>130.6</b>
<b>(d) Required reserves</b>			<b>130.0</b>

Source: ECB.

Note: Totals may not add up due to rounding.

the maintenance period, and the EONIA declined to 2.58% on that day. In fact, the reserve maintenance period ended slightly on the loose side, with a net recourse to the deposit facility of €3.9 billion.

The average difference between current account holdings of credit institutions with the Eurosystem and minimum reserve requirements was €0.65 billion.

The net liquidity-absorbing impact of the autonomous factors, i.e. factors not related to monetary policy operations (item (b) in the table above) was, on average, €93.6 billion. The published estimates of the average liquidity needs stemming from autonomous factors ranged between €89.2 billion and €102.3 billion. The largest deviation between the published estimate and the actual figure occurred in the first week of the maintenance period and amounted to €2.8 billion.

### Long-term government bond yields broadly stable in April

Between end-March and 7 May, ten-year government bond yields both in the euro area and in the United States decreased by around 10 basis points, bringing yields down to around 4% and 3.8% respectively on the latter date (see Chart 8). As a consequence, the negative differential between ten-year government bond yields in the US and the euro area remained unchanged over

that period and stood at a level of around -30 basis points on 7 May. Uncertainty, as measured by the implied volatility derived from options on futures contracts on government bonds, fell significantly between end-March and 7 May.

In the United States, bond market uncertainty, as measured by the implied volatility derived from options on futures contracts on ten-year US Treasury notes (see Chart 9), decreased significantly with the end of the military operations in Iraq. Developments in bond yields were influenced by lower risk premia required by investors as compensation for holding equity and by the associated reversal of “flight-to-safety” portfolio shifts from bond to equity markets.

**Chart 8**  
Long-term government bond yields in the euro area and the United States

(percentages per annum; daily data)



Source: Reuters.

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

In contrast with the decline in nominal yields, real yields extracted from index-linked US government bonds slightly increased. Between end-March and 7 May, ten-year real yields rose by around 5 basis points, bringing them back to levels recorded in February 2003. These levels, at around 1.9%, are still low by historical standards (see Box 4). Regarding inflation expectations, US ten-year break-even inflation rates, measured as the difference between the yields of comparable nominal and index-linked US government bonds, declined by 15 basis points between end-March and 7 May.

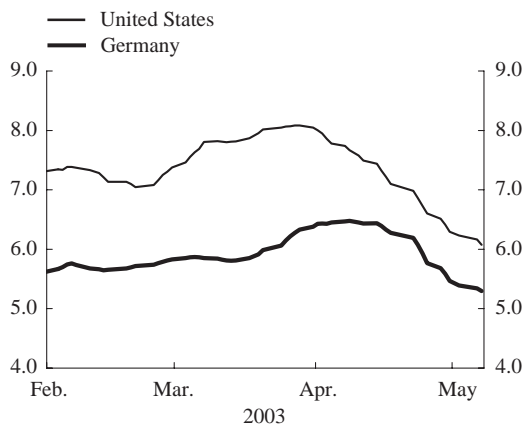
In Japan, ten-year government bond yields declined by 10 basis points between end-March and 7 May, standing at a level of around



**Chart 9**

**Implied volatility for futures contracts on the ten-year German Bund and the ten-year US Treasury note**

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



Source: Bloomberg.

Note: The implied volatility series represent the nearby implied volatility on the near-contract generic future, rolled over 20 days prior to expiry, as defined by Bloomberg. This means that 20 days prior to expiry of the contracts, a change in the choice of contracts used to obtain the implied volatility is made, from the contract closest to maturity to the next contract.

0.6% on the latter date. These historically low levels reflect market participants' pessimistic views about the short and long-term prospects for the Japanese economy, including its deflationary tendencies, as well as a flow of funds from the distressed Japanese equity markets, where the Nikkei stock market index reached a 20-year low on 28 April. At the same time, the level of uncertainty in these markets remained extremely low, as measured by the implied volatility derived from options on futures contracts on Japanese long-term government bonds, which in April reached its lowest level ever.

In the euro area, ten-year government bond yields moved in tandem with US ten-year bond yields. Real yields, as extracted from French index-linked bonds linked to euro area HICP excluding tobacco rose by around 5 basis points between end-March and 7 May. However, the level recorded – 2.1% on 7 May – is still very low by historical standards. As a consequence of these movements in real and nominal yields, the

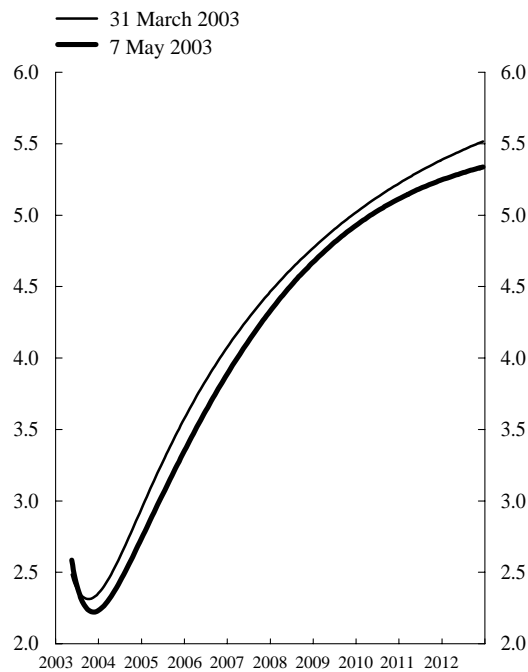
ten-year break-even inflation rate in the euro area, derived from the difference between ten-year nominal bond yields and the above-mentioned French ten-year index-linked bond yields, declined by around 15 basis points between end-March and 7 May.

The implied forward overnight interest rate curve shifted slightly down across the entire maturity spectrum (see Chart 10). The end of the military operations in Iraq led to a significant decrease in uncertainty in the euro area bond markets, as measured by the implied volatility of options on futures contracts on German long-term government bonds (see Chart 9). Notably, the ten-day moving average of implied volatility for futures contracts on ten-year German Bunds decreased by 1 percentage point between

**Chart 10**

**Implied forward euro area overnight interest rates**

(percentages per annum; daily data)



Source: ECB estimate.

Note: The implied forward yield curve, which is derived from the term structure of interest rates observed in the market, reflects the market expectation of future levels for short-term interest rates. The method used to calculate these implied forward yield curves was outlined on page 26 of the January 1999 issue of the ECB's Monthly Bulletin. The data used in the estimate are derived from swap contracts.



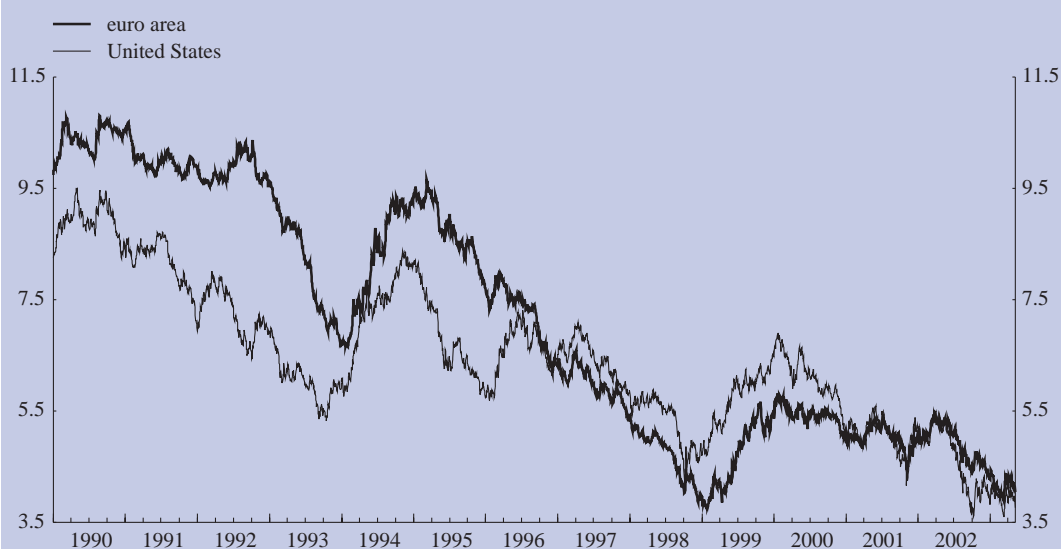
## Box 4

### Factors underlying the low levels of long-term bond yields in the United States and the euro area

Long-term government bond yields in the United States and the euro area dropped to very low levels in the first months of 2003 (see chart below). Ten-year bond yields in both economies reached a trough in early March, when uncertainties about the possibility of a war in Iraq were most pronounced, and still stood close to 4% towards the end of April. This box attempts to identify some of the factors that may have driven the latest trends in euro area and US bond markets, distinguishing between structural and cyclical factors as well as market dynamic factors that often underlie short-term movements.

#### Long-term government bond yields in the euro area and the United States

(percentages per annum; daily data)



Source: Reuters.

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

Looking at trends over the past decade, the most important factors behind the downward trend in bond yields seem to have been structural. Long-term interest rates comprise expected real interest rates, long-term inflation expectations and various premia, including a risk premium for inflation uncertainty. Among structural factors, declines in the ratios of deficit and debt to GDP over the past decade have reduced the demands of the public sector on global capital markets, bringing down long-term real interest rates. Demographic factors may also have contributed to the downward trend in government bond yields observed over the past decade. By raising the demand for fixed income securities, such as government bonds, which provide stable incomes to pension recipients, the ageing of the population in advanced economies may have also played a role in bringing down long-term real interest rates. An additional factor in the euro area has been the gradual disappearance of inter-country exchange risk premia in the run-up to the single currency.

These influences on real interest rates notwithstanding, a key factor underlying the decline in nominal long-term interest rates over the past decade has been the decline in inflation and inflation expectations, in which price stability-oriented monetary policy has played a crucial role. By keeping inflation low through a credible monetary policy, the Federal Reserve has succeeded in convincing market participants in the United States that inflation will remain low and stable in the future. Similarly, following the successful convergence process leading to Stage Three of EMU, markets have become convinced of the ECB's ability to keep inflation low

and stable in the euro area.<sup>1</sup> At the same time, market participants have acknowledged their confidence by demanding much smaller risk premia as compensation for inflation risk.

While these structural factors may account, in large part, for the drops in long-term interest rates over the past decade, other factors appear to have been at work more recently in bringing long-term interest rates down to historical lows. Among these are cyclical factors including savings and investment decisions in the economy, which are closely linked to business cycle conditions and market perceptions regarding future growth prospects. Since long-term interest rates reflect both current and expected future short term interest rates, the recent drop in long-term bond yields also seems to reflect downward revisions by market participants of their assessments of short-term growth prospects, both in the United States and in the euro area. Evidence for this is provided by trends in index-linked bond markets, where in late April 2003 real ten-year yields in the euro area and the United States were more than 100 basis points lower than the averages of the previous two years. At the same time, inflation expectations do not appear to have played much of a role in driving long-term interest rates down over recent months.

A final set of market dynamic factors also appears to have played a role in driving bond market trends over recent years. Stock prices and bond yields have moved broadly in tandem since the stock market correction began in early 2000. While a common cyclical factor, namely growing pessimism about economic growth prospects, played some role in this, it also seems that the large declines in the stock market together with exceptionally high stock market volatility reduced investors' appetite for risky assets. As a result, particularly after the WorldCom accounting scandal in June 2002, when stock market volatility soared, investors made "flight-to-safety" portfolio shifts from the stock market into the less risky bond markets. Once again, in early 2003, as uncertainties about the possibility of a war in Iraq became more acute, further shifts from the stock market to the bond market seemed to take place in an environment of high stock market uncertainty. After the war came to an end some uncertainty was lifted, although market participants did remain somewhat uncertain about economic growth prospects.

All in all, the low levels of government bond yields in the United States and the euro area appear to be due to several factors. While structural factors may account for the trend decline over the past decade, the recent declines appear to be primarily due to a combination of cyclical factors, such as downward revisions of future economic growth expectations, as well as portfolio shifts to safer assets among investors. While portfolio shifts seem to have been ongoing since the start of the stock market correction in early 2000, the exceptional turbulence in global stock markets witnessed in the second half of 2002 and early 2003 in connection with geopolitical tensions appears to have amplified this.

<sup>1</sup> See the article entitled "Stability-oriented policies and developments in long-term real interest rates in the 1990s" in the November 1999 issue of the ECB's Monthly Bulletin.

end-March and 7 May, reaching a level close to the average of the last two years.

Corporate bond yield spreads over government bond yields continued in April the declining trend which started in the last quarter of 2002. Between end-March and 7 May, the differential between the yields on bonds issued by

BBB-rated corporations and government bond yields in the euro area declined by around 60 basis points to levels last seen in April 2000. The current level of spread of corporate bond yields may reflect high demand from investors for these instruments, but it may also imply an improvement in the assessment of credit risk by investors.

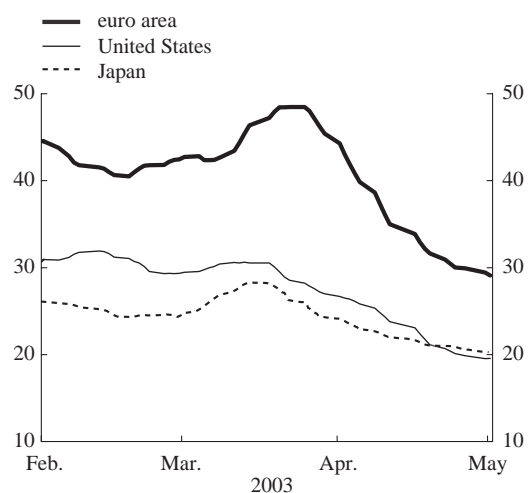
## Stock prices increased and volatility fell in April

Between end-March and 7 May 2003 the broad Dow Jones EURO STOXX index and the Standard & Poor's 500 index increased by around 15% and 10% respectively (see Chart 11). Furthermore, global equity markets were characterised by a significant decrease in the volatility of prices, reflecting the disappearance of the uncertainty caused by the military operations in Iraq. In the same period, Japanese stock prices, as measured by the Nikkei 225 index, increased by around 2%.

In the United States, stock markets recorded a "relief" rally associated with the end of the military operations in Iraq. Stock prices benefited from the decline in uncertainty and the related lower equity risk premium and reversal of previous "flight-to-safety" flows from bond to equity markets. The lessened uncertainty was reflected in an 8 percentage point fall in the ten-day moving average of

## Chart 12 Implied stock market volatility in the euro area, the United States and Japan

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

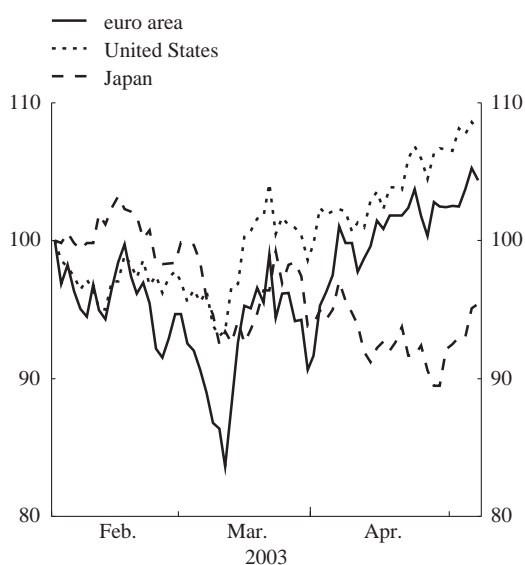


Source: Bloomberg.

Note: The implied volatility series reflect the expected standard deviation of percentage stock price changes 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 Dow Jones EURO STOXX 50 for the euro area, Standard & Poor's 500 for the United States, and Nikkei 225 for Japan.

## Chart 11 Stock price indices in the euro area, the United States and Japan

(index: 1 February 2003 = 100; daily data)



Source: Reuters.

Notes: Dow Jones EURO STOXX broad (stock price) index for the euro area, Standard & Poor's 500 for the United States and Nikkei 225 for Japan.

the implied volatility derived from options on the Standard & Poor's 500 index between end-March and 7 May; on the latter date volatility stood about 4 percentage points lower than its two-year average (see Chart 12). While economic data releases in April had a mixed impact on stock markets, stock prices benefited from the fact that corporate earnings releases for the first quarter of 2003 were, on balance, higher than expected by market participants.

In Japan, like in the euro area and the United States, stock prices increased between end-March and 7 May. However, the Nikkei 225 index reached its lowest level in more than 20 years in April. While ongoing pessimism about the economic prospects in Japan, as well as pension fund managers liquidating stock positions following a reform allowing corporations to transfer their corporate pension funds into the government-managed pension funds put downward pressure on stock prices, the announcement in early May by Japan's ruling coalition to boost the

equities market pushed prices up. The ten-day moving average of the implied volatility extracted from options on the Nikkei 225 index declined by around 6 percentage points between end-March and 7 May, to a level well below the average of the last two years.

In the euro area, stock price changes closely mirrored developments in the US stock markets in April and early May, although the euro area increase was more pronounced. This should be seen partly in light of the previous more pronounced stock market decline in the euro area, notably during the build-up to the military operations in Iraq. In line with developments in the United States, euro area stock prices increased significantly as the outcome of the military operations in Iraq became evident. In addition, the ten-day

moving average of the implied volatility extracted from options on the Dow Jones EURO STOXX 50 index dropped by around 19 percentage points between end-March and 7 May and stood on the latter date at a level significantly below the average of the last two years. Towards the end of April, the upward tendency in stock prices weakened somewhat against the background of mixed news on the economy and the corporate sector. The increases in euro area stock prices in April and early May were broadly based, with the financial, technology and telecommunications sector indices recording the most significant gains. However, these gains seemed to partly reflect an adjustment following the previous declines in these sectors, whose indices recorded historical lows in March.

## 2 Price developments

### HICP inflation is estimated to have declined in April 2003

According to Eurostat's flash estimate, euro area HICP inflation declined to 2.1% in April 2003, from 2.4% in February (see Table 2). Although a detailed HICP breakdown is not available, this development is expected to have resulted mainly from the energy component on account of the fall in oil prices since mid-March. By contrast, the year-on-year rates of change in the prices of some individual services items may have risen due to a change in the seasonal pattern, as Easter this year was in April, as opposed to March.

In March 2003, the most recent month for which detailed HICP information is available, euro area HICP inflation was unchanged as compared with February, at 2.4%. The year-

on-year rate of increase in the HICP excluding unprocessed food and energy resumed the downward movement observed since the middle of 2002 and declined to 2.0% in March, from 2.1% in February 2003.

The unchanged annual growth rate of overall HICP inflation in March 2003 partly reflected counteracting movements in the volatile unprocessed food and energy components. The annual rate of change in energy prices decreased from 7.7% in February to 7.4% in March 2003 owing to a favourable base effect which more than offset the upward impact of the rise observed in oil prices up to mid-March 2003 (see Chart 13). Importantly, the decline in euro-denominated oil prices that occurred in the second half of March 2003 is expected to affect the HICP only from April 2003 onwards. By contrast, the year-on-year

**Table 2**  
**Price and cost developments in the euro area**

(annual percentage changes, unless otherwise indicated)

	2000	2001	2002	2002	2002	2002	2003	2002	2002	2003	2003	2003	2003
				Q2	Q3	Q4	Q1	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<b>Harmonised Index of Consumer Prices (HICP) and its components</b>													
Overall index <sup>1)</sup>	2.1	2.3	2.3	2.1	2.1	2.3	2.3	2.3	2.3	2.1	2.4	2.4	2.1
<i>of which:</i>													
Goods	2.5	2.3	1.7	1.4	1.3	1.8	2.0	1.8	1.9	1.6	2.1	2.2	.
Food	1.4	4.5	3.1	2.9	2.3	2.3	2.0	2.4	2.2	1.5	2.1	2.3	.
Processed food	1.2	2.9	3.1	3.2	2.9	2.7	3.2	2.6	2.7	2.9	3.3	3.3	.
Unprocessed food	1.8	7.0	3.1	2.5	1.4	1.7	0.2	2.0	1.3	-0.6	0.3	0.8	.
Industrial goods	3.0	1.2	1.0	0.7	0.8	1.6	2.0	1.5	1.7	1.7	2.2	2.2	.
Non-energy industrial goods	0.5	0.9	1.5	1.6	1.3	1.2	0.7	1.3	1.2	0.6	0.7	0.8	.
Energy	13.0	2.2	-0.6	-2.3	-0.7	2.9	7.0	2.4	3.8	6.0	7.7	7.4	.
Services	1.5	2.5	3.1	3.1	3.3	3.1	2.7	3.1	3.0	2.8	2.7	2.6	.
<b>Other price and cost indicators</b>													
Industrial producer prices	5.5	2.2	0.0	-0.7	0.0	1.3	2.4	1.2	1.6	2.3	2.7	2.4	.
Unit labour costs	1.2	2.7	2.2	2.2	1.8	1.3	.	-	-	-	-	-	-
Labour productivity	1.3	0.1	0.4	0.2	0.6	1.1	.	-	-	-	-	-	-
Compensation per employee	2.6	2.8	2.6	2.4	2.4	2.4	.	-	-	-	-	-	-
Total hourly labour costs	3.2	3.4	3.6	3.4	3.5	3.6	.	-	-	-	-	-	-
Oil prices (EUR per barrel)	31.0	27.8	26.5	27.8	27.2	26.5	28.4	24.2	27.1	28.3	29.8	27.2	22.9
Commodity prices (EUR)	16.7	-7.6	-1.7	-5.5	-1.6	4.4	-5.0	3.4	2.1	-2.3	-4.5	-8.1	-7.5

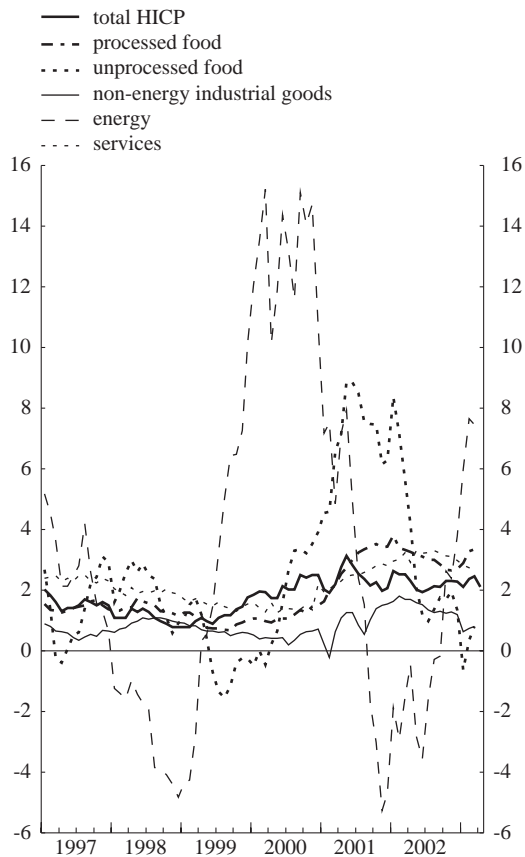
Sources: Eurostat, national data, Thomson Financial Datastream, HWWA (Hamburg Institute of International Economics) and ECB calculations.

Note: For periods prior to 2001, HICP data do not include Greece. The other price and cost indicators include Greece for periods prior to 2001. For further details on the data, see the "Euro area statistics" section.

1) HICP inflation in April 2003 refers to Eurostat's flash estimate.

**Chart 13**  
**Breakdown of HICP inflation in the euro area by component**

(annual percentage changes; monthly data)



Source: Eurostat.

Note: For periods prior to 2001, HICP data do not include Greece.

rate of change in unprocessed food prices increased to 0.8% in March, from 0.3% in the previous month.

The decline in the year-on-year rate of change in the HICP excluding energy and unprocessed food prices mainly reflected the easing of upward pressure on services prices as the impact of past price shocks continues to fade away. In year-on-year terms, services price increases stood at 2.6%, 0.1 percentage point lower than in February and the lowest rate of change observed since August 2001. With regard to the other components, the year-on-year rate of change of processed food prices was unchanged at 3.3% and broadly in line with the average increase observed in 2002. By contrast, the annual

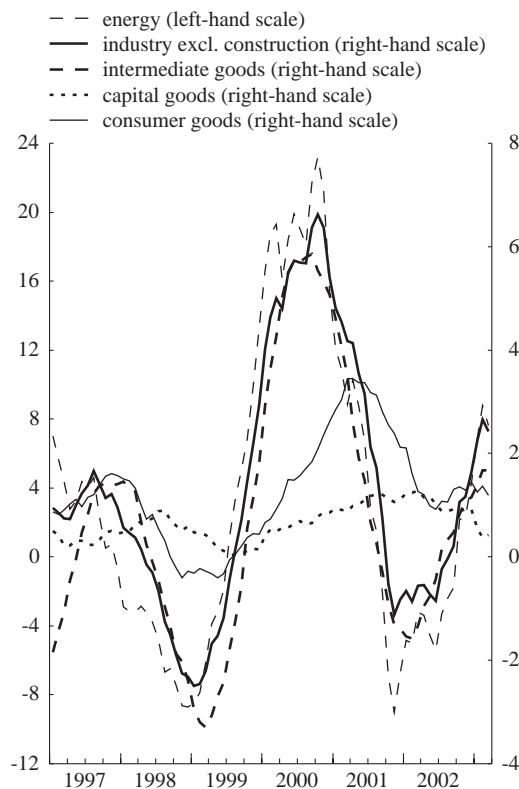
rate of change in prices of non-energy industrial goods rose slightly to 0.8%, owing mainly to a stronger month-on-month increase than last year in clothing prices following the end of the winter sales season.

**Annual rate of change in producer prices declined in March 2003**

The annual rate of increase in euro area industrial producer prices declined to 2.4% in March 2003, from 2.7% in February (see Chart 14). This development is mainly the result of a fall in the annual rate of change in energy prices, mainly owing to a favourable base effect. On a month-on-month basis, energy prices also declined in March, owing to lower oil prices than in February. Further downward pressure is expected from this

**Chart 14**  
**Breakdown of industrial producer prices for the euro area**

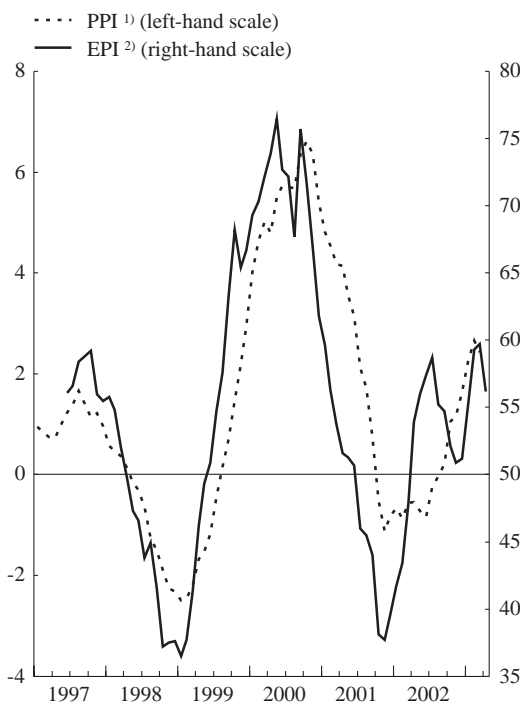
(annual percentage changes; monthly data)



Source: Eurostat.

Note: Data refer to the Euro 12 (including periods prior to 2001).

**Chart 15**  
**Overall producer prices and**  
**manufacturing input prices for the**  
**euro area**  
*(monthly data)*



Sources: Eurostat and Reuters.

Note: When available, data refer to the Euro 12 (including periods prior to 2001).

- 1) Producer Price Index; annual percentage changes; excluding construction.
- 2) Eurozone Price Index; manufacturing input prices from the Purchasing Managers' Survey. An index value above 50 indicates an increase in manufacturing input prices, whereas a value below 50 indicates a decrease.

component, as oil prices have continued to fall since mid-March. Consumer goods price increases declined from 1.4% in February to 1.2% in March 2003 (year on year). There was a somewhat stronger decline for durable goods than for non-durable goods.

In April 2003 the Eurozone Price Index (EPI) from the Purchasing Managers' Survey declined to 56.2 in April from 59.7 in March, pointing to a lower but still positive annual rate of increase in input prices (see Chart 15). The recent easing in euro-denominated oil prices seems to be the main reason behind this development.

### Annual growth in compensation per employee remained unchanged in the fourth quarter of 2002

Most indicators of labour cost growth show signs of stabilisation in the course of 2002. With the second release of national accounts data for the fourth quarter of 2002, the growth rate of compensation per employee has been revised downwards for 2002. The annual rate of change of compensation per employee is now estimated to have remained unchanged at 2.4% in the last three quarters of 2002, down from the rate of 3.0% observed in the first quarter (see Chart 16). While the overall profile has not changed dramatically, the magnitude of the decline in compensation per employee in 2002 appears larger as a result of the revisions. There is also a somewhat clearer indication of a stabilisation following the upward movement observed over previous years, although this would still need to be confirmed by subsequent data. For 2002 as a whole, the annual average growth rate now stands at 2.6%, 0.2 percentage point lower than in 2001.

The annual rate of change in total hourly labour costs in the non-agricultural business sector continued to increase slightly in the fourth quarter (to 3.6%), following the strong decline observed at the beginning of 2002. By contrast, but more in line with the latest indications from compensation per employee, the annual growth rate of gross monthly earnings displayed a slight decline in the fourth quarter, while negotiated wage growth remained broadly unchanged following a decline in the third quarter.

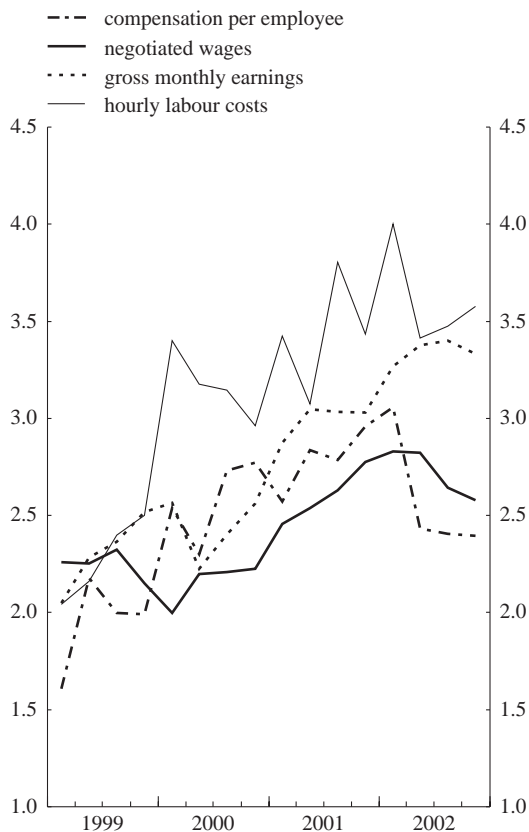
Labour productivity growth continued its recovery in the fourth quarter of 2002. As a result, whole economy unit labour cost growth declined from 1.8% year on year in the third quarter to 1.3% in the fourth quarter. For 2002 as a whole, reflecting the above-mentioned revisions to the growth rate of compensation per employee as well as the steady rise in productivity growth, unit labour cost growth now shows a decline to 2.2%, from 2.7% in 2001.



## Chart 16

### Selected labour cost indicators for the euro area

(annual percentage changes)



Sources: Eurostat, national data and ECB calculations.

### Euro area inflation is expected to ease further ahead

Looking ahead, current indications do not point to further strong declines in the inflation rate in the immediate future, but a number of factors are expected to contribute to a further reduction in inflationary pressure beyond the short term. While inflation could be affected by volatility due to energy or unprocessed food prices, the appreciation of the euro since the beginning of 2002 and the subdued demand conditions are both likely to exert downward pressure on the euro area inflation rate. In line with this, HICP inflation is expected to decline further and to stabilise at levels below 2% over the medium term. This outlook, which is in line with recent forecasts (see Box 5 for the results of the 2003 Q2 Survey of Professional Forecasters and other indicators of private sector expectations), presupposes, however, that wage moderation will prevail.

## Box 5

### Private sector expectations for inflation and economic activity in the euro area: the results of the 2003 Q2 Survey of Professional Forecasters (SPF) and other available indicators

This box presents the available indicators of private sector expectations for euro area inflation and economic activity and gives a summary of the results of the 2003 Q2 SPF conducted by the ECB in the second half of April. The survey is referred to as the Survey of Professional Forecasters (SPF) to reflect the fact that all of the participants are experts affiliated with financial or non-financial institutions based within the European Union. It is also important to bear in mind that, since the participants are not given a common set of assumptions on which to base their forecasts, the aggregate results in all likelihood reflect a relatively heterogeneous set of subjective views and assumptions. Wherever possible, the data have been presented together with other sources of private sector expectations for the same horizons.<sup>1</sup>

<sup>1</sup> These horizons are the calendar years 2003, 2004 and 2007. In addition, the expectations from the two additional "rolling horizons" requested in the SPF are also reported. These rolling horizons are set one and two years ahead of the period for which the latest data for each particular variable are available at the time the survey is conducted. In the 2003 Q2 SPF, these rolling horizons were March 2004 and 2005 for the HICP inflation rate, the fourth quarter of 2003 and 2004 for the rate of growth in real GDP, and February 2004 and 2005 for the unemployment rate. These rolling horizons may be useful for identifying dynamic patterns that are difficult to detect from averages over calendar years.



### Inflation expectations for 2003 and 2004

SPF participants expect the annual inflation rate in the euro area to average 2.0% in 2003 and to decrease to 1.7% in 2004 (see the table below). Inflation expectations for 2003 have therefore been revised upwards by 0.2 percentage point, mainly as a result of high oil prices in the first months of the year. The risk of high oil prices in the event of a military conflict in the Middle East was already identified by participants in the last survey round. However, beyond 2003 inflation is expected to remain below 2%. Indeed, the latest results for 2004 show a downward revision of 0.1 percentage point. It is likely that this revised assessment is related to a deterioration in growth prospects for 2004 (see the section on growth prospects below), lower assumptions with regard to oil prices beyond mid-2003 and the stronger euro exchange rate assumed in this survey round according to the information supplied by the participants. As shown in the table below, these results are broadly in line with the figures reported both in the April 2003 issue of Consensus Economics and in the April 2003 Euro Zone Barometer for the same horizons (1.9% for 2003 and 1.6% for 2004). In the SPF, the inflation rate expected in March 2004 and March 2005 is 1.6% and 1.7% respectively.

### Results from the 2003 Q2 SPF, the 2003 Q1 SPF and Consensus Economics (April 2003)

(annual percentage changes, unless otherwise indicated)

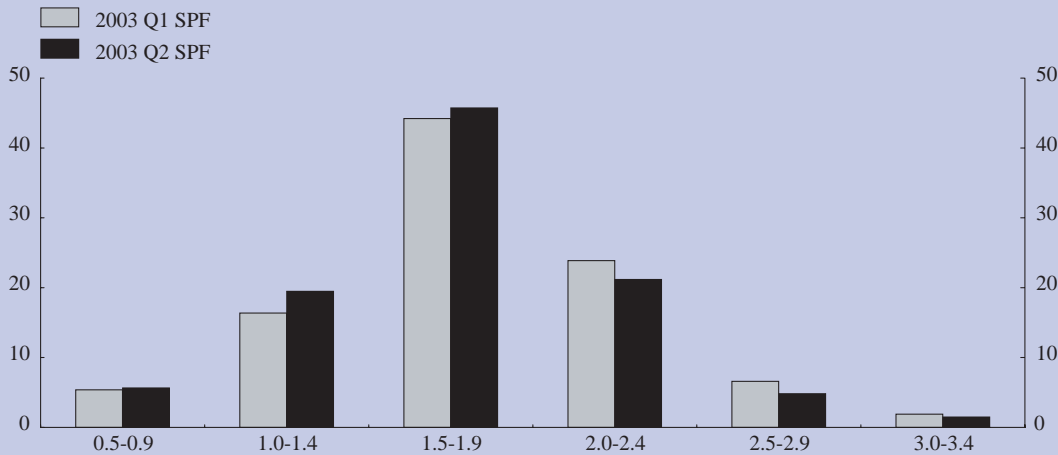
	Survey horizon				
	Mar. 2004	2003	Mar. 2005	2004	Longer term <sup>2)</sup>
<b>HICP inflation</b>					
2003 Q2 SPF	1.6	2.0	1.7	1.7	1.9
Previous SPF (2003 Q1)	-	1.8	-	1.8	1.9
Consensus (April 2003)	-	1.9	-	1.6	1.9
<b>Real GDP growth</b>	<b>2003 Q4</b>	<b>2003</b>	<b>2004 Q4</b>	<b>2004</b>	<b>Longer term <sup>2)</sup></b>
2003 Q2 SPF	1.3	1.0	2.3	2.1	2.4
Previous SPF (2003 Q1)	-	1.4	-	2.3	2.4
Consensus (April 2003)	-	1.0	-	2.0	2.2
<b>Unemployment rate <sup>1)</sup></b>	<b>Feb. 2004</b>	<b>2003</b>	<b>Feb. 2005</b>	<b>2004</b>	<b>Longer term <sup>2)</sup></b>
2003 Q2 SPF	8.9	8.8	8.5	8.7	7.5
Previous SPF (2003 Q1)	-	8.5	-	8.2	7.1
Consensus (April 2003)	-	8.8	-	8.7	-

1) As a percentage of the labour force.

2) For the SPF, longer-term inflation expectations relate to 2007. "Consensus Economics" figures refer to the period 2009-13, as reported in the April 2003 issue.

The SPF questionnaire also asks survey participants to assign some probability to actual outcomes falling within specific intervals. The probability distribution resulting from the aggregation of responses helps to assess how survey participants, on average, gauge the risk of the actual outcome being above or below the most likely range. Chart A below shows the aggregate probability distributions for average HICP inflation in 2004 in the last two survey rounds. It confirms that there have been very marginal changes in the risks surrounding the inflation outlook from the last survey round. Both distributions are centred around the interval 1.5-1.9%, which accumulates around 45% of the probability mass in both cases. Taking into account the downward revision of the estimate for 2004, the risk of the actual outcomes being above or below that interval appears to be quite balanced and the risk that inflation will be above 2% in 2004 has diminished accordingly. Inflation outcomes above the central range received a probability of 28%, while outcomes below 1.5% received around 26%. In the 2003 Q1 SPF, these probabilities were 32% and 23% respectively, which suggests that the balance of risks was on the upside.

**Chart A: Probability distribution for average inflation in 2004 in the last two SPF rounds**  
(percentages)

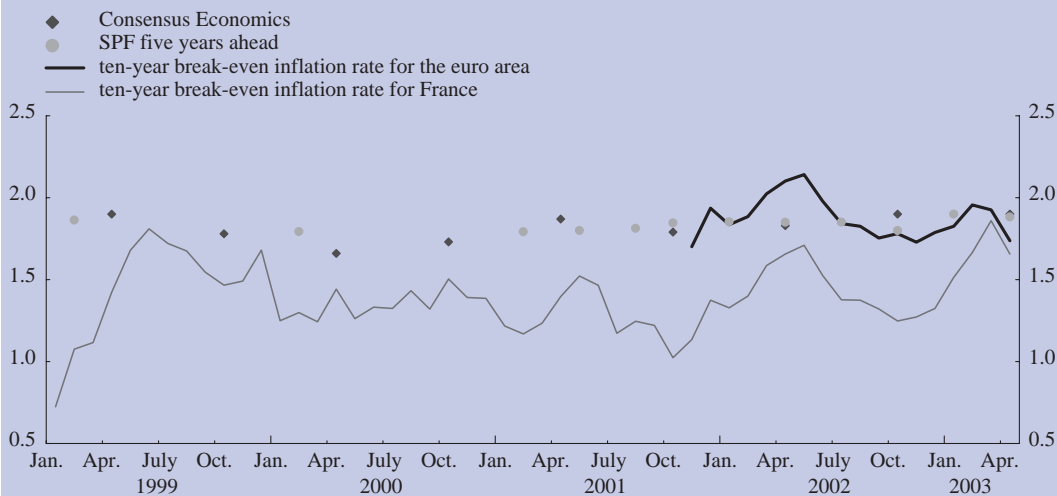


#### Indicators of longer-term inflation expectations

According to the 2003 Q2 SPF, average inflation in 2007 is expected to be 1.9%, unchanged from the previous round. This level of longer-term inflation expectations is consistent with other available measures of inflation expectations. The longer-term expectations published by the April 2003 Euro Zone Barometer have been revised upwards by 0.1 percentage point and now also indicate an expected average rate of inflation of 1.9% in 2007. Meanwhile, the April 2003 issue of Consensus Economics also expects an inflation rate of 1.9% for the period 2009-13 in the euro area as a whole.<sup>2</sup> Indicators of long-term inflation expectations extracted from financial market prices convey a similar message. Chart B below shows the ten-year break-even inflation rates extracted from French bonds linked to the French CPI and the euro area HICP (both excluding tobacco). Over

**Chart B: Indicators of long-term inflation expectations**

(average annual percentage changes)



Sources: French Treasury, Reuters, Consensus Economics and the ECB.

<sup>2</sup> Note that before this survey round the Consensus Economics figure for the euro area was constructed using national figures for Germany, Spain, France, Italy, and the Netherlands, which represent around 85% of the euro area aggregate, and these are the figures depicted in Chart B.

recent months the break-even inflation rate for the bond indexed to the euro area HICP has remained clearly below 2% after declining from the fairly high levels reached earlier in 2002. However, when interpreting the levels of these measures it is important to bear in mind that break-even inflation rates are not a direct measure of the markets' inflation expectations. This is because a variety of risk premia, including an inflation uncertainty premium and a liquidity premium, are included in the calculation.<sup>3</sup>

### **Expectations for euro area real GDP growth and unemployment**

SPF participants have revised downwards their expectations for the average annual growth rate of real GDP in 2003 to 1.0%, i.e. by 0.4 percentage point compared with the previous survey round (see the table above). These lower growth prospects in 2003 appear to be a result of the weak global economic and financial situation, although uncertainty associated with geopolitical tensions has now diminished somewhat. Growth for 2004 as a whole is expected to average 2.1%, while for 2004 Q4 a higher growth rate of 2.3% is expected. According to the April 2003 issues of Consensus Economics and the Euro Zone Barometer, euro area annual rates of real GDP growth are expected to average 1.0% in 2003 and to increase to 2.0% in 2004. Long-term growth prospects, at 2.4% for 2007 according to the SPF, 2.2% on average for the period 2009-13 on the basis of the information published by Consensus Economics, and 2.3% for 2007 according to the April 2003 Euro Zone Barometer, remain in line with the range of estimates of trend potential growth in the euro area.

According to the latest SPF, the euro area unemployment rate is expected to rise to 8.8% on average in 2003, reflecting the delayed adjustment to the past slowdown in activity and the weak growth prospects for the euro area in 2003. Thereafter it is expected to average 8.7% in 2004 and 7.5% in 2007. These results are broadly in line with those of the April 2003 Euro Zone Barometer (8.8%, 8.7% and 7.7% in 2003, 2004 and 2007 respectively) and the April 2003 Consensus Economics (8.8% and 8.7% in 2003 and 2004 respectively).

<sup>3</sup> It should be noted that the break-even inflation rate reflects the average value of inflation expectations over the maturity of the index-linked bond under consideration and is not a point estimate for a precise year (as is the case for the survey indicators of long-term inflation expectations). For a thorough description of the conceptual nature of the break-even inflation rate refer to the box entitled "Deriving long-term euro area inflation expectations from index-linked bonds issued by the French Treasury" on page 16 of the February 2002 issue of the ECB's Monthly Bulletin.

### 3 Output, demand and labour market developments

#### Real GDP growth in the fourth quarter of 2002 revised downwards slightly

Euro area real GDP growth is estimated to have been 0.1% quarter on quarter in the last quarter of 2002, revised downwards from 0.2% in the first estimate (see Table 3). This revision is accounted for by stronger imports, implying a lower net trade contribution to real GDP growth. The profile for total investment in the course of 2002 was also revised, reflecting weaker investment at the start of 2002, followed by upward revisions to investment in the second half of the year. Investment now shows positive growth rates for the third and fourth quarters of last year, at 0.2% quarter on quarter, contrary to previous estimates of further moderate declines over that period. However, despite this upward revision, developments in investment in the second half of 2002

remained subdued, most likely reflecting increasing uncertainty with regard to the general economic outlook amidst high geopolitical tensions, together with a need by companies to restore profitability and improve their balance sheets. The contribution of inventory changes in the final quarter of 2002 was slightly positive. Finally, private consumption grew by 0.4% quarter on quarter, benefiting from positive real labour income growth and from the tax incentives in Italy related to car purchases. Until the end of last year, consumer spending appears to have been only marginally affected by the previous decline in consumer confidence.

#### Consumption indicators remained weak in the first quarter of 2003

Short-term indicators continue to send mixed signals regarding developments in private

**Table 3**

#### Composition of real GDP growth in the euro area

(percentage changes, unless otherwise indicated; seasonally adjusted)

	Annual rates <sup>1)</sup>					Quarterly rates <sup>2)</sup>							
	2000	2001	2002	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 Q4	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 Q4
Real gross domestic product	3.5	1.4	0.8	0.5	0.4	0.7	0.9	1.3	-0.2	0.4	0.4	0.3	0.1
<i>of which:</i>													
Domestic demand	2.9	0.9	0.2	0.0	-0.1	-0.2	0.3	0.9	-0.1	0.1	0.2	0.1	0.5
Private consumption	2.5	1.8	0.6	1.6	0.6	0.3	0.7	1.1	0.0	-0.2	0.3	0.5	0.4
Government consumption	2.0	2.1	2.6	1.8	2.4	2.9	2.8	2.4	0.7	0.9	0.8	0.4	0.3
Gross fixed capital formation	4.9	-0.6	-2.6	-2.4	-2.9	-3.4	-2.6	-1.6	-0.9	-0.7	-1.2	0.2	0.2
Changes in inventories <sup>3)</sup>	0.0	-0.4	-0.1	-0.8	-0.3	-0.2	-0.1	0.2	-0.1	0.1	0.1	-0.3	0.1
Net exports <sup>3)</sup>	0.6	0.5	0.6	0.5	0.5	0.9	0.7	0.4	-0.1	0.3	0.2	0.2	-0.3
Exports <sup>4)</sup>	12.6	2.8	1.2	-2.7	-2.9	0.8	3.0	4.0	-0.9	-0.2	2.0	2.1	0.0
<i>of which: goods</i>	12.7	2.8	1.5	-2.8	-2.8	0.4	3.6	4.7	-1.1	0.1	1.7	2.9	-0.1
Imports <sup>4)</sup>	11.3	1.4	-0.4	-4.3	-4.5	-1.8	1.4	3.2	-0.8	-1.1	1.7	1.7	1.0
<i>of which: goods</i>	11.3	0.8	-0.4	-5.6	-4.7	-2.4	1.6	4.2	-1.0	-1.1	1.6	2.2	1.5
Real gross value added:													
Agriculture and fishing	-0.6	-1.3	0.5	-0.7	1.2	1.2	0.0	-0.4	-0.2	0.0	-0.1	0.3	-0.6
Industry	3.7	0.8	0.0	-1.2	-1.4	0.2	0.3	1.0	-1.0	0.7	0.4	0.2	-0.4
Services	4.0	2.3	1.6	1.7	1.5	1.5	1.5	1.7	0.2	0.4	0.5	0.3	0.5

Sources: Eurostat and ECB calculations.

Note: Data refer to the Euro 12 (including periods prior to 2001). For further details on the data, see the "Euro area statistics" section.

1) Annual rates: percentage change compared with the same period a year earlier.

2) Quarterly rates: percentage change compared with the previous quarter.

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

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

**Table 4**  
**Results from European Commission Business and Consumer Surveys for the euro area**

(seasonally adjusted data)

	2000	2001	2002	2002	2002	2002	2003	2002	2002	2003	2003	2003	2003
				Q2	Q3	Q4	Q1	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Economic sentiment index <sup>1)</sup>	2.5	-2.8	-1.8	0.3	-0.4	-0.3	-0.5	-0.4	0.2	-0.4	0.2	-0.6	0.1
Consumer confidence indicator <sup>2)</sup>	12	6	0	3	1	-3	-8	-3	-5	-7	-8	-10	-8
Industrial confidence indicator <sup>2)</sup>	12	-1	-5	-4	-5	-3	-4	-4	-2	-3	-4	-5	-6
Construction confidence indicator <sup>2)</sup>	16	10	1	3	-2	-3	0	-4	-2	-1	0	0	0
Retail trade confidence indicator <sup>2)</sup>	5	0	-9	-11	-10	-8	-10	-7	-9	-12	-6	-11	-10
Services confidence indicator <sup>2)</sup>	10	-5	-19	-15	-21	-24	-25	-24	-25	-24	-24	-27	-24
Business climate indicator <sup>3)</sup>	1.4	-0.1	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.2	-0.3	-0.3	-0.6	-0.7
Capacity utilisation (%)	84.4	83.1	81.2	81.1	81.3	81.4	81.1	-	-	81.3	-	-	80.9

Sources: European Commission Business and Consumer Surveys and the European Commission (DG ECFIN).

Note: Data refer to the Euro 12 (including periods prior to 2001). For further details on the data, see the "Euro area statistics" section.

1) Percentage changes compared with the previous period.

2) Percentage balances; data shown are calculated as deviations from the average over the period since April 1995 for the services confidence indicator, since July 1986 for the retail trade confidence indicator, and since January 1985 for the other confidence indicators.

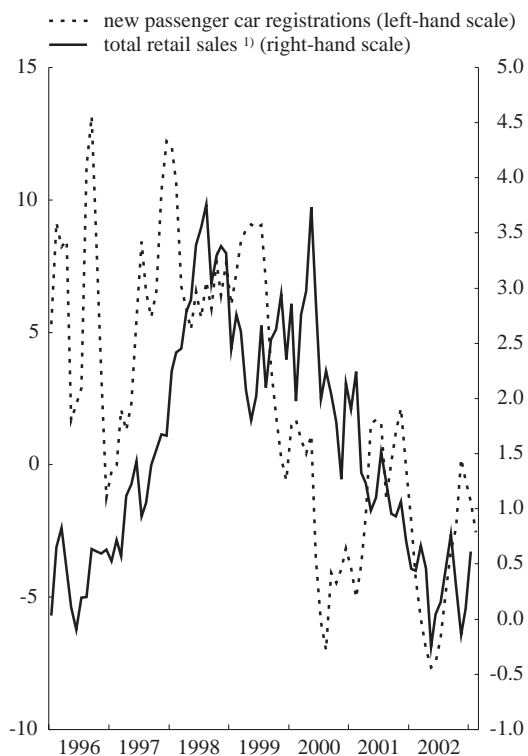
3) Units are defined as points of standard deviation.

consumption in the first quarter of the year. On the one hand, a strong increase in retail trade volumes in January 2003 was only partially offset by a modest decrease in February, indicating that consumer spending may have remained relatively well sustained at the start of this year. On the other hand, new passenger car registrations decreased by 6% in the first quarter of 2003. This decline occurred in spite of the continuation of tax incentives in Italy, which had significantly boosted passenger car registrations in the last quarter of 2002 (see Chart 17).

Consumer confidence improved somewhat in April, mainly reflecting slightly more positive expectations with regard to the general economic outlook, but also with regard to unemployment and the financial situation of households (see Table 4). Developments in consumer confidence in April thus indicate that uncertainty may have dissipated somewhat compared with March. However, the overall level of confidence remains low, reflecting the deterioration in labour market conditions, past declines in share prices and uncertainty related to geopolitical tensions. Confidence in the retail trade sector improved slightly in April 2003 as a result of more positive expectations for the business situation in general.

**Chart 17**  
**New passenger car registrations and retail sales in the euro area**

(annual percentage changes; three-month centred moving averages; working day adjusted)



Sources: Eurostat and ACEA (European Automobile Manufacturers' Association, Brussels).

Note: Data refer to the Euro 12 (including periods prior to 2001).

1) Calculated using seasonally adjusted data.

### Industrial production increased at the start of the year, but underlying trends remain weak

Euro area industrial production (excluding construction) increased on a month-on-month basis in February 2003, following a volatile profile around the end of last year when there was a significant fall in production followed by a similarly significant increase in January (see Table 5). The pattern of industrial production around the end of the year was distorted considerably by the number of working days, as there were more widespread closures of factories around Christmas. The further rise in production in February resulted from increases in the capital goods and energy industries. Conversely, the production of durable consumer goods weakened while that of intermediate goods remained more or less unchanged. On a three-month moving average basis, there is no indication yet of a strengthening in industrial activity.

Survey data suggest that weak economic conditions continued to prevail at the start of the second quarter of 2003, despite some dissipation of uncertainty following the end of military operations in Iraq. First, the Purchasing Managers' Index (PMI) for the manufacturing sector fell further in April to

47.8, following a strong decline in March (see Chart 18). The reading in April is clearly below the index value of 50 separating expansion from contraction in manufacturing and is the lowest level seen since January 2002. The fall was mainly attributable to declines in production and order books. Second, the European Commission's Business Survey showed a decline in industrial confidence in April owing to more pessimistic assessments of order books and stocks (see Table 4). Conversely, production expectations stabilised in April, following a considerable deterioration in March.

Construction confidence remained unchanged in April for the second consecutive month (see Table 4). Overall, construction confidence has improved somewhat in recent months. Combined with some evidence of a strengthening in output in this sector up until February, the construction sector seems to have seen some improvements recently following declines in output throughout 2002.

Activity in the services sector was the main element driving overall activity in the final quarter of 2002. Total value added in the sector increased by 0.5% over the quarter, while market services increased only slightly less rapidly at 0.4%. Looking at developments in the first half of 2003, survey data up to

**Table 5**  
**Industrial production in the euro area**

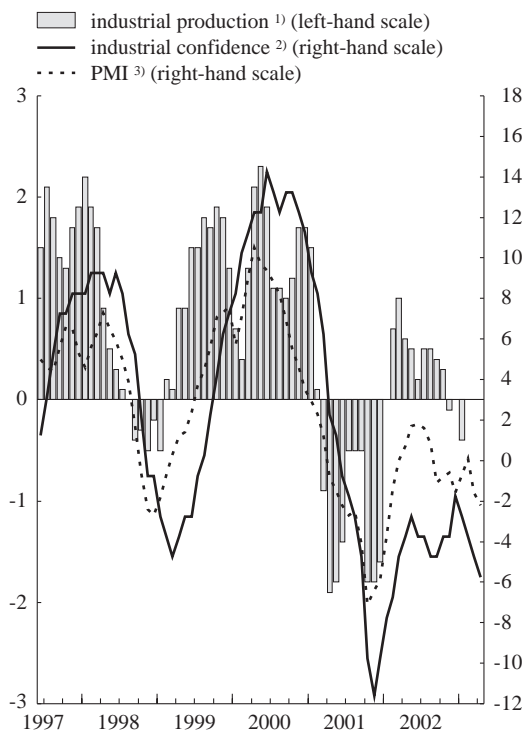
(annual percentage changes, unless otherwise indicated)

	2001	2002	2002	2003	2003	2002	2003	2003	2002	2002	2002	2002	2003
			Dec.	Jan.	Feb.	Dec.	Jan.	Feb.	Sep.	Oct.	Nov.	Dec.	Jan.
				month-on-month			three-month moving averages						
Total industry excluding construction by main industrial groupings:	0.4	-0.6	-0.4	1.3	2.0	-1.5	1.2	0.4	0.2	0.3	0.0	0.1	-0.1
Total indus. excl. construction and energy	0.2	-0.7	0.4	1.1	1.0	-1.7	0.9	0.0	0.2	0.2	0.0	0.1	-0.4
Intermediate goods	-0.7	0.3	1.4	2.4	1.1	-2.0	1.9	-0.2	0.3	0.3	-0.5	-0.1	-0.4
Capital goods	1.5	-2.2	0.1	1.3	3.0	-1.7	0.4	0.7	0.4	0.2	0.6	0.6	0.0
Consumer goods	0.3	-0.7	-0.5	-1.2	-1.0	-1.3	0.1	-0.1	-0.2	0.3	0.3	0.0	-0.8
Durable consumer goods	-1.7	-5.4	-6.7	-4.0	-4.9	-3.2	1.6	-1.5	-1.2	-0.4	-1.3	-1.1	-2.6
Non-durable consumer goods	0.7	0.2	0.8	-0.6	-0.2	-1.0	-0.2	0.2	0.0	0.5	0.6	0.2	-0.4
Energy	1.0	0.7	-5.4	1.0	8.0	0.2	2.4	3.6	-0.8	-1.0	-0.8	-0.6	1.9
Manufacturing	0.3	-0.7	0.3	1.1	1.0	-1.3	0.5	0.2	0.4	0.3	-0.1	0.0	-0.4

Sources: Eurostat and ECB calculations.

Note: Data refer to the Euro 12 (including periods prior to 2001). For further details on the data, see the "Euro area statistics" section.

**Chart 18**  
**Industrial production, industrial confidence and the PMI for the euro area**  
*(monthly data)*



Sources: Eurostat, European Commission Business and Consumer Surveys, Reuters and ECB calculations.

- 1) Manufacturing; three-month on three-month percentage changes; working day and seasonally adjusted data.
- 2) Percentage balances; deviations from the average since January 1985.
- 3) Purchasing Managers' Index; deviations from an index value of 50; positive deviations indicate an expansion in economic activity.

April suggest that the growth of value added in market services may have decelerated in the first quarter of 2003 and remained weak at the beginning of the second quarter. European Commission survey data for the services sector point to a slight fall in

confidence in the first quarter of 2003, mainly resulting from a decline in March which was subsequently reversed in April. However, confidence in April remains at low levels, comparable to those observed after the terrorist attacks in September 2001. The PMI for business activity in services remained unchanged in April at 47.7, following four consecutive months of declines. These developments signal a deceleration in services activity in the first few months of the year.

**Euro area unemployment increased significantly in the first quarter of 2003**

According to unemployment data, the first quarter of 2003 saw a significant deterioration in labour market conditions. The standardised rate of unemployment for the euro area rose to 8.7% in March 2003, from 8.6% in February (see Table 6). The unemployment rate was revised downwards slightly over the period November 2002 to February 2003. The number of unemployed rose by 86,000 in March, following increases of around 110,000 in January and February. The total increase in the first quarter of the year, in excess of 300,000, is the strongest quarterly rise since the end of 1993. In year-on-year terms, the number of unemployed increased by around 800,000 in the first quarter of 2003 (see Chart 19).

**Employment increased modestly in the fourth quarter of 2002**

National accounts data indicate that total employment increased by 0.1% in the fourth

**Table 6**  
**Unemployment in the euro area**  
*(as a percentage of the labour force; seasonally adjusted)*

	2000	2001	2002	2002 Q2	2002 Q3	2002 Q4	2003 Q1	2002 Oct.	2002 Nov.	2002 Dec.	2003 Jan.	2003 Feb.	2003 Mar.
Total	8.5	8.0	8.3	8.2	8.3	8.4	8.6	8.4	8.4	8.5	8.6	8.6	8.7
Under 25 years <sup>1)</sup>	16.6	15.6	16.1	16.0	16.1	16.4	16.9	16.2	16.4	16.5	16.7	16.9	17.0
25 years and over	7.4	7.0	7.3	7.2	7.3	7.4	7.6	7.4	7.4	7.5	7.5	7.6	7.6

Source: Eurostat.

Notes: In accordance with ILO recommendations. Data refer to the Euro 12 (including periods prior to 2001).

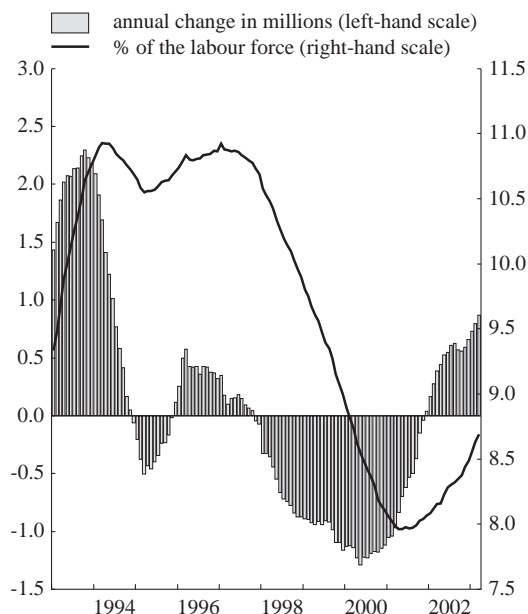
1) In 2002 this category represented 22.4% of total unemployment.



## Chart 19

### Unemployment in the euro area

(monthly data; seasonally adjusted)



Source: Eurostat.

Note: Data refer to the Euro 12 (including periods prior to 2001).

quarter of 2002, compared with zero growth in the third quarter (see Table 7). The actual increase in the final quarter of 2002 was

marginal, however, as it resulted from rounding effects. Employment growth remained weak in most sectors of the economy. In particular, employment in industry declined by 0.4% in the fourth quarter of last year, broadly unchanged from the rate observed in the previous quarters of the year. Employment in construction also continued to decline, albeit at a slower pace than in the previous quarter. Conversely, employment in services showed more signs of resilience, growing by 0.3% quarter on quarter, following a somewhat lower increase in the third quarter of 2002. The gap between employment performance in the services sector and the rest of the economy thus continued to widen.

As regards prospects for the first quarter of 2003, employment expectations in manufacturing improved slightly from the last quarter of 2002, but continued to indicate a decline in employment growth in the first quarter of 2003. Moreover, the PMI indicator of employment in the manufacturing sector averaged 46 in the first quarter, significantly below the threshold level of 50 signalling employment growth. The PMI indicator for

## Table 7

### Employment growth in the euro area

(annual percentage changes, unless otherwise indicated; seasonally adjusted)

	2000	2001	2002	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 Q4	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 Q4
	Quarterly rates <sup>1)</sup>												
Whole economy	2.1	1.4	0.4	0.8	0.7	0.5	0.3	0.2	0.2	0.1	0.0	0.0	0.1
of which:													
Agriculture and fishing <sup>2)</sup>	-1.6	-0.6	-2.0	-1.3	-2.0	-1.9	-1.8	-2.2	-0.4	-0.2	-0.5	-0.7	-0.8
Industry	0.9	0.3	-1.2	-0.5	-1.0	-1.1	-1.3	-1.4	-0.2	-0.4	-0.3	-0.4	-0.4
Excluding construction	0.6	0.3	-1.2	-0.5	-1.0	-1.2	-1.2	-1.4	-0.2	-0.4	-0.3	-0.3	-0.4
Construction	1.8	0.4	-1.1	-0.4	-0.8	-1.0	-1.4	-1.3	-0.3	-0.4	-0.2	-0.5	-0.2
Services	2.9	1.9	1.2	1.5	1.6	1.3	1.1	1.0	0.4	0.3	0.2	0.2	0.3
Trade and transport <sup>3)</sup>	3.1	1.6	0.7	1.2	1.5	0.9	0.3	0.2	0.3	0.3	-0.2	0.0	0.2
Finance and business <sup>4)</sup>	5.7	3.8	1.9	2.9	2.2	2.0	1.7	1.6	0.6	0.2	0.6	0.3	0.5
Public administration <sup>5)</sup>	1.6	1.3	1.4	1.1	1.3	1.4	1.5	1.4	0.4	0.4	0.3	0.3	0.3

Sources: Eurostat and ECB calculations.

Note: Data refer to the Euro 12 (including periods prior to 2001).

1) Quarterly rates: percentage change compared with the previous quarter.

2) Also includes hunting and forestry.

3) Also includes repairs, communication, hotels and restaurants.

4) Also includes real estate and renting services.

5) Also includes education, health and other services.



employment in the services sector showed a slight deterioration in the first quarter of 2003 compared with the final quarter of last year. In April, business surveys showed a stabilisation in employment conditions in the manufacturing and services sectors.

### **A gradual strengthening of real GDP growth remains likely**

The end of military operations in Iraq has reduced some of the geopolitical uncertainty that prevailed both in the global economy and the euro area. Reduced uncertainty was discernible in recent developments in oil prices and financial markets. As regards confidence, the more forward-looking components of the surveys, which were most affected by the climate of geopolitical uncertainty, improved slightly in April. However, business surveys up to April show that the overall climate at the start of the second quarter does not yet appear particularly conducive to stronger economic

activity in the short term. Beyond the short term, our main scenario remains that of a gradual strengthening of real GDP growth starting later in 2003 and gathering pace in the course of 2004, associated with an expected recovery of global demand, the prospect of falling inflation benefiting real disposable income growth, and the low level of interest rates. The recent unwinding of uncertainties associated with geopolitical tensions should also contribute to an economic recovery.

Nevertheless, there continue to be downside risks. First, there are the risks originating from the past accumulation of macroeconomic imbalances outside the euro area and from the concerns that have arisen lately with regard to the SARS virus. Furthermore, there is also some uncertainty over the extent of the adjustment still needed in the euro area corporate sector in order to enhance productivity and profitability, which could have an impact on employment growth and thus private consumption.

## **4 Exchange rate and balance of payments developments**

### **Euro rebounded in April**

After a period of rather strong fluctuations in March and early April, mostly related to the unfolding of the war in Iraq, foreign exchange markets seem to have refocused in April and early May on macroeconomic factors such as the twin deficits in the United States and weak economic activity in Japan. Against this background, after a brief decline in the first week of April, the nominal effective exchange rate of the euro rebounded, returning to about the average level of the first quarter of 1999.

In early April, the euro depreciated against the US dollar before appreciating again in subsequent weeks (see Chart 20). The initial weakening of the euro seems to have been associated with an unwinding of uncertainty as the military phase of operations in Iraq came to an end. In the course of April and in

early May, market participants refocused their attention towards macroeconomic factors such as the persistence of the US current account deficit. Together with mixed economic data releases for the United States pointing towards sluggish manufacturing activity and weak labour markets, while confirming robust private consumption, this seems to have provided some support for the euro despite the fact that macroeconomic data releases in the euro area were also mixed. On 7 May the euro exchange rate stood at USD 1.14, i.e. 4.9% above its level at end-March 2003 and 20.8% higher than its average level in 2002 (see Box 6 on "Using currency options-based indicators to assess sentiment in the foreign exchange markets").

Throughout April, the Japanese yen depreciated against the euro, while it was more stable against the US dollar apart from some depreciation in the first week of April.

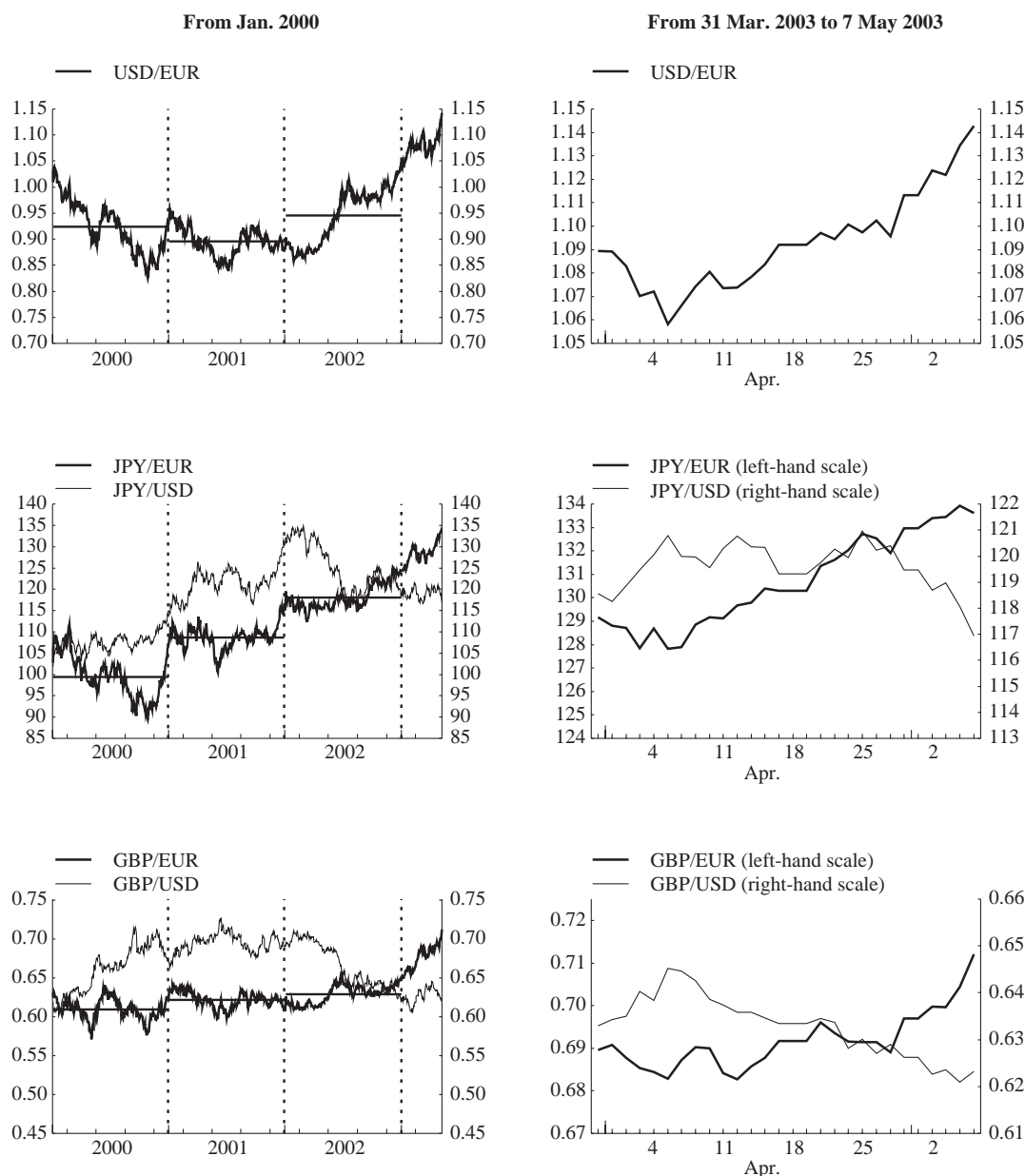
The relative stability of the Japanese currency vis-à-vis the US dollar may be partly associated with expectations among market participants that the Japanese authorities might resume foreign exchange market interventions to prevent a strengthening of the yen. The weakening of the yen against the euro may also reflect the rather

pessimistic outlook by the market for Japanese economic activity against the background of the continuing sluggishness in world economic growth (see Chart 20). On 7 May the euro was quoted at JPY 133.6, 3.4% stronger than at the end of March and 13.2% higher than on average in 2002.

## Chart 20

### Patterns in exchange rates

(daily data)



Source: ECB.

Note: The scaling of the charts is comparable within each column. Horizontal lines show annual averages.

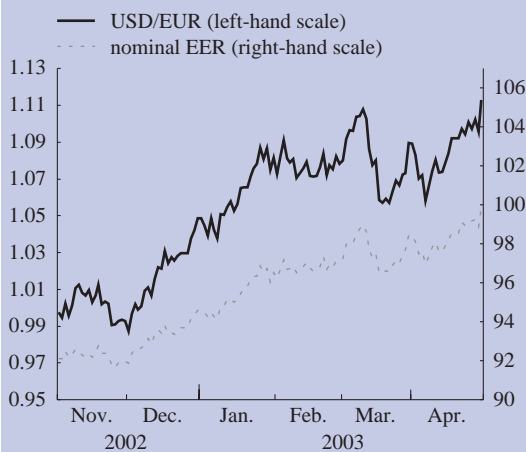
## Box 6

### Using currency options-based indicators to assess sentiment in the foreign exchange markets

Since the second quarter of 2002, the euro has appreciated against other major currencies. Having been relatively stable in the summer months of 2002, the euro experienced a renewed appreciating momentum against the US dollar, strengthening by 11.6% between 1 November 2002 and 30 April 2003 (see Chart A).<sup>1</sup> Since late February 2003, however, the currency pair has experienced rather substantial fluctuations. This box assesses developments in market expectations and sentiment over the last six months, as captured by data derived from currency options prices, focusing on the USD/EUR exchange rate.

#### Chart A: USD/EUR exchange rate and the effective euro exchange rate

(daily data)



Source: ECB.

The properties of the Black and Scholes options pricing model can be used to extract useful information from European-style options prices.<sup>2</sup> Since all the components of the Black and Scholes pricing formula are directly observable from quoted currency options prices – apart from the expected volatility of the underlying exchange rate – it is possible to derive the market's estimate for future volatility simply by inverting the Black and Scholes formula. Volatility derived from the options prices is called "implied volatility", which is a measure of the degree of uncertainty that the options market attaches to future movements in the exchange rate in any one direction over the lifetime of the option. Risk reversal in turn is an options strategy that consists of a simultaneous purchase of a call option and a sale of a put option with similar characteristics<sup>3</sup>; it is usually quoted as the difference between the implied volatilities of the two options. The risk reversal can be used to assess how the market sees the balance of risks between a large appreciation and a large depreciation in the exchange rate. A large positive reading of a risk reversal on the USD/EUR options suggests that higher probabilities are attached to a sizeable appreciation of the euro, whereas a large negative reading indicates expectations skewed in favour of a considerable euro depreciation.

Data on currency options prices make it possible to estimate a wide set of indicators for future exchange rate movements. First, it is possible to extract expected future volatility of the underlying currency pair, which provides a measure of the uncertainty that the market attaches to future developments in the exchange rate. Second, options-based data can be used to infer whether the market perceived the uncertainty to be symmetric or largely focused on a specific direction. Finally, using extensive interpolation and extrapolation techniques, it is possible to obtain a measure of the market's entire perceived probability distribution for the future exchange rate. The ECB often uses indicators based on currency options data to monitor and analyse developments in the foreign exchange markets.

<sup>1</sup> The appreciation of the single currency was broadly based, as witnessed by the appreciation of the euro nominal effective exchange rate index by 8.5% over the same period.

<sup>2</sup> In the Black and Scholes formula, European-style currency options are determined by the current spot exchange rate, domestic and foreign interest rates, the price and date of maturity of the options contract, and the volatility of the underlying exchange rate over the lifetime of the options contract. A European-style option cannot be exercised prior to the maturity, while an American-style option can be exercised at any date between the purchase and the maturity date.

<sup>3</sup> With a European put option an investor buys a right, but not an obligation, to sell the currency at a specified exchange rate at the terminal date of the contract. Similarly, a European call option provides a right, but not an obligation, to purchase currency at a specified rate.

Chart B shows the developments in implied volatility and risk reversals that are derived from options contracts with one-month maturity on the USD/EUR exchange rate. Implied volatility declined throughout November 2002 to reach a low point in early December. Thereafter, in line with the increasing momentum of appreciation of the euro vis-à-vis the US dollar, it rose rather sharply throughout the rest of December. This surge in implied volatility coincided with a movement in risk reversals from a near neutral (zero) reading to a range that indicates expectations of near-term euro appreciation. It seems therefore that once the appreciation of the euro gained pace, the options market started to assign a higher probability to a further near-term strengthening of the euro.

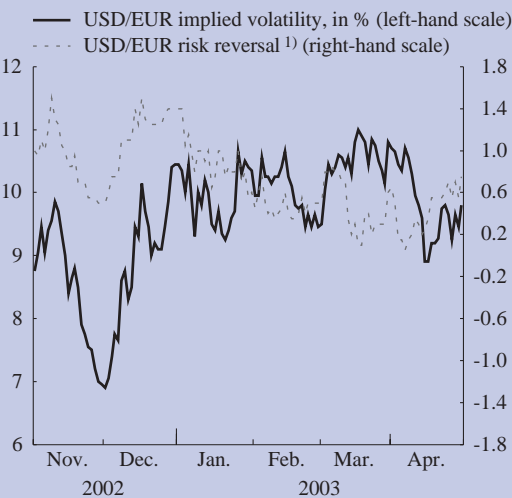
In the first four months of 2003, implied volatility fluctuated around the higher level before dropping substantially in the second half of April. These developments were closely associated with the war in Iraq and took place amid relatively large exchange rate fluctuations and a gradual decline in risk reversals towards zero. Taken together, such movements suggest that, while the options market remained concerned about the possibility of large near-term swings in the USD/EUR exchange rate, until early April they attached steadily lower probability to these being associated with an appreciation of the euro. A typical effect of the short-term impact of geopolitical tension during this period was the temporary depreciation of the euro in the week following the US administration's announcement on 13 March of the start of military operations in Iraq. This coincided with an upward jump in implied volatility and, a few days later, a more pronounced drop in risk reversals (see Charts A and B).

The information extracted from options prices can be enhanced by estimating the entire probability distribution for the exchange rate. In particular, a measure of the implied risk-neutral density (RND) can be obtained from the data on implied volatilities, risk reversals and strangles (another options strategy that consists of a simultaneous purchase of a put and a call option with similar characteristics). The implied RND reflects the markets' perception of the probability distribution of the underlying exchange rate at the future date when the option expires, if market participants were risk-neutral.<sup>4</sup> Despite the caveats related to the assumption of investor risk-neutrality, the implied RND should provide a useful indication of other aspects of the distribution, such as the dispersion of uncertainty as well as the possible asymmetries in the shape of the distribution.

In Chart C, the implied RND functions are plotted for selected dates. In the left-hand panel, the appreciation of the one-month forward exchange rate of the euro relative to the US dollar throughout December 2002 is shown as a rightward shift in the mean of the function. The appreciation was also associated with a rather marked increase in uncertainty, as shown by the increased standard deviation of the RND between 2 and 31 December 2002. The RND on 31 December is also clearly more asymmetric: the thicker right-hand tail shows that expectations became skewed towards euro appreciation. The right-hand panel shows developments during the last two weeks of the military operations in Iraq (early April 2003). While the forward exchange rate did

**Chart B: USD/EUR implied volatility and risk reversals**

(daily data)

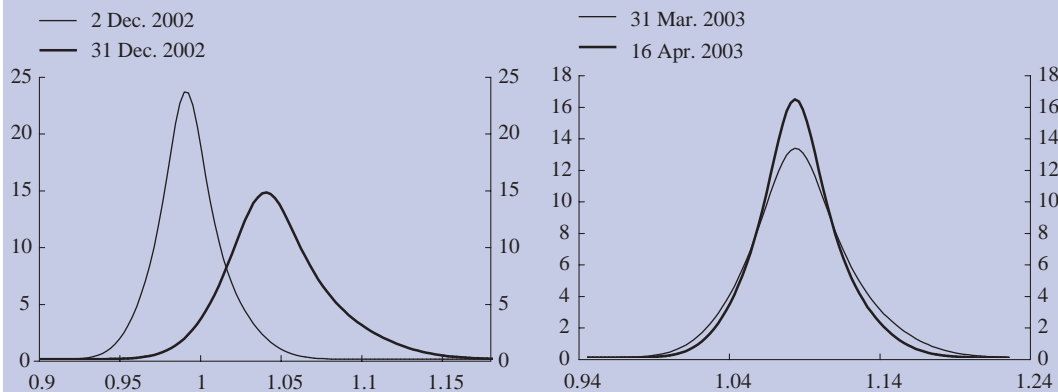


Source: Citibank.

1) Risk reversal is measured as the difference in implied volatility between a put and a call option with similar characteristics.

<sup>4</sup> Since the implied RND is risk-neutral, the mean of the distribution corresponds to the forward exchange rate for the relevant time horizon. Given that investors are generally risk averse, the implied RND is, however, only an estimate of the market's "true" perception of the probability distribution.

**Chart C: Implied risk-neutral distributions on USD/EUR exchange rates for selected dates**



Sources: Citibank and ECB calculations.

Note: The vertical axes show the probabilities, the horizontal axes the one-month forward exchange rates.

not markedly change between the two dates, overall uncertainty, as measured by standard deviation of the RNDs, declined. The function also became slightly more asymmetric in shape, reflecting increased expectations of future euro appreciation.

To summarise, the measures of market expectations of short-term exchange rate developments derived from one-month USD/EUR currency options prices show significant changes between November 2002 and April 2003, when the underlying exchange rate also experienced rather substantial movements. In particular, applying these measures helps to shed further light on exchange rate movements and the distribution of risks around forward exchange rates. However, all caveats need to be kept in mind when drawing specific conclusions about past and expected exchange rate developments.

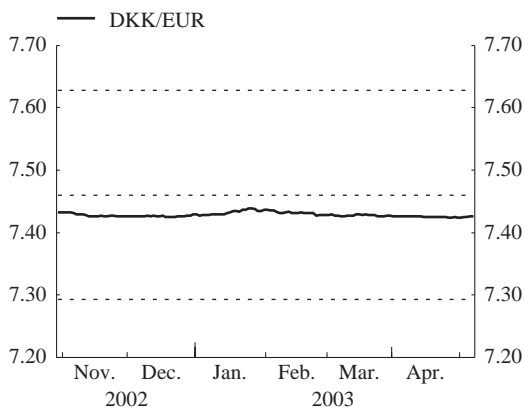
The euro also strengthened against the pound sterling as economic data releases in the United Kingdom appeared to confirm the slower pace of growth in economic activity, especially in the services sector. On 7 May the euro traded at GBP 0.71, i.e. 3.3% higher than at the end of March and 13.2% higher than on average in 2002.

Regarding other European currencies, the Danish krone continued to fluctuate in a narrow range slightly below its central parity in ERM II (see Chart 21). The euro depreciated by 1.6% vis-à-vis the Swedish krona, while it appreciated by 2.5% against the Swiss franc. Overall, the Swiss currency depreciated rather significantly against the euro with the start of military operations in Iraq, thus unwinding part of its earlier gains in association with the safe-haven flows accumulated since late 2002.

In the light of the aforementioned developments, on 7 May the nominal effective exchange rate of the euro – as measured

**Chart 21**  
**Patterns in exchange rates within ERM II**

(daily data)



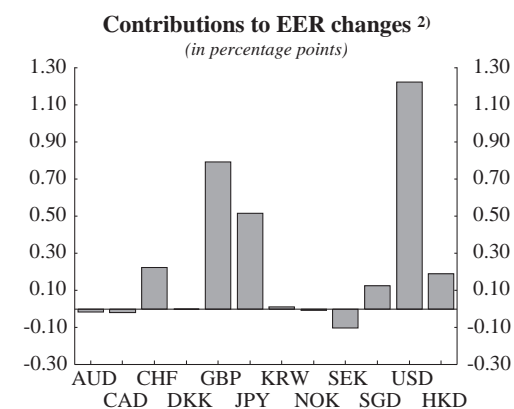
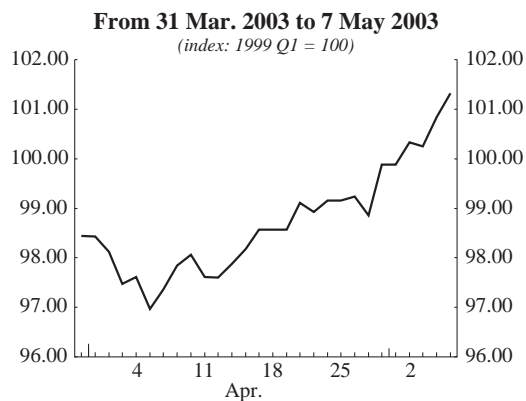
Source: ECB.

Note: The horizontal lines indicate the central parity (DKK 7.46) and the fluctuation band ( $\pm 2.25\%$  for DKK).

## Chart 22

### The effective euro exchange rate and its decomposition<sup>1)</sup>

(daily data)



Source: ECB.

1) An upward movement of the index represents an appreciation of the effective exchange rate against 12 partner currencies.

2) Changes are calculated, using trade weights, against 12 major trading partners.

against the currencies of 12 major trading partners of the euro area – was 2.9% stronger than its end-March level and 13% above its average level in 2002 (see Chart 22). In particular, this reflects the strengthening of the euro against the US dollar, the pound sterling, the Japanese yen and, to a smaller extent, the Swiss franc, which was only marginally offset by the appreciation of the Swedish krona against the single currency.

### Slight decline in current account surplus in February 2003

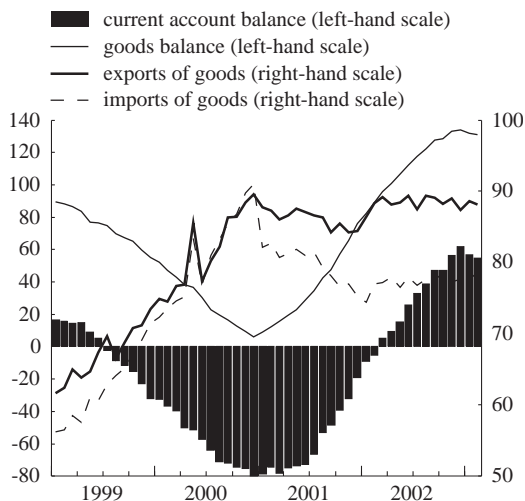
The euro area current account registered a surplus of €3.2 billion in February 2003, compared with €4.7 billion in February 2002. The lower surplus resulted from a €3 billion increase in the income deficit and a slight decrease in the goods surplus, which more than offset the lower deficits for both services and current transfers (see Table 8). The seasonally adjusted month-on-month data showed similar developments, with the current account recording a surplus of €1.9 billion in February 2003, down from €2.2 billion the month before.

Taking a longer-term perspective, Chart 23 shows that the rise in the 12-month cumulated current account surplus came to a halt towards the end of 2002. This was largely the result of the levelling-off of the cumulated goods surplus. The latter may be partly due to the impact of the appreciation of the euro: the value of extra-euro area exports showed a marginal decline in the second half of last year, resulting from both sluggish export

## Chart 23

### The euro area current account balance, the goods balance and exports and imports of goods

(EUR billions; seasonally adjusted)



Source: ECB.

Note: Data refer to the Euro 12. Balances are cumulated over 12 months; exports and imports of goods are monthly values.

**Table 8****Balance of payments of the euro area***(EUR billions; not seasonally adjusted)*

	2002 Jan. - Feb.	2002 Feb.	2003 Jan. - Feb.	2002 Dec.	2003 Jan.	2003 Feb.
<b>Current account balance</b>	4.5	4.7	-3.2	9.1	-6.5	3.2
Credits	274.5	132.8	274.7	144.8	143.3	131.5
Debits	270.0	128.1	278.0	135.7	149.7	128.3
Goods balance	13.2	10.1	10.3	10.7	0.8	9.5
Exports	163.1	83.5	165.2	84.9	81.8	83.5
Imports	149.9	73.3	154.9	74.1	80.9	74.0
Services balance	-4.0	-1.4	-0.7	2.4	-0.4	-0.3
Exports	47.4	23.1	48.3	29.4	25.2	23.1
Imports	51.3	24.5	48.9	27.0	25.6	23.3
Income balance	-6.6	-0.2	-13.2	-0.4	-10.1	-3.2
Current transfers balance	1.8	-3.9	0.3	-3.7	3.1	-2.8
<b>Capital account balance</b>	3.0	0.4	1.2	0.9	2.1	-0.9
<b>Financial account balance</b>	-26.1	13.3	-18.7	-15.0	-15.6	-3.1
Direct investment	-7.9	-9.1	-0.2	-1.7	-0.9	0.7
Abroad	-28.1	-21.4	-17.9	-4.3	-10.9	-7.0
Equity capital and reinvested earnings	-13.7	-5.1	-11.9	-15.6	-6.7	-5.2
Other capital, mostly inter-company loans	-14.4	-16.2	-6.0	11.3	-4.2	-1.8
In the euro area	20.1	12.2	17.7	2.6	10.0	7.6
Equity capital and reinvested earnings	6.2	3.4	13.9	11.4	8.4	5.5
Other capital, mostly inter-company loans	14.0	8.9	3.7	-8.8	1.6	2.1
Portfolio investment	-42.1	-8.6	5.2	-2.6	-5.5	10.7
Equities	0.4	0.6	20.3	-6.7	16.2	4.1
Assets	-22.3	-8.8	2.0	-6.6	2.0	-0.1
Liabilities	22.7	9.4	18.3	-0.1	14.1	4.2
Debt instruments	-42.6	-9.2	-15.1	4.1	-21.7	6.6
Assets	-23.9	-9.8	-48.5	-9.0	-24.7	-23.8
Liabilities	-18.7	0.6	33.4	13.1	3.0	30.4
Memo item:						
Combined net direct and portfolio investment	-50.1	-17.7	4.9	-4.3	-6.4	11.4
Financial derivatives	5.4	2.1	-0.1	-2.0	-1.0	0.9
Other investment	21.4	26.4	-30.5	-7.5	-9.6	-20.8
Reserve assets	-2.9	2.5	7.0	-1.2	1.5	5.4
<b>Errors and omissions</b>	18.6	-18.3	20.7	4.9	20.0	0.7

Source: ECB.

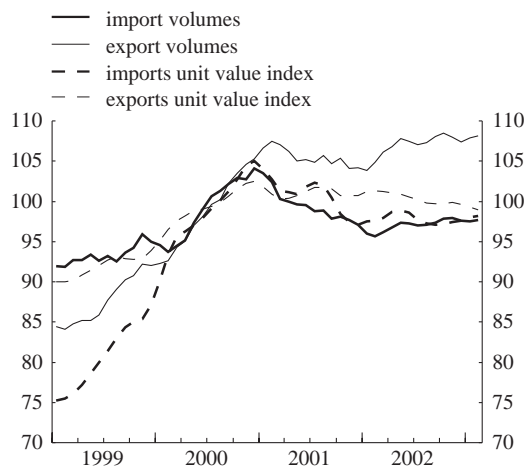
Notes: Figures may not add up due to rounding. For the financial account, a positive sign indicates an inflow, a negative sign an outflow; for reserve assets, a negative sign indicates an increase, a positive sign a decrease. A detailed set of tables on Euro 12 balance of payments data can be found on the ECB's website.



## Chart 24

### Extra-euro area trade volumes and unit value indices<sup>1)</sup>

(index: 2000 = 100, seasonally adjusted, three-month moving average)



Sources: Eurostat and ECB calculations.

1) Latest observations are for January 2003, and are partly based on estimates.

volumes and falling export prices (the latter proxied by unit value indices). Extra-euro area export volumes have remained fairly flat since the second half of 2002 (see Chart 24), coinciding with weak foreign demand and the loss in price competitiveness resulting from the euro appreciation. Further evidence of the impact of the euro appreciation is provided by the fact that exports to countries whose currencies have registered more marked depreciation against the euro, such as the United States, seem particularly subdued. Meanwhile, over the same period, export prices have been falling, suggesting that euro area exporters are cutting profit margins in an effort to partially offset the loss in price competitiveness resulting from the euro appreciation.

At the same time, the value of imported goods has also remained sluggish, reflecting both subdued import volumes and a slight decline in import prices (see Chart 24). So far, weak euro area demand – particularly for the import-intensive categories of expenditure, such as investment – seems to have offset the upward impact on import volumes that should result from the euro appreciation. Until recently, the rise in oil

prices seemed to partly compensate for the downward pressure on import prices due to the euro appreciation. However, looking ahead, significant downward pressure on import prices is likely to occur over the remainder of 2003 as a result of the lagged impact of the appreciation of the euro combined with the recent fall in oil prices, if sustained.

### Net inflows in portfolio investment in February 2003

The euro area recorded net inflows of €11.4 billion for combined direct and portfolio investment in February 2003, which mainly reflected net inflows in portfolio investment (€10.7 billion).

Developments in portfolio investment in February 2003 were due to net inflows both in equity investment (€4.1 billion) and debt instruments (€6.6 billion). Among debt instruments, substantial net inflows in money market instruments were recorded in February due to purchases of euro area instruments (€12.6 billion) by foreign residents (see Table 8.5 in the “Euro area statistics” section). These inflows were only partly counterbalanced by net outflows in bonds and notes: considerable net purchases of foreign bonds and notes by euro area investors (€25.1 billion) were partly offset by net purchases of euro area bonds and notes (€17.8 billion) by non-resident investors.

By contrast, as in previous months, net flows in direct investment were close to balance in February 2003. The other investment account recorded net outflows of €20.8 billion in February, primarily reflecting developments in “other sectors” (i.e. the money-holding sector).

The February 2003 data for the financial account confirmed some of the trends observed in previous months. Most importantly, financial flows of the euro area continue to be dominated by flows in debt



securities, while net flows in equity portfolio investment and direct investment have remained subdued for several months. This shift in the composition of financial flows may reflect the considerable degree of uncertainty and high volatility in financial markets, particularly in the few months prior to the war in Iraq. This interpretation is consistent not only with the large net flows on the asset and liability sides of bonds and notes in February 2003, but also with the sizeable net purchases of euro area money market instruments by foreign residents during this month.

#### **Data revisions**

In the current account, the introduction of a new travel survey by one Member State has

triggered a revision in the services balance. The new methodology revealed that travel expenditure had previously been underestimated and services debits were thus revised from 1997. As a consequence of this and other revisions, the euro area current account balance was revised downwards by around €5 billion per year from 1997 to 2001, and by €0.3 billion in 2002.

The revisions of the financial account affected portfolio investment since 2001, as one euro area country reported substantial changes in debt instrument-related liabilities. Net inflows in euro area debt instruments were revised upwards from €95.0 billion and €150.3 billion to €122.5 billion and €194.2 billion in 2001 and 2002 respectively. For January 2003 net inflows in euro area debt instruments were revised upwards by €6.7 billion.

# Recent trends in residential property prices in the euro area

*This article reviews the recent dynamics of residential property prices (hereinafter referred to as “house prices”) in the euro area and discusses their possible determinants and likely effects on household consumption and lending for house purchases. Monitoring and understanding house price dynamics is important for monetary policy, both because the housing market can be an important channel in the monetary policy transmission mechanism and because house price fluctuations are potential sources of shocks to the economy. Unfortunately, the lack of reliable and harmonised house price information in the euro area makes such monitoring and explanation of house price dynamics difficult for the time being.*

*In the period since 1998, euro area house prices have risen faster than consumer prices (i.e. they have risen in “real terms”), but the upswing has been less pronounced than that in the late 1980s. The decline in interest rates for loans on house purchases and sustained income growth have been important factors contributing to this upswing. Demographics and a number of country-specific factors have also influenced house price dynamics. The impact of the recent real house price increase on private consumption is believed to have been relatively modest in the euro area as a whole, though in some euro area countries private consumption may have been more strongly influenced by house price developments. Gross household indebtedness has also risen, albeit from low levels, in part as a result of house price increases.*

## I Introduction

The buying or selling of a dwelling is typically the largest transaction a household enters into. Changes in house prices are therefore likely to influence substantially the budget plans and savings decisions of prospective house buyers and sellers as well as their location and labour supply decisions. House price fluctuations will also have an immediate and large impact on the wealth of owners of dwellings, given that residential property is often the largest asset in their portfolio. Further, to the extent that they influence market rents, house prices affect income distribution between tenants and landlords. They also affect construction activity.

The above suggests that house price fluctuations can potentially have an impact on economic activity and price stability by affecting aggregate demand and supply, income distribution and the borrowing decisions of households. However, it is difficult to monitor and explain house price

dynamics in the euro area because of the lack of reliable and harmonised house price information (see Box I on “Data sources and limitations”) and because housing markets are geographically segmented, which means that many of the factors affecting house prices are local.

While taking account of the data problems, Section II of this article reviews recent developments in house prices in the euro area. Section III examines some likely determinants of recent house price dynamics. The following two sections discuss potential channels through which house price fluctuations may influence the rest of the economy. The article focuses on two such channels that have recently received attention, i.e. the potential effects of house price fluctuations on aggregate consumption (Section IV) and on the financial position of households (Section V).

## **Box I**

### **Data sources and limitations**

Harmonised data for most of the series used in the article either do not exist or only exist for a short time period. Extensive use is therefore made of national non-harmonised data series, with the caveat that these series are in principle not comparable across countries. This box describes some of the existing limitations in the data.

#### **Residential property prices**

For most euro area countries data are available since the late 1970s or early 1980s. For Spain data are available since 1987, for Austria and Portugal since 1988 and for Greece since 1994. The euro area residential property price index is constructed as the weighted average of the changes in non-harmonised national house price indicators. In the absence of information on relevant transaction values, the euro area aggregates are compiled using GDP weights. Given that national series are non-harmonised, the index can only provide an approximate indication of house price developments in the euro area.

In particular, the collection and production of residential property price statistics are not covered by any EU legislation, and available data come from a variety of public and private sources (national statistical institutes, mortgage lenders, real estate agents, etc.). They differ in terms of their geographical coverage (e.g. main cities or country-wide), the coverage of the types of dwelling (e.g. new or existing, flats or single houses), and often cover only certain types of dwelling transactions (only mortgage-financed or transactions brokered by real estate agents). National house price series are corrected to varying degrees for changes in the size of the sampled dwellings and their location. Other corrections for differences in quality between transactions over time are rare.

The impact of these methodological differences on the reliability and comparability of the house price series is difficult to judge a priori. Differences in coverage may have a particularly important effect on the short-term dynamics of the series. For example, house prices based on samples of large cities are likely to be far more volatile than country-wide data. Changes in the composition of the basket may both introduce “noise” in the series (non-systematic errors) and affect the long-term house price trend. For example, a lack of adjustment for location may introduce a downward bias in a price index for new dwellings, as these tend to be further away from the urban centres as time progresses, whereas the lack of adjustment for quality improvements is likely to give the price series an upward bias.

*Sources: Various national sources and ECB calculations.*

#### **Interest rates on loans to households for house purchases**

Data available since December 1995.

*Source: ECB.*

#### **Estimated cost of borrowing for house purchases**

The euro area cost of borrowing is estimated as a weighted average of the national non-harmonised lending rates on loans for house purchases in index form. For reasons of comparability with euro area house prices, GDP weights are used. The non-harmonised lending rates on loans for house purchases are not strictly comparable across countries because they refer to different types of loan contract.

*Sources: NCBs and ECB calculations.*

#### **Loans to households for house purchases by monetary and financial institutions (MFIs)**

Data available since 1997.

*Source: ECB.*

#### **Estimated lending for house purchases from all types of lender**

For most euro area countries data are available since the early 1980s. For Ireland data are available since 1992, for Luxembourg since 1997 and for Austria since 1995. Depending on the country, the data used here refer to loans to finance house purchases and repairs or, alternatively, to loans secured by housing assets. The coverage may also vary. In some countries, housing loans refer only to loans granted by MFIs, while loans granted by all types of lender are included in other countries.

*Sources: NCBs and ECB calculations.*

## 2 Overview of house price dynamics in the euro area

House price inflation remained relatively high in the euro area in 2002. Early estimates suggest that house prices rose by 6.7% in 2002, approximately the same rate as for the previous year.<sup>1</sup> Deflated by the Harmonised Index of Consumer Prices (HICP), real house prices are estimated to have increased by close to 4.5% in 2002. This was the fourth consecutive year in which euro area real house prices rose by between 4.2% and 5.2% annually.

House price developments varied across the euro area countries (see Table I). Since 1998, Greece, Spain, Ireland and the Netherlands have experienced the highest average annual rises in real house prices, ranging between an estimated 7.6% and 10.9%. By 2002, real house price increases in Ireland and the Netherlands had decelerated, having previously peaked at rates close to or above 20%. Early estimates suggest, however, that Greece and Spain experienced double-digit real house price increases in 2002.

In Belgium, France, Italy, Luxembourg and Finland there was also an upswing in real house prices, but average annual growth rates are estimated to have remained at or below 6.5% in the last four years. (Data for Luxembourg extend only up to 2000.)

However, house price inflation in this group of countries showed some signs of acceleration in 2002.

Germany, Austria and Portugal are the only euro area countries in which nominal house price rises have remained close to or below consumer price inflation in recent years, but data for Austria only extends up to 1999. In the last four years real house prices remained relatively flat in Portugal and fell in Germany. The fall of real house prices in Germany is often attributed to an oversupply of new dwellings after the unification of Germany. However, longer periods of falling real house prices had already been observed in Germany in the 1980s.<sup>2</sup>

The steady rate of growth of euro area real house prices since 1998 differs from the house price dynamics observed during the last upswing in the euro area housing markets in the late 1980s (see Chart 1). In that

<sup>1</sup> See the box entitled "Residential property prices in the euro area" in the October 2002 issue of the ECB's Monthly Bulletin, pp. 25-26.

<sup>2</sup> It should be noted, however, that the negative long-term trend in real house prices in Germany is not confirmed by information from the Federal Statistical Office in Germany on either construction land prices or building costs. See the ECB's publication entitled "Structural factors in the EU housing markets", March 2003.

**Table I**

### Real house prices in the euro area

(average annual growth in percentages)

	Euro area <sup>1)</sup>	Belgium <sup>2)</sup>	Germany	Greece <sup>2)</sup>	Spain	France <sup>3)</sup>	Ireland <sup>3)</sup>
1998-2002	4.5	3.6	-0.6	8.6	10.9	6.5	7.6
2002	4.3	5.1	-0.8	10.1	12.5	6.5	0.5
	Italy	Luxembourg <sup>4)</sup>	Austria <sup>5)</sup>	The Netherlands	Portugal	Finland	
1998-2002	5.4	5.1	-3.4	9.1	1.4	3.0	
2002	7.0	n.a.	n.a.	2.2	-2.5	5.5	

Sources: National sources, ECB estimates and calculations. See box on "Data sources and limitations".

1) ECB estimate for 2002 on the basis of national house price estimates for that year.

2) ECB estimate for 2002 on the basis of information for the first two quarters of the year.

3) ECB estimate for 2002 on the basis of information for the first three quarters of the year.

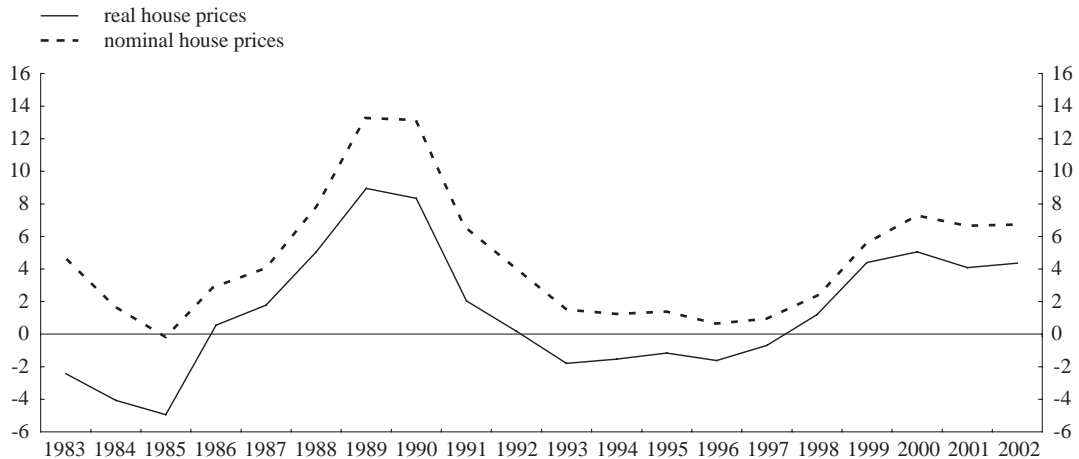
4) Data cover the period 1998-2000.

5) Data cover the period 1998-99.

## Chart 1

### Euro area nominal and real house prices

(annual growth rates in percentages)



Sources: National sources and ECB calculations. See box on "Data sources and limitations".

Notes: GDP-weighted average of annual percentage increase in nominal and real house prices. The coverage of euro area countries varies over time, depending on data availability. Real house prices are calculated as the ratio of the nominal house price index to the HICP.

upswing, real house price growth increased throughout the period from 1986 to 1989, reaching nearly 9% in 1989. A number of euro area countries experienced spells of double-digit growth in real house prices, and in Italy and Finland real house prices rose by more than 20% per annum at the peak of the cycle. The upswing ended abruptly in 1991

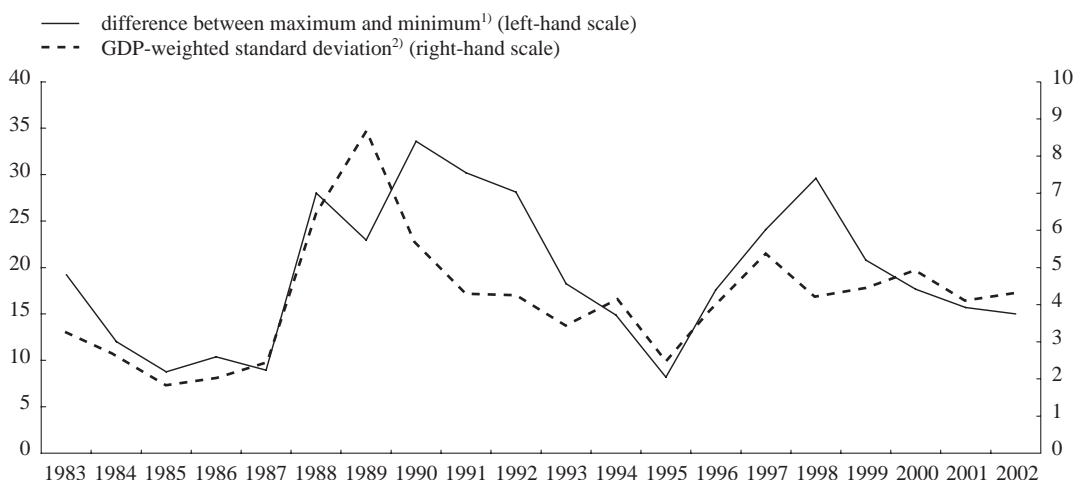
and was followed by a period of falling real house prices up to 1997.

The dispersion of real house price growth within the euro area has also remained relatively stable in recent years as compared with the upswing of the late 1980s. Chart 2 shows two dispersion indicators, the

## Chart 2

### Dispersion of real house price growth in the euro area

(in percentage points)



Sources: National sources and ECB calculations. See box on "Data sources and limitations".

1) Difference between the maximum and the minimum of real house price growth rates. The coverage of euro area countries varies over time, depending on data availability.

2) GDP-weighted average standard deviation of the annual percentage growth rates of real house prices. Greece, Luxembourg, Austria and Portugal are not included for reasons of data availability. For the same reason, Spain is also not included prior to 1988.

weighted standard deviation and the difference between the maximum and the minimum growth rates of real house prices. Both indicators show that growth rates of real house prices diverged across the euro

area during the upswing of the late 1980s. Compared with that period, the house price upswing in most euro area countries has tended to be more synchronised in recent years.

### 3 Determinants of house price dynamics

House price dynamics reflect changes in housing supply and demand. The demand for housing services depends on the number of households, expectations of future disposable income, interest rates on loans for house purchases (hereinafter referred to as “housing loans”), credit availability and a number of country-specific and local factors, including taxes and subsidies. Supply depends on the availability of land for construction purposes and on various factors affecting construction costs.

turn induce households to follow specific strategies and time their transactions according to their expectations of future house prices. Such strategies can feed back into and reinforce house price cycles.

The fall in interest rates on housing loans, sustained rising disposable income and demographics explain at least part of the house price movements observed in the euro area in the last decade.

In the short run, it is difficult to adapt the supply of new dwellings to current market conditions. Thus even temporary changes, for example in taxes, may give rise to significant house price fluctuations. The longer it takes for the supply of new housing to react to changing market conditions, the larger the deviations of house prices from their long-term trend are likely to be. Furthermore, wide house price fluctuations give rise to large short-run capital gains or losses, which in

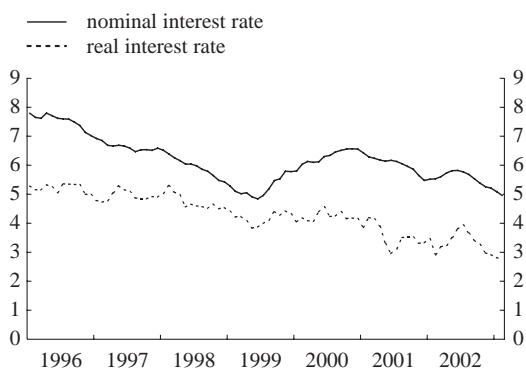
In the period from December 1995 (earliest date available) to January 2003 the average euro area interest rates on housing loans fell by close to 280 basis points. The corresponding real lending rate (after subtraction of HICP inflation) fell by around 250 basis points in the same period (see Chart 3).

Falling interest rates on housing loans combined with rising disposable income means that buying a dwelling is likely to have become more affordable for the average household in the euro area. The financial cost of buying a dwelling, as a ratio of nominal GDP (a proxy for nominal disposable income), is estimated to have decreased sharply since the early 1990s (see Chart 4).<sup>3</sup> In 2002, the nominal house price-to-GDP ratio, a somewhat different indicator of housing affordability, stood below the level of the early 1990s, mainly as a result of this ratio having fallen considerably in Germany.

#### Chart 3

#### Euro area interest rates to households on loans for house purchase

(in percentages per annum)



Source: ECB.

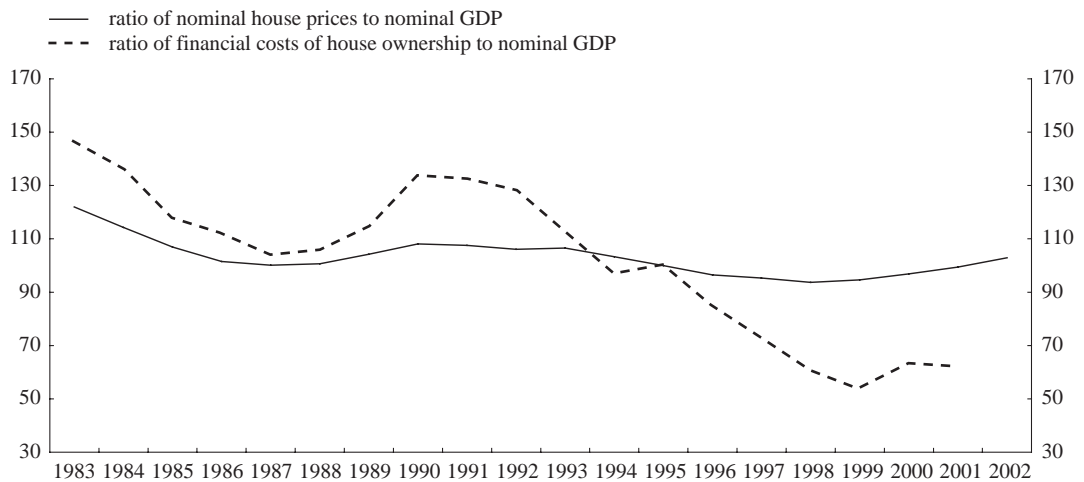
Note: Real interest rates are calculated as the interest rate charged minus HICP inflation.

3 Financial costs are estimated as the product of nominal house prices and a weighted average of euro area country-specific nominal interest rates on housing loans. See the box on “Data sources and limitations”. The same pattern of sharply falling financial costs as a ratio of GDP also emerges if the weighted average of real interest rates on housing loans is used instead. The indicators of affordability used here are only approximate measures of the dynamics of the cost of buying a house because they do not include factors such as taxes, subsidies and registration fees.

## Chart 4

### Indicators of the affordability of housing in the euro area

(index 1995=100)



Sources: National sources, European Commission and ECB calculations. See box on "Data sources and limitations".

Note: Financial costs of ownership are estimated as the product of nominal house prices with an indicator of weighted average euro area nominal borrowing costs.

Furthermore, financial liberalisation and the increased integration of the housing credit market with the rest of the financial system have created conditions for a rapid expansion in the range of mortgage products available. They have also raised competition in the mortgage market and are believed to have reduced quantitative rationing.

While the above factors have together boosted demand for housing, demographic pressures on the housing market have eased. The growth of

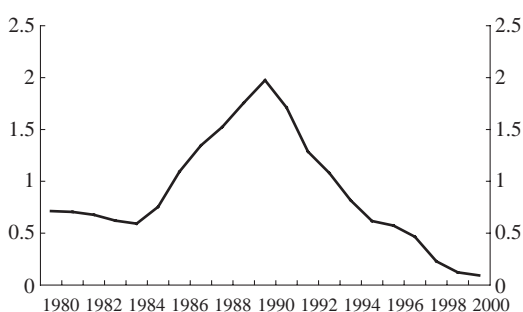
the population aged 25 to 44, a prime house buying population group, fell sharply in the 1990s, having peaked in 1991 (Chart 5). As a consequence, the growth in the number of euro area households has also fallen.

A number of country-specific and local factors, notably taxes, subsidies, planning rules and infrastructures affecting the supply of construction land, have also had an impact on house price fluctuations in certain regions of the euro area.<sup>4</sup> Housing markets are geographically segmented and the forces of house price equalisation across different areas are weak. Thus, local demand or supply shocks can give rise to substantial local house price fluctuations, which are then also reflected in the area-wide house price index. For example, it is not uncommon for tight supply conditions in some large city areas to drive much of the house price dynamics, both locally and at the national level. The geographic distribution of the population and of economic activity in a country may also be a relevant factor affecting country-wide house price dynamics.

## Chart 5

### Growth of population aged 25-44 in the euro area

(annual growth rates in percentages)



Sources: Eurostat and ECB calculations.

Notes: Before 1991, figures include population aged 25-44 in the GDR. The data for 2000 do not include Greece.

<sup>4</sup> For a detailed analysis of country-specific factors see the ECB's publication entitled "Structural factors in the EU housing markets", March 2003.

## 4 House prices and private consumption

House price fluctuations have attracted much attention lately because of their presumed effects on private consumption. Real house prices and private consumption have tended to vary in the same direction in the euro area, but the relation does not seem to have been either strong or very stable over time (Chart 6). Moreover, both are likely to be affected by a number of common factors, such as consumer expectations and real disposable income. Thus, any co-movement of house prices and private consumption does not necessarily imply a causal relation between the two.

The effect of house price fluctuations on consumption is in theory ambiguous. An increase in house prices will raise the wealth of owners of dwellings and may therefore induce them to consume more of their current income. A rise in house prices may also make mortgage-backed borrowing for consumption easier. Thus, house price rises are expected to have a positive wealth and credit effect on the consumption of homeowners.

At the same time, an increase in house prices will typically raise the cost of housing services

to households and, therefore, also have a negative (income) effect on consumption. When house prices increase, prospective first-time buyers need to save more in order to accumulate the necessary capital for a down-payment. Owner-occupiers also take into consideration that, if they were to sell their dwelling and realise the capital gains, they would then have to pay a higher price for a new house to live in.

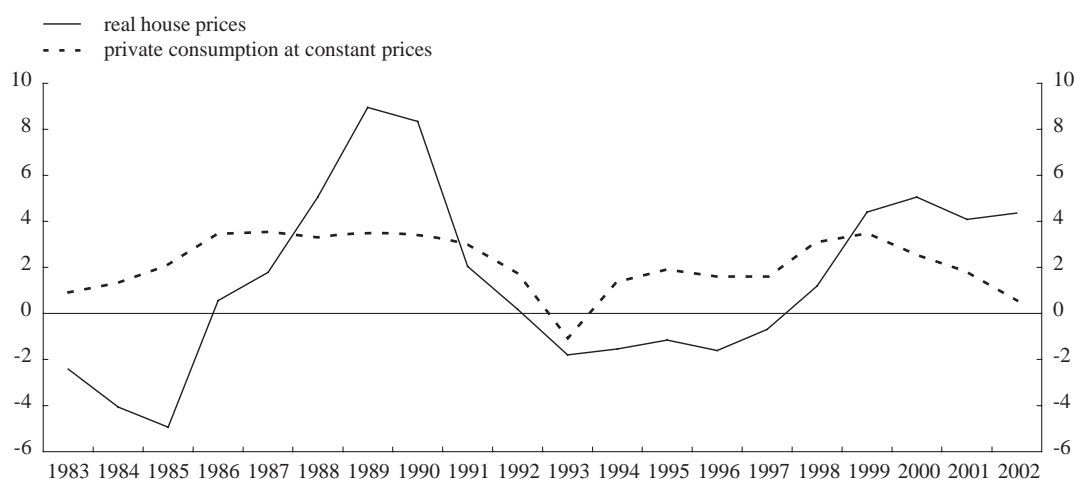
Additionally, house price fluctuations may affect market rents and, thus, the distribution of income between tenants and landlords. Depending on the propensity to consume of the two groups, rent changes can have an impact on consumption.

The above suggests that the effects of house price fluctuations on private consumption may well vary across countries and, within a country, over time. They will depend, among other things, on the source of house price fluctuations, households' house price expectations, the functioning of the credit system, the characteristics of owners of dwellings and on how widespread house ownership is.

**Chart 6**

### House prices and private consumption in the euro area

(annual growth rates in percentages)



Sources: National sources, European Commission and ECB calculations. See the box on "Data sources and limitations".



Empirical research typically finds that, on aggregate, house prices have a positive effect on consumption in the euro area countries. There is also some evidence that these effects may have strengthened over time, but thus far these results are rather inconclusive. In particular, the estimates tend not to be statistically significant for a number of euro area countries, including Germany, France and Italy.<sup>5</sup> On the basis of these empirical results, one would expect that the effects of the recent house price upswing on private consumption are likely to have been relatively modest for the euro area as a whole. Only in some countries have house price dynamics possibly had a more significant influence on consumption decisions.

One factor, in particular, that is likely to have affected the strength of the wealth and credit effects is the functioning of the house credit system. The wealth and credit effects on consumption are influenced by the ability of households to turn housing wealth gains into extra liquidity. Given that the great majority of transactions in the second-hand housing market are between households, the consolidated household sector cannot, in

general, realise its capital gains by selling its housing assets. Most transactions in the second-hand housing market and the ensuing transfer of money cancel out. Instead, the liquidity of the household sector can increase through the credit effect if it can borrow more against the increased value of its housing assets.

Rules and practices in the mortgage market are important in this respect. Households will be able to rapidly increase (or decrease) their mortgage borrowing following a change in house prices if they can do so without transacting in the housing market, e.g. without buying or selling dwellings. This type of direct “house equity withdrawal” (or “house equity injection”) is not a common practice in most euro area countries. However, so-called “house equity release” products have tended to become more common in some euro area countries, including the Netherlands and Finland.<sup>6</sup> A more extended use by households of such mortgage market products in the future could allow them to tap their housing equity with minimum costs and thus strengthen the effects of housing market fluctuations on final consumption.

## 5 House prices and loans for house purchases

Residential property is the single most important asset in the portfolio of many households. Loans for purchases of housing assets, which are typically also secured on these same assets, represent about two-thirds of households’ total liabilities. Thus, house price fluctuations can have a significant impact on the net worth (i.e. the wealth minus the liabilities) and creditworthiness of households. House price fluctuations are believed to have played a role in past credit cycles by both facilitating extra borrowing during the house price booms and creating financial headwinds in times of house price declines, thus contributing to economic downturns and retarding economic recovery.<sup>7</sup>

The above considerations have drawn attention to developments in housing loans and their

relation to house prices. In the euro area, the stock of housing loans (the “housing debt”) rose sharply in the period from 1991 onwards, albeit starting from relatively low levels. As a ratio of nominal GDP, nominal housing debt is

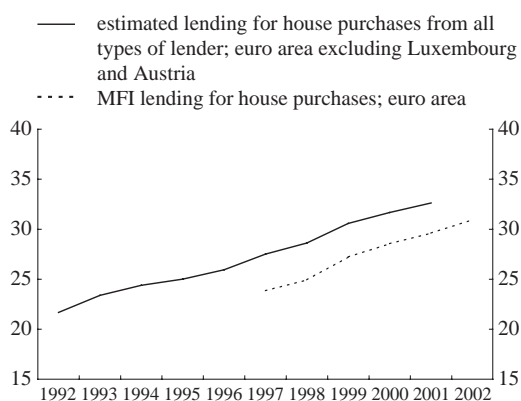
5 See, for example, Ludwig and Slok “The impact of changes in stock prices and house prices on consumption in OECD countries”, IMF Working paper 02/1, 2002; Boone, Girouard and Wanner “Financial market liberation, wealth and consumption”, OECD Working paper No. 308, 2001; Eschenbach and Schuknecht “Asset prices and fiscal balances”, ECB Working Paper No. 141, 2002.

6 See the ECB’s publication entitled “Structural factors in the EU housing markets”, March 2003.

7 In the case of highly indebted households with few assets other than their home, house price falls may result in negative net worth and geographical “lock-in” effects. The market value of their house will then be lower than the outstanding debt and selling their house will not be an option. Selling the house in order to move to other accommodation would require raising fresh capital and repaying at least part of the outstanding mortgage debt, which could prove very difficult, given the indebted households’ financial position.

## Chart 7 Ratio of housing debt to GDP

(in percentages)



Sources: ECB and NCBs. See box on "Data sources and limitations".

Notes: Lending for house purchases from all types of lender is an estimate based on non-harmonised national data. Luxembourg and Austria are excluded because of shorter time series. Lending to households for house purchases from MFIs does not include lending for house purchases from other types of lender, such as insurance companies.

estimated to have increased by about 12 percentage points since 1992 (Chart 7). Total household indebtedness also increased in the process. Recently, the nominal housing debt growth rate has fallen (see Box 2 entitled "Loans

to households for house purchases and total indebtedness of households").

High residential capital accumulation, improving income expectations, falling interest rates and favourable fiscal treatment of housing debt are all factors which are likely to have contributed to the housing debt accumulation. Rapidly rising house prices may have also contributed to this accumulation in some euro area countries, such as the Netherlands. As noted above, the higher collateral value of dwellings would have made it easier for households to take out new loans. These, in turn, may have fed back into more demand for housing as households attempted to "trade up" their houses, reinforcing the upward pressure on house prices.

Despite the recent increases in housing and total indebtedness in the euro area, households' housing and total debt levels are still deemed limited in relation to GDP (or disposable income) (Table 2). The interest service burden of households remained relatively stable in the 1990s and the consolidated household sector is a net lender

## Table 2 MFI loans to households for house purchases in the euro area countries

(in percentages)

Country	Belgium	Germany	Greece	Spain	France	Ireland
MFI loans to households for house purchases as a ratio of nominal GDP (end-2002)	24	44	15	35	22	35
Interest rate adjustment <sup>1)</sup> (percentage of all new housing loans in 2001)	F (75) M (19) V (6)	Mainly M and F	F (5) M (15) V (80)	V (more than 75)	F/M/Other (86) V (14) <sup>2)</sup>	V (70) The rest mainly M
Country	Italy	Luxembourg	Netherlands	Austria	Portugal	Finland
MFI loans to households for house purchases as a ratio of nominal GDP (end-2002)	10	32	62	15	50	22
Interest rate adjustment <sup>1)</sup> (percentage of all new housing loans in 2001)	F (28)	V (90)	F (74) <sup>3)</sup> M (19) <sup>3)</sup> V (7) <sup>3)</sup>		Mainly V	F (2) V (97) Other (1)

Sources: ECB and NCBs. See the ECB's publication entitled "Structural factors in the EU housing markets", March 2003.

1) Fixed (F): interest rate fixed for more than five years or until final maturity; Mixed (M): interest rate fixed for more than one year and up to five years; Variable (V): after one year, interest rate renegotiable or tied to market rates or adjustable at the discretion of the lender; (O): other.

2) V: interest rate tied to market rates only (other renegotiable interest rates not included). Flows of new mortgage loans granted by resident credit institutions in 2001.

3) Of existing stock of loans.

## Box 2

### Loans to households for house purchases and total indebtedness of households

Developments in loans to households for house purchases are the result of supply and demand factors interacting in the market, the relative importance of which is difficult to disentangle. The demand for this type of financing can be considered the result of housing demand and other factors (such as legal regulations, types of mortgage contract and repayment fees), as well as financial practices which can trigger the use of mortgage credit to finance current expenditure. At the same time, financial intermediaries who are the main providers of financing exert control over the availability of credit lines.

Loans to households for house purchases represent over 60% of total MFI loans to euro area households (see the table below). Over the late 1990s, total loans granted by MFIs to households showed an acceleration, reaching annual growth rates of above 11%, to a large extent attributable to developments in housing loans. Subsequently, after a moderate declining trend, the growth of both total and housing loans to households tended to stabilise in parallel with an increase in the relative importance of the latter (see chart below). In 2002, the annual growth rate of these loans stood at 7.6% in nominal terms and around 0.9% in real terms, using an estimate of house price growth for the euro area as a whole as a deflator.

#### MFI loans for house purchases in the euro area

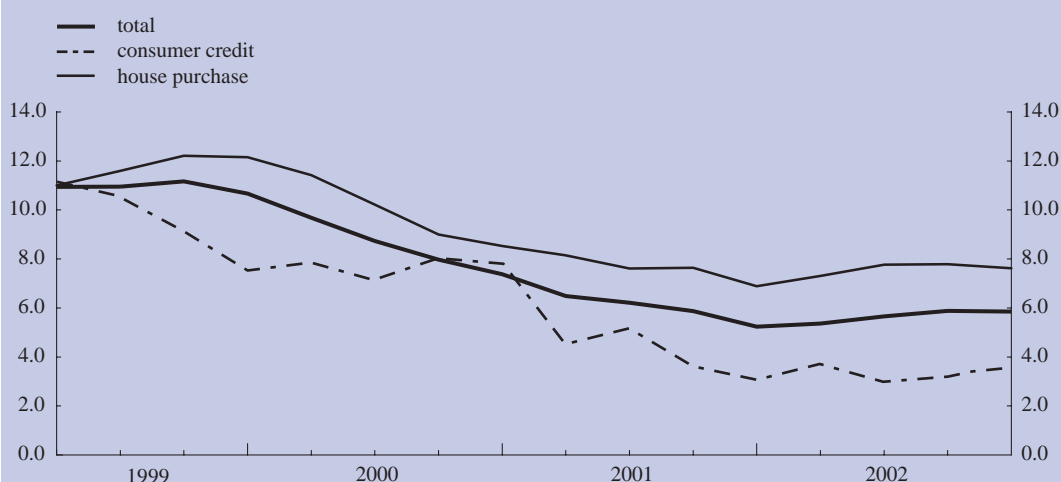
(in percentages)

	As a percentage of total loans to households	Annual growth
Dec. 1999	62.7	12.2
Dec. 2000	63.8	8.5
Dec. 2001	65.0	6.9
Dec. 2002	66.4	7.6

Source: ECB.

#### Growth of loans to euro area households by purpose

(annual growth rate in percentages; quarterly data)



Source: ECB.

Note: Total loans are the sum of those for house purchases, consumer credit and "other loans" (not shown in the chart).

Developments in loans to households for house purchases vary widely between countries (see also the ECB's publications entitled "Report on financial structures" (2002) and "Structural factors in the EU housing markets" (2003)). Although the dynamics of house prices help to explain the differences in the nominal

growth of these loans across countries, other country-specific factors, such as demographic issues, tax incentives, refinancing practices and housing equity releases, appear to play a role.

The increase in the indebtedness of euro area households due to housing loans has not involved a significant increase in the debt burden – interest payments on loans for house purchases as a percentage of disposable income of households – on account of the significant declines in interest rates, particularly in some euro area countries during the period prior to the introduction of the euro. Total interest payments by households – the major part of which results from loans for house purchases – represent around 5½% of disposable income of euro area households, a similar percentage to that observed at the beginning of the 1990s, according to preliminary estimates. While developments in loans for house purchases vary widely across euro area countries, over recent years, the dispersion of retail interest rates on loans for house purchases has been lower than that of interest rates on other types of loan. This notwithstanding, the cost of financing may vary across countries on account of the different fiscal treatment of mortgage indebtedness and the different fees for taking out a mortgage.

to other sectors and thus a net recipient of interest income.

Additionally, in a number of euro area countries a large share of housing debt is assumed at fixed interest rates for periods longer than five years (Table 2), thereby reducing the immediate risks to households

in the event of a rise in the interest rates on housing loans.<sup>8</sup> At this stage, therefore, it would seem that the financial position of the household sector in the euro area is not a particular cause for concern, though in some countries highly-indebted households are likely to be exposed to risks from house price fluctuations.

## 6 Concluding remarks

Euro area house price inflation remained well above consumer price inflation in the last four years. The recent upswing in house prices has been less pronounced than that of the late 1980s. Income growth and the decline in interest rates on loans for house purchases have been important factors contributing to the recent upswing. The effects of the recent house price upswing on private consumption are likely to have been relatively modest for the euro area as a whole, though in certain countries house price dynamics may have had a more significant influence on consumption decisions. House price rises are likely to have

also contributed to rising household indebtedness in the euro area in gross terms.

House price fluctuations are the main nexus between the housing market and the rest of the economy. Close monitoring of house price movements and an understanding of their determinants is therefore warranted. In this respect, improved standards for collecting statistics on housing markets in the euro area countries are needed.

<sup>8</sup> See the ECB's publication entitled "Report on financial structures", 2002.



# Electronification of payments in Europe

*In recent years, the increasing use of new communications technologies and the need for specific payment mechanisms for e-commerce have created opportunities for new intermediaries to facilitate the sending and processing of payment instructions. At the same time, banks have also developed new means for customers to access their accounts and to originate payments. Most of the initiatives are still in the early stages of adoption. Pursuant to its statutory responsibility “to promote the smooth operation of payment systems”, the European Central Bank sees itself as having two roles, namely that of a catalyst and that of an overseer. Initially, while the market is still in a phase of development, its emphasis will be on the former function. The ECB aims to provide a forum for co-operation between the stakeholders, and to offer analyses and statistics to support the work towards an integration of the various parts of the payment cycle and infrastructures in Europe. Its oversight activities as regards the electronic provision of payments will initially focus on the security of the associated instruments and systems.*

## I The changing nature of payments

A payment may generally be understood as a payer’s transfer of a monetary claim on a party acceptable to the beneficiary. For a retail transaction, the acceptable monetary claim is normally either money provided by the central bank or deposits/liabilities at a financial institution. Recently, where the regulations have permitted this, liabilities of non-banks have also been used as acceptable claims. A monetary claim that is accepted by the beneficiary will be referred to as the “means of payment”.

Payment instruments are tools for the payer to initiate the transfer of the means of payment. There are a wide range of payment instruments for transactions at the point of sale (such as debit and credit cards), for transactions to pay invoices, and to generally transfer funds between economic agents (such as credit transfer orders, either at the counter or online).

In most cases, the payment instrument and the means of payment are different. The most prominent exception is cash. Where the means of payment differs from the payment instrument, an infrastructure for effecting the transfer of the means of payment from the payer to the payee is required. The infrastructure for the transfer of liabilities between financial institutions is the interbank funds transfer system. When a payment is made on the basis of an invoice, two further aspects are also important: the delivery of the invoice to the

payer and the payee’s reconciliation of invoices sent and payments received.

In principle, information and telecommunications technology allows the entire payment process to be fully automated, including the provision of electronic means of payment. The migration towards the provision of payment services on a fully electronic and highly automated basis is called the electronification of payments. A stylised example of the payment process and its electronification is given in Box I.

Pursuant to its statutory responsibility “to promote the smooth operation of payment systems”, the ECB sees its role in the electronification of payments mainly in promoting the efficiency and security of the associated instruments and systems. Due to developments in information and telecommunications technology and, recently, the internet, the electronification of payments has increased continuously over the past few decades.

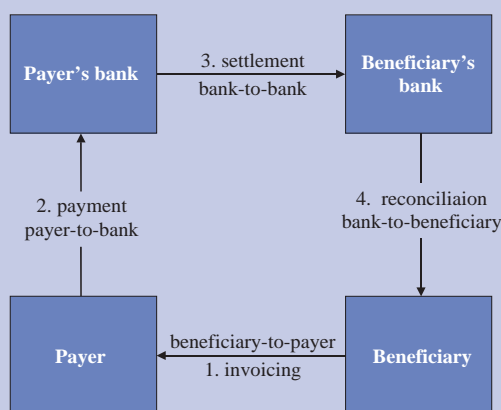
This article provides an overview of recent developments, focusing on the electronification of payment instruments for retail e-commerce. E-commerce is understood to encompass the sale or purchase of goods or services that is conducted via computer-mediated networks, such as the internet or the networks of mobile telecommunications operators.

## Box 1

### The payment cycle

A payment transaction usually involves four different parties: the payer, the beneficiary and the two financial institutions responsible for effecting the funds transfer. Communications between the parties have become increasingly automated, so that transactions are possible without manual intervention. A stylised example of a payment transaction using a credit transfer as the payment instrument is presented in the payment cycle shown in the chart.

- The adoption of electronic invoicing, which automates the billing process between the beneficiary and the payer, has thus far remained limited.
- The submission of payment instructions, or the initiation of payments, has undergone remarkable development in recent years, with the emergence of a wide variety of initiatives for electronic payment instruments.
- The interbank funds transfer systems show the highest degree of electronic communication in the payment cycle. In these systems, the automated electronic exchange of messages is widespread and has already become the standard.
- The reconciliation of balance and payment information between the payment provider and the beneficiary for book-keeping purposes (with statements and receipts) is already widely effected via electronic means between large companies and their banks, and this service is to an increasing degree also available to smaller companies.



### A variety of new initiatives in the market

A wide range of new initiatives allowing payments to be effected via the internet and mobile networks have been undertaken in Europe. Most of these initiatives are in an early stage of development; some have been successful, but many have had to close down.

A distinction can be made between traditional payment instruments that have been adapted to e-commerce and new payment instruments that have been developed specifically to serve it. The first group consists of initiatives that have leveraged existing instruments to serve new markets with no, or only minor, changes to the logic of the instruments. The familiarity of the products has led to wide and easy acceptance among the public. The second group consists of arrangements that try to

provide additional benefits or focus on specific parts of the payment cycle or on niches in the market (such as internet auction sites).

### The electrification of traditional payment instruments

The main traditional payment instruments currently being adapted to the internet and mobile networks are credit cards, credit transfers and debit instruments (such as direct debits, debit cards and cheques). Box 2 gives explanations of these instruments and their usage in Europe.

Credit cards are currently the most widely used payment instruments for making payments over the internet. The high online



## Box 2

### Use of non-cash payment instruments in Europe

A credit transfer is an instruction from the payer to his/her bank to debit his/her bank account and to credit the beneficiary's bank account. Credit transfers are the most widely used payment instruments in Europe. Around one-third of all non-cash payments are credit transfers.

Debit instruments allow the beneficiary to send an instruction to his/her bank to have purchases made by the payer charged (debited) directly to funds on the payer's account. A distinction is made between three types of debit instruments: direct debits, debit cards and cheques.

1. Direct debits are pre-authorized debits on the payer's bank account that are initiated by the beneficiary. Direct debits are often used for recurring payments, such as utility bill payments (e.g. for water, electricity and telephone usage), or for one-off payments where there is no direct contact between the payer and beneficiary. The second highest number of payments (one-quarter) are effected as direct debits.

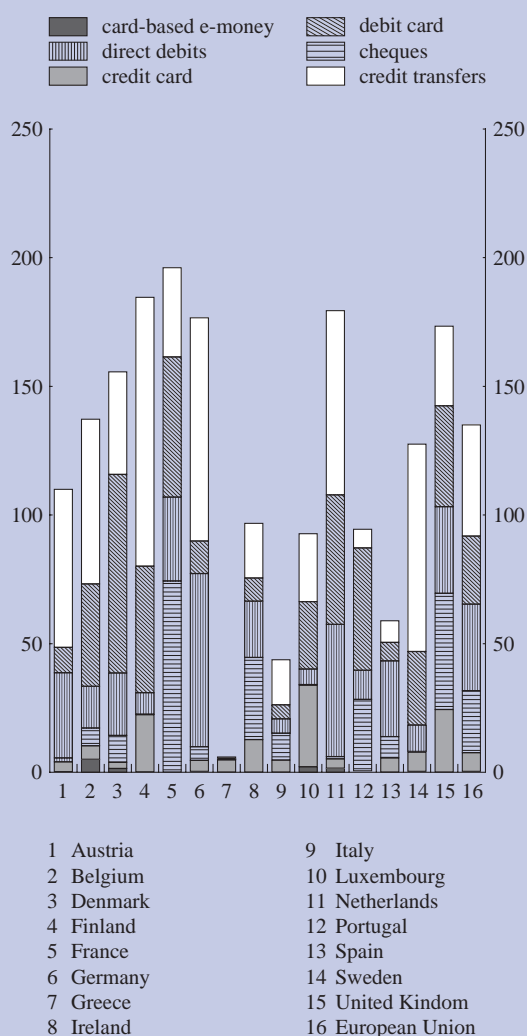
2. Debit cards provide a convenient way to present the payer information needed to initiate a direct debit. This information is embedded in the magnetic strip (or chip) on the card. A dedicated terminal is required to read the information on the debit card, and possibly to verify whether the card is still valid and whether the transaction would exceed any usage limits set for it. Debit cards are the most widely used non-cash payment instrument at points of sale. Around one-fifth of all payments are made using debit cards.

3. A cheque is a written order from one party (the drawer) to another (the drawee, normally a bank), requiring the drawee to pay a specified sum on demand to the drawer or to a third party specified by the drawer. Usage of cheques is still high in some countries, and cheque payments therefore account for between 19 and 20% of all payments effected in Europe. In many countries, however, they are virtually non-existent.

Credit cards allow customers to make purchases and/or withdraw cash as credit from the issuing credit card company. The credit granted is either settled in full by the end of a specified period, generally a month, or in part, with the remaining balance extended as credit. The former arrangement is sometimes called a delayed debit card, but in this paper – for the sake of simplicity – both variations are called credit cards. Credit cards are used for between 5 and 6% of all non-cash transactions in Europe.

### Use of non-cash payment instruments in Europe

(number of transactions per inhabitant per year)



Source: "Payment and securities settlement systems in the European Union (Blue Book)", Addendum incorporating 2000 figures, ECB, July 2002.

usage of credit cards can be explained by the fact that they are internationally known to customers and widely accepted by merchants. In many countries, the liability for a fraudulent transaction lies either with the merchant or with the credit card company. This makes credit cards especially attractive for the payer, who can be sure that he/she does not lose money as a result of fraud as long as he/she has complied with his/her obligations.

Most banks in Europe already provide their customers with e-banking applications through which online credit transfers can be initiated. E-banking is becoming very popular, and common standards are being developed in Europe. However, the use of credit transfers for buying on the internet has not yet taken off on a large scale, although some schemes have been implemented successfully in the Nordic countries.

In some countries, direct debits can also be used for payments over the internet. The procedures are comparable to those for an online payment by credit card. The payer sends his/her bank details (account number and any routing information) to the beneficiary or beneficiary's bank, and the funds are debited from the account individually. These schemes are usually restricted to use within a specific country, which makes direct debits less suitable for cross-border e-commerce.

In some European countries, debit cards can be used in internet shops. This functions similarly to the direct debit system, but offers additional security features for payments owing to the presence of the card. The cardholder authenticates his/her identity with the help of a card reader connected to the PC. The use of debit cards for purchases on the internet is still relatively limited.

An electronic "cheque" mimics the paper cheque, except that the order is in electronic form. In some jurisdictions, the absence of the handwritten signature may lead to a different legal classification of these instruments. In most European countries

cheques play an only minor role, and in countries where they are used more widely, other payment instruments and services have been developed for e-commerce.

### **New payment instruments and services**

While examples in the prior section related mainly to the presentation and transmission of payment information electronically using traditional payment instruments (e.g. credit cards, credit transfers, etc.) and traditional means of payment (commercial bank money), the examples discussed in this section are new payment instruments and related services. Providers use either traditional means of payment or new means such as electronic money or liabilities of other companies. Common to these new initiatives is the use of information and telecommunications technologies that were previously not available for payment purposes.

Electronic money (e-money) is defined broadly by the ECB as "an electronic store of monetary value on a technical device that may be widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transaction, but acting as a prepaid bearer instrument" (Report on electronic money, ECB, August 1998). In this definition, electronic value is comparable to cash (although, unlike cash, it need not be in open circulation) and can be stored, for instance, on a smart card (card-based schemes) or on a personal computer (software-based schemes). E-money has become a new means of payment through legislation. In Europe, the issuance of e-money is restricted to credit institutions and to companies – a type of narrow bank – that fall under the national implementations of the Electronic Money Directive (see legislative aspects below). The definition of e-money in the Directive is broader than the definition used by the ECB and can include – in addition to card and software-based e-money schemes – schemes that operate on the basis of accounts.

There are currently 25 different card-based e-money schemes in the EU, generally operated by financial institutions. On average, the high expectations of a few years ago with respect to their use have not yet been met. Card-based e-money transactions currently account for only 0.2% of all non-cash payments in Europe. They are most popular in Belgium and Luxembourg. In e-money schemes, as in many payment schemes, there are problems in achieving critical mass. There have been no recent Europe-wide roll-outs. As regards software-based e-money, most of the initiatives were closed down before they were able to operate on a wider scale.

The growing success of auction sites on the internet has led to the emergence of payment service providers which allow person-to-person payments over the internet. These have generally been termed personal online payments. The schemes operate in a similar way to bank deposits, i.e. customers open dedicated accounts with the payment service provider, and funds on these accounts can be used to make payments over the internet. They build upon traditional payment instruments (e.g. credit cards or credit transfers) to fund the dedicated accounts. The main innovation common to these initiatives is the use of e-mail and the payment provider's website for communications between the payment provider and the users, and the ease with which new accounts are created. In the European Union, banking regulations say that the means of payment in these initiatives must be commercial bank money or e-money. This means that a banking licence or licence to operate as an electronic money institution is required. Outside the EU, liabilities of non-banks ("company money") are also permitted in some countries.

A similar approach is applied in scratch cards. In these schemes, the payers' prepaid accounts are funded through cards that are sold in kiosks and shops. The prepaid accounts are held in remote servers, instead of being stored on the user's PC or smart card. The schemes also allow anonymous

payments because no registration is needed and no bank or credit card details have to be sent over the internet. Acceptance of these schemes is still limited. As in personal online payments, the means of payment can be either commercial bank money (when a bank or e-money institution is responsible) or company money.

A further type of service that builds upon traditional instruments is the payment portal. These are payment service providers that offer access to a wide range of different payment instruments and may provide merchant accounts to online retailers in general. Payment portals take care of the payment side of e-commerce operations for merchants, which can direct their customers to the payment portal's site to make online payments. After successful completion of the payment, the portal notifies the merchant that the order can be shipped.

In order to address the need to effect small-value payments on the internet, initiatives referred to here as cumulative collection services have emerged. Common to these is the accumulation of several smaller payments into a single transaction that is settled periodically (e.g. at the end of each month) as a single charge to the customer. The collection procedures can be compared to delayed payments for settling credit card bills. Two types of charge option can be distinguished: first, schemes in which the transactions are settled periodically by means of traditional payment instruments, e.g. through a direct debit from the customer's bank account or via a credit card bill, and, second, schemes in which the transactions are added to the customer's bill from a company with which he/she already has a relationship (e.g. the telephone company or the internet service provider). Cumulative collection services are not a new means of payment, but rather a layer added on top of existing products to save transaction costs. Some are aimed at micro-payments, as processing these amounts with traditional payment instruments could be very expensive for both the customer and the merchant.

**Box 3****Classification of payment instruments/means of payment**

<b>Traditional payment instruments</b>	<b>Means of payment</b>
Banknotes and coins	Central bank money
Credit transfers	Commercial bank money
Debit instruments	Commercial bank money
Credit cards	Commercial bank money
<b>New payment instruments and services</b>	<b>Means of payment</b>
Electronic money	E-money
Personal online payments	Commercial bank money, e-money or “company money”
Scratch cards	Commercial bank money, e-money or “company money”
Payment portals	Commercial bank money, e-money or “company money”
Cumulative collection	Commercial bank money, e-money or “company money”
M-payments	Commercial bank money, e-money or “company money”

*Note: In the EU “company money” is allowed in small-scale initiatives under the waiver permitted by the E-money Directive, provided it is not ruled out by other national provisions.*

The use of cumulative collection services has, however, remained quite limited.

Several initiatives have emerged for making payments from mobile telephones. These are sometimes referred to as m-payments. At present such schemes mainly offer a new payment channel to effect a credit transfer or a direct debit of funds (commercial bank money) at a financial institution. Some also offer pre-payment solutions with accounts that are accessible via mobile telephone. The funds on such accounts (e-money or company money) are used to pay for products and services. Mobile devices are well positioned for this, as they are personalised, permanently carried around, designed to be connected, and as the penetration level of digital mobile

telephones is higher than that of personal computers in Europe. It is also possible to use mobile telephones for all types of payment: at both manned and unmanned payment terminals, for internet payments and, in some schemes, also for payments between individuals. Several initiatives have been launched to promote inter-operability between different m-payment solutions. These include the MOBEY forum, the Mobile electronic Transactions (MeT) initiative, the Mobile Payments Forum and PayCircle. These fora encourage the use of mobile technology in financial services and act as a link between the various standardisation bodies in the mobile telecommunications and financial industries.

## 2 Challenges for development

Technological innovations can increase the efficiency of payments by reducing transaction costs and, thereby, increase general welfare. There are, however, many challenges which need to be met for the emergence of a safe and efficient electronic payment infrastructure.

A major challenge complicating the introduction of new payment services is their dependence on a sufficiently large network. Payment instruments derive their value from the number of acceptance points, or places where they can be used, and are therefore also called network goods. For example, the more terminals accept a certain type of

payment card, the more valuable the card will be for the user and the greater the incentive for others to join the network. A major difficulty for new network products or systems is the need to create a critical mass before they can attract other users. Customers will only join the network if enough acceptance points are available, and merchants will only offer acceptance points if enough customers are likely to use them. This “chicken and egg” problem creates high start-up costs for all types of new payment instruments and services.

Further challenges for successful electronic payments are related to standardisation and legislation, as well as to the security of the instruments and means of payment. Only through the use of common standards can the full benefits of electronification across the payment cycle be achieved. A solid legal environment for the provision of new payment services is likewise a necessity. Last but not least, the security of the services is of utmost importance both from the perspective of the payment provider and from the perspective of the public. In these areas, increased co-operation between the stakeholders involved would have obvious benefits.

### **Standardisation aspects**

It is important that common standards and message formats that allow straight-through-processing (STP) without manual intervention be agreed upon. Traditionally, standardisation in the payment business has been organised by a rather closed group of participants from the financial sector and has not been extended across national borders. The altered environment, i.e. the global reach brought about by the internet and mobile networks and the introduction of the euro, have increased the complexity of co-operation and standard-setting in several ways.

One aspect complicating standard-setting is the increased number of stakeholders in the

payment cycle, more and more of which are non-financial organisations. As depicted in Box 1, the full chain of electronic payments includes invoicing by the biller, payment initiation by the payer, payment processing and settlement by the financial institutions as well as, finally, payment reconciliation by the beneficiary. Solutions are needed that can be accepted by all stakeholders, who should ideally be involved in the development and implementation of the standards relevant to their place in the payment cycle.

Technological developments and the emergence of new providers in the market, as well as rapid developments in other fields where communications are a major element, have raised customer expectations. Customers expect faster and cheaper payments, which means that the existing interbank infrastructure, which is based traditionally on the notion of value dates and daily settlements, will need to adapt to the new environment. Current developments in payment systems include the introduction of direct and easy access (e.g. using internet technologies) and tools for managing security risks (e.g. Public Key Infrastructure), changes in timing and finality (e.g. multiple or real-time interbank settlement per day), increased capacity to carry information (to allow automatic reconciliation, for instance) and variable message formats (e.g. XML).

The consolidation and integration processes in Europe and the creation of cross-border payment systems further increase the complexity, but also raise the rewards. National standards within Europe differ considerably from one another, and the move towards European, or global, standards is costly.

### **Legislative aspects**

The European legislative framework for e-commerce consists of several directives addressing problems that could arise from online trade and payments in different legal, contractual and judicial systems across the EU (Box 4).

#### Box 4

#### Legal framework for e-commerce in Europe

A number of directives have been adopted to increase confidence in e-commerce and to promote the development of online provision of services and products. The three most important directives related to electronic payments are:

- the E-commerce Directive (Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market) is aimed at ensuring the “free movement of information society services between Member States”. The directive promotes the free movement of online services through the supervision of service operators in the Member State in which they are established (“country-of-origin” principle). It also introduces transparency measures for commercial communications and “electronic contracting”, and ensures recognition of the legal validity of electronic contracts;
- the E-money Directive (Directive 2000/46/EC on the taking up, pursuit of and prudential supervision of the business of electronic money institutions) introduces a minimum set of harmonised prudential rules for e-money issuance and applies the arrangements for the mutual recognition of home Member State supervision (provided for in Directive 2000/12/EC) to e-money institutions; and
- the E-signatures Directive (Directive 1999/93/EC on a Community framework for electronic signatures) sets the framework regarding the conditions applying to electronic signatures. The Directive ensures that all Member States accept the legal validity of an electronic signature, and second, that all services relating to electronic signatures can be provided on the EU market without national obstacles.

Other related legislation includes the following:

- The Banking Directive (2000/12/EC) of 20 March 2000 provides for a European passport for credit institutions to offer services and set up branches in other Member States. It also enables credit institutions to access foreign payment systems located in the EU not only through branches established in the country concerned, but also by remote access without physical presence, provided they accept the conditions of the respective systems.
- The Regulation on cross-border payments in euro (2560/2001/EC) lays down rules to ensure that charges for cross-border payments are the same as those for payments in euro within the Member State (for cross-border payments up to (ultimately) EUR 50,000).
- The Recommendation concerning transactions by electronic payment instruments and in particular the relationship between issuer and holder (97/489/EC) includes a description of the appropriate division of liability between the consumer, the merchant and the payment service provider.

The European Commission recently conducted a consultation on a “Possible Legal Framework for the Single Payments Area in the Internal Market”.<sup>1</sup> The aim of the consultation document was to discuss the adoption of a coherent and modern legal framework for payments in the Internal Market. It envisaged a codification of various legal instruments adopted by the European Parliament, the European Commission and the Council in one comprehensive legal framework.

Given the rapid technological developments, it could become difficult for legislators to provide appropriate and up-to-date

legislation. Any additional legislative requirement related to innovative payment arrangements should therefore be assessed thoroughly on necessity, should be defined as broad principles to cover later technological developments, and should be developed in a dialogue with market participants.

#### Security aspects

Security concerns regarding electronic payments are one of the reasons most

<sup>1</sup> See [www.europa.eu.int](http://www.europa.eu.int).

commonly cited by the public not to use electronic payment instruments. Moreover, the failure of some initiatives can be attributed to the payment provider failing to offer sufficient security to protect its services. Different security initiatives have been developed for payments over the internet, but not all have been adopted on a large scale.

Several components have to be taken into account when assessing the overall security of electronic payments and online transactions, such as availability, authenticity/authorisation, integrity, non-repudiation and confidentiality. These are explained briefly in Box 5.

Many of the above-mentioned security aspects can only be achieved by combining different techniques, typically by using encryption technologies, with proper organisational measures. So far, inadequate organisational measures have been an obstacle to initiatives being successfully implemented on a large scale, while the technologies necessary to meet these requirements have been available for some time. Providing security in electronic payments is an issue not only of technology, but also of a valid business model that is accepted by customers and not too costly for its users.

Several encryption standards have been developed and initiatives launched to allow a safer transmission and storage of payment information. The most widely used protocol is Secure Socket Layer (SSL). It provides a secure exchange of data between the customer's PC and merchant's website. Usually an additional password is required to authenticate participants. Credit cards, as the payment instrument most widely used over the internet, have seen an increase in online fraud, raising security concerns for credit card companies, merchants and consumers. European banks and card schemes have recently started to actively work towards fraud prevention under the newly established European Payments Council (EPC).

At a more general level, whenever security features are discussed, the structure of incentives has to be borne in mind. The risk of being liable for the breakdown of a security feature provides a strong, if not the strongest, incentive to develop adequate security features. In the case of electronic payments, the distribution of risks and liabilities between the parties involved is therefore a key element of the development of secure payments. The obligations and liabilities of the parties involved in a payment cycle need to be clearly allocated and legally

## Box 5

### Security components

Some of the most important security components are:

- Availability: the instrument provides an efficient and timely response, has adequate capacity to support acceptable performance and is able to recover quickly from disruptions.
- Authenticity and authorisation: the instrument has appropriate means to authenticate the identity of and authorise customers using the service, and to make sure that all transactions are legitimate.
- Integrity: the instrument has the appropriate means to protect the integrity of the data in e-payment transactions. This means that e-payment-related information in transit or in storage cannot be altered or deleted without authorisation.
- Non-repudiation: the instrument uses transaction authentication methods that make repudiation difficult and establish accountability for e-payment transactions. Proof that a message has been sent and received is provided to protect the sender against false denial of receipt by the recipient, and to protect the recipient against a false claim by the sender that the data have or have not been sent.
- Confidentiality: the instrument has the appropriate means to preserve the confidentiality of relevant e-payment information. Key information should not be disclosed in such a way that it can be viewed or used by those unauthorised to do so.



documented. Those parties who carry a potential risk and cost as a result of an obligation (e.g. to maintain confidentiality or to rectify false/fraudulent payments) will have a strong incentive to take the respective security measures.

Finally, there must be awareness that the electrification of payments brings a new quality of information generated by the use of the electronic payment instruments and means

of payment. Owing to the features of information technology, electronic payments generate information that goes beyond the payment purpose (e.g. on the behavioural patterns of payers and payees, on the velocity of circulation of the means of payment, etc.). Aspects of data protection and the protection of the private sphere as well as the allocation and proper use of the valuable information generated are far-reaching matters that need to be discussed and addressed.

### 3 The ECB's interest in electronic payments

The tasks of the ECB in the area of payment systems and payment instruments include the promotion of the security and efficiency of payment systems and payment instruments, the safeguarding of the monetary policy transmission mechanism and the unit-of-account function of money, and the maintenance of systemic stability.

In autumn 2002, the ECB published an issues paper entitled "E-payments in Europe – the Eurosystem's perspective" and organised a conference to discuss the future of electronic payments and the role of the Eurosystem in this area. On the basis of these discussions with market participants, the ECB sees mainly two roles for itself – a catalyst function and an oversight function. With a view to ensuring efficiency and security, the Eurosystem's initial emphasis – as long as the market is still in a phase of development – will be on the former function.

#### Catalyst

The general public reaps the greatest benefits from electronic payments whenever the various parties in the payment process operate seamlessly together. The ECB, by acting as a catalyst for developments in the field, aims to provide a forum for co-operation between the stakeholders as well as analyses and statistics to support the work towards integration.

In 2003, the ECB decided to continue the operation of the electronic payment systems observatory (ePSO) initially launched by the European Commission in 2000. The ePSO is an open information-sharing infrastructure on electronic payments. Its aim is to foster an exchange of views between market participants and to serve as a source of information. The ePSO website can be accessed at [www.e-psy.info](http://www.e-psy.info).

Adequate statistics are vital for the business decisions of the companies providing payment services, for analysts and financiers thereof and for the public authorities setting the underlying policies. The ECB initiated work in 2002 to improve the quality and availability of aggregate payment statistics for the EU, the euro area and the accession countries. Initial results of this work are envisaged to be available in the course of 2004.

The ECB places a special emphasis on the interoperability of standards across national borders. However, standards are difficult to agree upon in the field of payments, because of the different national and international players involved, because of the particularities of network goods and also because of both changing customer demands and the restructuring of processing.

The ECB's contribution to the adoption of standards focuses on different parts of the payment cycle: the initiation of payments, the interbank leg and reconciliation. With



regard to the initiation of payments or communications between the payer and his/her bank or the payment service provider, some international standards already exist, such as the International Bank Account Number (IBAN), the Bank Identifier Code (BIC), and the electronic Payment Initiator (ePI).<sup>2</sup> The ECB encourages the use and dissemination of these standards for the electronic presentation of payments.

With respect to the interbank leg of the cycle, the ECB has carried out several analyses of interbank retail infrastructures and has formulated recommendations to improve the situation.<sup>3</sup> Central banks are often providers of interbank payment services and can therefore play a role in adapting these systems to the needs of retail payments. Special requirements created by the electrification of payments for the development of interbank settlement and clearing infrastructures will be investigated in more detail.

Most of the new payment initiatives seen at present do not change the interbank settlement process; they rely on banks to effect settlement through interbank payment systems. However, the implications of the increased use of innovative technologies for the interbank payment process could be a push towards real-time settlement, as the expectations of the general public for real-time payments are increasing and as the cost of information technology and telecommunications is decreasing, while their capacities and capabilities are simultaneously increasing.

There are no widely accepted standards at the European level for the final leg in the payment cycle between the beneficiary and his/her bank or payment service provider, concerning the synchronisation of invoice and account information ("reconciliation") for the biller's accounts. In online business, where the full benefits are realised only in end-to-end STP, this is clearly a shortcoming that increases the costs of e-commerce unnecessarily. The ECB will continue to

monitor both the implementation of existing standards and the development of new standards to enable full STP, from payment presentation up to payment reconciliation.

### **Overseer**

Within the scope of its oversight activities, the ECB is concerned with the security of all means of payment and payment instruments used by the public. A perceived or real lack of security of specific payment instruments or systems might lead to a loss of confidence in that instrument or system and could, in the extreme case, have a negative effect on the functioning of the payment systems, e.g. if reverting to other means of payment is difficult or if the loss of confidence spills over to other instruments. This holds equally true of the safety of the means of payment. This has so far been assured by the rule that payment services based on deposits can only be provided by a supervised financial institution (including electronic money institutions).

While the security of electronic payment instruments can be improved by more stringent security requirements, these can also make the system more costly for consumers, merchants and service providers, thereby diminishing the acceptance and efficiency of the service. Because of this possible trade-off between security requirements and the requirements of efficiency, the right balance between the two must be found.

The Eurosystem has started to investigate the security of specific retail payment instruments. Its common approach concerning e-money was published for consultation in the report on "Electronic

<sup>2</sup> For details, see the European Committee for Banking Standards ([www.ecbs.org](http://www.ecbs.org)).

<sup>3</sup> See, for example, "Towards an integrated infrastructure for credit transfers in euro", ECB, November 2001, "Improving cross-border retail payment services – Progress report", ECB, September 2000, and "Improving cross-border retail payment services in the euro area – the Eurosystem's view", ECB, September 1999.

Money System Security Objectives”, which contains a list of more specific security objectives for e-money schemes. These security objectives should ensure the overall reliability and technical security of the schemes, and should increase public confidence in them. They are also designed to level the regulatory playing field for the different schemes.

In July 2002, the Eurosystem issued for public consultation a set of oversight standards for

retail payment systems operating in euro.<sup>4</sup> It will soon publish the final set of standards and explain any changes made. The Eurosystem has defined these standards to ensure the smooth operation of retail payment systems that are of major importance to the economy, to ensure efficiency, safety and a level playing field for the participants of different systems and, ultimately, to foster public confidence in the euro.

#### **4 Conclusions**

The payment process is moving to a greater degree of electronification. Current developments focus on the leg between the beneficiary and the payer (invoicing) and, especially, on the leg between the payer and his/her payment provider. In recent years, a wide range of new payment services have emerged, and many have already vanished again. Thus far, the new services for payments over the internet and mobile networks have mainly consisted of traditional payment instruments that have been adapted to electronic use.

The ECB sees its role in the field as that of a catalyst and an overseer. Both functions are aimed at promoting the security and efficiency of electronic payment systems and payment

instruments. The ECB will endeavour to improve co-ordination in the market, to disseminate statistics to support business decisions and the relevant authorities’ policies, to engage in analysis concerning standards that would allow full automation throughout the payment cycle and to promote the existence of a solid legal environment for the provision of new payment services. Results of this work will be communicated to the public. Moreover, it is planned that the ECB’s oversight function as regards electronic payments will become more important than its catalyst role, once the use of electronic payments has moved beyond early development.

<sup>4</sup> “Oversight standards for euro retail payment systems”, 8 July 2002.

# The adjustment of voting modalities in the Governing Council

*In order to ensure that the Governing Council of the ECB will be able to take decisions in a timely and efficient manner even after a future large-scale enlargement of the euro area, the EU Council, meeting in the composition of Heads of State or Government, recently adopted a decision on the adjustment of voting modalities in the Governing Council on the basis of a Recommendation from the ECB. This article outlines the fundamental terms of the discussion leading to the ECB Recommendation for a new voting system and explains its main features and functioning. Finally, it recalls the procedure that led to the adoption of the new voting system and briefly discusses the arguments put forward by the various European institutions in this context.*

## I Introduction

The EU is preparing itself for a substantial enlargement to take in new Member States from central, eastern and southern Europe. Increasing the EU's membership to the presently envisaged 27 countries will have a profound impact on the operation of its institutions and bodies, including the ECB. Although the new Member States will join the EU with the status of a "Member State with a derogation", they will be committed to the eventual adoption of the euro. Once

they have demonstrated their capability to fulfil the Maastricht convergence criteria in a sustainable manner, they will adopt the euro. Therefore, the Governing Council of the ECB will also have to be prepared for a potentially significant increase in the number of Member States of the euro area and for the resulting participation of the governors of the respective NCBs in the Governing Council.

## 2 The ECB "enabling clause"

In response to the challenge to maintain the Governing Council's capacity for efficient and timely decision-making even as its membership increases substantially, the Treaty of Nice contains an ECB "enabling clause". This takes the form of a new Article 10.6 of the Statute of the European System of Central Banks and of the European Central Bank ("the Statute"), which allows for an adjustment of the voting modalities in the Governing Council of the ECB as laid down in Article 10.2 of the Statute.

According to Article 10.6 of the Statute (see also Box 1), Article 10.2 of the Statute may be amended by way of a unanimous decision of the EU Council, meeting in the composition of Heads of State or Government, either on the basis of a Recommendation from the ECB, and after consulting the European Commission and the European Parliament, or on the basis of a Recommendation from the European Commission, in which case the ECB and the

European Parliament are consulted. Article 10.6 of the Statute also prescribes that the ECB Recommendation should be adopted unanimously by the Governing Council. In a declaration annexed to the Final Act of the Intergovernmental Conference preparing the Treaty of Nice, the governments of the Member States expressed their expectation that a Recommendation within the meaning of Article 10.6 would be presented as soon as possible after the Treaty enters into force.

Following the conclusion of the Intergovernmental Conference, the Governing Council extensively discussed possible options for an adjustment of its voting modalities and on 3 February 2003 unanimously adopted the ECB Recommendation for a Council Decision on an amendment to Article 10.2 of the Statute of the European System of Central Banks and of the European Central Bank (ECB/2003/1), which was presented to the EU Council on the same day. On 21 March 2003 the EU Council, meeting in

## Box I

### Selected legal provisions related to the adjustment of voting modalities in the Governing Council

*Article 10 of the Statute (as amended by the Treaty of Nice)*

#### **The Governing Council**

10.1. In accordance with Article 112 (1) of this Treaty, the Governing Council shall comprise the members of the Executive Board of the ECB and the governors of the national central banks.

10.2. Subject to Article 10.3, only members of the Governing Council present in person shall have the right to vote. By way of derogation from this rule, the Rules of Procedure referred to in Article 12.3 may lay down that members of the Governing Council may cast their vote by means of teleconferencing. These rules shall also provide that a member of the Governing Council who is prevented from voting for a prolonged period may appoint an alternate as a member of the Governing Council.

Subject to Articles 10.3 and 11.3, each member of the Governing Council shall have one vote. Save as otherwise provided for in this Statute, the Governing Council shall act by a simple majority. In the event of a tie, the President shall have the casting vote.

In order for the Governing Council to vote, there shall be a quorum of two thirds of the members. If the quorum is not met, the President may convene an extraordinary meeting at which decisions may be taken without regard to the quorum.

10.3. For any decisions to be taken under Articles 28, 29, 30, 32, 33 and 51, the votes in the Governing Council shall be weighted according to the national central banks' shares in the subscribed capital of the ECB. The weights of the votes of the members of the Executive Board shall be zero. A decision requiring a qualified majority shall be adopted if the votes cast in favour represent at least two thirds of the subscribed capital of the ECB and represent at least half of the shareholders. If a Governor is unable to be present, he may nominate an alternate to cast his weighted vote.

10.4. The proceedings of the meetings shall be confidential. The Governing Council may decide to make the outcome of its deliberations public.

10.5. The Governing Council shall meet at least 10 times a year.

10.6 The provisions of paragraph 2 may be amended by the Council meeting in the composition of the Heads of State or Government, acting unanimously either on a recommendation from the ECB and after consulting the European Parliament and the Commission, or on a recommendation from the Commission and after consulting the European Parliament and the ECB. The Council shall recommend such amendments to the Member States for adoption. The amendments shall enter into force after having been ratified by all the Member States in accordance with their respective constitutional requirements.

A recommendation made by the ECB under this paragraph shall require a decision by the Governing Council acting unanimously.

\* \* \*

*Declaration to be included in the Final Act of the Conference on Article 10.6 of the Statute of the European System of Central Banks and of the European Central Bank*

“The Conference expects that a recommendation within the meaning of Article 10.6 of the Statute of the European System of Central Banks and of the European Central Bank will be presented as soon as possible.”

the composition of Heads of State or Government, adopted the decision on this amendment to the Statute, which has now

to be ratified by the Member States in accordance with their respective constitutional requirements.

### 3 The terms of the discussion on a new voting system

A substantial expansion of the membership of the Governing Council will not only have an impact on its decision-making process. It will also influence the public and the markets' perception of the ECB's capacity to take decisions in an efficient and timely manner. It was therefore imperative that the Governing Council presented a reform proposal which could safeguard the effectiveness of the ECB's governance structures following expansion of the euro area.

#### The limits imposed by the 'enabling clause'

When designing a suitable new voting system, the Governing Council was bound by the limits imposed by the enabling clause. These restrict the reform to a change of the voting modalities as laid down in Article 10.2 of the Statute. As a result, any adjustment of the voting modalities had to be without prejudice to the right of all members of the Governing Council to be present during the Governing Council meetings (Article 10.1 of the Statute), and to participate in the discussions. Moreover, any adjustment of the voting modalities was not to have any implications for voting on decisions taken under Articles 28, 29, 30, 32, 33 and 51 of the Statute (Article 10.3 of the Statute). More fundamental reform options, such as changes to the composition of the Governing Council or a different distribution of tasks between the Executive Board and the Governing Council – as mentioned, *inter alia*, by the European Parliament and the European Commission in their official Opinions (see Section 5) – were, therefore, outside the scope of the enabling clause.

#### Five guiding principles

In order to maintain the Governing Council's decision-making capacity in an enlarged euro area, the Governing Council agreed that the number of governors exercising a voting right would have to be smaller than the overall number of governors in the Governing Council. In the judgement of the Governing Council, a rotation system represents an equitable, efficient and acceptable way in which to allocate voting rights among governors within the Governing Council.

The Governing Council took the view that the members of the Executive Board should maintain a permanent voting right, given their special status as the only members of the Governing Council who are appointed at the European level by a Treaty procedure and who operate solely in the euro area context and for the ECB, the competence of which spans the whole euro area. Moreover, the President, a member of the Executive Board, also has the casting vote in the event of a tie in the Governing Council.

In designing the precise features of the rotation system, the Governing Council was guided by the following fundamental principles.

*"One member, one vote"*

As already outlined in the ECB's Opinion on the enabling clause of 5 December 2000 (CON/00/30), the Governing Council considers the "one member, one vote" principle to be fundamental to its decision-making. While a rotation system necessarily implies that there will no longer be permanent voting rights for all the members of the Governing Council as the number of

governors increases, this principle should nevertheless be retained and apply to those members of the Governing Council who do exercise a voting right. This rules out any reform proposals based on weighted voting. Neither a system of explicitly weighted voting, e.g. along the lines of the provisions of Article 10.3 of the Statute, nor any form of double majority system, with a mechanism to verify whether a simple majority of the governors represents a set percentage of a certain euro area indicator (as suggested, for example, by the European Parliament – see Section 5), would be compatible with the maintenance of the “one member, one vote” principle.

*“Ad personam participation”*

All members of the Governing Council should continue to participate in the Governing Council’s meetings, and do so in a personal and independent capacity (*ad personam participation*), irrespective of whether they have the right to vote or not. Therefore, any new voting system based on constituencies or country groupings, where governors select a representative who acts and votes on behalf of the country group/constituency, or based on the delegation of voting in a rotation system, would not be compatible with this principle.

*“Representativeness”*

The introduction of a rotation of voting rights could lead to situations in which the group of governors with a voting right are from Member States which, taken together, might be perceived as not being sufficiently representative of the euro area economy as a whole. The new voting system, therefore, should be designed in a manner which would safeguard against such outcomes.

In order to achieve representativeness, governors might not be able to exercise the voting right with the same frequency, with

governors from the “larger” Member States having the right to vote more frequently than those from “smaller” Member States. At the same time, any reference to the country from which a governor comes should be made *exclusively* for the purpose of determining the frequency with which each governor exercises the voting right. Although the introduction of considerations of representativeness marks a departure from the existing provisions for voting in the Governing Council, this is solely motivated by the need to accommodate the impact of enlargement on the ECB’s decision-making. For all governors exercising the voting right at any point in time, the “one member, one vote” principle should apply. Consequently, this differentiation should not affect actual substantive decision-making, but should only be relevant in the process of determining who votes when.

*“Automaticity”*

Given that the sequencing of future euro area expansions is uncertain, the new voting system should be sufficiently robust as to avoid the need to change the rules every time a new Member State enters the euro area. Therefore, the rules of the new voting system should be stipulated in such a way as to allow the system to automatically adjust to the entry of new governors into the Governing Council in the process of euro area enlargement. In addition, the rotation system should be capable of accommodating any conceivable sequencing of euro area enlargement up to 27 Member States, i.e. the current EU Member States and the 12 accession countries listed in the Declaration on the enlargement of the EU annexed to the Treaty of Nice. The automatic functioning of the system should also preclude situations in which, as a result of the workings of the rotation system, governors from “smaller” Member States would enjoy *de facto* higher voting frequencies than governors from “larger” Member States.

*“Transparency”*

The new voting system should be transparent in order that its main features and functioning can be communicated with relative ease.

## **4 The new voting system**

Seeking to simultaneously fulfil these five principles – while at the same time respecting the limits imposed by the enabling clause – represented an appreciable challenge. This notwithstanding, the Governing Council succeeded in reaching a unanimous agreement on a new voting system with the following key features:

*15 rotating voting rights for governors;  
six permanent voting rights for Executive Board members*

Under the new voting system, the number of governors with a voting right will not exceed 15. This number is implicit in the institutional status quo. Currently, the Treaty stipulates that the members of the Executive Board and the governors of the NCBs of the Member States form the Governing Council. Since no adjustment of the Maastricht provisions was undertaken at the time of the 1995 enlargement (when the EU expanded to 15 Member States), this implies 15 voting rights for NCB governors. Each of the six members of the Executive Board retains a permanent voting right.

*NCB governors hold the voting right with different frequencies*

In line with the principle of representativeness, governors will exercise their voting right with different frequencies, depending on an indicator of the relative size of the economy, and financial sector, of their respective Member State within the euro area. A rotation system based on groups guarantees that this differentiation between governors in terms of their entitlement to exercise a

Consequently, the necessary Treaty language of a revised Article 10.2 of the Statute should be reasonably accessible and commensurate with the requirements of primary Community law.

voting right follows certain clear and transparent rules.

*Allocation of governors to groups on the basis of a country ranking*

The allocation to groups will be based on a ranking of governors' respective Member States resulting from their share in the euro area total according to a set indicator of “representativeness”. This allocation determines how often a governor holds a voting right.

*Composite indicator to determine the country ranking*

This country ranking should be based on a composite indicator consisting of two components:

- *GDP mp*: The first component is the share of a Member State in the aggregate gross domestic product at market prices (“GDP mp”) of the Member States which have adopted the euro. The economic weight of a Member State as reflected in its GDP mp is an appropriate component as the impact of central bank decisions is greater in Member States with larger economies than in those with smaller economies.
- *TABS-MFI*: At the same time, the size of a Member State's financial sector also has a particular relevance for central bank decisions, since the counterparties of central bank operations belong to this sector. A second component is therefore introduced, namely the share of a Member State in the total aggregated balance sheet



of the monetary financial institutions (“TABS-MFI”) of the Member States which have adopted the euro.

– The second group is composed of all other governors. This group shares 11 voting rights.

As regards the choice of the relative weights of the two components of the composite indicator, a  $\frac{5}{6}$  weight for GDP and a  $\frac{1}{6}$  weight for TABS-MFI appears suitable in order to ensure that the financial component is sufficiently and meaningfully represented.

As Table I shows, this allocation of voting rights to the two groups might be changed if there are 16, 17 or 18 governors in the Governing Council. This temporary adjustment might become necessary in order to ensure that the voting frequency of the governors in the first group is not lower than the voting frequency of those in the second group, as called for by the principle of automaticity. As a result, the governors in the first group would – temporarily – have a voting frequency of 100%. Whether or not this issue will arise at all depends on the sequencing of future euro area enlargement, that is, whether a number of countries will enter the euro area at the same time, or whether they will enter one by one. In any case, should the Governing Council so decide, by a two-thirds majority of all its members – both those with and those without a voting right – such a situation could be avoided altogether by postponing the start of the rotation system until the date on which the number of governors exceeds 18.

#### *Establishment of the rotation system in two stages*

In order to ensure a smooth introduction of the rotation system, it will be established in two stages. In principle, the system for the rotation of voting rights will start operating as soon as the 16th Member State enters the euro area, first on the basis of two groups. Once the number of euro area countries has increased to more than 21, there will be three groups.

#### *Rules to allocate governors and voting rights to the groups*

During the first stage, governors will be allocated to two groups according to the following rules:

– The first group is composed of five governors from the euro area countries which occupy the highest positions in the country ranking. This group shares four voting rights.

As soon as the 22nd Member State enters the euro area, the system will operate on the basis of three groups, according to the following rules:

– The first group is composed of the five governors from the euro area countries

**Table I**  
**Two-group rotation system (first stage) – voting frequencies of governors in each group**

		Number of governors in the Governing Council						22 and more
		16	17	18	19	20	21	
<i>1st group</i>	No. of voting rights/ No. of governors	5/5	5/5	5/5	4/5	4/5	4/5	<i>Second stage: Rotation system with three groups (see Table 2)</i>
	<i>Voting frequency</i>	100%	100%	100%	80%	80%	80%	
<i>2nd group</i>	No. of voting rights/ No. of governors	10/11	10/12	10/13	11/14	11/15	11/16	
	<i>Voting frequency</i>	91%	83%	77%	79%	73%	69%	
<b>Σ voting rights</b>		<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	



**Table 2****Three-group rotation system (second stage) – voting frequencies of governors in each group**

		Number of governors in the Governing Council						
		16 – 21	22	23	24	25	26	27
<i>1st group</i>	No. of voting rights/ No. of governors	<i>First stage: Rotation system with two groups (see Table 1)</i>	4/5	4/5	4/5	4/5	4/5	4/5
	<i>Voting frequency</i>		80%	80%	80%	80%	80%	80%
<i>2nd group</i>	No. of voting rights/ No. of governors		8/11	8/12	8/12	8/13	8/13	8/14
	<i>Voting frequency</i>		73%	67%	67%	62%	62%	57%
<i>3rd group</i>	No. of voting rights/ No. of governors		3/6	3/6	3/7	3/7	3/8	3/8
	<i>Voting frequency</i>		50%	50%	43%	43%	38%	38%
<b>Σ voting rights</b>		<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	

which occupy the highest positions in the country ranking. This group shares four voting rights.

- The second group is composed of half of all governors, rounded up to the nearest full number, selected from the subsequent positions of the country ranking. This group shares eight voting rights.
- The third group is composed of the remaining governors, who share three voting rights.

These rules generate the voting frequencies shown in Table 2.

*Implementing provisions to be adopted by the Governing Council*

The precise implementing provisions specifying the rotation of voting rights in each group (such as the time interval between the rotation of voting rights) will be adopted by the Governing Council on the basis of a provision contained in the revised Article 10.2 of the Statute. A clear stipulation of these rather technical parameters in the Statute is not necessary since they are not of a constitutional nature and only implement the voting entitlements as derived from the allocation of governors to the groups. Moreover, the uncertainty associated with

the sequencing of future euro area enlargement requires a certain flexibility in the exact implementation of the rotation system. For the sake of the simplicity of the legal text of the new Article 10.2 of the Statute, these issues are left for subsequent implementing decisions. These implementing provisions will be adopted by means of a special voting procedure to be laid down in the revised Article 10.2, namely a majority of two-thirds of all members of the Governing Council, with and without a voting right.

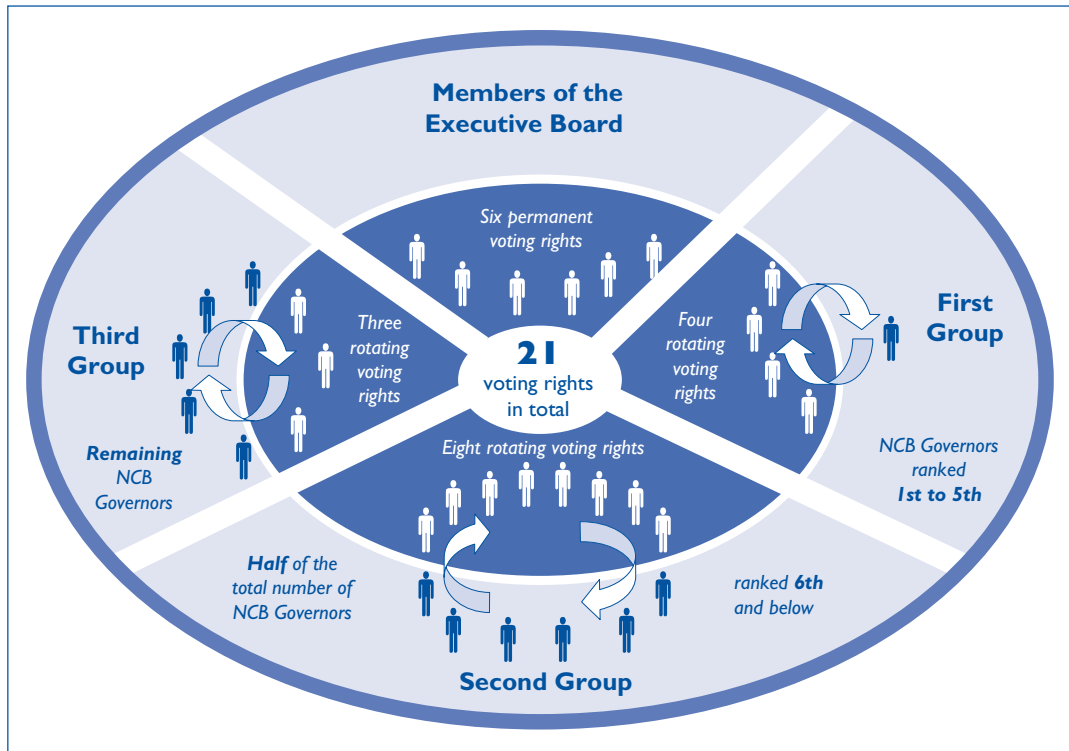
*Data for the calculation of the composite indicator*

The relevant data for the calculation of the shares in GDP at market prices will be provided by the Commission under the rules adopted by the Council on the basis of Article 29.2 of the Statute for the calculation of the key for subscription of the ECB's capital. The relevant data for the calculation of the TABS-MFI shares will be provided by the ECB in accordance with the statistical framework applying in the EU.

The size and/or composition of the groups of governors will be adjusted whenever the shares of each NCB's Member State in the aggregate GDP mp and in the TABS-MFI of the Member States which have adopted the euro are adjusted in accordance with Article 29.3 of the Statute (regular adjustments) or

## Diagram

### Three-group rotation system for the ECB Governing Council (scenario for a euro area of 27 Member States)



whenever a new governor enters the Governing Council (non-regular adjustments). The new size and/or composition of the groups resulting from the regular adjustments will then apply as from the first day of the following year. The new size and/or composition of the groups resulting from

non-regular adjustments will apply as from the day on which the governor(s) join(s) the Governing Council. These operational details are part of the implementing provisions to be adopted by the Governing Council acting by a two-thirds majority of all its members, with and without a voting right.

## 5 The discussions in the EU institutions

With the formal submission of the ECB Recommendation to the EU Council, the ECB set in motion the procedure for an amendment of Article 10.2, as foreseen by the enabling clause. In addition, ECB representatives used the meetings of the Eurogroup, the ECOFIN Council and the Economic and Financial Committee to present and explain in detail the recommended new voting system to the representatives of the Member States and the European Commission.

### Consultation of the European Commission

In line with the procedure foreseen by Article 10.6 of the Statute, the European Commission presented its opinion on 19 February 2003. The Commission considered the new voting system as recommended by the ECB to “constitute an important step in the adjustment of the [Governing Council’s] decision-making capacity in view of enlargement”. Against the background of this positive overall evaluation, the Commission

also proposed “possible enhancements of the three-group rotation model”, inter alia:

- a lower number of governors with voting rights than the 15 recommended by the ECB, since this would further increase the speed and efficiency of decision-making;
- the introduction of a measure of population into the indicator for the country ranking (e.g. by using the ECB capital key), in order to ensure that the allocation of governors to the groups can be considered neutral and unbiased by both existing and future Member States;
- improved specification of the measures needed to put the system into operation (such as the time period between rotations, etc.); and
- clarification regarding the precise starting-point of the rotation system.

Finally, the Commission recognised that the limits imposed by the enabling clause clearly restricted the range of possible reform options. In view of this, the Commission pointed out that any potentially more comprehensive adaptations, for example with regard to decision-making in the area of monetary policy, and the role of the Executive Board in this respect, would have to be realised in the wider framework of the Convention on the future of Europe and the forthcoming Intergovernmental Conference.

### **Consultation of the European Parliament**

At its plenary session on 13 March 2003, the European Parliament adopted a resolution on the ECB Recommendation, on the basis of a report from the Committee on Economic and Monetary Affairs. In its resolution, the European Parliament rejected the ECB Recommendation on the grounds that the proposed rotation model had been criticised for being complex, even taking into account the difficulty of the task, given the limits imposed by Article 10.6 of the Statute.

As an alternative proposal, the European Parliament favoured a two-stage approach. It proposed that, for the time being, the status quo should be retained, meaning that all members of the Governing Council should continue to participate in decision-making with full voting rights and that decisions would continue to be taken by simple majority. However, a more comprehensive reform should be envisaged by the Convention on the future of Europe and proposed to the next Intergovernmental Conference for adoption. Such a comprehensive reform should – in the view of the European Parliament – distinguish between operational decisions, to be taken by an “enlarged Executive Board of nine Members adequately representing the euro area economy”, and strategic and general monetary policy decisions to be taken by the Governing Council. For these latter decisions, the Governing Council should use a double majority system, whereby it would be verified whether a simple majority of governors would be representative of a majority of the “population of the Member States, the total size of the economy and the relative size within it of the financial services sector”.

### **Adoption by the Council and follow-up**

On 21 March 2003, the EU Council, meeting in the composition of Heads of State or Government, unanimously adopted the “Decision on an amendment to Article 10.2 of the Statute of the ESCB and the ECB” concerning the voting modalities of the Governing Council of the ECB. Unanimous approval was possible after two Member States (Finland and the Netherlands) withdrew certain reservations they had previously expressed. However, they insisted that the forthcoming Intergovernmental Conference should revisit the issue of ECB governance, and put these comments on the record. Furthermore, on the initiative of the Netherlands, the Council agreed to record in the minutes a statement stipulating that the model established for the ECB’s Governing Council “should not be seen as a precedent

## Box 2

### The new voting system of the Governing Council – Article 10.2 of the Statute as amended by the EU Council Decision of 21 March 2003

10.2 Each member of the Governing Council shall have one vote. As from the date on which the number of members of the Governing Council exceeds 21, each member of the Executive Board shall have one vote and the number of governors with a voting right shall be 15. The latter voting rights shall be assigned and shall rotate as follows:

- As from the date on which the number of governors exceeds 15, until it reaches 22, the governors shall be allocated to two groups, according to a ranking of the size of the share of their national central bank's Member State in the aggregate gross domestic product at market prices and in the total aggregated balance sheet of the monetary financial institutions of the Member States which have adopted the euro. The shares in the aggregate gross domestic product at market prices and in the total aggregated balance sheet of the monetary financial institutions shall be assigned weights of  $\frac{5}{6}$  and  $\frac{1}{6}$ , respectively. The first group shall be composed of five governors and the second group of the remaining governors. The frequency of voting rights of the governors allocated to the first group shall not be lower than the frequency of voting rights of those of the second group. Subject to the previous sentence, the first group shall be assigned four voting rights and the second group 11 voting rights.
- As from the date on which the number of governors reaches 22, the governors shall be allocated to three groups according to a ranking based on the above criteria. The first group shall be composed of five governors and shall be assigned four voting rights. The second group shall be composed of half of the total number of governors, with any fraction rounded up to the nearest integer, and shall be assigned eight voting rights. The third group shall be composed of the remaining governors and shall be assigned three voting rights.
- Within each group, the governors shall have their voting rights for equal amounts of time.
- For the calculation of the shares in the aggregate gross domestic product at market prices Article 29.2 shall apply. The total aggregated balance sheet of the monetary financial institutions shall be calculated in accordance with the statistical framework applying in the European Community at the time of the calculation.
- Whenever the aggregate gross domestic product at market prices is adjusted in accordance with Article 29.3, or whenever the number of governors increases, the size and/or composition of the groups shall be adjusted in accordance with the above principles.
- The Governing Council, acting by a two-thirds majority of all its members, with and without a voting right, shall take all measures necessary for the implementation of the above principles and may decide to postpone the start of the rotation system until the date on which the number of governors exceeds 18.

The right to vote shall be exercised in person. By way of derogation from this rule, the Rules of Procedure referred to in Article 12.3 may lay down that members of the Governing Council may cast their vote by means of teleconferencing. These rules shall also provide that a member of the Governing Council who is prevented from attending meetings of the Governing Council for a prolonged period may appoint an alternate as a member of the Governing Council.

The provisions of the previous paragraphs are without prejudice to the voting rights of all members of the Governing Council, with and without a voting right, under Articles 10.3, 10.6 and 41.2.

Save as otherwise provided for in this Statute, the Governing Council shall act by a simple majority of the members having a voting right. In the event of a tie, the President shall have the casting vote.

In order for the Governing Council to vote, there shall be a quorum of two-thirds of the members having a voting right. If the quorum is not met, the President may convene an extraordinary meeting at which decisions may be taken without regard to the quorum.

for the future composition and decision-making process of other Community Institutions”.

The new Article 10.2 of the Statute is reproduced in Box 2. Following the adoption

of the EU Council Decision, the amendment to the Statute needs to be ratified by the Member States in accordance with their respective constitutional requirements. It is generally expected that no referenda will be held in any of the Member States.

## 6 Concluding remarks

The ratification of the amendment to Article 10.2 of the Statute, as adopted by the EU Council, would equip the Governing Council with a new voting system which guarantees its capacity for timely and efficient decision-making, even in a substantially enlarged euro area. That said, in reviewing the comments and suggestions put forward by the different institutions involved in the procedure, as well as those raised by outside observers, the following considerations should be taken into account.

The new voting system – like any rotation system – is inevitably characterised by a degree of complexity which is a consequence of the aim to simultaneously fulfil a number of principles. It can be noted that the new voting system is similar to the one used in the Federal Open Market Committee in the United States, where the Presidents of the Federal Reserve Bank are also assigned to groups and exercise their voting right with different frequencies. Moreover, while the participation of *all* governors at the meetings

of the Governing Council will not necessarily make the deliberations easier, the new voting system clearly enhances the efficiency of decision-taking. Finally, although the new voting system introduces considerations of representativeness, it does so exclusively to determine who votes when. The principle of *ad personam* participation of governors remains valid and the “one member, one vote” principle applies to all members exercising a voting right. All of this will ensure that, also in an enlarged Governing Council, it is the force of arguments that counts in the deliberations and not the country of origin of a governor, or whether that country is large or small.

Overall, the new voting system retains the tried-and-tested elements of the current institutional framework of the Eurosystem and, in this way, ensures that the Governing Council will be able to take its decisions from a clear euro area perspective, also following expansion of the euro area.





## **Euro area statistics**





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<sup>1</sup> See the ECB's website ([www.ecb.int](http://www.ecb.int)) for longer runs and more detailed data.

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#### Conventions used in the tables

“-”	data do not exist/data not applicable
“.”	data are not yet available
“...”	nil or negligible
“billion”	10 <sup>9</sup>
(p)	provisional
s.a.	seasonally adjusted

# Euro area overview table

## Summary table of economic indicators for the euro area

(annual percentage changes, unless otherwise indicated)

### 1. Monetary developments and interest rates

	M1 <sup>1)</sup>	M2 <sup>1)</sup>	M3 <sup>1)2)</sup>		MFI loans to euro area residents excluding MFIs and general government <sup>1)</sup>	Securities issued by non-financial and non-monetary financial corporations <sup>1)</sup>	3-month interest rate (EURIBOR, % per annum, period averages) <sup>7)</sup>	10-year government bond yield (% per annum, period averages) <sup>8)</sup>
	1	2	3	3-month moving average (centred) <sup>4)</sup>				
2001	3.6	4.2	5.3	-	7.8	27.6	4.26	5.03
2002	7.3	6.5	7.2	-	5.3	21.9	3.32	4.92
2002 Q2	6.6	6.5	7.3	-	5.6	24.3	3.45	5.26
Q3	7.6	6.5	7.0	-	5.2	18.0	3.36	4.77
Q4	8.8	6.7	7.0	-	4.8	16.1	3.11	4.54
2003 Q1	10.2	7.0	7.5	-	4.9	.	2.69	4.16
2002 Nov.	9.1	6.9	7.0	6.9	4.5	15.4	3.12	4.59
Dec.	9.9	6.6	6.9	7.0	4.7	15.4	2.94	4.41
2003 Jan.	9.5	6.5	7.2	7.3	4.9	14.9	2.83	4.27
Feb.	10.3	7.3	7.9	7.7	5.1	16.6	2.69	4.06
Mar.	11.6	7.9	7.9	.	4.5	.	2.53	4.13
Apr.	.	.	.	.	.	.	2.54	4.23

### 2. Price and real economy developments

	HICP	Industrial producer prices	Hourly labour costs (whole economy)	Real GDP	Industrial production (excluding construction)	Capacity utilisation in manufacturing (percentages)	Employment (whole economy)	Unemployment (% of labour force)
	9	10	11	12	13	14	15	16
2001	2.3	2.2	3.4	1.4	0.4	83.1	1.4	8.0
2002	2.3	0.0	3.6	0.8	-0.6	81.2	0.4	8.3
2002 Q2	2.1	-0.7	3.4	0.7	-0.7	81.1	0.5	8.2
Q3	2.1	0.0	3.5	0.9	0.0	81.3	0.3	8.3
Q4	2.3	1.3	3.6	1.3	1.2	81.4	0.2	8.4
2003 Q1	2.3	2.4	.	.	.	81.1	.	8.6
2002 Nov.	2.3	1.2	-	-	2.7	-	-	8.4
Dec.	2.3	1.6	-	-	-0.4	-	-	8.5
2003 Jan.	2.1	2.3	-	-	1.3	81.3	-	8.6
Feb.	2.4	2.7	-	-	2.0	-	-	8.6
Mar.	2.4	2.4	-	-	.	-	-	8.7
Apr.	2.1	.	-	-	.	80.9	-	.

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

(EUR billions, unless otherwise indicated)

	Balance of payments (net flows)				Reserve assets (end-of-period positions)	Effective exchange rate of the euro: broad group (1999 Q1 = 100)		USD/EUR exchange rate
	Current and capital accounts	Goods	Direct investment	Portfolio investment		Nominal	Real (CPI)	
2001	-9.8	75.5	-102.8	64.7	392.7	91.0	87.8	0.896
2002	73.5	133.3	-45.5	110.6	366.1	95.6	91.7	0.946
2002 Q2	5.7	31.3	-9.2	72.2	367.0	93.9	90.2	0.919
Q3	25.3	38.5	-12.0	35.7	380.9	97.9	93.8	0.984
Q4	27.3	36.8	-8.3	38.4	366.1	99.4	95.0	0.999
2003 Q1	.	.	.	.	339.2	104.1	99.3	1.073
2002 Nov.	12.0	13.7	0.5	15.8	372.6	99.3	94.7	1.001
Dec.	10.0	10.7	-1.7	-2.6	366.1	100.4	96.0	1.018
2003 Jan.	-4.4	0.8	-0.9	-5.5	363.4	103.0	98.1	1.062
Feb.	2.4	9.5	0.7	10.7	352.2	104.4	99.4	1.077
Mar.	.	.	.	.	339.2	105.1	100.2	1.081
Apr.	.	.	.	.	.	105.2	100.2	1.085

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

For more information on the data, see the relevant tables in the "Euro area statistics" section.

1) Monthly growth rates refer to the end of the period, whereas quarterly and annual growth rates are calculated as period averages. Growth rates for M1, M2, M3 and loans are calculated on the basis of seasonally adjusted monthly stocks and flows.

2) M3 and its components exclude holdings by non-residents of the euro area of money market fund shares/units and debt securities up to 2 years.

# I Monetary policy statistics

**Table 1.1**

## Consolidated financial statement of the Eurosystem

(EUR millions)

### 1. Assets

		Gold and gold receivables	Claims on non-euro area residents in foreign currency	Claims on euro area residents in foreign currency	Claims on non-euro area residents in euro	Lending to euro area credit institutions in euro	Main refinancing operations	Longer-term refinancing operations	Fine-tuning reverse operations
		1	2	3	4	5	6	7	8
2002	6 Dec.	131,065	248,397	20,125	3,668	219,704	173,791	45,000	0
	13	131,034	250,736	20,192	3,700	221,816	176,792	45,000	0
	20	130,961	248,555	20,196	3,720	223,805	168,501	45,000	9,999
	27	130,858	248,634	19,881	4,020	236,589	191,501	45,000	0
2003	3 Jan.	130,739	236,765	19,948	4,030	225,117	180,000	45,000	0
	10	130,702	237,058	16,585	4,085	219,066	174,001	45,000	0
	17	130,686	235,409	15,565	4,369	208,613	160,999	45,000	0
	24	130,664	231,755	16,584	4,378	215,343	169,999	45,000	0
	31	130,641	233,338	18,335	4,924	219,190	174,001	45,000	0
	7 Feb.	130,641	231,438	17,498	5,305	214,019	169,000	45,000	0
	14	130,640	229,822	17,331	5,690	206,155	161,000	45,000	0
	21	130,314	228,010	17,686	6,230	216,190	170,001	45,000	0
	28	130,314	228,349	17,331	5,926	223,186	178,001	45,000	0
	7 Mar.	130,314	227,928	17,384	6,164	182,175	137,090	45,000	0
	14	130,314	226,868	17,048	5,511	270,123	225,091	45,000	0
	21	130,314	223,947	17,725	5,121	234,917	189,001	45,000	0
	28	130,314	224,146	16,800	5,202	232,049	187,000	45,000	0
	4 Apr.	122,728	216,872	17,072	4,783	220,040	174,999	45,000	0
	11	122,728	215,994	16,736	4,496	217,097	172,000	44,973	0
	18	122,728	215,786	16,528	4,551	223,000	177,998	44,973	0
	25	122,274	215,757	16,919	4,575	247,011	201,999	44,973	0
	2 May	122,274	214,456	16,721	4,597	207,989	163,001	44,979	0

### 2. Liabilities

		Banknotes in circulation	Liabilities to euro area credit institutions in euro	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls	Other liabilities to euro area credit institutions in euro	Debt certificates issued
		1	2	3	4	5	6	7	8	9
2002	6 Dec.	351,340	127,068	127,002	66	0	0	0	262	2,029
	13	355,673	130,036	129,942	94	0	0	0	15	2,029
	20	367,890	127,909	126,745	1,164	0	0	0	15	2,029
	27	374,600	129,305	129,146	159	0	0	0	15	2,029
2003	3 Jan.	354,528	130,012	129,938	74	0	0	0	15	2,029
	10	346,293	133,539	133,441	89	0	0	9	15	2,029
	17	341,636	132,870	132,748	118	0	0	4	15	2,029
	24	338,201	127,180	127,168	9	0	0	3	15	2,029
	31	339,517	126,760	126,631	128	0	0	1	62	2,029
	7 Feb.	342,781	133,194	133,161	33	0	0	0	62	2,029
	14	342,890	128,006	127,947	59	0	0	0	61	2,029
	21	341,561	131,392	128,951	2,441	0	0	0	61	2,029
	28	345,414	125,405	125,346	59	0	0	0	62	2,029
	7 Mar.	350,078	89,529	89,431	98	0	0	0	62	2,029
	14	350,014	177,351	177,262	89	0	0	0	15	2,029
	21	350,482	128,616	127,972	623	0	0	21	15	2,029
	28	351,783	129,392	129,356	23	0	0	13	15	2,029
	4 Apr.	357,775	131,573	131,477	90	0	0	6	76	2,029
	11	360,186	128,359	128,321	29	0	0	9	76	2,029
	18	367,559	132,655	132,436	216	0	0	3	15	2,029
	25	363,873	147,509	147,427	80	0	0	2	15	2,029
	2 May	367,432	122,600	122,512	87	0	0	1	15	2,029

Source: ECB.

Structural reverse operations	Marginal lending facility	Credits related to margin calls	Other claims on euro area credit institutions in euro	Securities of euro area residents in euro	General government debt in euro	Other assets	Total		
							9	10	
0	892	21	211	33,231	67,224	89,080	812,706	2002	6 Dec.
0	15	9	197	33,205	67,106	90,733	818,720		13
0	275	30	163	33,253	67,106	92,688	820,448		20
0	40	48	109	33,098	66,306	93,062	832,558		27
0	45	72	120	27,824	44,486	105,962	794,992	2003	3 Jan.
0	10	55	103	27,919	44,475	106,625	786,619		10
0	2,575	39	174	28,016	44,485	105,949	773,267		17
0	299	45	238	28,522	44,485	106,893	778,863		24
0	170	19	296	29,054	44,485	106,466	786,730		31
0	3	16	330	30,675	44,436	107,701	782,044		7 Feb.
0	110	45	326	31,685	44,355	109,365	775,370		14
0	1,145	44	250	32,602	44,355	109,171	784,809		21
0	148	37	552	33,484	44,355	107,151	790,649		28
0	50	35	938	33,495	44,340	107,218	749,960		7 Mar.
0	2	30	473	36,694	44,342	107,546	838,923		14
0	889	27	276	37,823	44,345	107,801	802,273		21
0	10	39	275	38,149	44,344	107,391	798,674		28
0	3	38	289	38,760	44,318	109,563	774,429		4 Apr.
0	109	15	164	39,658	44,322	109,351	770,550		11
0	14	15	134	39,785	44,279	109,666	776,461		18
0	30	9	116	40,185	44,273	109,529	800,643		25
0	1	8	111	40,295	44,273	109,631	760,351		2 May

Liabilities to other euro area residents in euro	Liabilities to non-euro area residents in euro	Liabilities to euro area residents in foreign currency	Liabilities to non-euro area residents in foreign currency	Counterpart of special drawing rights allocated by the IMF	Other liabilities	Revaluation accounts	Capital and reserves	Total		
								10	11	
62,194	8,489	1,341	20,045	6,567	62,616	106,307	64,448	812,706	2002	6 Dec.
58,514	8,428	1,296	22,432	6,567	62,972	106,307	64,451	818,720		13
49,967	9,541	1,382	20,693	6,567	63,728	106,307	64,420	820,448		20
55,085	8,810	1,232	20,067	6,567	64,121	106,307	64,420	832,558		27
47,408	11,555	1,126	20,996	6,339	73,817	82,844	64,323	794,992	2003	3 Jan.
48,541	8,278	1,147	19,714	6,339	73,640	82,844	64,240	786,619		10
42,522	8,346	1,136	17,259	6,339	74,025	82,844	64,246	773,267		17
58,993	8,872	1,125	14,978	6,339	74,217	82,844	64,070	778,863		24
65,146	9,426	1,054	15,759	6,339	73,719	82,848	64,071	786,730		31
52,197	8,473	1,017	15,776	6,339	73,256	82,848	64,072	782,044		7 Feb.
51,338	8,543	1,017	15,195	6,339	72,734	82,848	64,370	775,370		14
58,968	8,421	1,025	14,113	6,339	74,543	82,840	63,517	784,809		21
70,147	8,704	1,024	14,054	6,339	70,187	82,840	64,444	790,649		28
60,226	8,659	1,050	14,772	6,339	69,932	82,840	64,444	749,960		7 Mar.
60,064	8,607	1,054	16,093	6,339	70,055	82,840	64,462	838,923		14
72,700	8,441	1,076	14,706	6,339	70,565	82,840	64,464	802,273		21
73,624	8,395	1,071	14,490	6,339	64,227	82,840	64,469	798,674		28
53,949	8,858	1,081	15,366	6,168	65,081	68,005	64,468	774,429		4 Apr.
51,602	8,717	1,005	14,572	6,168	65,227	68,005	64,604	770,550		11
44,996	9,172	1,045	14,304	6,168	65,907	68,005	64,606	776,461		18
59,278	8,455	1,048	14,132	6,168	65,475	68,005	64,656	800,643		25
40,143	9,506	1,048	12,990	6,168	65,853	67,910	64,657	760,351		2 May

**Table 1.2****Key ECB interest rates***(levels in percentages per annum; changes in percentage points)*

With effect from <sup>1)</sup>	Deposit facility		Main refinancing operations			Marginal lending facility	
			Fixed rate tenders	Variable rate tenders			
			Fixed rate	Minimum bid rate			
	Level <sub>1</sub>	Change <sub>2</sub>	Level <sub>3</sub>	Level <sub>4</sub>	Change <sub>5</sub>	Level <sub>6</sub>	Change <sub>7</sub>
1999 1 Jan.	2.00	-	3.00	-	-	4.50	-
4 <sup>2)</sup>	2.75	0.75	3.00	-	...	3.25	-1.25
22	2.00	-0.75	3.00	-	...	4.50	1.25
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	3.25	0.50	4.25	-	0.50	5.25	0.50
28 <sup>3)</sup>	3.25	...	-	4.25	...	5.25	...
1 Sep.	3.50	0.25	-	4.50	0.25	5.50	0.25
6 Oct.	3.75	0.25	-	4.75	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

Source: ECB.

- 1) The date refers to the deposit and marginal lending facilities. For main refinancing operations, unless otherwise indicated, 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.
- 2) 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 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.

**Table 1.3****Eurosystem monetary policy operations allotted through tenders <sup>1)</sup>***(EUR millions; interest rates in percentages per annum)***1. Main refinancing operations <sup>2)</sup>**

Date of settlement	Bids (amount)	Allotment (amount)	Fixed rate tenders	Variable rate tenders			Running for (...) days
			Fixed rate	Minimum bid rate	Marginal rate <sup>3)</sup>	Weighted average rate	
	1	2	3	4	5	6	7
2002 13 Nov.	85,033	51,000	-	3.25	3.28	3.28	14
20	120,351	99,000	-	3.25	3.27	3.29	14
27	108,905	62,000	-	3.25	3.29	3.31	14
4 Dec.	111,791	111,791	-	3.25	3.25	3.25	14
11	100,511	65,000	-	2.75	2.82	2.83	13
18	103,502	103,502	-	2.75	2.75	2.87	13
24	146,157	88,000	-	2.75	3.02	3.08	15
31	117,377	92,000	-	2.75	2.85	2.95	15
2003 8 Jan.	133,781	82,000	-	2.75	2.83	2.84	14
15	120,349	79,000	-	2.75	2.80	2.81	14
22	123,705	91,000	-	2.75	2.80	2.81	14
29	114,931	83,000	-	2.75	2.79	2.81	14
5 Feb.	115,836	86,000	-	2.75	2.78	2.79	14
12	100,544	75,000	-	2.75	2.76	2.78	14
19	125,104	95,000	-	2.75	2.77	2.78	13
26	110,698	83,000	-	2.75	2.75	2.76	14
4 Mar.	54,090	54,090	-	2.75	2.75	2.75	15
12	126,251	106,000	-	2.50	2.57	2.63	13
12	75,870	65,000	-	2.50	2.55	2.64	7
19	129,827	83,000	-	2.50	2.58	2.59	14
25	115,518	104,000	-	2.50	2.53	2.55	15
2 Apr.	112,031	71,000	-	2.50	2.53	2.54	14
9	133,547	101,000	-	2.50	2.53	2.53	14
16	126,889	77,000	-	2.50	2.53	2.54	14
23	156,979	125,000	-	2.50	2.54	2.55	14
30	106,071	38,000	-	2.50	2.55	2.55	14
7 May	120,843	76,000	-	2.50	2.53	2.54	14
7	67,356	53,000	-	2.50	2.53	2.54	7

## 2. Longer-term refinancing operations

Date of settlement	Bids (amount)	Allotment (amount)	Fixed rate tenders	Variable rate tenders		Running for (...) days
			Fixed rate	Marginal rate <sup>3)</sup>	Weighted average rate	
	1	2	3	4	5	6
2001 31 May	46,448	20,000	-	4.49	4.51	91
28 June	44,243	20,000	-	4.36	4.39	91
26 July	39,369	20,000	-	4.39	4.42	91
30 Aug.	37,855	20,000	-	4.20	4.23	91
27 Sep.	28,269	20,000	-	3.55	3.58	85
25 Oct.	42,308	20,000	-	3.50	3.52	98
29 Nov.	49,135	20,000	-	3.32	3.34	91
21 Dec.	38,178	20,000	-	3.29	3.31	97
2002 31 Jan.	44,547	20,000	-	3.31	3.33	84
28 Feb.	47,001	20,000	-	3.32	3.33	91
28 Mar.	39,976	20,000	-	3.40	3.42	91
25 Apr.	40,580	20,000	-	3.35	3.36	91
30 May	37,602	20,000	-	3.45	3.47	91
27 June	27,670	20,000	-	3.38	3.41	91
25 July	28,791	15,000	-	3.35	3.37	98
29 Aug.	33,527	15,000	-	3.33	3.34	91
26 Sep.	25,728	15,000	-	3.23	3.26	88
31 Oct.	27,820	15,000	-	3.22	3.24	91
28 Nov.	38,644	15,000	-	3.02	3.04	91
23 Dec.	42,305	15,000	-	2.93	2.95	94
2003 30 Jan.	31,716	15,000	-	2.78	2.80	90
27 Feb.	24,863	15,000	-	2.48	2.51	91
27 Mar.	33,367	15,000	-	2.49	2.51	91
30 Apr.	35,096	15,000	-	2.50	2.51	92

## 3. Other tender operations

Date of settlement	Type of operation	Bids (amount)	Allotment (amount)	Fixed rate tenders	Variable rate tenders			Running for (...) days
				Fixed rate	Minimum bid rate	Marginal rate <sup>3)</sup>	Weighted average rate	
	1	2	3	4	5	6	7	8
2000 5 Jan. <sup>4)</sup>	Collection of fixed-term deposits	14,420	14,420	-	-	3.00	3.00	7
21 June	Reverse transaction	18,845	7,000	-	-	4.26	4.28	1
<i>Euro area enlargement</i>								
2001 30 Apr.	Reverse transaction	105,377	73,000	-	4.75	4.77	4.79	7
12 Sep.	Reverse transaction	69,281	69,281	4.25	-	-	-	1
13	Reverse transaction	40,495	40,495	4.25	-	-	-	1
28 Nov.	Reverse transaction	73,096	53,000	-	3.25	3.28	3.29	7
2002 4 Jan.	Reverse transaction	57,644	25,000	-	3.25	3.30	3.32	3
10	Reverse transaction	59,377	40,000	-	3.25	3.28	3.30	1
18 Dec.	Reverse transaction	28,480	10,000	-	2.75	2.80	2.82	6

Source: ECB.

1) The amounts shown may differ slightly from those in Table 1.1, columns 6 to 8, due to operations allotted but not settled.

2) 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.

3) In liquidity providing (absorbing) operations, the marginal rate refers to the lowest (highest) rate at which bids were accepted.

4) This operation was conducted with a maximum rate of 3.00%.

**Table 1.4****Minimum reserve statistics****1. Reserve base of credit institutions subject to reserve requirements <sup>1) 2)</sup>***(EUR billions; end of period)*

Reserve base as at:	Total	Liabilities to which a 2% reserve coefficient is applied		Liabilities to which a 0% reserve coefficient is applied		
		Deposits (overnight, up to 2 years' agreed maturity and notice period)	Debt securities up to 2 years' agreed maturity <sup>3)</sup>	Deposits (over 2 years' agreed maturity and notice period)	Repos	Debt securities over 2 years' agreed maturity
	1	2	3	4	5	6
2002 Mar.	11,031.8	6,178.0	400.6	1,349.9	663.1	2,440.1
Apr.	11,076.4	6,176.1	404.9	1,355.1	699.1	2,441.2
May	11,111.6	6,150.4	410.5	1,355.8	741.7	2,453.2
June	11,009.1	6,083.3	407.5	1,355.3	699.2	2,463.9
July	10,999.6	6,069.3	408.6	1,368.0	691.0	2,462.7
Aug.	10,952.0	6,010.3	401.5	1,359.7	703.2	2,477.2
Sep.	11,054.3	6,055.4	405.0	1,373.5	747.6	2,472.7
Oct.	11,113.6	6,052.0	414.2	1,379.1	790.5	2,477.8
Nov.	11,207.0	6,142.9	426.9	1,365.2	784.2	2,487.7
Dec.	11,116.8	6,139.9	409.2	1,381.9	725.5	2,460.3
2003 Jan.	11,100.8	6,048.5	426.0	1,385.7	773.9	2,466.7
Feb.	11,214.2	6,092.6	434.0	1,396.4	808.2	2,483.0
Mar. <sup>(p)</sup>	11,211.2	6,116.3	424.7	1,404.0	782.3	2,484.0

Source: ECB.

- 1) Liabilities vis-à-vis other credit institutions subject to the ESCB's minimum reserve system, the ECB and participating national central banks, are excluded from the reserve base. If 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. This percentage was 10% for calculating the reserve base until November 1999, and 30% thereafter.
- 2) Maintenance periods start on the 24th of the month and run to the 23rd of the following month; the required reserve is calculated from the reserve base as at the end of the preceding month.
- 3) Includes money market paper. For further details, see the general notes.

**2. Reserve maintenance <sup>1)</sup>***(EUR billions; interest rates as annual percentages)*

Maintenance period ending in:	Required reserves <sup>2)</sup>	Actual reserves <sup>3)</sup>	Excess reserves <sup>4)</sup>	Deficiencies <sup>5)</sup>	Interest rate on minimum reserves <sup>6)</sup>
	1	2	3	4	5
2002 May	131.0	131.5	0.5	0.0	3.30
June	131.0	131.7	0.7	0.0	3.33
July	130.7	131.3	0.6	0.0	3.32
Aug.	129.3	129.7	0.5	0.0	3.29
Sep.	129.0	129.5	0.5	0.0	3.28
Oct.	127.7	128.2	0.5	0.0	3.28
Nov.	128.7	129.2	0.5	0.0	3.28
Dec.	128.8	129.4	0.7	0.0	3.06
2003 Jan.	130.9	131.4	0.6	0.0	2.87
Feb.	130.4	131.0	0.6	0.0	2.78
Mar.	128.9	129.5	0.6	0.0	2.67
Apr.	130.0	130.5	0.5	0.0	2.53
May <sup>(p)</sup>	130.3	.	.	.	.

Source: ECB.

- 1) This table contains full data for completed maintenance periods and required reserves for the current maintenance period.
- 2) The amount of 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 as at the end of each calendar month; subsequently, each credit institution deducts from this figure a lump-sum allowance of EUR 100,000. The resulting reserve requirements are then aggregated at the euro area level.
- 3) Aggregate average daily holdings of credit institutions required to hold a positive amount of reserves on their reserve accounts over the maintenance period.
- 4) Average actual reserve holdings over the maintenance period in excess of the required reserves, computed on the basis of those credit institutions that have fulfilled the reserve requirement.
- 5) Average shortfalls of actual reserve holdings from required reserves over the maintenance period, computed on the basis of those credit institutions that have not fulfilled the reserve requirement.
- 6) This rate equals the average, over the maintenance period, of the ECB's rate (weighted according to the number of calendar days) on the Eurosystem's main refinancing operations (see Table 1.3).



**Table 1.5**
**Banking system's liquidity position <sup>1)</sup>**
*(EUR billions; period averages of daily positions)*

Maintenance period ending in:	Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current accounts <sup>4)</sup>	Base money <sup>5)</sup>
	Monetary policy operations of the Eurosystem					Deposit facility	Other liquidity-absorbing operations <sup>2)</sup>	Banknotes in circulation	Central government deposits with the Eurosystem	Other factors (net) <sup>3)</sup>		
	Eurosystem's net assets in gold and foreign currency <sup>1)</sup>	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations <sup>2)</sup>							
1	2	3	4	5	6	7	8	9	10	11	12	
2002 Mar.	386.7	114.6	60.0	0.2	0.0	0.1	0.0	283.3	54.2	91.8	132.1	415.6
Apr.	395.4	112.7	60.0	0.4	0.0	0.2	0.0	285.9	55.9	95.3	131.2	417.3
May	397.7	110.6	60.0	0.1	0.0	0.3	0.0	293.7	49.2	93.5	131.7	425.6
June	396.2	112.6	60.0	0.5	0.0	0.4	0.0	300.8	45.1	91.2	131.8	433.0
July	369.1	130.4	60.0	0.2	0.0	0.2	0.0	313.4	54.4	60.3	131.4	445.0
Aug.	360.0	139.2	55.2	0.1	0.0	0.1	0.0	322.8	50.9	50.8	129.9	452.8
Sep.	362.3	140.9	50.8	0.1	0.0	0.2	0.0	323.6	49.1	51.7	129.6	453.4
Oct.	370.0	146.1	45.3	0.1	0.0	0.1	0.0	329.2	45.6	58.2	128.3	457.6
Nov.	372.1	147.5	45.0	0.1	0.0	0.1	0.0	334.0	42.8	58.6	129.3	463.4
Dec.	371.5	168.1	45.0	1.1	2.0	0.2	0.0	350.7	51.7	55.5	129.5	480.5
2003 Jan.	360.9	176.3	45.0	0.5	0.0	0.3	0.0	353.9	43.7	53.3	131.6	485.8
Feb.	356.4	168.6	45.0	0.3	0.0	0.3	0.0	340.7	50.2	48.0	131.1	472.2
Mar.	352.5	179.5	45.0	0.2	0.0	0.1	0.0	347.8	59.1	40.6	129.6	477.5
Apr. <sup>6)</sup>	337.4	179.4	45.0	0.1	0.0	0.2	0.0	358.5	52.1	20.5	130.6	489.3

Source: ECB.

1) The banking system's liquidity position is defined as the current account holdings in euro of credit institutions in the euro area with the Eurosystem. Amounts are derived from the consolidated financial statement of the Eurosystem.

2) Excludes the issuance of debt certificates initiated by national central banks in Stage Two.

3) Remaining items in the consolidated financial statement of the Eurosystem.

4) Equal to the difference between the sum of liquidity-providing factors (items 1 to 5) and the sum of liquidity-absorbing factors (items 6 to 10).

5) Calculated as the sum of the deposit facility (item 6), banknotes in circulation (item 8) and credit institutions' current account holdings (item 11).

## 2 Monetary developments and investment funds in the euro area

**Table 2.1**

### Aggregated balance sheet of the Eurosystem

(EUR billions (not seasonally adjusted; end of period))

#### 1. Assets

	Loans to euro area residents				Holdings of securities other than shares issued by euro area residents <sup>2)</sup>	Holdings of shares/ other equity issued by euro area residents			External assets <sup>1)</sup>	Fixed assets	Re-maining assets	Total			
	1	MFIs <sup>1)</sup>	General government	Other euro area residents		MFIs	General government	Other euro area residents							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2000	445.0	427.4	17.1	0.5	97.4	2.5	93.6	1.3	15.3	4.3	11.0	380.7	11.2	56.1	1,005.7
<i>Euro area enlargement</i>															
2001 Q1	401.7	373.9	27.2	0.6	105.0	2.7	101.2	1.1	14.7	4.6	10.1	396.7	11.3	54.3	983.8
Q2	426.0	398.2	27.2	0.6	105.8	3.1	101.5	1.2	14.2	4.6	9.6	414.7	11.9	54.5	1,027.2
Q3	388.2	360.4	27.2	0.6	106.6	3.7	101.9	1.1	13.1	4.8	8.3	397.1	11.9	54.8	971.7
Q4	412.7	386.4	25.7	0.6	107.0	3.8	101.8	1.3	13.8	4.6	9.2	399.0	11.9	54.3	998.6
2002 Mar.	381.3	354.9	25.8	0.6	106.5	4.1	101.0	1.4	13.8	4.7	9.1	414.4	11.9	101.5	1,029.4
Apr.	344.2	317.8	25.8	0.6	107.5	5.0	101.4	1.1	13.5	4.7	8.8	401.2	12.0	103.3	981.7
May	356.1	329.7	25.7	0.6	107.0	4.9	101.0	1.0	13.3	4.7	8.6	394.4	12.0	105.5	988.3
June	387.7	361.3	25.7	0.6	107.9	4.9	101.6	1.4	12.9	4.7	8.2	372.7	12.0	108.9	1,001.9
July	364.0	337.7	25.7	0.6	108.8	5.3	101.9	1.7	12.7	4.7	7.9	377.9	12.1	110.5	986.0
Aug.	363.4	337.5	25.3	0.6	110.8	5.4	103.3	2.1	12.8	4.8	8.0	377.9	12.1	110.9	987.9
Sep.	365.6	339.6	25.3	0.6	112.5	5.8	104.6	2.2	12.3	4.8	7.5	386.0	12.1	112.5	1,000.9
Oct.	370.8	344.8	25.3	0.6	113.5	6.5	106.1	0.9	13.0	4.9	8.1	379.9	12.1	115.1	1,004.5
Nov.	377.3	351.3	25.3	0.6	115.0	7.0	107.1	0.9	13.6	5.0	8.6	378.9	9.8	119.2	1,013.8
Dec.	416.1	391.3	24.2	0.6	94.5	7.6	86.0	0.8	13.3	5.1	8.2	374.6	12.1	125.1	1,035.7
2003 Jan.	412.3	387.5	24.2	0.6	96.8	8.6	87.4	0.8	12.8	4.9	7.9	373.4	12.2	109.8	1,017.9
Feb.	410.2	385.4	24.1	0.6	100.7	9.1	90.8	0.8	12.7	5.0	7.8	363.4	12.0	121.1	1,020.6
Mar. <sup>(p)</sup>	411.8	387.0	24.1	0.6	105.2	9.5	94.8	0.8	12.5	5.2	7.3	349.7	11.9	123.5	1,015.1

#### 2. Liabilities

	Currency in circulation		Deposits of euro area residents			Debt securities issued <sup>2)</sup>	Capital and reserves	External liabilities <sup>1)</sup>	Remaining liabilities	Total
	1	2	MFIs <sup>1)</sup>	Central government	Other general government/ other euro area residents					
	1	2	3	4	5	6	7	8	9	10
2000	390.2	327.3	270.4	47.1	9.8	3.8	197.5	29.9	57.0	1,005.7
<i>Euro area enlargement</i>										
2001 Q1	370.5	312.6	253.4	46.8	12.4	5.5	204.6	26.8	63.8	983.8
Q2	368.8	342.2	274.1	51.8	16.3	5.6	223.7	32.6	54.2	1,027.2
Q3	346.1	323.6	269.4	37.6	16.6	5.5	209.2	30.0	57.3	971.7
Q4	285.9	391.9	342.4	35.1	14.4	4.6	209.8	35.6	70.8	998.6
2002 Mar.	309.2	355.1	282.4	56.3	16.4	4.6	217.8	36.9	105.9	1,029.4
Apr.	311.3	323.5	254.8	50.8	17.9	4.6	212.7	32.4	97.2	981.7
May	319.6	326.6	268.4	40.7	17.4	4.6	207.9	31.6	98.0	988.3
June	329.4	354.3	285.2	51.5	17.5	4.6	182.3	31.0	100.5	1,001.9
July	340.1	316.0	247.4	52.9	15.6	4.6	183.7	35.1	106.6	986.0
Aug.	342.3	318.7	255.8	47.3	15.6	4.6	186.4	31.0	104.9	987.9
Sep.	347.0	317.6	258.9	41.7	17.0	4.6	190.2	32.5	109.1	1,000.9
Oct.	355.3	313.5	254.4	40.8	18.3	4.6	187.9	31.4	111.9	1,004.5
Nov.	360.8	319.3	255.2	46.2	17.9	3.6	185.7	31.5	112.9	1,013.8
Dec.	393.0	328.4	283.3	29.5	15.6	3.6	156.2	32.9	121.7	1,035.7
2003 Jan.	352.1	348.3	284.1	49.3	15.0	3.6	154.5	30.2	129.1	1,017.9
Feb.	358.1	346.0	276.9	54.2	14.9	2.8	159.5	28.6	125.5	1,020.6
Mar. <sup>(p)</sup>	365.4	345.8	279.0	50.7	16.2	2.7	149.2	28.7	123.2	1,015.1

Source: ECB.

1) Since the end of November 2000, balances arising from the TARGET system are netted by novation on a daily basis. This implies that the bilateral positions of each NCB vis-à-vis the ECB and other NCBs have been replaced by a single net bilateral position vis-à-vis the ECB. For the TARGET gross end-month positions in 1999 and in 2000 (January to October), see the corresponding footnote in the February 2000 and December 2000 issues of the ECB Monthly Bulletin.

2) Includes money market paper. For further details, see the general notes.

Table 2.2

## Aggregated balance sheet of the euro area MFIs, excluding the Eurosystem

(EUR billions (not seasonally adjusted; end of period))

## 1. Assets

	Loans to euro area residents				Holdings of securities other than shares issued by euro area residents <sup>1)</sup>				Money market fund shares/units	Holdings of shares/other equity issued by euro area residents			External assets	Fixed assets	Remaining assets	Total
	1	2	3	4	5	6	7	8		10	11	12				
2000	10,419.8	3,510.4	817.8	6,091.5	2,311.5	1,051.4	995.9	264.2	23.3	750.9	240.2	510.8	2,026.2	158.7	1,015.2	16,705.6
<i>Euro area enlargement</i>																
2001 Q1	10,814.0	3,715.6	824.4	6,274.0	2,454.0	1,100.6	1,066.2	287.1	25.6	812.3	255.3	557.0	2,242.1	160.8	1,097.2	17,606.0
Q2	10,894.4	3,698.3	808.5	6,387.6	2,529.2	1,123.3	1,104.9	300.9	32.9	799.3	251.3	548.0	2,290.1	163.5	1,128.3	17,837.7
Q3	10,953.2	3,729.3	802.6	6,421.3	2,543.2	1,123.5	1,093.3	326.4	36.1	771.6	245.1	526.4	2,300.6	165.7	1,115.8	17,886.2
Q4	11,134.7	3,794.0	822.0	6,518.7	2,535.9	1,122.9	1,077.4	335.6	38.5	810.8	251.9	559.0	2,408.8	168.1	1,129.5	18,226.3
2002 Mar.	11,210.8	3,778.4	826.8	6,605.5	2,646.9	1,173.5	1,128.1	345.3	46.6	811.4	260.0	551.4	2,430.8	164.5	1,031.1	18,342.2
Apr.	11,264.9	3,817.7	806.7	6,640.6	2,653.2	1,183.6	1,127.8	341.8	47.5	825.4	267.5	557.9	2,425.3	164.2	1,011.2	18,391.8
May	11,329.0	3,866.4	803.4	6,659.1	2,673.9	1,188.7	1,141.2	343.9	50.8	826.0	265.7	560.3	2,451.4	164.4	984.6	18,480.1
June	11,334.7	3,839.8	804.4	6,690.5	2,675.0	1,195.9	1,137.5	341.7	58.3	819.0	263.4	555.6	2,358.6	164.3	1,002.3	18,412.2
July	11,339.5	3,844.7	802.8	6,691.9	2,671.9	1,192.8	1,135.5	343.6	60.5	808.1	266.9	541.2	2,378.8	164.6	1,025.6	18,449.0
Aug.	11,321.2	3,836.8	792.7	6,691.7	2,657.6	1,187.0	1,131.7	338.9	60.9	816.7	265.5	551.1	2,367.3	165.6	1,011.0	18,400.2
Sep.	11,406.6	3,885.0	795.5	6,726.1	2,687.2	1,190.0	1,148.6	348.6	62.1	805.1	263.6	541.5	2,427.5	166.2	1,057.9	18,612.6
Oct.	11,463.5	3,926.4	795.1	6,742.0	2,680.0	1,185.5	1,142.3	352.2	63.7	819.5	266.0	553.5	2,483.6	167.1	1,021.1	18,698.6
Nov.	11,592.2	4,034.5	803.9	6,753.9	2,706.7	1,203.5	1,147.3	355.8	65.6	822.9	264.7	558.2	2,558.2	167.1	1,055.3	18,968.1
Dec.	11,610.1	4,020.8	812.0	6,777.4	2,672.9	1,171.9	1,134.2	366.9	62.9	827.9	257.5	570.4	2,463.6	168.1	1,057.1	18,862.6
2003 Jan.	11,658.6	4,051.9	803.4	6,803.3	2,782.4	1,220.5	1,187.3	374.5	65.5	814.6	254.6	559.9	2,475.9	164.3	1,024.9	18,986.5
Feb.	11,733.1	4,102.7	803.8	6,826.6	2,817.4	1,229.6	1,206.9	380.9	66.8	812.1	254.5	557.5	2,544.3	163.2	1,047.9	19,185.0
Mar. <sup>(p)</sup>	11,724.1	4,068.6	805.2	6,850.2	2,832.4	1,236.9	1,212.9	382.6	67.2	815.9	257.5	558.4	2,534.8	161.0	1,046.0	19,181.5

## 2. Liabilities

	Currency in circulation	Deposits of euro area residents					Money market fund shares/units <sup>2)</sup>	Debt securities issued <sup>12)</sup>	Capital and reserves	External liabilities	Remaining liabilities	Total				
			MFIs	Central government	Other general government/other euro area residents	Over-night							With agreed maturity	Redeemable at notice	Repurchase agreements	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2000	0.0	9,057.1	3,679.3	117.4	5,260.5	1,648.9	2,159.8	1,276.9	174.9	323.3	2,712.9	940.5	2,299.5	1,372.2	16,705.6	
<i>Euro area enlargement</i>																
2001 Q1	0.0	9,325.3	3,814.5	103.6	5,407.2	1,624.0	2,237.8	1,322.8	222.6	369.2	2,817.4	982.4	2,638.7	1,473.1	17,606.0	
Q2	0.0	9,424.1	3,805.6	113.7	5,504.8	1,715.9	2,236.6	1,330.8	221.5	390.2	2,861.3	998.1	2,713.8	1,450.1	17,837.7	
Q3	0.0	9,484.8	3,839.0	110.2	5,535.5	1,733.7	2,233.5	1,342.6	225.7	417.3	2,875.5	1,011.1	2,613.4	1,484.1	17,886.2	
Q4	0.0	9,696.6	3,829.6	103.9	5,763.1	1,882.1	2,257.5	1,405.0	218.5	436.5	2,882.9	1,041.9	2,687.4	1,480.9	18,226.3	
2002 Mar.	0.0	9,695.4	3,852.1	101.2	5,742.1	1,823.1	2,266.3	1,423.0	229.6	477.9	2,966.1	1,057.6	2,754.4	1,390.7	18,342.2	
Apr.	0.0	9,742.5	3,871.8	106.7	5,763.9	1,852.1	2,269.0	1,414.7	228.1	485.0	2,969.4	1,064.1	2,741.5	1,389.4	18,391.8	
May	0.0	9,810.7	3,920.5	108.3	5,781.9	1,852.8	2,278.8	1,415.5	234.8	493.4	2,994.0	1,071.3	2,723.4	1,387.2	18,480.1	
June	0.0	9,836.4	3,926.6	103.5	5,806.3	1,898.8	2,256.3	1,421.7	229.6	497.5	2,984.6	1,071.6	2,589.0	1,433.2	18,412.2	
July	0.0	9,818.1	3,932.1	99.0	5,787.1	1,870.1	2,263.8	1,424.3	228.8	510.7	2,989.6	1,081.4	2,613.1	1,436.1	18,449.0	
Aug.	0.0	9,779.9	3,918.3	93.6	5,768.0	1,836.2	2,265.4	1,429.8	236.5	524.3	3,002.0	1,088.2	2,585.3	1,420.5	18,400.2	
Sep.	0.0	9,870.6	3,960.8	104.6	5,805.2	1,891.3	2,242.8	1,432.8	238.3	522.5	3,004.3	1,094.1	2,642.2	1,478.9	18,612.6	
Oct.	0.0	9,942.0	4,020.2	111.0	5,810.8	1,873.5	2,263.8	1,438.1	235.6	526.4	3,010.3	1,097.0	2,666.6	1,456.3	18,698.6	
Nov.	0.0	10,091.7	4,126.6	101.3	5,863.8	1,925.7	2,259.8	1,448.7	229.6	542.8	3,038.6	1,100.1	2,706.3	1,488.6	18,968.1	
Dec.	0.0	10,190.5	4,133.0	106.9	5,950.6	1,985.1	2,261.3	1,477.8	226.4	532.9	2,990.4	1,102.0	2,596.5	1,450.4	18,862.6	
2003 Jan.	0.0	10,197.6	4,159.5	105.8	5,932.3	1,935.2	2,263.5	1,500.6	233.0	600.3	3,012.8	1,106.9	2,635.7	1,433.3	18,986.5	
Feb.	0.0	10,292.8	4,214.7	121.7	5,956.5	1,932.9	2,275.7	1,514.0	233.9	613.8	3,033.3	1,104.3	2,689.1	1,451.7	19,185.0	
Mar. <sup>(p)</sup>	0.0	10,295.1	4,184.4	119.3	5,991.3	1,968.6	2,275.2	1,524.3	223.3	617.6	3,041.8	1,110.3	2,666.7	1,450.0	19,181.5	

Source: ECB.

1) Includes money market paper. For further details, see the general notes.

2) Amounts held by residents of the euro area. Amounts held by non-residents of the euro area are included in external liabilities.

Table 2.3

## Consolidated balance sheet of the euro area MFIs, including the Eurosystem

(EUR billions (not seasonally adjusted; end of period))

## 1. Assets: levels

											Total
	Loans to euro area residents	General government	Other euro area residents	Holdings of securities other than shares issued by euro area residents <sup>2)</sup>	General government	Other euro area residents	Holdings of shares/ other equity issued by other euro area residents	External assets <sup>3)</sup>	Fixed assets	Remaining assets	
	1	2	3	4	5	6	7	8	9	10	11
2001 Sep.	7,251.7	829.8	6,421.9	1,522.6	1,195.2	327.4	534.7	2,697.8	177.6	1,134.1	13,318.6
Oct.	7,278.8	827.2	6,451.6	1,516.6	1,186.8	329.9	543.7	2,742.5	178.3	1,164.2	13,424.2
Nov.	7,345.2	843.3	6,501.9	1,524.1	1,191.0	333.1	544.6	2,827.6	179.1	1,153.9	13,574.5
Dec.	7,367.0	847.7	6,519.3	1,516.1	1,179.2	336.9	568.1	2,807.8	180.0	1,137.6	13,576.7
2002 Jan.	7,379.2	844.8	6,534.4	1,548.3	1,206.3	341.9	568.1	2,829.6	177.5	1,164.8	13,667.3
Feb.	7,396.2	847.5	6,548.7	1,557.7	1,207.8	349.9	566.7	2,833.2	176.6	1,126.8	13,657.2
Mar.	7,458.8	852.6	6,606.1	1,575.7	1,229.1	346.6	560.5	2,845.2	176.4	1,077.8	13,694.4
Apr.	7,473.6	832.4	6,641.2	1,572.2	1,229.3	342.9	566.8	2,826.5	176.2	1,065.0	13,680.2
May	7,488.9	829.2	6,659.7	1,587.2	1,242.3	345.0	568.9	2,845.8	176.4	1,044.4	13,711.6
June	7,521.2	830.1	6,691.1	1,582.0	1,239.0	343.0	563.9	2,731.2	176.2	1,067.7	13,642.2
July	7,521.1	828.5	6,692.6	1,582.7	1,237.4	345.3	549.1	2,756.7	176.7	1,092.7	13,679.1
Aug.	7,510.4	818.0	6,692.3	1,576.0	1,235.0	341.0	559.1	2,745.3	177.7	1,080.7	13,649.2
Sep.	7,547.5	820.8	6,726.8	1,603.9	1,253.2	350.8	549.1	2,813.5	178.3	1,130.0	13,822.3
Oct.	7,563.1	820.4	6,742.7	1,601.6	1,248.5	353.1	561.5	2,863.5	179.3	1,094.8	13,863.8
Nov.	7,583.7	829.2	6,754.5	1,611.1	1,254.4	356.7	566.8	2,937.1	177.0	1,135.1	14,010.7
Dec.	7,614.2	836.2	6,778.0	1,587.9	1,220.2	367.7	578.6	2,838.2	180.2	1,130.5	13,929.7
2003 Jan.	7,631.6	827.6	6,803.9	1,650.0	1,274.7	375.3	567.9	2,849.3	176.6	1,094.7	13,970.7
Feb.	7,655.2	828.0	6,827.2	1,679.4	1,297.7	381.7	565.3	2,907.8	175.1	1,130.3	14,113.7
Mar. <sup>(p)</sup>	7,680.2	829.3	6,850.9	1,691.2	1,307.8	383.4	565.7	2,884.6	172.9	1,131.3	14,126.5

## 2. Liabilities: levels

													Total	
	Currency in circulation	Deposits of central government	Deposits of other general government/ other euro area residents	Over-night	With agreed maturity	Redeemable at notice	Repurchase agreements	Money market fund shares/ units <sup>4)</sup>	Debt securities issued <sup>2a)</sup>	Capital and reserves	External liabilities <sup>3)</sup>	Re-maining liabilities		Excess of inter-MFI liabilities
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2001 Sep.	309.6	147.8	5,552.2	1,749.9	2,233.9	1,342.6	225.7	381.2	1,753.9	970.4	2,643.4	1,541.4	18.7	13,318.6
Oct.	295.5	153.3	5,574.8	1,750.3	2,237.6	1,351.9	235.1	392.3	1,767.9	981.1	2,665.2	1,588.7	5.5	13,424.2
Nov.	279.7	150.2	5,628.1	1,798.1	2,239.2	1,365.0	225.9	400.8	1,760.3	982.6	2,729.9	1,632.4	10.4	13,574.5
Dec.	239.7	139.0	5,777.6	1,896.2	2,257.9	1,405.0	218.5	398.0	1,760.8	995.2	2,723.0	1,551.8	-8.5	13,576.7
2002 Jan.	246.5	148.9	5,736.9	1,847.8	2,254.1	1,418.8	216.2	416.6	1,775.9	1,007.5	2,759.4	1,573.6	2.0	13,667.3
Feb.	240.3	155.7	5,736.7	1,843.3	2,251.4	1,420.9	221.1	427.0	1,778.2	1,011.5	2,768.0	1,538.8	1.1	13,657.2
Mar.	254.3	157.5	5,758.5	1,839.1	2,266.7	1,423.0	229.6	431.2	1,793.1	1,010.7	2,791.3	1,496.6	1.3	13,694.4
Apr.	261.7	157.5	5,781.8	1,869.7	2,269.3	1,414.7	228.1	437.5	1,785.5	1,004.6	2,774.0	1,486.6	-8.9	13,680.2
May	273.9	149.0	5,799.3	1,869.8	2,279.1	1,415.5	234.8	442.6	1,805.0	1,008.8	2,755.1	1,485.2	-7.3	13,711.6
June	285.8	155.0	5,823.9	1,916.0	2,256.6	1,421.7	229.6	439.2	1,788.3	985.8	2,619.9	1,533.6	10.7	13,642.2
July	296.8	151.9	5,802.6	1,885.4	2,264.1	1,424.3	228.8	450.3	1,796.1	993.4	2,648.1	1,542.7	-2.9	13,679.1
Aug.	301.2	141.0	5,783.6	1,851.6	2,265.7	1,429.8	236.5	463.4	1,814.3	1,004.3	2,616.3	1,525.4	-0.2	13,649.2
Sep.	306.7	146.3	5,822.2	1,908.0	2,243.1	1,432.8	238.3	460.4	1,813.0	1,015.9	2,674.8	1,588.0	-5.0	13,822.3
Oct.	313.9	151.8	5,829.1	1,891.4	2,264.1	1,438.1	235.6	462.7	1,822.9	1,013.9	2,698.0	1,568.2	3.3	13,863.8
Nov.	321.4	147.5	5,881.6	1,943.2	2,260.1	1,448.7	229.6	477.1	1,831.7	1,016.0	2,737.8	1,601.5	-4.0	14,010.7
Dec.	341.3	136.4	5,966.1	2,000.3	2,261.6	1,477.8	226.4	470.1	1,814.5	995.6	2,629.3	1,572.1	4.3	13,929.7
2003 Jan.	312.1	155.1	5,947.2	1,949.8	2,263.8	1,500.6	233.0	534.7	1,787.2	1,001.8	2,665.9	1,562.5	4.2	13,970.7
Feb.	319.4	175.9	5,971.4	1,947.4	2,276.0	1,514.0	233.9	547.0	1,797.3	1,004.3	2,717.7	1,577.2	3.5	14,113.7
Mar. <sup>(p)</sup>	327.2	170.0	6,007.5	1,984.5	2,275.5	1,524.3	223.3	550.4	1,798.1	996.8	2,695.4	1,573.2	7.7	14,126.5

Source: ECB.

1) Calculated from monthly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

2) Includes money market paper. For further details, see the general notes.

3) See Table 2.1, footnote 1.

4) Amounts held by residents of the euro area. Amounts held by non-residents of the euro area are included in external liabilities.

### 3. Assets: flows <sup>1)</sup>

	Loans to euro area residents		Other euro area residents	Holdings of securities other than shares issued by euro area residents <sup>2)</sup>	General government		Holdings of shares/ other equity issued by other euro area residents	External assets <sup>3)</sup>	Fixed assets	Remaining assets	Total
	1	2			3	4					
2001 Oct.	25.7	-2.7	28.4	-7.0	-9.6	2.6	5.7	43.7	0.7	30.1	99.0
Nov.	65.7	16.0	49.7	9.9	7.9	2.1	-3.2	66.0	1.1	5.9	145.6
Dec.	25.5	3.7	21.8	-8.4	-10.3	2.0	22.1	-26.2	1.1	-17.1	-3.0
2002 Jan.	9.5	-3.1	12.6	27.1	21.9	5.2	-0.3	-0.1	-2.5	26.6	60.2
Feb.	19.0	2.7	16.2	9.2	1.2	8.0	0.6	0.3	-0.9	-39.3	-11.1
Mar.	64.2	5.2	59.0	14.1	16.9	-2.9	-7.6	19.9	0.0	-48.1	42.4
Apr.	21.7	-20.0	41.7	-1.9	1.5	-3.3	6.3	18.0	-0.2	-13.1	30.8
May	25.4	-2.8	28.2	12.7	9.7	3.0	0.9	73.9	0.2	-20.8	92.3
June	40.7	1.4	39.3	-3.0	-1.3	-1.7	-5.1	-26.8	-0.2	23.7	29.2
July	-4.7	-1.8	-2.9	-2.5	-2.0	-0.5	-11.7	-2.4	0.5	23.9	3.1
Aug.	-10.6	-10.9	0.3	-5.7	-3.1	-2.6	9.4	-10.5	1.0	-12.1	-28.6
Sep.	38.3	2.8	35.4	20.8	11.5	9.3	-4.4	65.5	0.6	47.8	168.5
Oct.	18.2	-0.4	18.6	-0.4	-2.6	2.2	10.2	55.0	0.9	-35.8	48.1
Nov.	28.4	9.0	19.4	9.7	6.1	3.6	3.2	84.8	-2.3	39.6	163.3
Dec.	44.9	7.4	37.5	-4.4	-14.9	10.6	10.7	-35.2	1.7	-15.9	2.0
2003 Jan.	28.2	0.6	27.5	23.9	19.9	4.0	-6.2	17.3	-2.4	-21.8	39.4
Feb.	24.1	-1.4	25.5	24.5	17.8	6.7	-1.5	68.6	-1.5	34.9	149.2
Mar. <sup>(p)</sup>	28.8	1.5	27.3	14.4	12.4	2.1	1.9	-6.2	-0.2	-5.2	33.5

### 4. Liabilities: flows <sup>1)</sup>

	Currency in circulation	Deposits of central government	Deposits of other general government/ other euro area residents	Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements	Money market fund shares/ units <sup>4)</sup>	Debt securities issued <sup>2+4)</sup>	Capital and reserves	External liabilities <sup>3)</sup>	Re-maining liabilities	Excess of inter-MFI liabilities	Total
2001 Oct.	-14.2	5.4	22.6	0.9	3.0	9.2	9.5	11.5	13.1	7.9	18.7	45.7	-11.8	99.0
Nov.	-15.7	-3.0	51.4	47.2	0.3	13.1	-9.2	9.7	24.1	2.9	38.8	32.9	4.6	145.6
Dec.	-40.0	-11.2	149.3	98.4	18.4	40.0	-7.4	-1.3	-0.5	13.6	-17.3	-76.2	-19.5	-3.0
2002 Jan.	6.8	10.4	-42.5	-49.5	-3.1	12.4	-2.3	19.5	10.6	14.2	14.1	15.6	11.3	60.2
Feb.	-6.2	6.9	0.2	-4.3	-2.5	2.1	4.9	10.4	4.8	-0.8	11.3	-36.9	-0.7	-11.1
Mar.	14.0	1.7	22.8	-3.8	16.1	2.2	8.4	3.3	18.4	2.7	25.5	-55.2	9.3	42.4
Apr.	7.4	0.0	27.6	32.1	5.2	-8.2	-1.5	7.9	-2.1	-5.2	20.6	-15.9	-9.6	30.8
May	12.2	-8.5	24.6	2.4	14.4	1.1	6.7	4.0	29.2	3.7	34.9	-9.3	1.5	92.3
June	12.0	6.0	31.1	48.2	-17.3	6.4	-6.1	-7.2	0.6	-17.1	-67.8	56.1	15.6	29.2
July	11.0	-3.1	-24.5	-31.8	5.4	2.5	-0.7	12.0	5.4	9.6	-5.1	11.3	-13.5	3.1
Aug.	4.4	-11.0	-4.7	-33.6	15.7	5.5	7.7	12.3	4.0	9.0	-24.8	-20.5	2.8	-28.6
Sep.	5.6	1.6	39.5	56.4	-22.3	3.0	2.4	-2.7	15.8	9.3	47.4	53.9	-1.9	168.5
Oct.	7.2	5.5	7.8	-16.4	21.7	5.3	-2.8	2.1	11.4	-0.1	25.6	-20.8	9.4	48.1
Nov.	7.5	-4.3	55.6	52.9	-3.7	10.6	-4.4	14.7	14.9	2.7	49.6	29.2	-6.5	163.3
Dec.	19.9	-11.0	80.8	49.1	5.5	29.4	-3.2	-6.6	-14.2	-3.1	-53.0	-19.0	8.3	2.0
2003 Jan.	-7.6	15.6	-12.1	-49.0	-1.3	23.0	15.1	19.6	9.9	7.4	11.4	-8.2	3.5	39.4
Feb.	7.3	18.3	24.3	-2.4	12.4	13.4	0.9	12.1	10.8	5.3	56.7	12.5	1.9	149.2
Mar. <sup>(p)</sup>	7.8	-5.9	37.9	37.7	0.5	10.3	-10.6	4.2	1.7	-1.7	-13.6	-1.1	4.1	33.5

Table 2.4

Monetary aggregates <sup>1)</sup> and counterparts

(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)

## 1. Monetary aggregates: levels at the end of the period

	M2							
	M1				Deposits with agreed maturity up to 2 years	Deposits redeemable at notice up to 3 months	Total	Index Dec. 01=100 <sup>3)</sup>
	Currency in circulation <sup>1)</sup>	Overnight deposits <sup>2)</sup>	Total	Index Dec. 01=100 <sup>3)</sup>				
					1	2	3	4
2001 Sep.	309.6	1,815.1	2,124.7	96.23	1,070.9	1,299.7	4,495.3	96.40
Oct.	295.5	1,816.1	2,111.6	95.66	1,074.7	1,311.6	4,497.9	96.46
Nov.	279.7	1,864.6	2,144.3	97.11	1,077.6	1,326.4	4,548.2	97.50
Dec.	239.7	1,968.2	2,207.9	100.00	1,088.8	1,367.9	4,664.6	100.00
2002 Jan.	246.5	1,921.9	2,168.4	98.16	1,080.9	1,390.4	4,639.7	99.44
Feb.	240.3	1,917.1	2,157.4	97.67	1,076.7	1,394.5	4,628.7	99.21
Mar.	254.3	1,914.2	2,168.5	98.19	1,088.5	1,397.9	4,654.8	99.79
Apr.	261.7	1,945.5	2,207.2	100.01	1,092.0	1,391.9	4,691.2	100.65
May	273.9	1,945.4	2,219.3	100.66	1,099.6	1,394.0	4,712.8	101.24
June	285.8	1,992.1	2,277.9	103.41	1,074.8	1,400.0	4,752.8	102.23
July	296.8	1,959.3	2,256.1	102.37	1,083.7	1,403.0	4,742.8	101.89
Aug.	301.2	1,927.4	2,228.6	101.13	1,096.8	1,408.9	4,734.3	101.72
Sep.	306.7	1,984.3	2,291.0	103.96	1,073.6	1,411.1	4,775.7	102.61
Oct.	313.9	1,968.3	2,282.2	103.57	1,093.6	1,417.7	4,793.5	103.00
Nov.	321.4	2,020.9	2,342.3	106.35	1,086.2	1,428.8	4,857.3	104.40
Dec.	341.3	2,083.2	2,424.5	109.71	1,075.1	1,458.9	4,958.5	106.47
2003 Jan.	312.1	2,030.6	2,342.7	107.06	1,076.6	1,485.9	4,905.2	105.86
Feb.	319.4	2,029.0	2,348.4	107.32	1,079.0	1,501.4	4,928.8	106.37
Mar. <sup>(p)</sup>	327.2	2,067.0	2,394.2	109.45	1,072.0	1,513.1	4,979.4	107.49

2. Monetary aggregates: flows <sup>4)</sup>

	M2							
	M1				Deposits with agreed maturity up to 2 years	Deposits redeemable at notice up to 3 months	Total	Annual growth rate <sup>3)</sup> (%)
	Currency in circulation <sup>1)</sup>	Overnight deposits <sup>2)</sup>	Total	Annual growth rate <sup>3)</sup> (%)				
					1	2	3	4
2001 Oct.	-14.2	1.6	-12.6	5.0	3.3	11.8	2.6	5.4
Nov.	-15.7	47.8	32.0	5.5	1.9	14.8	48.7	5.9
Dec.	-40.0	103.8	63.8	5.1	11.1	41.5	116.4	6.1
2002 Jan.	6.8	-47.3	-40.6	6.7	-6.7	21.1	-26.2	6.7
Feb.	-6.2	-4.6	-10.8	6.3	-4.0	4.1	-10.7	6.3
Mar.	14.0	-2.6	11.4	6.3	12.3	3.4	27.1	6.4
Apr.	7.4	32.8	40.2	6.6	5.4	-5.8	39.8	6.4
May	12.2	2.1	14.3	6.4	10.9	2.3	27.5	6.7
June	12.0	48.6	60.6	7.3	-20.6	6.3	46.3	6.6
July	11.0	-33.8	-22.9	7.3	4.2	2.8	-15.9	6.4
Aug.	4.4	-31.7	-27.3	8.0	13.5	6.0	-7.9	6.6
Sep.	5.6	56.9	62.4	8.0	-23.3	2.2	41.3	6.4
Oct.	7.2	-15.8	-8.6	8.3	20.4	6.7	18.5	6.8
Nov.	7.5	53.8	61.2	9.5	-7.3	11.1	65.0	7.1
Dec.	19.9	54.2	74.1	9.7	-8.0	30.3	96.4	6.5
2003 Jan.	-7.6	-51.0	-58.6	9.1	2.6	27.2	-28.8	6.5
Feb.	7.3	-1.6	5.7	9.9	2.5	15.5	23.7	7.2
Mar. <sup>(p)</sup>	7.8	38.7	46.5	11.5	-6.2	11.8	52.1	7.7

Source: ECB.

1) Monetary aggregates comprise monetary liabilities of MFIs and central government (Post Office, Treasury) vis-à-vis non-MFI euro area residents excluding central government.

2) M3 and its components exclude holdings by non-residents of the euro area of money market fund shares/units and debt securities up to 2 years.

M3 <sup>2)</sup>						
Repurchase agreements	Money market fund shares/units	Debt securities up to 2 years <sup>5)</sup>	Total	Index Dec. 01=100 <sup>3)</sup>		
9	10	11	12	13		
225.7	381.2	147.6	5,249.9	96.71	2001 Sep.	
235.1	392.3	149.5	5,274.7	97.16	Oct.	
225.9	400.8	152.2	5,327.1	98.16	Nov.	
218.5	398.0	145.9	5,427.0	100.00	Dec.	
216.2	416.6	141.8	5,414.4	99.83	2002 Jan.	
221.1	427.0	138.8	5,415.5	99.84	Feb.	
229.6	431.2	137.2	5,453.0	100.56	Mar.	
228.1	437.5	134.7	5,491.5	101.35	Apr.	
234.8	442.6	144.0	5,534.2	102.23	May	
229.6	439.2	132.9	5,554.4	102.70	June	
228.8	450.3	125.5	5,547.4	102.45	July	
236.5	463.4	126.5	5,560.8	102.70	Aug.	
238.3	460.4	131.3	5,605.7	103.52	Sep.	
235.6	462.7	133.6	5,625.4	103.89	Oct.	
229.6	477.1	131.2	5,695.3	105.24	Nov.	
226.4	470.1	128.3	5,783.3	106.77	Dec.	
233.0	534.7	107.0	5,780.0	106.96	2003 Jan.	
233.9	547.0	107.9	5,817.6	107.65	Feb.	
223.3	550.4	101.1	5,854.1	108.35	Mar. <sup>(6)</sup>	

M3 <sup>2)</sup>						
Repurchase agreements	Money market fund shares/units	Debt securities up to 2 years <sup>5)</sup>	Total	Annual growth rate <sup>3)</sup> (%)		
9	10	11	12	13		
9.5	11.5	0.6	24.2	7.3	2001 Oct.	
-9.2	9.7	5.2	54.4	7.6	Nov.	
-7.4	-1.3	-7.8	99.9	7.6	Dec.	
-2.3	19.5	-0.2	-9.1	7.7	2002 Jan.	
4.9	10.4	-3.9	0.7	7.3	Feb.	
8.4	3.3	0.2	39.0	7.3	Mar.	
-1.5	7.9	-3.6	42.6	7.2	Apr.	
6.7	4.0	9.5	47.8	7.5	May	
-6.1	-7.2	-7.8	25.2	7.2	June	
-0.7	12.0	-8.6	-13.2	6.9	July	
7.7	12.3	1.1	13.2	7.1	Aug.	
2.4	-2.7	3.6	44.6	7.0	Sep.	
-2.8	2.1	2.5	20.3	6.9	Oct.	
-4.4	14.7	-2.6	72.8	7.2	Nov.	
-3.2	-6.6	-3.8	82.9	6.8	Dec.	
15.1	19.6	4.3	10.2	7.1	2003 Jan.	
0.9	12.1	0.7	37.3	7.8	Feb.	
-10.6	4.2	-7.7	38.0	7.7	Mar. <sup>(6)</sup>	

3) For the calculations of the index and the growth rates, see the technical notes.

4) Calculated from monthly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

5) Includes money market paper. For further details, see the general notes.

**Table 2.4 (cont'd)**
**Monetary aggregates <sup>1)</sup> and counterparts**
*(EUR billions and percentage growth rates, unless otherwise indicated)*
**3. Seasonally adjusted levels at the end of the period**

	M2								Total	Index <sup>4)</sup>
	M1				Other short-term deposits <sup>5)</sup>					
	Currency in circulation <sup>1)</sup>	Overnight deposits <sup>2)</sup>	Total	Index <sup>4)</sup>	Total	Index <sup>4)</sup>	Total	Index <sup>4)</sup>		
2001 Sep.	309.0	1,819.5	2,128.5	96.40	2,392.8	97.47	4,521.3	96.96		
Oct.	297.2	1,841.8	2,139.0	96.90	2,406.3	98.00	4,545.3	97.48		
Nov.	279.8	1,870.3	2,150.0	97.37	2,421.1	98.56	4,571.1	97.99		
Dec.	233.3	1,917.8	2,151.1	97.43	2,447.8	99.64	4,598.9	98.59		
2002 Jan.	251.7	1,924.5	2,176.2	98.52	2,452.9	99.83	4,629.1	99.21		
Feb.	244.8	1,932.3	2,177.1	98.57	2,449.6	99.71	4,626.7	99.17		
Mar.	254.2	1,921.7	2,175.8	98.52	2,471.8	100.64	4,647.7	99.64		
Apr.	263.4	1,939.2	2,202.7	99.81	2,477.4	100.95	4,680.1	100.41		
May	272.5	1,945.4	2,217.9	100.60	2,481.1	101.24	4,699.0	100.94		
June	281.9	1,948.2	2,230.1	101.24	2,486.5	101.64	4,716.6	101.45		
July	292.3	1,959.4	2,251.7	102.17	2,497.1	101.88	4,748.9	102.02		
Aug.	299.1	1,970.9	2,270.1	103.01	2,503.4	102.15	4,773.4	102.56		
Sep.	307.5	1,988.5	2,296.0	104.19	2,511.1	102.47	4,807.2	103.28		
Oct.	315.7	1,996.0	2,311.7	104.91	2,531.8	103.33	4,843.5	104.08		
Nov.	321.9	2,017.8	2,339.7	106.23	2,532.7	103.37	4,872.4	104.73		
Dec.	332.8	2,032.3	2,365.1	107.03	2,527.5	103.29	4,892.6	105.06		
2003 Jan.	317.3	2,042.1	2,359.5	107.83	2,538.4	103.79	4,897.9	105.70		
Feb.	323.8	2,055.6	2,379.4	108.74	2,551.9	104.35	4,931.3	106.42		
Mar. <sup>(p)</sup>	332.4	2,073.8	2,406.2	110.00	2,572.2	105.21	4,978.5	107.47		

**4. Seasonally adjusted flows <sup>7)</sup>**

	M2										
	M1					Other short-term deposits <sup>5)</sup>			Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)
	Currency in circulation <sup>1)</sup>	Overnight deposits <sup>2)</sup>	Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)	Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)			
									3	4	5
2001 Oct.	-11.8	22.9	11.1	0.5	5.1	12.9	0.5	5.7	24.0	0.5	5.4
Nov.	-17.4	27.8	10.3	0.5	5.9	13.8	0.6	5.9	24.1	0.5	5.9
Dec.	-46.4	47.7	1.3	0.1	5.4	26.5	1.1	7.2	27.8	0.6	6.4
2002 Jan.	18.4	5.7	24.1	1.1	6.6	4.8	0.2	6.9	28.8	0.6	6.8
Feb.	-6.9	8.0	1.0	0.0	6.1	-3.0	-0.1	6.5	-2.0	0.0	6.3
Mar.	9.3	-10.2	-0.9	0.0	6.0	22.8	0.9	6.5	21.9	0.5	6.3
Apr.	9.3	19.0	28.3	1.3	6.7	7.6	0.3	6.2	35.9	0.8	6.4
May	9.1	8.4	17.5	0.8	6.8	7.3	0.3	6.6	24.7	0.5	6.7
June	9.3	4.8	14.1	0.6	6.9	9.8	0.4	6.0	23.9	0.5	6.4
July	10.5	10.1	20.5	0.9	7.6	5.8	0.2	5.5	26.3	0.6	6.5
Aug.	6.8	11.8	18.6	0.8	7.7	6.6	0.3	5.4	25.2	0.5	6.5
Sep.	8.4	17.5	25.9	1.1	8.1	7.7	0.3	5.1	33.7	0.7	6.5
Oct.	8.2	7.6	15.8	0.7	8.3	21.1	0.8	5.4	37.0	0.8	6.8
Nov.	6.2	22.9	29.1	1.3	9.1	1.0	0.0	4.9	30.2	0.6	6.9
Dec.	10.9	6.7	17.6	0.8	9.9	-1.9	-0.1	3.7	15.6	0.3	6.6
2003 Jan.	6.5	11.2	17.7	0.7	9.5	12.2	0.5	4.0	29.8	0.6	6.5
Feb.	6.4	13.5	19.9	0.8	10.3	13.6	0.5	4.7	33.6	0.7	7.3
Mar. <sup>(p)</sup>	8.7	18.9	27.5	1.2	11.6	21.2	0.8	4.5	48.7	1.0	7.9

Source: ECB.

1) Monetary aggregates comprise monetary liabilities of MFIs and central government (Post Office, Treasury) vis-à-vis non-MFI euro area residents excluding central government.

2) M3 and its components exclude holdings by non-residents of the euro area of money market fund shares/units and debt securities up to 2 years.

3) Loans, with other components of credit, are shown without seasonal adjustment on page 20\*.

4) For the calculations of the index and the growth rates, see the technical notes.



M3 <sup>2)</sup>				Loans to other euro area residents (excluding general government) <sup>3)</sup>		
Marketable instruments <sup>6)</sup>		Total	Index <sup>4)</sup>	Total	Index <sup>4)</sup>	
Total	Index <sup>4)</sup>					
9	10	11	12	13	14	
761.9	99.55	5,283.2	97.33	6,432.5	98.63	2001 Sep.
783.6	102.31	5,329.0	98.16	6,466.8	99.14	Oct.
784.0	102.85	5,355.1	98.68	6,511.5	99.81	Nov.
789.1	103.50	5,388.0	99.28	6,513.1	99.91	Dec.
778.5	102.74	5,407.5	99.71	6,534.3	100.19	2002 Jan.
780.9	102.96	5,407.6	99.70	6,558.6	100.59	Feb.
784.5	103.50	5,432.2	100.18	6,595.8	101.19	Mar.
787.6	103.99	5,467.7	100.91	6,625.1	101.74	Apr.
800.8	105.62	5,499.8	101.59	6,661.8	102.45	May
802.3	105.65	5,518.9	102.04	6,660.8	102.56	June
809.9	106.61	5,558.7	102.66	6,680.5	102.79	July
824.0	108.35	5,597.4	103.37	6,718.4	103.38	Aug.
838.3	110.20	5,645.5	104.25	6,737.2	103.69	Sep.
838.5	110.22	5,682.0	104.94	6,757.2	104.04	Oct.
843.8	111.14	5,716.2	105.63	6,764.4	104.26	Nov.
853.4	112.36	5,746.0	106.08	6,775.0	104.64	Dec.
877.9	114.14	5,775.7	106.88	6,805.5	105.14	2003 Jan.
882.0	114.63	5,813.4	107.57	6,838.2	105.68	Feb.
859.5	111.69	5,837.9	108.05	6,839.4	105.76	Mar. <sup>(p)</sup>

M3 <sup>2)</sup>							Loans to other euro area residents (excluding general government) <sup>3)</sup>			
Marketable instruments <sup>6)</sup>			Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)	3-month moving average (centred) (%)	Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)	
Total	Monthly growth rate <sup>4)</sup> (%)	Annual growth rate <sup>4)</sup> (%)								
12	13	14	15	16	17	18	19	20	21	
21.1	2.8	19.4	45.1	0.9	7.3	7.2	33.0	0.5	6.5	2001 Oct.
4.1	0.5	19.4	28.2	0.5	7.7	7.6	44.1	0.7	6.6	Nov.
5.0	0.6	17.6	32.8	0.6	7.9	7.8	6.0	0.1	6.1	Dec.
-5.8	-0.7	13.9	23.1	0.4	7.7	7.6	18.7	0.3	5.7	2002 Jan.
1.6	0.2	13.5	-0.3	0.0	7.3	7.4	26.2	0.4	5.6	Feb.
4.1	0.5	12.8	26.0	0.5	7.2	7.2	38.7	0.6	5.5	Mar.
3.7	0.5	12.6	39.6	0.7	7.3	7.3	36.0	0.5	5.5	Apr.
12.4	1.6	12.9	37.1	0.7	7.6	7.3	46.4	0.7	5.8	May
0.2	0.0	10.8	24.1	0.4	7.1	7.2	6.9	0.1	5.4	June
7.3	0.9	10.1	33.6	0.6	7.0	7.0	15.3	0.2	5.1	July
13.3	1.6	9.8	38.5	0.7	7.0	7.0	38.4	0.6	5.4	Aug.
14.1	1.7	10.7	47.7	0.9	7.1	7.0	19.9	0.3	5.1	Sep.
0.2	0.0	7.7	37.1	0.7	6.9	7.0	22.6	0.3	4.9	Oct.
7.0	0.8	8.1	37.1	0.7	7.0	6.9	14.7	0.2	4.5	Nov.
9.2	1.1	8.6	24.9	0.4	6.9	7.0	24.6	0.4	4.7	Dec.
13.5	1.6	11.1	43.4	0.8	7.2	7.3	32.1	0.5	4.9	2003 Jan.
3.8	0.4	11.3	37.4	0.6	7.9	7.7	34.9	0.5	5.1	Feb.
-22.6	-2.6	7.9	26.0	0.4	7.9	.	4.8	0.1	4.5	Mar. <sup>(p)</sup>

5) Other short-term deposits comprise deposits with an agreed maturity of up to two years and deposits redeemable at notice of up to three months.

6) Marketable instruments comprise repurchase agreements, money market fund shares/units and debt securities up to two years.

7) Calculated from monthly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.4 (cont'd)**
**Monetary aggregates <sup>1)</sup> and counterparts**
*(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)*
**5. Main counterparts of M3: levels at the end of the period**

	Longer-term MFI liabilities				Credit <sup>2)</sup>				Net external assets	Fixed assets
	Deposits with agreed maturity over 2 years	Deposits redeemable at notice over 3 months	Debt securities over 2 years	Capital and reserves	Credit to general government	Credit to other euro area residents	Of which loans	Index Dec. 01 =100 <sup>3)</sup>		
	1	2	3	4	5	6	7	8	9	10
2001 Sep.	1,163.0	118.6	1,604.7	970.4	2,025.0	7,284.1	6,421.9	98.47	54.3	177.6
Oct.	1,162.9	116.9	1,617.0	981.1	2,014.0	7,325.2	6,451.6	98.90	77.3	178.3
Nov.	1,161.6	115.8	1,606.6	982.6	2,034.3	7,379.6	6,501.9	99.67	97.7	179.1
Dec.	1,169.1	115.8	1,613.6	995.2	2,026.9	7,424.4	6,519.3	100.00	84.7	180.0
2002 Jan.	1,173.2	112.3	1,632.9	1,007.5	2,051.1	7,444.4	6,534.4	100.19	70.1	177.5
Feb.	1,174.7	111.2	1,638.8	1,011.5	2,055.3	7,465.4	6,548.7	100.44	65.2	176.6
Mar.	1,178.2	109.9	1,655.8	1,010.7	2,081.7	7,513.2	6,606.1	101.35	54.0	176.4
Apr.	1,177.3	108.0	1,650.2	1,004.6	2,061.7	7,550.9	6,641.2	101.99	52.5	176.2
May	1,179.6	106.8	1,660.6	1,008.8	2,071.5	7,573.6	6,659.7	102.42	90.8	176.4
June	1,181.7	106.6	1,655.2	985.8	2,069.1	7,598.0	6,691.1	103.02	111.3	176.2
July	1,180.4	106.6	1,670.1	993.4	2,065.9	7,587.0	6,692.6	102.98	108.5	176.7
Aug.	1,168.9	106.8	1,687.0	1,004.3	2,053.0	7,592.5	6,692.3	102.98	129.0	177.7
Sep.	1,169.5	107.2	1,680.8	1,015.9	2,073.9	7,626.6	6,726.8	103.53	138.7	178.3
Oct.	1,170.5	106.2	1,688.7	1,013.9	2,068.8	7,657.3	6,742.7	103.81	165.5	179.3
Nov.	1,174.0	105.7	1,698.9	1,016.0	2,083.6	7,678.0	6,754.5	104.11	199.2	177.0
Dec.	1,186.4	105.8	1,685.0	995.6	2,056.4	7,724.4	6,778.0	104.69	208.9	180.2
2003 Jan.	1,187.2	106.3	1,679.4	1,001.8	2,102.4	7,747.1	6,803.9	105.12	183.5	176.6
Feb.	1,197.0	105.0	1,688.9	1,004.3	2,125.7	7,774.2	6,827.2	105.51	190.0	175.1
Mar. <sup>(4)</sup>	1,203.4	103.5	1,696.2	996.8	2,137.1	7,800.0	6,850.9	105.93	189.1	172.9

**6. Main counterparts of M3: flows <sup>4)</sup>**

	Longer-term MFI liabilities				Credit <sup>2)</sup>				Net external assets	Fixed assets
	Deposits with agreed maturity over 2 years	Deposits redeemable at notice over 3 months	Debt securities over 2 years	Capital and reserves	Credit to general government	Credit to other euro area residents	Of which loans	Annual growth rate <sup>3)</sup> (%)		
	1	2	3	4	5	6	7	8	9	10
2001 Oct.	-0.3	-1.7	12.7	7.9	-12.3	36.8	28.4	6.5	25.0	0.7
Nov.	-1.6	-1.1	18.7	2.9	23.8	48.6	49.7	6.6	27.2	1.1
Dec.	7.3	0.1	7.6	13.6	-6.6	45.9	21.8	6.0	-9.0	1.1
2002 Jan.	3.6	-3.6	11.0	14.2	18.7	17.5	12.6	5.7	-14.3	-2.5
Feb.	1.6	-1.0	9.3	-0.8	3.9	24.9	16.2	5.6	-11.0	-0.9
Mar.	3.7	-1.3	18.7	2.7	22.1	48.5	59.0	5.5	-5.6	0.0
Apr.	-0.2	-1.9	1.0	-5.2	-18.5	44.6	41.7	5.5	-2.6	-0.2
May	3.5	-1.2	19.7	3.7	6.9	32.1	28.2	5.8	39.0	0.2
June	3.3	-0.2	8.6	-17.1	0.1	32.5	39.3	5.4	41.0	-0.2
July	1.3	0.0	13.8	9.6	-3.8	-15.1	-2.9	5.1	2.7	0.5
Aug.	2.2	0.2	2.7	9.0	-14.0	7.1	0.3	5.4	14.3	1.0
Sep.	1.0	0.4	12.1	9.3	14.3	40.3	35.4	5.1	18.1	0.6
Oct.	1.3	-1.0	9.1	-0.1	-3.0	31.0	18.6	5.0	29.4	0.9
Nov.	3.6	-0.5	16.6	2.7	15.1	26.2	19.4	4.5	35.1	-2.3
Dec.	13.5	0.1	-10.1	-3.1	-7.5	58.9	37.5	4.7	17.8	1.7
2003 Jan.	-3.9	0.5	6.0	7.4	20.6	25.3	27.5	4.9	5.8	-2.4
Feb.	9.9	-1.2	10.4	5.3	16.4	30.8	25.5	5.0	12.0	-1.5
Mar. <sup>(4)</sup>	6.7	-1.6	9.0	-1.7	13.9	31.3	27.3	4.5	7.4	-0.2

1) Monetary aggregates comprise monetary liabilities of MFIs and central government (Post Office, Treasury) vis-à-vis non-MFI euro area residents excluding central government.

2) Credit comprises loans granted to non-MFIs resident in the euro area and holdings of securities issued by non-MFIs resident in the euro area.

3) For the calculations of the index and the growth rates, see the technical notes.

4) Calculated from monthly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.5**

**MFI loans by counterpart, type and original maturity <sup>1)</sup>**

(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated))

**1. Loans to non-monetary financial corporations and to government: levels at the end of the period**

	Non-monetary financial intermediaries except insurance corporations and pension funds			Insurance corporations and pension funds			General government							
	Total	Up to 1 year	Index Dec.01 =100 <sup>2)</sup>	Total	Up to 1 year	Index Dec.01 =100 <sup>2)</sup>	Central government <sup>3)</sup>	Other general government					Total	Index Dec.01 =100 <sup>2)</sup>
								State government	Local government	Social security funds	Over 5 years	Over 5 years		
	8	9	10	11	12	13							14	
2001 Q2	425.5	280.7	97.5	36.2	26.7	102.9	174.1	294.0	254.9	350.4	312.4	17.2	835.7	98.6
Q3	409.0	256.8	93.7	37.4	26.9	107.3	167.3	293.9	254.1	349.7	312.0	18.9	829.8	98.0
Q4	434.4	276.0	100.0	34.9	24.8	100.0	170.1	298.3	252.0	362.9	322.3	16.4	847.7	100.0
2002 Q1	459.4	305.3	105.9	38.9	28.3	111.3	180.3	294.0	248.2	361.8	317.9	16.4	852.6	100.6
Q2	461.1	303.4	106.3	42.5	30.5	120.8	163.0	280.9	245.8	366.6	314.5	19.5	830.1	98.0
Q3	452.4	288.0	104.3	42.1	30.1	113.6	156.4	274.7	241.6	367.8	315.6	21.9	820.8	96.9
Q4 <sup>4)</sup>	454.7	287.4	105.5	32.9	20.0	88.9	155.5	277.7	237.0	382.0	324.6	21.0	836.2	98.8

**2. Loans to non-monetary financial corporations and to government: flows <sup>4)</sup>**

	Non-monetary financial intermediaries except insurance corporations and pension funds			Insurance corporations and pension funds			General government							
	Total	Up to 1 year	Annual growth rate <sup>2)</sup> (%)	Total	Up to 1 year	Annual growth rate <sup>2)</sup> (%)	Central government <sup>3)</sup>	Other general government					Total	Annual growth rate <sup>2)</sup> (%)
								State government	Local government	Social security funds	Over 5 years	Over 5 years		
	8	9	10	11	12	13							14	
2001 Q3	-16.8	-23.9	7.8	1.5	0.2	13.8	-6.2	0.0	-0.7	-0.7	-0.4	1.7	-5.2	-0.8
Q4	27.5	21.3	11.8	-2.5	-2.1	11.3	1.9	4.4	-2.1	13.2	10.3	-2.5	16.9	-0.9
2002 Q1	25.6	29.8	10.5	3.9	3.5	7.5	10.1	-4.3	-3.8	-1.1	-4.4	0.1	4.8	0.0
Q2	1.6	-1.8	9.0	3.3	2.1	17.4	-16.2	-13.1	-2.4	4.8	-3.5	3.1	-21.4	-0.6
Q3	-8.7	-15.4	11.3	-2.5	-0.4	5.9	-6.7	-6.8	-4.7	1.2	1.1	2.4	-9.9	-1.1
Q4 <sup>4)</sup>	5.5	2.8	5.5	-9.2	-10.2	-11.1	-0.4	3.1	-4.6	14.2	9.0	-0.9	15.9	-1.2

Source: ECB.

1) Corresponding ESA 95 sector codes: non-financial corporations, S.11; households, S.14; non-profit institutions serving households, S.15; non-monetary financial intermediaries except insurance corporations and pension funds (corresponding to other financial intermediaries in the ESA 95), S.123 (including financial auxiliaries, S.124); insurance corporations and pension funds, S.125; general government, S.13.

2) For the calculation of the index and the growth rates, see the technical notes.

3) A maturity breakdown is not available for loans to central government.

4) Calculated from quarterly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.5 (cont'd)****MFI loans by counterpart, type and original maturity <sup>1)</sup>***(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)***3. Loans to non-financial sectors other than government: levels at the end of the period**

	Non-financial corporations					Consumer credit <sup>3)</sup>				
	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Index Dec.01 =100 <sup>2)</sup>	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Index Dec.01 =100 <sup>2)</sup>
	1	2	3	4	5	6	7	8	9	10
2001 Q2	1,051.7	456.3	1,343.7	2,851.8	97.8	100.1	171.1	217.7	488.8	98.4
Q3	1,027.2	467.3	1,372.1	2,866.6	98.7	100.6	170.7	221.7	493.1	99.3
Q4	1,019.0	489.8	1,394.5	2,903.3	100.0	102.5	170.4	224.2	497.1	100.0
2002 Q1	1,018.8	494.8	1,418.9	2,932.5	100.8	99.3	170.5	226.5	496.2	99.8
Q2	1,008.4	502.7	1,434.1	2,945.2	102.1	102.2	173.6	230.1	505.9	101.3
Q3	992.9	505.4	1,450.4	2,948.8	102.2	104.1	175.6	233.8	513.5	102.4
Q4 <sup>(p)</sup>	987.7	513.9	1,469.3	2,970.9	103.5	102.2	180.2	235.9	518.3	103.7

**4. Loans to non-financial sectors other than government: flows <sup>4)</sup>**

	Non-financial corporations					Consumer credit <sup>3)</sup>				
	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Annual growth rate <sup>2)</sup> (%)	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Annual growth rate <sup>2)</sup> (%)
	1	2	3	4	5	6	7	8	9	10
2001 Q3	-19.2	14.3	32.3	27.4	7.6	0.9	-0.5	4.1	4.5	3.6
Q4	-9.1	23.2	22.4	36.5	6.2	1.8	-0.7	2.4	3.5	3.0
2002 Q1	-2.1	4.7	20.3	22.8	5.0	-4.2	1.2	2.3	-0.7	3.7
Q2	-2.3	13.3	27.5	38.6	4.4	2.9	0.7	3.7	7.3	3.0
Q3	-13.1	-1.2	16.3	2.0	3.5	1.9	0.0	3.7	5.6	3.2
Q4 <sup>(p)</sup>	1.2	12.4	25.8	39.4	3.5	1.3	4.1	1.0	6.3	3.7

Source: ECB.

1) Corresponding ESA 95 sector codes: non-financial corporations, S.11; households, S.14; non-profit institutions serving households, S.15; non-monetary financial intermediaries except insurance corporations and pension funds (corresponding to other financial intermediaries in the ESA 95), S.123 (including financial auxiliaries, S.124); insurance corporations and pension funds, S.125; general government, S.13.

2) For the calculation of the index and the growth rates, see the technical notes.

Households											Non-profit institutions serving households			
Lending for house purchase <sup>3)</sup>					Other lending					Total	Index Dec.01 =100 <sup>2)</sup>	Total	Index Dec.01 =100 <sup>2)</sup>	
Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Index Dec.01 =100 <sup>2)</sup>	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Index Dec.01 =100 <sup>2)</sup>					
11	12	13	14	15	16	17	18	19	20	21	22	23	24	
22.3	62.4	1,868.0	1,952.8	96.6	148.8	100.9	342.7	592.4	100.1	3,034.0	97.5	40.7	104.3	2001 Q2
22.5	61.1	1,905.9	1,989.5	98.4	144.3	100.8	342.1	587.2	99.3	3,069.8	98.7	39.0	99.9	Q3
22.7	61.0	1,937.6	2,021.3	100.0	143.9	101.9	343.6	589.3	100.0	3,107.6	100.0	39.1	100.0	Q4
23.1	60.7	1,975.6	2,059.3	101.9	142.1	101.2	337.7	581.1	99.5	3,136.7	101.1	38.7	99.1	2002 Q1
23.7	60.7	2,019.8	2,104.1	104.1	145.6	103.3	339.4	588.4	101.0	3,198.4	103.1	43.9	112.5	Q2
24.6	60.7	2,059.7	2,145.0	106.1	141.8	100.0	343.3	585.2	101.0	3,243.7	104.6	39.8	102.0	Q3
25.8	64.5	2,087.5	2,177.8	107.6	145.9	95.8	342.3	584.0	101.5	3,280.2	105.8	39.4	102.5	Q4 <sup>4)</sup>

Households											Non-profit institutions serving households			
Lending for house purchase <sup>3)</sup>					Other lending					Total	Annual growth rate <sup>2)</sup> (%)	Total	Annual growth rate <sup>2)</sup> (%)	
Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Annual growth rate <sup>2)</sup> (%)	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Annual growth rate <sup>2)</sup> (%)					
11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0.2	-1.4	38.4	37.3	7.6	-4.5	0.1	0.2	-4.3	2.1	37.4	5.9	-1.7	3.7	2001 Q3
0.1	-0.1	31.4	31.4	6.9	-0.4	2.3	2.0	3.9	1.7	38.9	5.2	0.0	2.2	Q4
0.4	-0.4	38.1	38.1	7.3	-1.3	-0.3	-1.2	-2.8	0.4	34.6	5.4	-0.4	3.9	2002 Q1
0.6	0.0	44.2	44.8	7.8	3.7	2.4	2.3	8.4	0.9	60.6	5.7	5.3	7.9	Q2
0.9	0.0	39.6	40.5	7.8	-3.8	-1.3	5.2	0.1	1.7	46.3	5.9	-4.1	2.1	Q3
1.2	2.0	27.4	30.5	7.6	1.8	1.0	0.4	3.2	1.5	40.0	5.8	0.2	2.5	Q4 <sup>4)</sup>

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

4) Calculated from quarterly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.6****Deposits held with MFIs, by counterpart and instrument <sup>1)</sup>***(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)***1. Deposits held by non-monetary financial corporations and by government: levels at the end of the period**

	Non-monetary financial intermediaries except insurance corporations and pension funds					Insurance corporations and pension funds					General government					
	Total <sup>2)</sup>				Index Dec.01 =100 <sup>3)</sup>	Total <sup>2)</sup>				Index Dec.01 =100 <sup>3)</sup>	Central government	Other general government			Total	Index Dec.01 =100 <sup>3)</sup>
	Over-night	With agreed maturity	Repos			Over-night	With agreed maturity	Repos				State government	Local government	Social security funds		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	455.6	164.3	196.0	89.3	100.6	486.3	41.4	424.2	16.9	98.2	165.5	31.4	66.8	60.8	324.6	108.6
Q3	455.3	162.7	201.8	85.6	98.8	487.8	39.3	426.9	17.9	98.5	147.8	33.3	67.4	60.4	308.9	103.3
Q4	465.8	157.9	217.3	85.3	100.0	495.4	48.0	427.5	16.4	100.0	139.0	30.0	68.9	61.0	299.0	100.0
2002 Q1	485.5	157.8	228.8	92.8	103.8	498.6	43.9	433.0	17.7	100.6	157.5	31.0	64.2	61.8	314.5	105.4
Q2	492.4	164.0	229.9	93.0	104.8	503.9	48.4	432.9	19.0	101.7	155.0	34.2	65.7	59.8	314.7	105.4
Q3	488.5	158.2	219.4	105.2	106.4	506.3	50.1	437.9	14.4	102.2	146.3	34.3	63.8	55.0	299.4	99.1
Q4 <sup>4)</sup>	480.4	154.0	223.8	96.0	104.9	522.6	56.3	445.4	17.4	105.5	136.4	31.7	68.8	53.0	290.0	96.0

**2. Deposits held by non-monetary financial corporations and by government: flows <sup>4)</sup>**

	Non-monetary financial intermediaries except insurance corporations and pension funds					Insurance corporations and pension funds					General government					
	Total <sup>2)</sup>				Annual growth rate <sup>3)</sup> (%)	Total <sup>2)</sup>				Annual growth rate <sup>3)</sup> (%)	Central government	Other general government			Total	Annual growth rate <sup>3)</sup> (%)
	Over-night	With agreed maturity	Repos			Over-night	With agreed maturity	Repos				State government	Local government	Social security funds		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q3	-8.2	-1.6	-2.2	-3.7	2.3	1.5	-2.1	2.7	1.0	4.6	-17.7	1.9	0.5	-0.5	-15.7	-2.0
Q4	5.7	-4.7	10.5	-0.2	3.8	7.6	8.8	0.6	-1.4	3.3	-8.8	-3.4	1.5	0.7	-10.0	-6.9
2002 Q1	17.7	0.0	9.6	7.4	5.5	3.0	-4.2	5.3	1.3	3.1	19.0	1.0	-4.7	0.7	16.1	3.8
Q2	4.8	5.8	1.4	-0.4	4.2	5.3	4.5	-0.1	1.2	3.6	-2.5	3.3	1.5	-2.1	0.2	-2.9
Q3	7.3	-6.2	1.2	12.2	7.7	2.5	1.7	5.1	-4.6	3.8	-12.5	0.1	-1.9	-4.7	-19.0	-4.1
Q4 <sup>4)</sup>	-6.9	-4.2	4.0	-7.7	4.9	16.3	6.2	7.5	3.0	5.5	-9.8	-2.6	5.1	-2.0	-9.3	-4.0

Source: ECB.

1) Corresponding ESA 95 sector codes: non-financial corporations, S.11; households, S.14; non-profit institutions serving households, S.15; non-monetary financial intermediaries except insurance corporations and pension funds (corresponding to other financial intermediaries in the ESA 95), S.123 (including financial auxiliaries, S.124); insurance corporations and pension funds, S.125; general government, S.13.

2) Including deposits redeemable at notice.

3) For the calculation of the index and the growth rates, see the technical notes.

4) Calculated from quarterly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.6 (cont'd)****Deposits held with MFIs, by counterpart and instrument <sup>1)</sup>***(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)***3. Deposits held by non-financial sectors other than government: levels at the end of the period**

	Non-financial corporations						Households <sup>2)</sup>					
	Overnight	With agreed maturity	Redeemable at notice	Repos	Total	Index Dec.01 =100 <sup>3)</sup>	Overnight	With agreed maturity	Redeemable at notice	Repos	Total	Index Dec.01 =100 <sup>3)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12
2001 Q2	514.6	331.2	24.4	29.1	899.3	90.6	947.2	1,198.8	1,293.5	81.3	3,520.8	95.5
Q3	514.8	318.4	25.4	32.0	890.7	91.5	963.6	1,203.8	1,305.3	84.6	3,557.3	96.5
Q4	577.1	335.2	27.5	36.2	976.0	100.0	1,043.5	1,194.6	1,365.7	76.6	3,680.4	100.0
2002 Q1	529.1	344.5	27.5	33.8	934.9	95.7	1,039.1	1,180.1	1,382.6	80.6	3,682.4	100.1
Q2	555.7	337.5	27.7	37.0	957.9	99.9	1,076.3	1,174.7	1,382.0	77.0	3,710.0	100.9
Q3	562.3	337.9	28.7	36.4	965.3	100.7	1,066.7	1,172.2	1,391.8	78.4	3,709.0	100.9
Q4 <sup>4)</sup>	595.1	340.5	30.7	36.0	1,002.3	105.6	1,119.1	1,179.7	1,433.8	74.7	3,807.3	103.3

**4. Deposits held by non-financial sectors other than government: flows <sup>4)</sup>**

	Non-financial corporations						Households <sup>2)</sup>					
	Overnight	With agreed maturity	Redeemable at notice	Repos	Total	Annual growth rate <sup>3)</sup> (%)	Overnight	With agreed maturity	Redeemable at notice	Repos	Total	Annual growth rate <sup>3)</sup> (%)
	1	2	3	4	5	6	7	8	9	10	11	12
2001 Q3	3.9	1.6	0.4	3.0	8.9	5.4	16.2	5.2	12.7	3.4	37.4	6.0
Q4	62.1	14.5	2.0	4.3	82.8	10.2	80.1	-4.1	60.3	-8.0	128.3	7.6
2002 Q1	-48.5	9.2	0.0	-2.5	-41.8	8.0	-4.5	-10.1	15.1	4.0	4.5	6.5
Q2	33.0	4.6	0.2	3.0	40.8	10.3	36.9	-5.1	1.6	-3.7	29.7	5.7
Q3	5.6	1.4	0.9	0.0	8.0	10.1	-9.2	-2.8	9.7	1.4	-0.8	4.5
Q4 <sup>4)</sup>	36.5	7.8	3.1	-0.4	47.1	5.6	41.9	7.6	41.3	-3.7	87.1	3.3

Source: ECB.

1) Corresponding ESA 95 sector codes: non-financial corporations, S.11; households, S.14; non-profit institutions serving households, S.15; non-monetary financial intermediaries except insurance corporations and pension funds (corresponding to other financial intermediaries in the ESA 95), S.123 (including financial auxiliaries, S.124); insurance corporations and pension funds, S.125; general government, S.13.

2) Comprises households (S.14) and non-profit institutions serving households (S.15).

3) For the calculation of the index and the growth rates, see the technical notes.

4) Calculated from quarterly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.7**
**Main MFI claims on and liabilities to non-residents of the euro area**
*(EUR billions (not seasonally adjusted) and percentage growth rates, unless otherwise indicated)*
**1. Levels at the end of the period**

	Loans to non-residents								Holdings of securities other than shares issued by non-residents							
	Banks <sup>1)2)</sup>		Non-banks				Total	Index Dec.01 =100 <sup>3)</sup>	Banks <sup>1)</sup>		Non-banks				Total	Index Dec.01 =100 <sup>3)</sup>
	Total	Index Dec.01 =100 <sup>3)</sup>	General government	Other	Total	Index Dec.01 =100 <sup>3)</sup>			Total	Index Dec.01 =100 <sup>3)</sup>	General government	Other	Total	Index Dec.01 =100 <sup>3)</sup>		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	1,073.2	94.3	79.2	519.0	598.1	94.8	1,671.3	94.5	210.6	87.6	294.6	208.7	503.3	97.2	713.9	94.1
Q3	1,084.7	97.4	75.1	527.4	602.5	99.0	1,687.2	97.9	206.7	88.8	273.8	213.1	486.9	97.1	693.6	94.5
Q4	1,119.7	100.0	75.2	543.3	618.6	100.0	1,738.3	100.0	236.6	100.0	290.2	218.0	508.2	100.0	744.8	100.0
2002 Q1	1,104.8	98.5	76.8	556.1	633.0	102.5	1,737.8	99.9	262.9	110.8	275.9	217.8	493.7	97.3	756.6	101.6
Q2	1,083.4	102.9	73.2	529.6	602.9	104.8	1,686.3	103.6	244.0	109.2	244.5	214.6	459.2	96.0	703.2	100.2
Q3	1,122.2	105.6	76.3	540.1	616.3	106.3	1,738.5	105.9	249.8	110.2	253.1	231.8	484.9	99.9	734.7	103.2
Q4 <sup>(p)</sup>	1,169.2	112.9	73.4	533.1	606.4	108.1	1,775.6	111.2	242.2	109.9	245.7	232.7	478.4	101.6	720.6	104.2

**2. Flows <sup>4)</sup>**

	Loans to non-residents								Holdings of securities other than shares issued by non-residents							
	Banks <sup>1)2)</sup>		Non-banks				Total	Annual growth rate <sup>3)</sup> (%)	Banks <sup>1)</sup>		Non-banks				Total	Annual growth rate <sup>3)</sup> (%)
	Total	Annual growth rate <sup>3)</sup> (%)	General government	Other	Total	Annual growth rate <sup>3)</sup> (%)			Total	Annual growth rate <sup>3)</sup> (%)	General government	Other	Total	Annual growth rate <sup>3)</sup> (%)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q3	34.8	10.1	-4.1	30.5	26.4	19.6	61.2	13.4	2.9	26.7	-22.3	21.9	-0.4	3.2	2.6	9.2
Q4	29.2	14.0	0.1	6.1	6.2	16.0	35.4	14.7	26.0	33.3	16.7	-2.1	14.6	7.3	40.6	14.3
2002 Q1	-17.3	4.4	3.6	11.8	15.4	6.3	-2.0	5.1	25.6	35.7	-10.9	-2.8	-13.7	0.9	11.9	10.7
Q2	50.2	9.1	-3.6	18.1	14.5	10.6	64.7	9.7	-3.8	24.7	-34.1	27.5	-6.6	-1.2	-10.4	6.5
Q3	28.4	8.5	3.0	5.3	8.3	7.4	36.7	8.1	2.3	24.1	4.6	14.0	18.6	2.9	20.9	9.2
Q4 <sup>(p)</sup>	76.9	12.9	-2.9	13.3	10.4	8.1	87.3	11.2	-0.7	9.9	-7.5	15.7	8.2	1.6	7.5	4.2

Source: ECB.

1) The term "banks" is used in this table to indicate institutions of a similar type to MFIs resident outside the euro area.

2) Deposits placed by MFIs with banks located outside the euro area are included.



**Table 2.7 (cont'd)**

Holdings of shares and other equity issued by non-residents						Deposits held by non-residents								
Banks <sup>1)</sup>		Other		Total	Index Dec.01 =100 <sup>3)</sup>	Banks <sup>1)</sup>		Non-banks				Total	Index Dec.01 =100 <sup>3)</sup>	
Total	Index Dec.01 =100 <sup>3)</sup>	Total	Index Dec.01 =100 <sup>3)</sup>			Total	Index Dec.01 =100 <sup>3)</sup>	General government	Other	Total	Index Dec.01 =100 <sup>3)</sup>			
17	18	19	20	21	22	23	24	25	26	27	28	29	30	
61.1	87.5	97.2	107.5	158.3	98.8	1,817.5	103.3	94.9	587.1	681.9	94.3	2,499.4	100.7	2001 Q2
63.6	90.9	89.9	99.2	153.5	95.6	1,710.8	100.7	93.0	588.5	681.5	97.2	2,392.3	99.7	Q3
73.1	100.0	89.8	100.0	162.9	100.0	1,718.4	100.0	95.3	615.0	710.3	100.0	2,428.8	100.0	Q4
77.1	104.5	98.5	110.9	175.6	108.0	1,740.4	100.4	99.0	636.8	735.9	103.3	2,476.3	101.3	2002 Q1
77.0	104.2	100.9	113.4	177.9	109.3	1,605.9	98.9	96.2	607.6	703.8	104.6	2,309.7	100.6	Q2
79.5	107.6	94.3	105.9	173.9	106.7	1,644.0	99.3	102.5	613.5	715.9	105.8	2,359.9	101.2	Q3
78.7	107.4	98.7	113.2	177.4	110.6	1,605.8	99.7	98.4	596.4	694.9	105.3	2,300.7	101.4	Q4 <sup>4)</sup>

Holdings of shares and other equity issued by non-residents						Deposits held by non-residents								
Banks <sup>1)</sup>		Other		Total	Annual growth rate <sup>3)</sup> (%)	Banks <sup>1)</sup>		Non-banks				Total	Annual growth rate <sup>3)</sup> (%)	
Total	Annual growth rate <sup>3)</sup> (%)	Total	Annual growth rate <sup>3)</sup> (%)			Total	Annual growth rate <sup>3)</sup> (%)	General government	Other	Total	Annual growth rate <sup>3)</sup> (%)			
17	18	19	20	21	22	23	24	25	26	27	28	29	30	
2.4	8.5	-7.5	13.5	-5.1	11.4	-45.2	11.3	-1.9	22.4	20.6	14.0	-24.6	12.0	2001 Q3
6.3	11.8	0.8	12.9	7.1	12.4	-12.0	8.7	2.3	17.5	19.8	18.0	7.8	11.2	Q4
3.3	12.0	9.8	6.1	13.0	8.4	7.6	-2.9	4.2	19.0	23.2	9.9	30.8	0.6	2002 Q1
-0.2	19.1	2.3	5.5	2.1	10.6	-26.1	-4.2	-2.8	12.3	9.5	10.9	-16.6	-0.1	Q2
2.5	18.4	-6.7	6.8	-4.1	11.7	5.8	-1.4	6.1	2.2	8.2	8.9	14.1	1.5	Q3
-0.1	7.4	6.5	13.2	6.3	10.6	7.5	-0.3	-4.0	0.3	-3.7	5.3	3.7	1.4	Q4 <sup>4)</sup>

3) For the calculation of the index and the growth rates, see the technical notes.

4) Calculated from quarterly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

**Table 2.8****Currency analysis of certain liabilities and assets of the euro area MFIs <sup>1)</sup>***(EUR billions (not seasonally adjusted; end of period))***Liabilities outstanding****1. Deposits placed by euro area residents**

	MFIs								Non-MFIs							
	All currencies 1	Euro <sup>2)</sup> 2	Other EU currencies 3	Other currencies 4	Other currencies				All currencies 9	Euro <sup>3)</sup> 10	Other EU currencies 11	Other currencies 12	Other currencies			
					USD 5	JPY 6	CHF 7	Other 8					USD 13	JPY 14	CHF 15	Other 16
2001 Q2	4,079.7	3,590.3	52.8	436.6	309.0	43.3	65.4	19.0	5,686.6	5,476.6	30.7	179.3	133.5	21.0	11.6	13.2
Q3	4,108.4	3,628.3	48.9	431.2	300.6	41.7	71.0	17.9	5,700.0	5,503.7	28.2	168.1	125.7	19.4	10.8	12.2
Q4	4,171.9	3,699.5	46.6	425.9	307.6	33.5	67.2	17.6	5,916.6	5,715.8	26.0	174.8	127.4	23.9	10.5	13.0
2002 Q1	4,134.6	3,645.4	46.1	443.0	315.8	40.6	65.6	21.0	5,915.9	5,712.5	28.8	174.6	126.8	22.4	10.7	14.6
Q2	4,211.9	3,771.7	41.3	398.8	276.4	40.8	62.8	18.8	5,978.9	5,791.1	26.7	161.0	115.0	22.3	10.9	12.8
Q3	4,219.7	3,799.3	38.8	381.6	266.0	37.1	58.1	20.4	5,968.5	5,782.3	27.3	158.9	115.6	20.8	9.5	13.0
Q4 <sup>4)</sup>	4,416.3	4,011.7	35.3	369.2	252.6	34.0	60.2	22.5	6,102.6	5,925.5	25.1	151.9	107.7	20.1	10.9	13.2

**2. Deposits placed by non-residents of the euro area**

	Banks <sup>3)</sup>								Non-banks							
	All currencies 1	Euro <sup>2)</sup> 2	Other EU currencies 3	Other currencies 4	Other currencies				All currencies 9	Euro <sup>3)</sup> 10	Other EU currencies 11	Other currencies 12	Other currencies			
					USD 5	JPY 6	CHF 7	Other 8					USD 13	JPY 14	CHF 15	Other 16
2001 Q2	1,817.5	690.1	133.8	993.6	815.4	72.9	73.2	32.2	681.9	286.7	73.2	322.0	274.2	19.3	13.6	14.9
Q3	1,710.8	664.3	140.3	906.2	745.2	53.5	76.3	31.2	681.5	297.7	69.2	314.5	263.0	18.4	17.1	16.0
Q4	1,718.4	631.1	132.3	955.1	799.1	48.5	75.3	32.1	710.3	308.1	60.8	341.4	293.9	16.8	18.1	12.6
2002 Q1	1,740.4	661.8	144.8	933.8	781.0	44.4	74.6	33.8	735.9	312.7	66.6	356.6	302.8	20.0	18.9	14.8
Q2	1,605.9	648.9	141.6	815.4	665.8	40.5	73.4	35.7	703.8	322.4	63.3	318.1	268.7	19.4	17.8	12.2
Q3	1,644.0	703.2	147.8	793.0	649.0	37.7	73.0	33.3	715.9	335.7	68.2	312.1	261.7	17.7	16.4	16.4
Q4 <sup>4)</sup>	1,605.8	702.7	141.3	761.8	627.4	34.2	69.1	31.2	694.9	334.2	72.3	288.3	244.1	15.6	13.6	15.0

**3. Debt securities and money market paper issued by euro area MFIs <sup>4)</sup>**

	Debt securities								Money market paper							
	All currencies 1	Euro <sup>2)</sup> 2	Other EU currencies 3	Other currencies 4	Other currencies				All currencies 9	Euro <sup>3)</sup> 10	Other EU currencies 11	Other currencies 12	Other currencies			
					USD 5	JPY 6	CHF 7	Other 8					USD 13	JPY 14	CHF 15	Other 16
2001 Q2	2,731.3	2,358.3	53.9	319.1	189.3	69.4	39.6	20.8	275.5	227.0	4.3	44.2	35.8	4.7	2.5	1.1
Q3	2,751.5	2,384.7	52.9	313.9	187.4	68.6	38.5	19.5	265.0	217.9	4.0	43.2	36.0	3.1	2.8	1.2
Q4	2,780.1	2,377.9	67.9	334.4	209.7	63.8	40.6	20.2	254.7	204.8	6.0	43.9	37.9	2.8	2.1	1.1
2002 Q1	2,844.8	2,428.7	71.5	344.6	219.8	56.4	43.3	25.2	274.7	226.1	5.4	43.2	36.9	2.4	2.6	1.3
Q2	2,850.7	2,448.4	67.9	334.4	209.4	55.1	44.1	25.8	285.3	233.7	7.2	44.5	38.0	1.5	2.7	2.3
Q3	2,862.4	2,457.8	72.3	332.4	203.2	53.4	47.8	28.1	287.0	234.6	6.8	45.6	40.4	1.0	3.1	1.1
Q4 <sup>4)</sup>	2,848.7	2,441.4	72.6	334.7	206.2	53.7	46.8	27.9	289.4	238.1	7.9	43.4	37.9	0.9	3.6	1.0

Source: ECB.

1) Levels at the end of the period. Data are partially estimated. For further details, see the technical notes.

2) Including items expressed in the national denominations of the euro.

3) The term "banks" is used in this table to indicate institutions of a similar type to MFIs resident outside the euro area.

4) Quarterly data on debt securities and money market paper are shown separately until the first publication data with reference to 2003. For further details, see the general notes.

**Table 2.8 (cont'd)**
**Currency analysis of certain liabilities and assets of the euro area MFIs <sup>1)</sup>**
*(EUR billions (not seasonally adjusted; end of period))*
**Assets outstanding**
**4. Loans to euro area residents**

	MFIs								Non-MFIs							
	All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies					All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies				
					USD	JPY	CHF	Other					USD	JPY	CHF	Other
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	4,096.6	-	-	-	-	-	-	-	7,223.9	6,857.3	29.4	337.2	205.0	51.7	74.0	6.5
Q3	4,089.7	-	-	-	-	-	-	-	7,251.7	6,907.3	30.9	313.5	178.2	52.1	77.3	5.8
Q4	4,180.4	-	-	-	-	-	-	-	7,367.0	7,025.2	29.8	312.0	181.6	47.8	77.5	5.1
2002 Q1	4,133.3	-	-	-	-	-	-	-	7,458.8	7,106.7	30.5	321.5	187.4	51.0	76.8	6.3
Q2	4,201.2	-	-	-	-	-	-	-	7,521.2	7,209.0	28.9	283.3	152.5	46.7	78.3	5.8
Q3	4,224.7	-	-	-	-	-	-	-	7,547.5	7,238.6	28.4	280.5	148.1	45.4	81.2	5.8
Q4 <sup>4)</sup>	4,412.0	-	-	-	-	-	-	-	7,614.3	7,323.1	28.5	262.6	133.7	40.6	82.6	5.7

**5. Holdings of securities other than shares issued by euro area residents**

	Issued by MFIs								Issued by non-MFIs							
	All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies					All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies				
					USD	JPY	CHF	Other					USD	JPY	CHF	Other
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	1,114.1	1,071.0	11.0	32.1	22.1	6.5	1.6	1.8	1,508.6	1,466.8	4.9	36.9	21.7	13.3	1.1	0.8
Q3	1,109.6	1,070.1	9.6	29.9	21.0	5.9	1.5	1.5	1,522.6	1,483.6	4.2	34.8	20.4	12.6	1.2	0.6
Q4	1,113.6	1,068.6	12.4	32.6	23.1	6.3	1.4	1.8	1,516.1	1,478.6	3.6	33.9	20.1	12.1	1.1	0.6
2002 Q1	1,161.3	1,113.2	14.8	33.3	24.0	5.6	1.8	1.9	1,575.7	1,539.1	3.7	32.9	19.5	11.7	1.1	0.6
Q2	1,183.6	1,136.6	13.5	33.5	23.9	5.8	2.0	1.8	1,582.0	1,547.8	4.5	29.8	15.5	12.2	1.2	0.8
Q3	1,177.0	1,132.2	14.1	30.7	22.2	4.9	2.0	1.7	1,603.9	1,568.9	5.1	29.8	15.9	11.7	1.4	0.7
Q4 <sup>4)</sup>	1,050.1	1,006.9	13.2	29.9	21.9	4.6	1.8	1.7	1,587.9	1,552.4	6.1	29.4	16.2	11.0	1.5	0.7

**6. Loans to non-residents of the euro area**

	Banks <sup>3)</sup>								Non-banks							
	All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies					All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies				
					USD	JPY	CHF	Other					USD	JPY	CHF	Other
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	1,073.2	474.4	103.0	495.8	375.9	48.2	36.7	35.0	598.1	184.7	47.7	365.7	318.1	12.1	26.9	8.6
Q3	1,084.7	488.3	101.5	494.8	378.6	42.0	40.3	33.9	602.5	201.5	46.8	354.2	307.5	12.7	24.9	9.0
Q4	1,119.7	452.2	114.7	552.9	435.9	45.2	37.9	33.8	618.6	202.3	46.8	369.5	323.4	12.0	25.7	8.4
2002 Q1	1,104.8	432.2	131.1	541.6	424.4	45.6	37.3	34.3	633.0	199.4	49.9	383.7	331.2	16.4	26.9	9.2
Q2	1,083.4	457.7	129.9	495.9	375.0	61.4	36.1	23.4	602.9	205.7	46.6	350.5	300.8	12.8	28.1	8.8
Q3	1,122.2	495.3	143.8	483.0	369.9	55.8	33.4	23.9	616.3	219.8	46.2	350.3	297.0	15.4	29.0	8.9
Q4 <sup>4)</sup>	1,169.2	545.6	122.3	501.3	392.8	53.3	32.4	22.8	606.4	221.4	44.3	340.7	288.9	14.3	28.0	9.5

**7. Holdings of securities other than shares issued by non-residents of the euro area**

	Issued by banks <sup>3)</sup>								Issued by non-banks							
	All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies					All currencies	Euro <sup>2)</sup>	Other EU currencies	Other currencies				
					USD	JPY	CHF	Other					USD	JPY	CHF	Other
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2001 Q2	210.6	72.5	25.5	112.6	98.4	6.8	2.6	4.8	503.3	121.4	25.8	356.1	316.2	26.9	3.0	9.9
Q3	206.7	76.5	27.0	103.2	93.1	4.7	2.1	3.4	486.9	129.1	27.1	330.7	292.7	27.1	3.9	7.1
Q4	236.6	80.7	27.6	128.3	118.1	4.2	2.7	3.3	508.2	131.5	27.1	349.6	306.4	30.3	4.2	8.7
2002 Q1	262.9	87.1	33.5	142.4	130.5	4.4	2.9	4.5	493.7	127.9	26.9	339.0	298.6	24.6	5.0	10.8
Q2	244.0	87.5	32.6	123.9	111.8	4.0	2.3	5.9	459.2	132.4	25.0	301.7	260.7	24.3	5.0	11.7
Q3	249.8	90.9	38.7	120.1	111.6	4.0	1.4	3.2	484.9	136.3	31.6	316.9	273.8	26.2	5.4	11.6
Q4 <sup>4)</sup>	242.2	88.1	35.4	118.7	110.9	3.9	1.3	2.6	478.4	134.3	33.5	310.7	269.4	24.2	5.8	11.3

**Table 2.9****Aggregated balance sheet of euro area investment funds <sup>1)</sup>***(EUR billions (not seasonally adjusted; end of period))***1. Assets**

									Total
	Deposits	Holdings of securities other than shares			Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	Other assets	
			Up to 1 year	Over 1 year					
1	2	3	4	5	6	7	8	9	
2001 Q2	248.7	1,293.6	62.0	1,231.7	1,340.4	211.9	104.3	92.2	3,291.3
Q3	242.4	1,293.9	62.6	1,231.4	1,053.9	192.4	105.0	90.4	2,977.9
Q4	244.6	1,309.9	63.5	1,246.5	1,219.1	209.6	108.9	98.7	3,190.8
2002 Q1	253.6	1,308.7	70.7	1,238.0	1,263.3	224.6	111.0	98.0	3,259.2
Q2	242.8	1,312.6	75.4	1,237.1	1,056.1	215.2	108.0	99.8	3,034.4
Q3	236.7	1,337.4	74.3	1,263.0	844.8	203.4	121.0	103.2	2,846.5
Q4 <sup>(p)</sup>	242.0	1,336.6	72.5	1,264.1	853.6	203.4	123.5	106.8	2,865.9

**2. Liabilities**

				Total
	Deposits and loans taken	Investment fund shares	Other liabilities	
	1	2	3	4
2001 Q2	39.3	3,164.2	87.8	3,291.3
Q3	41.5	2,858.8	77.6	2,977.9
Q4	41.1	3,075.6	74.1	3,190.8
2002 Q1	42.6	3,137.7	78.8	3,259.2
Q2	39.1	2,919.8	75.5	3,034.4
Q3	38.9	2,732.3	75.3	2,846.5
Q4 <sup>(p)</sup>	40.1	2,748.6	77.2	2,865.9

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

	Funds by investment policy							Funds by type of investor		Total
	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		
2001 Q2	947.5	1,019.3	857.1	123.6	343.8	2,510.3	781.0	3,291.3		
Q3	738.2	1,019.1	756.0	127.0	337.7	2,241.8	736.1	2,977.9		
Q4	839.6	1,031.7	810.3	134.0	375.2	2,408.1	782.7	3,190.8		
2002 Q1	862.4	1,039.3	820.3	142.3	394.8	2,464.2	794.9	3,259.2		
Q2	728.7	1,037.0	762.6	139.2	366.9	2,262.4	772.0	3,034.4		
Q3	585.2	1,063.2	699.9	145.6	352.6	2,092.3	754.2	2,846.5		
Q4 <sup>(p)</sup>	593.5	1,068.1	701.7	150.8	351.7	2,091.0	774.9	2,865.9		

Source: ECB.

<sup>1)</sup> Other than money market funds. Data refer to euro area countries excluding Ireland. For further details, see the general notes.

**Table 2.10****Aggregated balance sheet of euro area investment funds broken down by investment policy***(EUR billions (not seasonally adjusted; end of period))***1. Assets of equity funds**

								Total
	Deposits 1	Holdings of securities other than shares 2			Holdings of shares/ other equity 5	Holdings of investment fund shares 6	Other assets 7	8
			Up to 1 year 3	Over 1 year 4				
2001 Q2	48.8	34.7	4.5	30.2	830.5	21.0	12.6	947.5
Q3	41.2	30.6	4.2	26.4	636.1	16.7	13.6	738.2
Q4	39.5	29.0	3.0	26.1	735.2	19.4	16.5	839.6
2002 Q1	39.3	28.7	2.9	25.8	759.1	20.6	14.7	862.4
Q2	34.0	27.4	4.0	23.4	630.0	22.2	15.0	728.7
Q3	29.0	26.5	3.7	22.8	496.5	19.1	14.1	585.2
Q4 <sup>(p)</sup>	26.7	28.2	3.1	25.1	505.6	18.3	14.9	593.5

**2. Liabilities of equity funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
	2001 Q2	3.2	936.4	8.0
Q3	4.1	727.9	6.1	738.2
Q4	2.6	831.4	5.6	839.6
2002 Q1	3.5	852.7	6.1	862.4
Q2	4.4	718.7	5.6	728.7
Q3	4.1	576.0	5.1	585.2
Q4 <sup>(p)</sup>	3.9	586.0	3.6	593.5

**3. Assets of bond funds**

								Total
	Deposits 1	Holdings of securities other than shares 2			Holdings of shares/ other equity 5	Holdings of investment fund shares 6	Other assets 7	8
			Up to 1 year 3	Over 1 year 4				
2001 Q2	78.6	858.5	29.4	829.1	36.4	12.3	33.6	1,019.3
Q3	74.9	865.5	32.2	833.3	34.3	12.7	31.6	1,019.1
Q4	73.2	875.5	33.2	842.3	38.5	11.2	33.4	1,031.7
2002 Q1	77.9	874.0	37.3	836.7	42.9	11.5	33.0	1,039.3
Q2	75.9	882.2	38.5	843.8	33.2	10.8	34.9	1,037.0
Q3	78.3	902.1	37.2	865.0	32.6	11.6	38.5	1,063.2
Q4 <sup>(p)</sup>	83.9	902.5	36.9	865.6	32.0	12.3	37.5	1,068.1

**4. Liabilities of bond funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
	2001 Q2	7.3	984.5	27.5
Q3	8.1	991.2	19.8	1,019.1
Q4	8.4	1,007.3	16.0	1,031.7
2002 Q1	8.5	1,013.2	17.7	1,039.3
Q2	7.9	1,011.5	17.6	1,037.0
Q3	7.0	1,039.2	17.0	1,063.2
Q4 <sup>(p)</sup>	7.7	1,044.0	16.5	1,068.1

Source: ECB.

**Table 2.10 (cont'd)****Aggregated balance sheet of euro area investment funds broken down by investment policy***(EUR billions (not seasonally adjusted; end of period))***5. Assets of mixed funds**

									Total
	Deposits 1	Holdings of securities other than shares 2			Holdings of shares/ other equity 5	Holdings of investment fund shares 6	Fixed assets 7	Other assets 8	9
			Up to 1 year 3	Over 1 year 4					
2001 Q2	55.8	296.3	18.0	278.3	382.8	93.8	2.6	25.9	857.1
Q3	55.2	290.4	16.4	274.0	297.5	85.7	2.5	24.8	756.0
Q4	56.9	286.5	17.0	269.5	347.5	92.7	2.4	24.3	810.3
2002 Q1	52.6	283.8	18.1	265.7	357.0	100.3	2.3	24.4	820.3
Q2	54.2	286.9	20.6	266.3	298.8	94.6	2.1	26.0	762.6
Q3	53.0	291.7	21.3	270.4	234.3	88.1	5.2	27.7	699.9
Q4 <sup>(p)</sup>	53.9	295.4	21.4	274.0	233.0	87.8	3.4	28.2	701.7

**6. Liabilities of mixed funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
2001 Q2	3.4	834.1	19.6	857.1
Q3	3.3	734.4	18.3	756.0
Q4	2.9	790.9	16.5	810.3
2002 Q1	2.9	799.4	18.0	820.3
Q2	3.1	741.3	18.2	762.6
Q3	3.5	676.9	19.5	699.9
Q4 <sup>(p)</sup>	3.0	677.3	21.5	701.7

**7. Assets of real estate funds**

									Total
	Deposits 1	Holdings of securities other than shares 2			Holdings of shares/ other equity 5	Holdings of investment fund shares 6	Fixed assets 7	Other assets 8	9
			Up to 1 year 3	Over 1 year 4					
2001 Q2	6.6	8.7	0.5	8.2	1.0	1.3	101.5	4.4	123.6
Q3	9.8	7.6	0.5	7.1	0.9	1.5	102.3	4.9	127.0
Q4	8.6	10.7	0.5	10.1	1.0	2.0	106.1	5.7	134.0
2002 Q1	11.5	12.9	0.6	12.3	1.1	2.1	108.3	6.4	142.3
Q2	13.5	9.8	0.6	9.2	0.9	3.9	105.1	6.0	139.2
Q3	13.3	10.7	0.6	10.1	0.8	5.1	109.5	6.2	145.6
Q4 <sup>(p)</sup>	10.9	9.5	0.5	8.9	0.8	7.0	115.7	6.9	150.8

**8. Liabilities of real estate funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
2001 Q2	24.1	95.0	4.5	123.6
Q3	24.8	97.9	4.4	127.0
Q4	25.9	103.3	4.8	134.0
2002 Q1	26.7	110.7	4.9	142.3
Q2	22.3	112.1	4.8	139.2
Q3	22.9	117.7	5.0	145.6
Q4 <sup>(p)</sup>	24.5	120.9	5.4	150.8

Source: ECB.

**Table 2.11****Aggregated balance sheet of euro area investment funds broken down by type of investor***(EUR billions (not seasonally adjusted; end of period))***1. Assets of general public funds**

							Total
	Deposits 1	Holdings of securities other than shares 2	Holdings of shares/ other equity 3	Holdings of investment fund shares 4	Fixed assets 5	Other assets 6	7
2001 Q2	209.3	919.1	1,047.7	170.4	96.5	67.4	2,510.3
Q3	196.4	912.1	820.2	151.6	96.4	65.1	2,241.8
Q4	201.0	928.7	949.2	167.0	99.1	63.2	2,408.1
2002 Q1	213.3	921.8	984.8	176.8	100.6	66.9	2,464.2
Q2	199.2	915.7	818.4	166.7	96.1	66.3	2,262.4
Q3	187.9	917.6	654.4	156.0	107.9	68.5	2,092.3
Q4 <sup>(p)</sup>	190.7	905.4	663.0	153.1	108.9	69.9	2,091.0

**2. Liabilities of general public funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
2001 Q2	35.7	2,397.4	77.3	2,510.3
Q3	37.4	2,137.4	67.0	2,241.8
Q4	36.4	2,312.9	58.8	2,408.1
2002 Q1	38.1	2,360.2	65.9	2,464.2
Q2	34.0	2,166.0	62.4	2,262.4
Q3	33.0	1,997.8	61.5	2,092.3
Q4 <sup>(p)</sup>	33.6	1,995.7	61.7	2,091.0

**3. Assets of special investors' funds**

							Total
	Deposits 1	Holdings of securities other than shares 2	Holdings of shares/ other equity 3	Holdings of investment fund shares 4	Fixed assets 5	Other assets 6	7
2001 Q2	39.4	374.6	292.7	41.5	7.8	24.9	781.0
Q3	46.0	381.8	233.7	40.7	8.6	25.3	736.1
Q4	43.6	381.2	270.0	42.6	9.8	35.6	782.7
2002 Q1	40.3	386.9	278.4	47.8	10.3	31.2	794.9
Q2	43.6	396.9	237.7	48.5	11.9	33.5	772.0
Q3	48.8	419.8	190.3	47.5	13.1	34.7	754.2
Q4 <sup>(p)</sup>	51.3	431.2	190.6	50.3	14.7	36.9	774.9

**4. Liabilities of special investors' funds**

				Total
	Deposits and loans taken 1	Investment fund shares 2	Other liabilities 3	4
2001 Q2	3.6	766.8	10.6	781.0
Q3	4.2	721.4	10.5	736.1
Q4	4.6	762.8	15.3	782.7
2002 Q1	4.5	777.5	12.9	794.9
Q2	5.1	753.8	13.1	772.0
Q3	5.9	734.5	13.8	754.2
Q4 <sup>(p)</sup>	6.5	753.0	15.4	774.9

Source: ECB.

## 3 Financial markets and interest rates in the euro area

**Table 3.1**

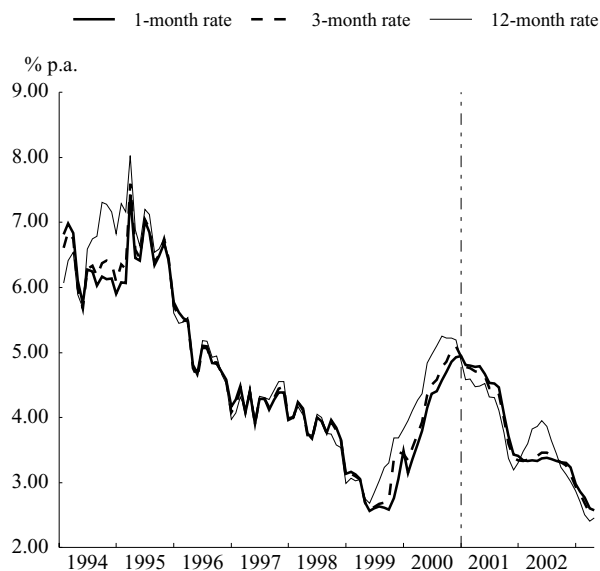
### Money market interest rates <sup>1)</sup>

(percentages per annum)

	Euro area <sup>4)</sup>					United States <sup>6)</sup>	Japan <sup>6)</sup>
	Overnight deposits <sup>2)3)</sup> 1	1-month deposits <sup>5)</sup> 2	3-month deposits <sup>5)</sup> 3	6-month deposits <sup>5)</sup> 4	12-month deposits <sup>5)</sup> 5	3-month deposits <sup>6)</sup> 6	3-month deposits <sup>7)</sup> 7
1998	3.09	3.84	3.83	3.78	3.77	5.57	0.66
1999	2.74	2.86	2.96	3.06	3.19	5.42	0.22
2000	4.12	4.24	4.40	4.55	4.78	6.53	0.28
<i>Euro area enlargement</i>							
2001	4.39	4.33	4.26	4.16	4.09	3.78	0.15
2002	3.29	3.30	3.32	3.35	3.49	1.80	0.08
2002 Apr.	3.32	3.34	3.41	3.54	3.86	1.97	0.08
May	3.31	3.37	3.46	3.62	3.95	1.91	0.08
June	3.35	3.38	3.46	3.59	3.87	1.88	0.07
July	3.30	3.36	3.41	3.48	3.64	1.85	0.07
Aug.	3.29	3.33	3.35	3.38	3.44	1.78	0.07
Sep.	3.32	3.32	3.31	3.27	3.24	1.80	0.07
Oct.	3.30	3.31	3.26	3.17	3.13	1.78	0.07
Nov.	3.30	3.23	3.12	3.04	3.02	1.46	0.07
Dec.	3.09	2.98	2.94	2.89	2.87	1.41	0.06
2003 Jan.	2.79	2.86	2.83	2.76	2.71	1.37	0.06
Feb.	2.76	2.77	2.69	2.58	2.50	1.34	0.06
Mar.	2.75	2.60	2.53	2.45	2.41	1.29	0.06
Apr.	2.56	2.58	2.54	2.47	2.45	1.30	0.06
2003 4 Apr.	2.54	2.58	2.52	2.43	2.41	1.28	0.06
11	2.54	2.57	2.52	2.45	2.43	1.29	0.06
18	2.64	2.59	2.56	2.52	2.51	1.32	0.06
25	2.55	2.58	2.54	2.47	2.44	1.31	0.06
2 May	2.55	2.57	2.50	2.41	2.36	1.29	0.06

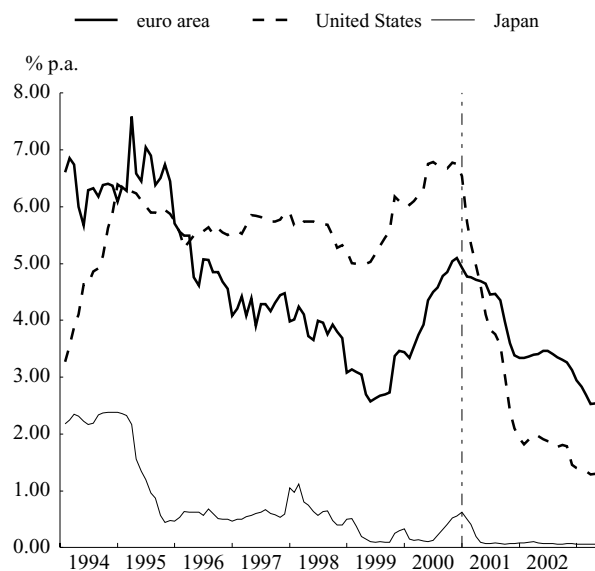
### Euro area money market rates

(monthly)



### 3-month money market rates

(monthly)



Sources: Reuters and ECB.

1) With the exception of the overnight rate to December 1998, monthly and yearly values are period averages.

2) Interbank deposit bid rates to December 1998. From January 1999 column 1 shows the euro overnight index average (EONIA).

3) End-of-period rates to December 1998; period averages thereafter.

4) Before January 1999 synthetic euro area rates were calculated on the basis of national rates weighted by GDP.

5) From January 1999, euro interbank offered rates (EURIBOR). Up to December 1998, London interbank offered rates (LIBOR) where available.

6) London interbank offered rates (LIBOR).



**Table 3.2**

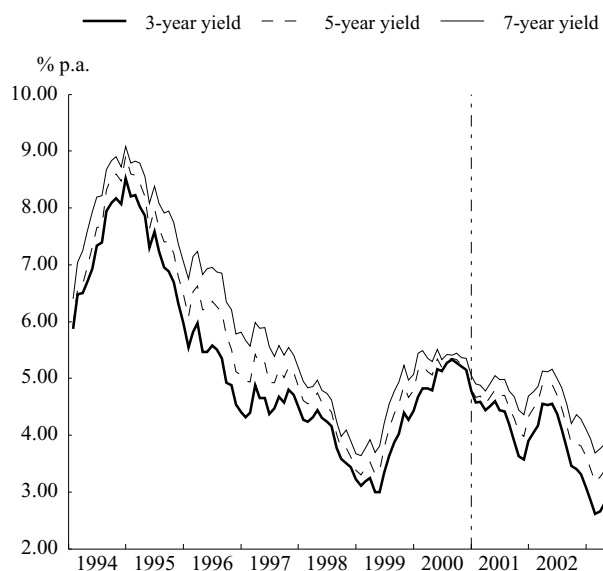
**Government bond yields <sup>1)</sup>**

(percentages per annum)

	Euro area <sup>2)</sup>					United States	Japan
	2 years <sup>1</sup>	3 years <sup>2</sup>	5 years <sup>3</sup>	7 years <sup>4</sup>	10 years <sup>5</sup>	10 years <sup>6</sup>	10 years <sup>7</sup>
1998	3.16	3.22	3.38	3.67	4.71	5.33	1.30
1999	3.38	3.63	4.01	4.38	4.66	5.64	1.75
2000	4.90	5.03	5.19	5.37	5.44	6.03	1.76
<i>Euro area enlargement</i>							
2001	4.11	4.23	4.49	4.79	5.03	5.01	1.34
2002	3.68	3.94	4.35	4.70	4.92	4.60	1.27
2002 Apr.	4.21	4.53	4.86	5.12	5.30	5.21	1.39
May	4.25	4.55	4.89	5.16	5.30	5.15	1.38
June	4.10	4.37	4.70	4.99	5.16	4.90	1.36
July	3.83	4.10	4.48	4.84	5.03	4.62	1.30
Aug.	3.47	3.76	4.15	4.54	4.73	4.24	1.26
Sep.	3.19	3.46	3.85	4.20	4.52	3.88	1.16
Oct.	3.13	3.41	3.86	4.36	4.62	3.91	1.09
Nov.	3.04	3.31	3.81	4.28	4.59	4.04	0.99
Dec.	2.84	3.08	3.63	4.10	4.41	4.03	0.97
2003 Jan.	2.64	2.85	3.40	3.93	4.27	4.02	0.84
Feb.	2.45	2.61	3.18	3.68	4.06	3.90	0.83
Mar.	2.50	2.66	3.26	3.76	4.13	3.79	0.74
Apr.	2.59	2.81	3.38	3.85	4.23	3.94	0.66
2003 4 Apr.	2.55	2.72	3.38	3.86	4.26	3.93	0.70
11	2.62	2.87	3.44	3.91	4.28	3.97	0.68
18	2.66	2.89	3.43	3.89	4.24	3.96	0.63
25	2.53	2.78	3.29	3.77	4.17	3.88	0.62
2 May	2.49	2.75	3.27	3.78	4.16	3.90	0.61

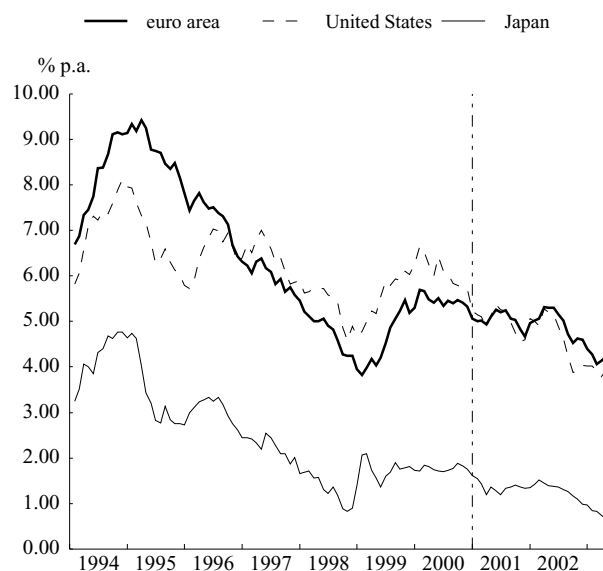
**Euro area government bond yields**

(monthly)



**10-year government bond yields**

(monthly)



Sources: Reuters, ECB, Federal Reserve and Bank of Japan.

- 1) To December 1998, 2, 3, 5 and 7-year euro area yields are end-of-period values and 10-year yields are period averages. Thereafter, all yields are period averages.
- 2) To December 1998, euro area yields are calculated on the basis of harmonised national government bond yields weighted by GDP. Thereafter, the weights are the nominal outstanding amounts of government bonds in each maturity band.

**Table 3.3**

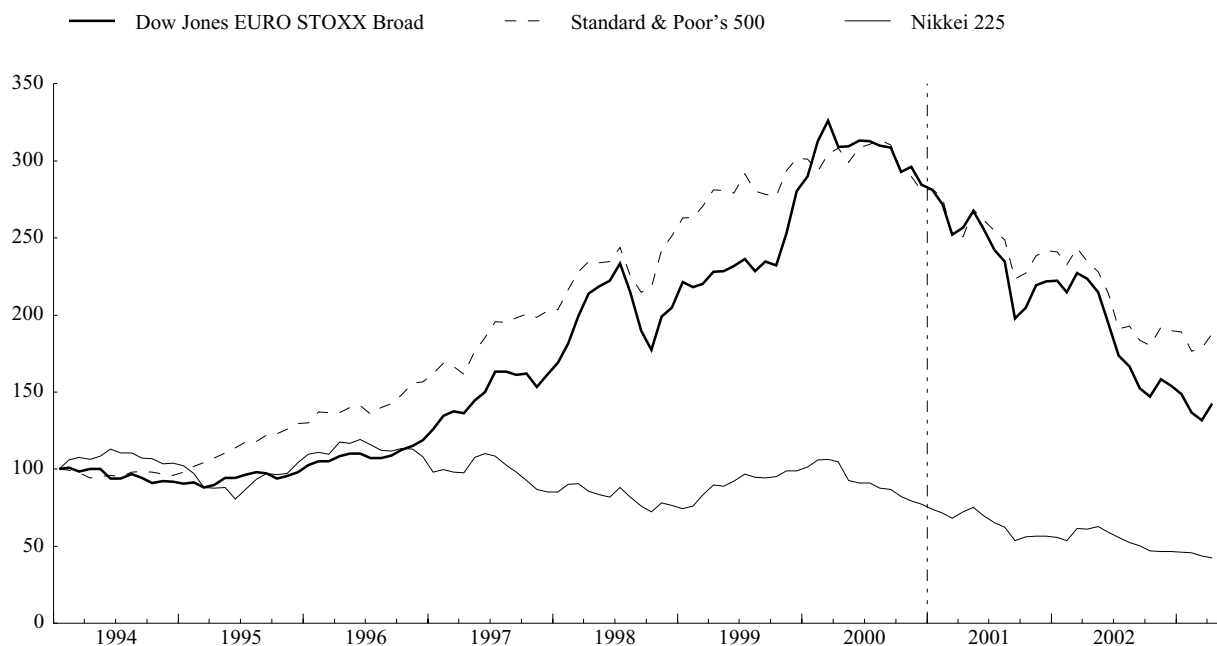
**Stock market indices**

(index levels, in points)<sup>1)</sup>

	Dow Jones EURO STOXX indices												United States	Japan
	Benchmark		Main economic sector indices											
	Broad	50	Basic materials	Consumer cyclical	Consumer non-cyclical	Energy	Financial	Industrial	Technology	Utilities	Telecommunications	Health-care		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1998	280.5	3,076.3	257.9	245.0	295.5	249.3	281.3	218.4	333.6	282.4	488.1	348.9	1,085.3	15,338.4
1999	325.8	3,787.3	279.2	262.9	327.7	286.0	295.7	285.1	470.4	306.2	717.7	392.6	1,327.8	16,829.9
2000	423.9	5,075.5	299.1	292.9	324.3	342.3	350.7	378.0	963.1	341.7	1,072.5	476.0	1,426.7	17,162.7
<i>Euro area enlargement</i>														
2001	336.3	4,049.4	296.0	228.2	303.3	341.4	321.6	310.0	530.5	309.6	541.2	540.1	1,193.8	12,114.8
2002	259.9	3,023.4	267.5	175.0	266.5	308.9	243.3	252.4	345.1	255.5	349.2	411.8	995.4	10,119.3
2002 Apr.	310.2	3,657.0	308.6	210.2	302.8	351.5	299.5	299.0	438.6	296.9	409.7	472.1	1,112.0	11,391.6
May	298.2	3,503.5	306.9	204.3	300.7	347.3	293.7	296.7	378.3	290.6	355.9	460.8	1,079.9	11,695.8
June	269.8	3,143.1	293.1	187.5	282.1	324.6	263.8	275.3	312.4	273.0	302.4	408.1	1,014.0	10,965.9
July	241.2	2,810.6	267.8	160.9	252.1	298.6	229.2	248.8	282.1	244.0	300.4	370.6	905.5	10,352.3
Aug.	231.3	2,697.4	243.6	152.9	250.1	290.9	217.4	227.9	258.8	236.7	310.0	376.6	912.6	9,751.2
Sep.	211.8	2,450.2	227.2	140.6	241.2	274.0	193.1	215.3	229.0	221.2	283.1	337.0	870.1	9,354.8
Oct.	204.0	2,384.7	214.4	135.3	236.5	272.1	177.8	193.6	235.8	209.6	286.8	345.4	854.6	8,781.1
Nov.	219.5	2,559.0	224.2	145.4	234.8	272.4	197.0	208.8	289.6	215.2	324.5	347.1	910.1	8,699.6
Dec.	213.6	2,475.1	225.3	139.4	226.5	268.8	194.2	205.2	270.4	207.3	322.5	324.4	899.1	8,674.8
2003 Jan.	206.3	2,377.4	213.0	130.9	220.2	262.4	186.5	198.5	250.2	210.0	330.0	313.8	896.0	8,567.4
Feb.	189.8	2,170.9	185.8	121.5	196.5	245.1	172.2	186.0	226.5	198.1	309.4	274.3	836.6	8,535.8
Mar.	183.0	2,086.5	176.1	115.4	188.4	241.1	164.5	181.2	228.2	185.6	292.8	275.2	846.6	8,171.0
Apr.	197.9	2,278.2	193.4	122.5	203.9	250.0	181.0	192.0	251.6	201.0	324.8	288.7	889.6	7,895.7
2003 4 Apr.	193.0	2,223.2	187.8	119.2	202.3	253.0	172.9	188.0	241.5	198.5	314.9	291.1	878.9	8,074.1
11	195.2	2,247.5	191.9	120.0	204.7	251.5	177.4	190.7	240.2	198.9	320.8	288.1	868.3	7,816.5
18	201.3	2,324.3	197.5	125.1	205.7	252.3	185.5	193.3	260.4	202.0	328.9	290.2	893.6	7,874.5
25	198.3	2,271.9	194.8	122.4	201.4	239.2	184.2	194.1	254.4	200.2	330.8	291.2	898.8	7,699.5
2 May	202.9	2,321.9	202.0	125.9	203.2	244.9	189.0	198.7	263.1	205.8	326.3	303.7	930.1	7,907.2

**Dow Jones EURO STOXX Broad, Standard & Poor's 500 and Nikkei 225**

(base month: January 1994 = 100; monthly)



Source: Reuters.

1) Monthly and yearly values are period averages.

**Table 3.4**

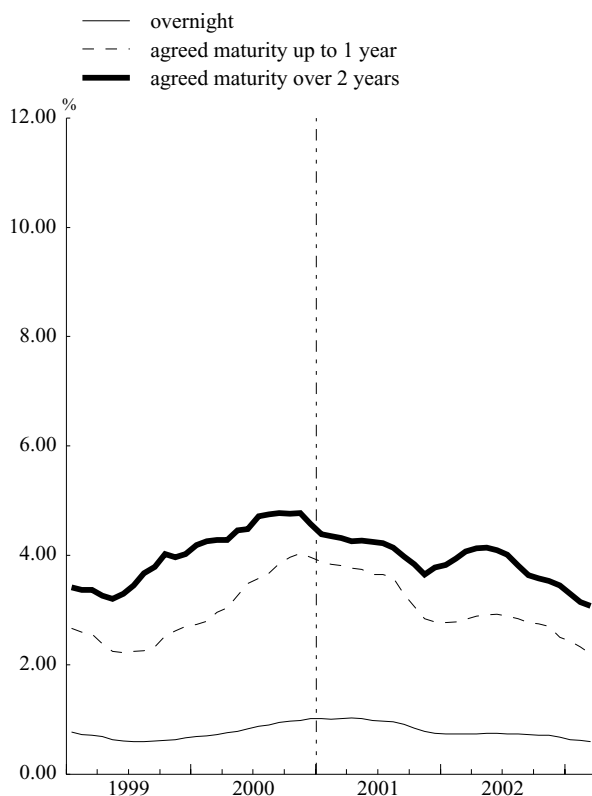
**Retail bank interest rates**

(percentages per annum; period averages)

	Deposit interest rates						Lending interest rates			
	Overnight 1	With agreed maturity			Redeemable at notice		To enterprises		To households	
		Up to 1 year 2	Up to 2 years 3	Over 2 years 4	Up to 3 months 5	Over 3 months 6	Up to 1 year 7	Over 1 year 8	Consumer lending 9	For house purchase 10
2000	0.85	3.45	3.45	4.52	2.25	3.79	6.60	6.23	9.87	6.34
<i>Euro area enlargement</i>										
2001	0.94	3.49	3.49	4.12	2.40	3.59	6.83	6.15	10.12	5.97
2002	0.73	2.80	2.80	3.85	2.13	2.85	6.13	5.71	9.78	5.54
2002 Mar.	0.73	2.84	2.84	4.07	2.15	3.00	6.09	5.85	9.78	5.74
Apr.	0.74	2.89	2.90	4.13	2.14	3.07	6.17	5.95	9.83	5.81
May	0.74	2.91	2.92	4.15	2.15	3.08	6.20	5.98	9.87	5.82
June	0.74	2.93	2.94	4.09	2.13	3.08	6.18	5.92	9.83	5.77
July	0.74	2.89	2.90	4.02	2.13	3.02	6.16	5.79	9.78	5.68
Aug.	0.73	2.84	2.85	3.81	2.12	2.94	6.15	5.71	9.79	5.53
Sep.	0.73	2.77	2.77	3.64	2.13	2.73	6.12	5.61	9.85	5.38
Oct.	0.72	2.74	2.74	3.58	2.11	2.63	6.13	5.54	9.72	5.26
Nov.	0.71	2.70	2.69	3.53	2.11	2.55	6.10	5.50	9.70	5.21
Dec.	0.68	2.51	2.51	3.45	2.05	2.41	5.97	5.34	9.58	5.09
2003 Jan.	0.63	2.43	2.43	3.29	2.04	2.34	5.95	5.29	9.58	4.91
Feb.	0.62	2.32	2.32	3.15	2.02	2.12	5.89	5.19	9.51	4.78
Mar.	0.59	2.20	2.19	3.08	1.98	2.05	5.76	5.17	9.36	4.69

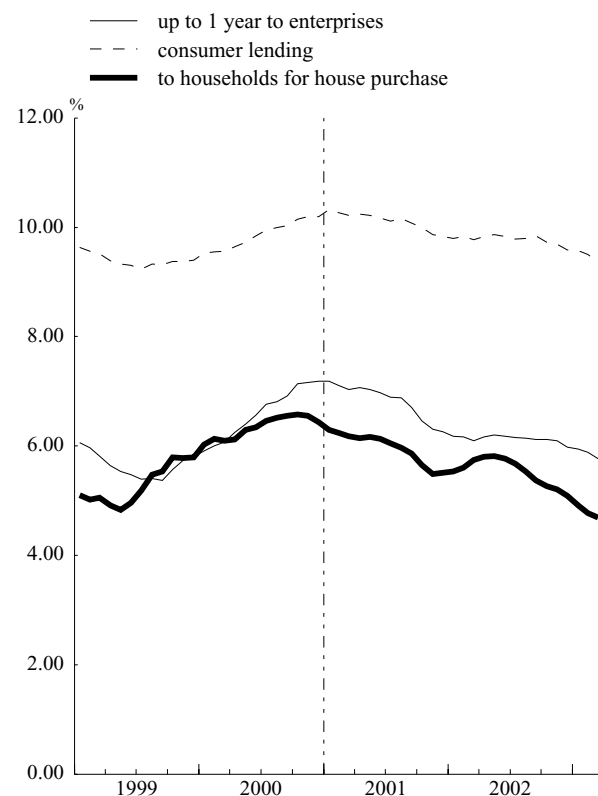
**Deposit interest rates**

(monthly)



**Lending interest rates**

(monthly)



Source: ECB.

These euro area retail bank interest rates should be used with caution and for statistical purposes only, primarily to analyse their development over time rather than their level. They are calculated as the weighted average of national interest rates provided by the national central banks. The national rates represent those rates that are currently available from national sources and which are judged to fit the standard categories. These national rates have been aggregated to derive information for the euro area, in some cases relying on proxies and working assumptions due to the heterogeneity observed in the national financial instruments across MU Member States. Furthermore, the national interest rates are not harmonised in terms of their coverage (new business and/or outstanding amounts), the nature of the data (nominal or effective) or the compilation method. The country weights for the euro area retail bank interest rates are derived from MFI balance sheet statistics or close proxies. The weights reflect the country-specific proportions of the relevant instruments within the euro area, measured as outstanding amounts. The weights are adjusted monthly, so that interest rates and weights always refer to the same month.

**Table 3.5****Securities issues other than shares by original maturity, residency of the issuer and currency denomination***(EUR billions; transactions during the month and end-of-period stocks; nominal values)***1. Short-term**

	By euro area residents									
					In euro <sup>1)</sup>				In other	
	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	407.4	409.0	-1.6	733.9	387.3	387.7	-0.4	647.9	20.0	21.2
Mar.	422.5	404.5	17.9	753.4	400.6	383.5	17.1	666.3	21.9	21.0
Apr.	403.4	407.0	-3.6	749.3	377.3	384.4	-7.1	659.1	26.1	22.7
May	402.1	379.9	22.2	770.3	378.2	358.7	19.5	677.5	23.9	21.2
June	337.8	342.2	-4.4	766.2	317.0	319.1	-2.1	676.8	20.9	23.1
July	406.0	392.2	13.7	772.6	382.4	371.4	11.0	685.0	23.5	20.9
Aug.	384.5	378.1	6.4	775.6	366.2	356.8	9.4	693.1	18.3	21.3
Sep.	414.9	400.6	14.3	792.6	392.1	381.0	11.0	706.7	22.8	19.5
Oct.	468.3	456.4	11.9	806.0	441.8	433.3	8.5	715.4	26.5	23.1
Nov.	435.4	413.0	22.4	830.4	413.5	388.9	24.6	740.1	22.0	24.1
Dec.	406.1	451.6	-45.5	783.4	386.7	429.9	-43.1	696.0	19.3	21.7
2003 Jan.	545.1	487.4	57.7	837.8	518.6	462.7	55.9	750.4	26.5	24.7
Feb.	453.8	428.4	25.4	863.0	431.2	408.3	22.9	773.3	22.6	20.1

**2. Long-term**

	By euro area residents									
					In euro <sup>1)</sup>				In other	
	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	141.9	108.2	33.7	7,126.7	130.7	97.5	33.1	6,487.0	11.2	10.7
Mar.	164.4	101.3	63.1	7,188.7	143.0	90.2	52.7	6,539.0	21.5	11.1
Apr.	126.0	79.5	46.5	7,225.4	114.9	74.4	40.5	6,580.1	11.1	5.1
May	149.4	87.4	61.9	7,274.0	126.9	75.8	51.0	6,632.4	22.5	11.6
June	133.1	95.0	38.1	7,289.2	123.3	87.2	36.1	6,664.9	9.7	7.8
July	131.1	113.2	17.9	7,318.6	114.3	103.8	10.4	6,679.0	16.8	9.3
Aug.	68.8	64.2	4.6	7,320.8	59.2	54.7	4.5	6,683.1	9.6	9.5
Sep.	140.2	86.3	53.9	7,374.2	121.4	74.6	46.8	6,729.2	18.8	11.7
Oct.	123.0	92.1	30.9	7,404.6	105.7	81.5	24.3	6,753.7	17.3	10.6
Nov.	132.1	95.6	36.5	7,438.3	118.7	89.8	29.0	6,782.7	13.4	5.9
Dec.	138.8	172.4	-33.7	7,385.5	127.7	159.7	-32.0	6,749.6	11.0	12.7
2003 Jan.	174.0	133.2	40.8	7,416.3	151.5	124.4	27.1	6,777.5	22.5	8.8
Feb.	167.0	110.5	56.5	7,478.0	148.4	102.3	46.1	6,825.2	18.6	8.2

**3. Total**

	By euro area residents									
					In euro <sup>1)</sup>				In other	
	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	549.3	517.2	32.1	7,860.6	518.0	485.2	32.8	7,134.9	31.2	31.9
Mar.	586.9	505.8	81.1	7,942.1	543.6	473.8	69.8	7,205.3	43.3	32.1
Apr.	529.5	486.5	42.9	7,974.7	492.2	458.8	33.4	7,239.2	37.2	27.8
May	551.5	467.4	84.1	8,044.3	505.1	434.5	70.6	7,309.9	46.4	32.9
June	470.9	437.2	33.7	8,055.4	440.3	406.3	34.0	7,341.7	30.6	30.9
July	537.1	505.4	31.7	8,091.3	496.7	475.2	21.5	7,364.1	40.4	30.2
Aug.	453.3	442.3	11.0	8,096.4	425.4	411.5	13.8	7,376.2	27.9	30.8
Sep.	555.1	486.8	68.2	8,166.9	513.4	455.6	57.8	7,435.9	41.6	31.3
Oct.	591.3	548.5	42.9	8,210.6	547.5	514.7	32.8	7,469.1	43.8	33.7
Nov.	567.6	508.7	58.9	8,268.8	532.2	478.6	53.6	7,522.8	35.4	30.0
Dec.	544.9	624.0	-79.2	8,168.9	514.5	589.5	-75.1	7,445.6	30.4	34.5
2003 Jan.	719.1	620.6	98.5	8,254.1	670.0	587.1	83.0	7,527.9	49.1	33.6
Feb.	620.8	538.8	81.9	8,341.0	579.6	510.6	69.0	7,598.5	41.1	28.3

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

1) Including items expressed in the national denominations of the euro.

currencies		By non-residents of the euro area in euro <sup>1)</sup>				Total in euro <sup>1)</sup>				
Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	
11	12	13	14	15	16	17	18	19	20	
-1.2	86.0	13.4	11.8	1.7	43.3	400.8	399.5	1.3	691.2	2002 Feb.
0.8	87.1	24.3	7.9	16.4	59.7	424.9	391.4	33.5	726.0	Mar.
3.4	90.2	9.7	28.1	-18.4	41.3	387.0	412.5	-25.5	700.3	Apr.
2.6	92.8	13.7	13.4	0.3	41.5	391.9	372.1	19.8	719.1	May
-2.2	89.5	20.9	8.0	12.9	54.4	337.9	327.1	10.7	731.2	June
2.7	87.6	14.7	24.8	-10.1	44.4	397.1	396.2	1.0	729.4	July
-3.0	82.5	12.1	11.5	0.6	44.9	378.3	368.4	9.9	738.0	Aug.
3.3	85.9	31.7	7.7	24.0	68.9	423.8	388.7	35.1	775.7	Sep.
3.4	90.7	17.1	31.4	-14.2	54.7	458.9	464.6	-5.7	770.1	Oct.
-2.2	90.3	14.6	16.9	-2.3	52.4	428.1	405.8	22.3	792.5	Nov.
-2.4	87.4	23.9	10.7	13.2	65.6	410.6	440.5	-29.9	761.6	Dec.
1.8	87.4	.	.	.	.	.	.	.	.	2003 Jan.
2.5	89.7	.	.	.	.	.	.	.	.	Feb.

currencies		By non-residents of the euro area in euro <sup>1)</sup>				Total in euro <sup>1)</sup>				
Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	
11	12	13	14	15	16	17	18	19	20	
0.5	639.7	20.0	13.9	6.2	895.0	150.7	111.4	39.3	7,382.0	2002 Feb.
10.4	649.7	25.5	12.0	13.5	908.5	168.4	102.2	66.2	7,447.6	Mar.
6.0	645.3	23.0	7.6	15.4	924.1	137.9	82.0	55.9	7,504.3	Apr.
10.9	641.6	26.3	8.2	18.0	942.3	153.1	84.1	69.1	7,574.7	May
2.0	624.3	29.3	10.9	18.5	960.7	152.6	98.1	54.6	7,625.6	June
7.5	639.6	11.6	8.2	3.4	964.1	125.9	112.1	13.9	7,643.1	July
0.1	637.7	7.0	8.1	-1.1	963.0	66.2	62.8	3.4	7,646.1	Aug.
7.1	645.1	24.3	11.4	12.9	976.0	145.7	86.0	59.7	7,705.1	Sep.
6.7	650.8	13.2	13.1	0.1	976.1	118.9	94.6	24.3	7,729.9	Oct.
7.5	655.7	13.7	11.9	1.8	977.9	132.4	101.6	30.8	7,760.6	Nov.
-1.7	635.9	18.3	10.9	7.4	985.3	146.1	170.6	-24.5	7,735.0	Dec.
13.7	638.8	.	.	.	.	.	.	.	.	2003 Jan.
10.4	652.8	.	.	.	.	.	.	.	.	Feb.

currencies		By non-residents of the euro area in euro <sup>1)</sup>				Total in euro <sup>1)</sup>				
Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	Issues	Redemptions	Net issues	Amounts outstanding	
11	12	13	14	15	16	17	18	19	20	
-0.7	725.7	33.5	25.6	7.8	938.3	551.5	510.9	40.6	8,073.2	2002 Feb.
11.3	736.8	49.8	19.9	30.0	968.2	593.4	493.6	99.8	8,173.6	Mar.
9.5	735.5	32.7	35.7	-3.0	965.4	524.9	494.5	30.4	8,204.6	Apr.
13.5	734.4	39.9	21.6	18.3	983.9	545.0	456.1	88.9	8,293.8	May
-0.3	713.7	50.2	18.9	31.3	1,015.1	490.5	425.2	65.3	8,356.8	June
10.2	727.2	26.4	33.0	-6.7	1,008.5	523.1	508.2	14.8	8,372.5	July
-2.9	720.2	19.1	19.7	-0.6	1,007.9	444.5	431.2	13.3	8,384.1	Aug.
10.4	731.0	56.0	19.1	37.0	1,044.9	569.5	474.7	94.8	8,480.8	Sep.
10.1	741.5	30.3	44.5	-14.2	1,030.8	577.9	559.2	18.6	8,499.9	Oct.
5.4	746.0	28.3	28.8	-0.5	1,030.3	560.5	507.4	53.1	8,553.1	Nov.
-4.1	723.3	42.2	21.6	20.6	1,051.0	556.7	611.1	-54.4	8,496.6	Dec.
15.5	726.2	.	.	.	.	.	.	.	.	2003 Jan.
12.9	742.5	.	.	.	.	.	.	.	.	Feb.

**Table 3.6****Euro-denominated securities other than shares by original maturity, residency and sector of the issuer <sup>1)</sup>***(EUR billions; end of period; nominal values)***Amounts outstanding****1. Short-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	647.9	255.6	3.9	98.2	286.7	3.5	43.3	19.9	19.2	3.6
Mar.	666.3	262.5	4.3	97.1	299.0	3.3	59.7	26.4	26.4	6.4
Apr.	659.1	260.2	4.5	92.6	298.8	3.0	41.3	18.2	18.6	3.8
May	677.5	266.7	3.7	89.9	314.3	3.0	41.5	18.3	19.2	3.5
June	676.8	265.4	3.8	82.0	322.5	3.0	54.4	21.3	28.0	4.4
July	685.0	269.7	4.1	86.2	321.7	3.4	44.4	18.3	22.8	2.8
Aug.	693.1	269.9	4.3	86.7	328.8	3.3	44.9	18.1	23.9	2.6
Sep.	706.7	276.6	4.1	87.7	335.7	2.6	68.9	26.8	37.3	4.0
Oct.	715.4	284.0	4.2	88.5	335.6	3.0	54.7	20.9	28.1	3.5
Nov.	740.1	304.7	4.7	89.9	337.8	3.1	52.4	18.2	28.1	3.7
Dec.	696.0	281.5	4.3	85.2	321.8	3.2	65.6	20.5	37.9	4.6
2003 Jan.	750.4	312.7	4.5	92.6	337.9	2.6	.	.	.	.
Feb.	773.3	317.1	5.9	95.8	351.2	3.2	.	.	.	.

**2. Long-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	6,487.0	2,346.2	374.6	357.6	3,275.6	133.0	895.0	229.8	339.5	106.5
Mar.	6,539.0	2,368.6	380.7	357.9	3,294.3	137.6	908.5	232.2	350.3	108.2
Apr.	6,580.1	2,377.4	390.8	363.4	3,306.3	142.2	924.1	234.9	360.8	108.7
May	6,632.4	2,391.5	402.0	368.7	3,322.4	147.7	942.3	238.5	367.6	111.5
June	6,664.9	2,401.8	406.5	372.2	3,334.1	150.2	960.7	245.9	381.2	111.0
July	6,679.0	2,400.7	413.3	374.6	3,331.1	159.2	964.1	245.9	385.5	110.7
Aug.	6,683.1	2,399.8	413.6	372.7	3,337.0	160.1	963.0	245.3	385.3	110.8
Sep.	6,729.2	2,421.4	421.8	375.5	3,348.7	161.8	976.0	246.1	394.5	109.3
Oct.	6,753.7	2,417.7	428.2	374.6	3,367.8	165.5	976.1	246.9	396.1	109.0
Nov.	6,782.7	2,418.3	441.2	374.9	3,381.2	167.0	977.9	249.2	398.5	108.7
Dec.	6,749.6	2,404.3	471.6	376.8	3,328.2	168.7	985.3	251.8	403.2	109.8
2003 Jan.	6,777.5	2,399.4	470.7	383.4	3,351.3	172.7	.	.	.	.
Feb.	6,825.2	2,410.7	483.1	387.5	3,365.8	178.1	.	.	.	.

**3. Total**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	7,134.9	2,601.8	378.5	455.8	3,562.2	136.5	938.3	249.7	358.7	110.1
Mar.	7,205.3	2,631.1	384.9	455.1	3,593.3	140.9	968.2	258.6	376.6	114.6
Apr.	7,239.2	2,637.6	395.3	456.0	3,605.1	145.2	965.4	253.2	379.5	112.5
May	7,309.9	2,658.2	405.7	458.6	3,636.7	150.7	983.9	256.8	386.7	115.0
June	7,341.7	2,667.2	410.4	454.2	3,656.7	153.2	1,015.1	267.2	409.2	115.4
July	7,364.1	2,670.4	417.5	460.8	3,652.8	162.6	1,008.5	264.2	408.3	113.5
Aug.	7,376.2	2,669.7	417.9	459.4	3,665.8	163.4	1,007.9	263.4	409.1	113.4
Sep.	7,435.9	2,697.9	425.9	463.2	3,684.4	164.4	1,044.9	272.9	431.8	113.3
Oct.	7,469.1	2,701.7	432.4	463.1	3,703.4	168.4	1,030.8	267.8	424.2	112.5
Nov.	7,522.8	2,723.0	446.0	464.8	3,718.9	170.1	1,030.3	267.4	426.6	112.4
Dec.	7,445.6	2,685.8	475.8	462.0	3,650.1	171.9	1,051.0	272.3	441.1	114.4
2003 Jan.	7,527.9	2,712.1	475.2	476.0	3,689.3	175.3	.	.	.	.
Feb.	7,598.5	2,727.8	489.0	483.3	3,717.0	181.4	.	.	.	.

*Sources: ECB and BIS (for issues by non-residents of the euro area).**1) Including items expressed in the national denominations of the euro.*

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
0.1	0.1	0.4	691.2	275.5	23.1	101.8	286.8	3.6	0.4	2002 Feb.
0.1	0.1	0.4	726.0	288.9	30.7	103.5	299.2	3.4	0.4	Mar.
0.1	0.1	0.5	700.3	278.4	23.1	96.4	298.9	3.1	0.5	Apr.
0.1	0.1	0.4	719.1	285.0	22.9	93.4	314.4	3.1	0.4	May
0.2	0.1	0.5	731.2	286.7	31.8	86.4	322.7	3.1	0.5	June
0.2	0.0	0.2	729.4	288.0	26.9	89.0	321.9	3.4	0.2	July
0.1	0.0	0.1	738.0	288.0	28.2	89.3	329.0	3.4	0.1	Aug.
0.2	0.0	0.6	775.7	303.3	41.4	91.8	335.9	2.7	0.6	Sep.
0.1	0.2	1.8	770.1	304.9	32.4	92.1	335.7	3.2	1.8	Oct.
0.1	0.2	2.0	792.5	322.9	32.9	93.6	337.8	3.3	2.0	Nov.
0.0	0.2	2.4	761.6	302.0	42.2	89.8	321.9	3.4	2.4	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
92.0	14.6	112.5	7,382.0	2,576.0	714.1	464.1	3,367.6	147.6	112.5	2002 Feb.
92.2	14.6	111.1	7,447.6	2,600.8	730.9	466.2	3,386.4	152.1	111.1	Mar.
94.1	14.6	111.0	7,504.3	2,612.3	751.6	472.2	3,400.4	156.8	111.0	Apr.
95.1	14.6	115.1	7,574.7	2,630.0	769.6	480.3	3,417.5	162.3	115.1	May
93.2	14.6	114.7	7,625.6	2,647.7	787.8	483.2	3,427.3	164.8	114.7	June
93.1	14.6	114.3	7,643.1	2,646.7	798.9	485.3	3,424.2	173.8	114.3	July
93.4	14.6	113.6	7,646.1	2,645.1	798.9	483.5	3,430.4	174.7	113.6	Aug.
94.1	14.7	117.3	7,705.1	2,667.5	816.4	484.8	3,442.8	176.5	117.3	Sep.
93.6	14.6	115.9	7,729.9	2,664.6	824.3	483.6	3,461.4	180.1	115.9	Oct.
93.1	14.6	113.8	7,760.6	2,667.5	839.7	483.6	3,474.3	181.6	113.8	Nov.
92.7	14.3	113.6	7,735.0	2,656.2	874.7	486.6	3,420.9	183.0	113.6	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
92.2	14.7	112.9	8,073.2	2,851.5	737.2	565.9	3,654.4	151.2	112.9	2002 Feb.
92.3	14.6	111.5	8,173.6	2,889.7	761.6	569.7	3,685.6	155.5	111.5	Mar.
94.2	14.6	111.5	8,204.6	2,890.7	774.7	568.5	3,699.3	159.8	111.5	Apr.
95.2	14.6	115.5	8,293.8	2,915.0	792.4	573.6	3,731.9	165.4	115.5	May
93.4	14.7	115.2	8,356.8	2,934.4	819.6	569.7	3,750.0	167.9	115.2	June
93.3	14.7	114.5	8,372.5	2,934.7	825.7	574.3	3,746.1	177.2	114.5	July
93.5	14.7	113.7	8,384.1	2,933.1	827.0	572.8	3,759.4	178.1	113.7	Aug.
94.3	14.7	117.9	8,480.8	2,970.8	857.8	576.5	3,778.7	179.1	117.9	Sep.
93.7	14.8	117.7	8,499.9	2,969.5	856.6	575.7	3,797.2	183.2	117.7	Oct.
93.2	14.8	115.9	8,553.1	2,990.4	872.6	577.2	3,812.1	184.9	115.9	Nov.
92.7	14.5	116.0	8,496.6	2,958.1	916.9	576.4	3,742.8	186.3	116.0	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

**Table 3.6 (cont'd)**
**Euro-denominated securities other than shares by original maturity, residency and sector of the issuer <sup>1)</sup>**
*(EUR billions; transactions during the month; nominal values)*
**Gross issues**
**1. Short-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	387.3	269.0	2.6	66.0	47.9	1.9	13.4	5.0	6.6	1.5
Mar.	400.6	287.4	2.2	60.2	49.0	1.8	24.3	10.7	10.1	3.3
Apr.	377.3	255.9	2.5	63.3	53.8	1.8	9.7	4.4	4.1	0.9
May	378.2	255.0	2.1	62.5	57.0	1.6	13.7	5.2	7.1	1.2
June	317.0	208.1	2.5	51.7	52.5	2.2	20.9	6.3	12.6	1.8
July	382.4	260.2	1.8	65.6	52.6	2.2	14.7	5.9	8.2	0.6
Aug.	366.2	257.8	1.8	50.9	53.9	1.8	12.1	4.5	6.8	0.6
Sep.	392.1	278.4	1.9	56.8	53.0	2.0	31.7	11.1	18.0	2.0
Oct.	441.8	319.5	2.2	64.7	53.1	2.3	17.1	5.0	9.0	1.3
Nov.	413.5	302.9	2.4	58.2	47.7	2.3	14.6	4.7	8.4	1.2
Dec.	386.7	291.3	2.2	46.4	44.3	2.6	23.9	6.3	15.7	1.3
2003 Jan.	518.6	375.7	2.1	66.0	72.9	1.9	.	.	.	.
Feb.	431.2	306.6	2.2	56.6	63.6	2.1	.	.	.	.

**2. Long-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	130.7	54.6	9.2	8.3	57.5	1.1	20.0	8.2	8.8	1.3
Mar.	143.0	56.9	9.1	2.9	68.8	5.3	25.5	8.6	12.4	3.3
Apr.	114.9	44.1	12.6	8.2	45.2	4.9	23.0	5.1	12.8	1.1
May	126.9	41.5	16.0	7.4	55.3	6.6	26.3	5.7	10.1	3.2
June	123.3	48.2	13.5	7.4	51.3	2.9	29.3	9.9	17.7	0.7
July	114.3	37.9	12.7	6.2	48.2	9.4	11.6	2.9	6.9	0.4
Aug.	59.2	28.2	2.4	2.1	25.2	1.3	7.0	3.1	2.7	0.3
Sep.	121.4	52.5	11.5	4.4	50.4	2.6	24.3	5.2	12.6	0.2
Oct.	105.7	39.3	9.1	0.9	52.1	4.4	13.2	4.6	6.8	0.3
Nov.	118.7	48.5	15.7	3.0	48.0	3.6	13.7	5.6	6.6	0.8
Dec.	127.7	45.6	36.1	7.9	34.4	3.7	18.3	6.1	8.8	2.2
2003 Jan.	151.5	57.9	2.6	8.9	75.8	6.3	.	.	.	.
Feb.	148.4	54.5	15.9	8.4	63.2	6.3	.	.	.	.

**3. Total**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	518.0	323.6	11.8	74.3	105.4	3.0	33.5	13.2	15.4	2.9
Mar.	543.6	344.3	11.3	63.1	117.8	7.1	49.8	19.3	22.5	6.6
Apr.	492.2	300.0	15.1	71.5	99.0	6.7	32.7	9.5	16.9	2.0
May	505.1	296.5	18.1	69.9	112.3	8.2	39.9	10.9	17.2	4.4
June	440.3	256.3	16.0	59.1	103.8	5.2	50.2	16.3	30.3	2.5
July	496.7	298.1	14.5	71.8	100.8	11.6	26.4	8.8	15.1	1.0
Aug.	425.4	285.9	4.2	53.1	79.1	3.2	19.1	7.7	9.6	0.9
Sep.	513.4	330.9	13.4	61.1	103.5	4.6	56.0	16.3	30.7	2.1
Oct.	547.5	358.8	11.3	65.6	105.2	6.7	30.3	9.7	15.8	1.6
Nov.	532.2	351.4	18.1	61.2	95.7	5.8	28.3	10.4	15.1	2.0
Dec.	514.5	336.9	38.3	54.3	78.7	6.4	42.2	12.4	24.5	3.5
2003 Jan.	670.0	433.5	4.7	74.9	148.7	8.2	.	.	.	.
Feb.	579.6	361.1	18.2	65.0	126.9	8.4	.	.	.	.

*Sources: ECB and BIS (for issues by non-residents of the euro area).*
*1) Including items expressed in the national denominations of the euro.*



of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
0.0	0.0	0.2	400.8	274.1	9.2	67.5	47.9	1.9	0.2	2002 Feb.
0.0	0.0	0.1	424.9	298.0	12.4	63.6	49.0	1.8	0.1	Mar.
0.1	0.0	0.2	387.0	260.3	6.6	64.2	53.9	1.8	0.2	Apr.
0.0	0.0	0.1	391.9	260.2	9.2	63.8	57.0	1.6	0.1	May
0.0	0.0	0.1	337.9	214.4	15.1	53.5	52.5	2.2	0.1	June
0.0	0.0	0.0	397.1	266.1	10.0	66.2	52.7	2.2	0.0	July
0.0	0.0	0.1	378.3	262.3	8.6	51.5	53.9	1.8	0.1	Aug.
0.1	0.0	0.5	423.8	289.5	19.9	58.7	53.1	2.0	0.5	Sep.
0.0	0.1	1.6	458.9	324.5	11.2	66.0	53.1	2.5	1.6	Oct.
0.0	0.0	0.2	428.1	307.6	10.8	59.4	47.7	2.3	0.2	Nov.
0.0	0.0	0.5	410.6	297.6	17.9	47.7	44.3	2.7	0.5	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
1.5	0.0	0.3	150.7	62.7	18.0	9.6	59.0	1.1	0.3	2002 Feb.
0.8	0.2	0.3	168.4	65.5	21.5	6.1	69.5	5.5	0.3	Mar.
3.3	0.0	0.7	137.9	49.1	25.3	9.3	48.5	4.9	0.7	Apr.
2.0	0.0	5.3	153.1	47.2	26.1	10.6	57.2	6.6	5.3	May
0.1	0.1	0.7	152.6	58.2	31.3	8.1	51.4	3.0	0.7	June
0.9	0.1	0.3	125.9	40.8	19.6	6.6	49.1	9.5	0.3	July
0.3	0.1	0.5	66.2	31.3	5.1	2.4	25.5	1.4	0.5	Aug.
0.7	0.2	5.5	145.7	57.6	24.1	4.5	51.1	2.7	5.5	Sep.
0.2	0.0	1.3	118.9	43.9	15.9	1.2	52.2	4.4	1.3	Oct.
0.0	0.0	0.5	132.4	54.1	22.3	3.8	48.0	3.6	0.5	Nov.
0.4	0.0	0.8	146.1	51.7	44.9	10.1	34.8	3.7	0.8	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
1.5	0.0	0.5	551.5	336.8	27.2	77.1	106.9	3.0	0.5	2002 Feb.
0.8	0.2	0.4	593.4	363.6	33.9	69.7	118.6	7.3	0.4	Mar.
3.3	0.0	0.9	524.9	309.5	31.9	73.5	102.3	6.7	0.9	Apr.
2.0	0.0	5.5	545.0	307.4	35.3	74.3	114.3	8.2	5.5	May
0.2	0.1	0.9	490.5	272.6	46.3	61.6	103.9	5.3	0.9	June
1.0	0.1	0.4	523.1	306.8	29.6	72.8	101.8	11.7	0.4	July
0.3	0.1	0.6	444.5	293.6	13.7	54.0	79.4	3.3	0.6	Aug.
0.8	0.2	6.0	569.5	347.1	44.0	63.3	104.3	4.8	6.0	Sep.
0.2	0.2	2.9	577.9	368.4	27.1	67.2	105.3	6.9	2.9	Oct.
0.0	0.0	0.7	560.5	361.8	33.2	63.2	95.7	5.9	0.7	Nov.
0.4	0.0	1.3	556.7	349.3	62.7	57.8	79.1	6.4	1.3	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

**Table 3.6 (cont'd)**
**Euro-denominated securities other than shares by original maturity, residency and sector of the issuer <sup>1)</sup>**
*(EUR billions; transactions during the month; nominal values)*
**Net issues**
**1. Short-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	-0.4	-6.2	0.2	-2.2	7.8	0.0	1.7	1.1	-0.1	0.5
Mar.	17.1	5.7	0.4	-1.1	12.4	-0.2	16.4	6.5	7.1	2.8
Apr.	-7.1	-2.2	0.2	-4.5	-0.3	-0.3	-18.4	-8.1	-7.7	-2.6
May	19.5	7.6	-0.8	-2.7	15.5	0.0	0.3	0.1	0.5	-0.3
June	-2.1	-2.5	0.1	-8.1	8.3	0.0	12.9	3.0	8.8	1.0
July	11.0	7.2	0.3	4.1	-0.8	0.3	-10.1	-3.0	-5.2	-1.6
Aug.	9.4	1.5	0.2	0.5	7.2	0.0	0.6	-0.2	1.1	-0.2
Sep.	11.0	4.1	-0.3	1.1	6.9	-0.7	24.0	8.6	13.5	1.4
Oct.	8.5	7.5	0.2	0.8	-0.3	0.3	-14.2	-5.8	-9.2	-0.5
Nov.	24.6	20.5	0.5	1.4	2.2	0.1	-2.3	-2.7	0.0	0.2
Dec.	-43.1	-22.2	-0.4	-4.7	-15.9	0.1	13.2	2.3	9.8	0.9
2003 Jan.	55.9	32.8	0.3	7.3	16.1	-0.6	.	.	.	.
Feb.	22.9	4.4	1.4	3.2	13.2	0.6	.	.	.	.

**2. Long-term**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	33.1	20.0	4.8	3.3	5.4	-0.4	6.2	3.5	3.3	0.9
Mar.	52.7	23.0	6.0	0.4	18.7	4.6	13.5	2.4	10.8	1.7
Apr.	40.5	8.2	10.1	5.5	12.0	4.6	15.4	2.7	10.5	0.5
May	51.0	12.9	11.2	5.3	16.1	5.5	18.0	3.6	6.7	2.8
June	36.1	13.8	4.6	3.5	11.7	2.5	18.5	7.4	13.7	-0.6
July	10.4	-4.6	6.8	2.4	-3.0	8.9	3.4	0.0	4.3	-0.3
Aug.	4.5	-0.7	0.3	-1.9	5.9	0.9	-1.1	-0.6	-0.2	0.1
Sep.	46.8	22.5	8.2	2.6	11.7	1.7	12.9	0.8	9.3	-1.5
Oct.	24.3	-4.2	6.3	-0.9	19.3	3.7	0.1	0.8	1.5	-0.3
Nov.	29.0	0.7	13.0	0.4	13.3	1.5	1.8	2.3	2.4	-0.3
Dec.	-32.0	-14.1	30.4	2.9	-52.9	1.7	7.4	2.6	4.7	1.1
2003 Jan.	27.1	-5.7	-0.9	6.6	23.1	4.0	.	.	.	.
Feb.	46.1	9.8	12.4	4.1	14.5	5.4	.	.	.	.

**3. Total**

	By euro area residents						By non-residents			
	Total	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8	9	10
2002 Feb.	32.8	13.8	5.0	1.1	13.2	-0.4	7.8	4.6	3.2	1.3
Mar.	69.8	28.7	6.4	-0.7	31.1	4.3	30.0	8.9	17.9	4.5
Apr.	33.4	6.0	10.3	1.0	11.8	4.4	-3.0	-5.4	2.8	-2.1
May	70.6	20.5	10.4	2.6	31.6	5.5	18.3	3.7	7.2	2.5
June	34.0	11.4	4.7	-4.6	20.0	2.5	31.3	10.4	22.5	0.4
July	21.5	2.6	7.1	6.5	-3.9	9.2	-6.7	-3.0	-1.0	-1.9
Aug.	13.8	0.9	0.5	-1.4	13.0	0.8	-0.6	-0.8	0.9	-0.1
Sep.	57.8	26.6	8.0	3.7	18.6	1.0	37.0	9.4	22.7	-0.1
Oct.	32.8	3.3	6.5	-0.1	19.1	4.0	-14.2	-5.1	-7.6	-0.8
Nov.	53.6	21.2	13.5	1.7	15.5	1.6	-0.5	-0.4	2.4	-0.1
Dec.	-75.1	-36.3	30.1	-1.8	-68.9	1.8	20.6	4.9	14.5	2.0
2003 Jan.	83.0	27.1	-0.7	13.9	39.2	3.4	.	.	.	.
Feb.	69.0	14.1	13.9	7.3	27.7	6.0	.	.	.	.

*Sources: ECB and BIS (for issues by non-residents of the euro area).*
*1) Including items expressed in the national denominations of the euro.*

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
0.0	0.0	0.2	1.3	-5.2	0.1	-1.7	7.8	0.0	0.2	2002 Feb.
0.0	0.0	0.0	33.5	12.2	7.5	1.7	12.4	-0.2	0.0	Mar.
-0.1	0.0	0.1	-25.5	-10.3	-7.5	-7.1	-0.3	-0.3	0.1	Apr.
0.0	0.0	-0.1	19.8	7.7	-0.3	-3.0	15.5	0.0	-0.1	May
0.0	0.0	0.1	10.7	0.5	8.9	-7.1	8.3	0.0	0.1	June
0.0	0.0	-0.2	1.0	4.2	-4.9	2.5	-0.8	0.3	-0.2	July
0.0	0.0	-0.1	9.9	1.3	1.3	0.3	7.1	0.0	-0.1	Aug.
0.1	0.0	0.5	35.1	12.7	13.2	2.5	6.9	-0.7	0.5	Sep.
-0.1	0.1	1.2	-5.7	1.7	-9.0	0.3	-0.3	0.5	1.2	Oct.
0.0	0.0	0.2	22.3	17.8	0.5	1.5	2.1	0.1	0.2	Nov.
-0.1	0.0	0.3	-29.9	-19.9	9.4	-3.8	-16.0	0.1	0.3	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
0.7	-0.3	-1.9	39.3	23.6	8.1	4.2	6.1	-0.7	-1.9	2002 Feb.
0.1	0.0	-1.4	66.2	25.4	16.8	2.1	18.8	4.5	-1.4	Mar.
1.8	0.0	-0.1	55.9	10.9	20.6	6.0	13.9	4.7	-0.1	Apr.
0.9	0.0	4.1	69.1	16.5	17.9	8.1	17.0	5.5	4.1	May
-1.9	0.0	-0.3	54.6	21.3	18.3	3.0	9.8	2.5	-0.3	June
-0.1	0.0	-0.5	13.9	-4.6	11.1	2.1	-3.1	8.9	-0.5	July
0.3	0.0	-0.7	3.4	-1.3	0.0	-1.7	6.2	0.9	-0.7	Aug.
0.7	0.0	3.7	59.7	23.4	17.5	1.1	12.4	1.7	3.7	Sep.
-0.5	-0.1	-1.4	24.3	-3.4	7.9	-1.2	18.8	3.6	-1.4	Oct.
-0.5	0.0	-2.0	30.8	3.0	15.4	0.0	12.9	1.5	-2.0	Nov.
-0.4	-0.3	-0.3	-24.5	-11.5	35.1	4.0	-53.4	1.4	-0.3	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

of the euro area			Total							
Central government	Other general government	International organisations	Total	Banks (including central banks)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	International organisations	
11	12	13	14	15	16	17	18	19	20	
0.7	-0.4	-1.7	40.6	18.4	8.2	2.5	14.0	-0.7	-1.7	2002 Feb.
0.1	0.0	-1.4	99.8	37.6	24.3	3.7	31.2	4.3	-1.4	Mar.
1.8	0.0	0.0	30.4	0.6	13.1	-1.1	13.5	4.4	0.0	Apr.
0.9	0.0	4.0	88.9	24.1	17.7	5.0	32.5	5.5	4.0	May
-1.8	0.0	-0.3	65.3	21.8	27.2	-4.2	18.2	2.6	-0.3	June
-0.1	0.0	-0.7	14.8	-0.4	6.1	4.6	-3.9	9.2	-0.7	July
0.3	0.0	-0.8	13.3	0.1	1.3	-1.4	13.3	0.8	-0.8	Aug.
0.8	0.0	4.2	94.8	36.0	30.7	3.6	19.3	1.0	4.2	Sep.
-0.6	0.1	-0.2	18.6	-1.7	-1.2	-0.9	18.5	4.1	-0.2	Oct.
-0.5	0.0	-1.8	53.1	20.8	15.9	1.6	15.0	1.6	-1.8	Nov.
-0.5	-0.3	0.1	-54.4	-31.4	44.6	0.2	-69.4	1.5	0.1	Dec.
.	.	.	.	.	.	.	.	.	.	2003 Jan.
.	.	.	.	.	.	.	.	.	.	Feb.

**Table 3.7****Annual growth rates of securities other than shares issued by euro area residents <sup>1)</sup>***(percentage changes)***1. Short-term**

	In all currencies combined						
	Total		MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government
	1	Index Dec.01= 100 2					
2002 Feb.	2.1	104.8	-3.2	-21.7	5.7	7.4	55.3
Mar.	2.3	107.4	-2.5	-16.3	4.1	7.5	48.8
Apr.	0.5	106.9	-3.0	-18.0	1.3	4.4	36.1
May	3.8	110.0	2.1	-32.8	-8.3	10.5	27.8
June	4.5	109.4	0.4	-25.1	-15.2	16.7	50.8
July	5.3	111.4	3.8	-16.4	-14.0	14.6	-3.1
Aug.	5.4	112.3	4.8	0.6	-18.0	15.2	-1.3
Sep.	7.7	114.4	8.9	0.8	-17.0	16.3	-19.4
Oct.	8.9	116.1	10.5	14.9	-18.5	17.9	-0.9
Nov.	12.3	119.3	18.6	23.3	-14.6	15.6	-5.3
Dec.	12.8	112.8	14.8	30.4	-10.4	19.3	-14.3
2003 Jan.	15.3	121.1	17.6	28.9	-7.3	21.1	-16.0
Feb.	19.0	124.7	22.0	60.3	-1.8	22.7	-0.2

**2. Long-term**

	In all currencies combined						
	Total		MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government
	1	Index Dec.01= 100 2					
2002 Feb.	7.7	101.3	6.7	31.9	23.4	3.7	21.6
Mar.	7.8	102.2	7.5	30.6	15.8	4.0	23.7
Apr.	7.9	102.9	7.4	32.1	16.3	3.8	25.4
May	7.9	103.8	8.0	32.7	14.4	3.5	29.6
June	7.5	104.3	7.7	30.2	12.9	3.1	31.7
July	7.0	104.6	6.7	27.1	11.7	3.1	36.6
Aug.	6.8	104.6	6.5	26.5	8.9	3.3	34.3
Sep.	7.3	105.4	7.0	27.3	11.7	3.6	31.2
Oct.	7.2	105.8	6.3	26.6	12.2	3.9	30.0
Nov.	6.9	106.3	5.7	26.8	7.7	4.3	29.3
Dec.	5.9	105.9	5.0	24.6	6.8	2.9	29.7
2003 Jan.	5.6	106.5	4.7	22.9	7.1	2.7	30.2
Feb.	5.9	107.3	4.4	25.0	7.5	3.0	34.6

**3. Total**

	In all currencies combined						
	Total		MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government
	1	Index Dec.01= 100 2					
2002 Feb.	7.2	101.6	5.5	31.1	19.5	3.9	22.3
Mar.	7.3	102.7	6.3	30.0	13.4	4.2	24.2
Apr.	7.1	103.2	6.2	31.4	13.3	3.9	25.7
May	7.5	104.3	7.3	31.8	9.6	4.0	29.6
June	7.2	104.8	6.8	29.5	7.1	4.2	32.0
July	6.9	105.2	6.4	26.6	6.3	4.0	35.4
Aug.	6.7	105.3	6.3	26.3	3.1	4.3	33.2
Sep.	7.3	106.2	7.2	27.0	5.5	4.6	29.7
Oct.	7.4	106.8	6.7	26.5	5.4	5.0	29.2
Nov.	7.5	107.5	7.1	26.8	3.0	5.2	28.4
Dec.	6.5	106.5	6.0	24.7	3.5	4.1	28.3
2003 Jan.	6.5	107.8	6.1	22.9	4.3	4.1	29.0
Feb.	7.1	108.8	6.3	25.3	5.7	4.6	33.7

Source: ECB.

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

2) Including items expressed in the national denomination of the euro.

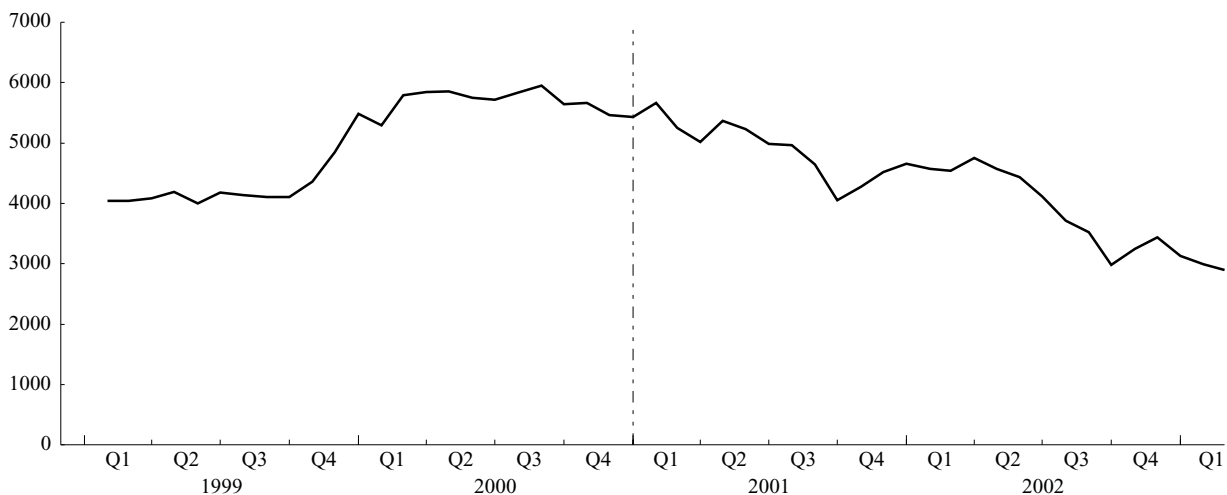
In euro <sup>2)</sup>							
Total	Index Dec.01= 100	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	
2.4	105.7	-4.1	-21.7	4.5	8.0	58.5	2002 Feb.
2.7	108.5	-2.9	-16.3	2.4	8.1	52.5	Mar.
-0.2	107.3	-5.3	-18.0	-0.2	4.7	38.6	Apr.
3.2	110.5	0.9	-32.8	-10.1	10.6	26.0	May
4.1	110.1	-0.9	-27.1	-16.6	16.5	51.6	June
5.0	111.9	3.5	-18.5	-15.6	14.5	-7.0	July
5.6	113.5	6.0	-1.8	-19.4	15.0	-7.0	Aug.
7.7	115.3	9.0	-1.8	-18.1	16.7	-28.9	Sep.
7.5	116.7	8.0	12.1	-20.3	18.1	-11.8	Oct.
12.3	120.7	20.3	20.6	-15.9	15.9	-14.0	Nov.
13.6	113.6	16.6	27.3	-11.4	20.3	-23.4	Dec.
16.1	122.8	20.5	26.0	-8.2	21.1	-27.0	2003 Jan.
19.7	126.5	25.2	57.4	-2.9	22.4	-9.0	Feb.

In euro <sup>2)</sup>							
Total	Index Dec.01= 100	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	
7.3	101.3	5.0	45.5	23.2	3.7	22.5	2002 Feb.
7.4	102.1	5.6	43.5	18.8	3.9	24.7	Mar.
7.5	102.7	5.6	44.7	19.4	3.8	26.5	Apr.
7.4	103.5	5.8	42.8	17.3	3.6	30.5	May
7.0	104.1	5.7	39.4	15.8	3.2	32.7	June
6.4	104.2	4.5	33.6	15.7	3.1	37.9	July
6.3	104.3	4.4	32.5	12.8	3.3	35.3	Aug.
6.7	105.0	5.1	33.3	14.1	3.4	32.1	Sep.
6.5	105.4	4.3	31.0	14.7	3.9	29.7	Oct.
6.5	105.9	4.2	31.5	9.2	4.3	29.1	Nov.
5.4	105.4	3.5	29.2	8.3	2.8	29.2	Dec.
5.0	105.8	3.1	27.3	8.5	2.5	29.4	2003 Jan.
5.2	106.5	2.6	29.0	8.6	2.8	33.8	Feb.

In euro <sup>2)</sup>							
Total	Index Dec.01= 100	MFIs (including Eurosystem)	Non-monetary financial corporations	Non-financial corporations	Central government	Other general government	
6.8	101.6	4.1	44.2	18.6	4.1	23.2	2002 Feb.
6.9	102.6	4.7	42.4	14.9	4.3	25.2	Mar.
6.7	103.1	4.4	43.4	14.8	3.9	26.7	Apr.
7.0	104.1	5.3	41.3	10.7	4.2	30.4	May
6.7	104.6	5.0	38.2	8.2	4.2	33.0	June
6.3	104.9	4.4	32.8	8.3	4.1	36.6	July
6.2	105.1	4.6	32.0	4.9	4.2	34.0	Aug.
6.8	105.9	5.5	32.9	6.3	4.5	30.3	Sep.
6.6	106.4	4.7	30.7	5.9	5.0	28.7	Oct.
7.0	107.2	5.8	31.4	3.3	5.3	27.9	Nov.
6.1	106.1	4.7	29.1	4.0	4.1	27.6	Dec.
6.0	107.3	4.9	27.3	4.8	4.0	28.0	2003 Jan.
6.5	108.3	4.8	29.2	6.2	4.3	32.7	Feb.

**Table 3.8****Quoted shares issued by euro area residents***(EUR billions; end-of-period stocks; market values)***Amounts outstanding**

	Total 1	MFIs 2	Non-monetary financial corporations 3	Non-financial corporations 4
2000 Feb.	5,794.6	647.8	600.6	4,546.2
Mar.	5,841.3	658.2	649.7	4,533.4
Apr.	5,860.1	670.4	654.9	4,534.8
May	5,751.1	673.4	648.2	4,429.5
June	5,716.5	692.0	645.7	4,378.8
July	5,833.7	700.3	696.3	4,437.2
Aug.	5,947.3	742.1	700.4	4,504.7
Sep.	5,638.6	730.3	687.7	4,220.7
Oct.	5,666.3	719.0	664.4	4,282.9
Nov.	5,465.3	674.5	673.5	4,117.4
Dec.	5,430.4	687.0	675.0	4,068.3
<i>Euro area enlargement</i>				
2001 Jan.	5,667.2	762.2	706.3	4,198.7
Feb.	5,247.9	710.1	661.6	3,876.2
Mar.	5,020.1	686.3	620.4	3,713.5
Apr.	5,364.4	715.3	643.4	4,005.6
May	5,233.9	697.9	627.0	3,909.0
June	4,984.1	676.5	635.1	3,672.5
July	4,959.8	647.0	572.4	3,740.4
Aug.	4,650.3	643.2	576.6	3,430.5
Sep.	4,052.5	535.7	485.3	3,031.5
Oct.	4,277.9	551.5	497.7	3,228.7
Nov.	4,522.8	587.5	512.0	3,423.2
Dec.	4,652.5	617.3	511.1	3,524.1
2002 Jan.	4,574.0	623.8	518.8	3,431.4
Feb.	4,545.6	622.4	509.8	3,413.4
Mar.	4,750.1	665.3	536.7	3,548.2
Apr.	4,569.8	678.0	517.5	3,374.2
May	4,432.0	666.3	484.9	3,280.9
June	4,113.3	614.8	463.4	3,035.1
July	3,709.7	515.6	395.4	2,798.7
Aug.	3,519.2	521.7	371.0	2,626.5
Sep.	2,977.9	412.6	276.0	2,289.3
Oct.	3,250.9	446.9	321.2	2,482.8
Nov.	3,434.7	487.3	346.0	2,601.4
Dec.	3,127.3	450.7	283.6	2,393.0
2003 Jan.	2,993.8	425.8	261.1	2,306.9
Feb.	2,900.3	425.5	270.7	2,204.1

**Total outstanding amounts***(EUR billions; end-of-period stocks; market values)*

Source: ECB.



## 4 HICP and other prices in the euro area

**Table 4.1**

### Harmonised Index of Consumer Prices

(not seasonally adjusted, annual percentage changes, unless otherwise indicated)

#### 1. Total index and goods and services

	Total		Goods		Services		Total (s.a.)		Goods (s.a.)	Services (s.a.)
	Index 1996 = 100		Index 1996 = 100		Index 1996 = 100		Index 1996 = 100	% change on previous period	Index 1996 = 100	Index 1996 = 100
Weight in the total (%) <sup>1)</sup>	100.0	100.0	59.1	59.1	40.9	40.9	100.0	100.0	59.1	40.9
	1	2	3	4	5	6	7	8	9	10
1999	103.8	1.1	102.7	0.9	106.0	1.5	-	-	-	-
2000	106.0	2.1	105.3	2.5	107.5	1.5	-	-	-	-
<i>Euro area enlargement</i>										
2001	108.5	2.3	107.7	2.3	110.2	2.5	-	-	-	-
2002	110.9	2.3	109.5	1.7	113.6	3.1	-	-	-	-
2002 Q2	111.0	2.1	109.9	1.4	113.1	3.1	110.7	0.5	109.4	113.1
Q3	111.1	2.1	109.2	1.3	114.5	3.3	111.2	0.4	109.6	114.0
Q4	111.7	2.3	110.1	1.8	114.5	3.1	111.7	0.5	110.0	114.8
2003 Q1	112.5	2.3	110.8	2.0	115.3	2.7	112.6	0.8	111.1	115.5
2002 May	111.1	2.0	110.0	1.3	113.2	3.3	110.8	0.2	109.4	113.3
June	111.1	1.9	109.7	1.0	113.5	3.2	110.8	0.0	109.3	113.5
July	111.0	2.0	108.9	1.2	114.5	3.2	110.9	0.1	109.4	113.8
Aug.	111.0	2.1	108.9	1.4	114.6	3.3	111.2	0.2	109.6	114.1
Sep.	111.3	2.1	109.7	1.4	114.2	3.2	111.4	0.3	109.9	114.3
Oct.	111.6	2.3	110.1	1.8	114.2	3.1	111.7	0.2	110.1	114.6
Nov.	111.5	2.3	110.0	1.8	114.2	3.1	111.7	0.0	109.9	114.8
Dec.	112.0	2.3	110.2	1.9	115.2	3.0	111.9	0.2	110.1	115.1
2003 Jan.	111.9	2.1	110.2	1.6	115.0	2.8	112.3	0.4	110.7	115.3
Feb.	112.4	2.4	110.7	2.1	115.4	2.7	112.6	0.3	111.1	115.4
Mar.	113.1	2.4	111.7	2.2	115.6	2.6	113.0	0.3	111.5	115.7
Apr. <sup>2)</sup>	.	2.1	.	.	.	.	.	.	.	.

#### 2. Breakdown of goods and services

	Goods						Services				
	Food <sup>3)</sup>			Industrial goods			Housing	Transport	Communi- cation	Recreation and personal	Miscellan- eous
	Total	Processed food <sup>3)</sup>	Unprocessed food	Total	Non-energy industrial goods	Energy					
Weight in the total (%) <sup>1)</sup>	19.3	11.7	7.6	39.8	31.6	8.2	10.4	6.3	2.9	14.9	6.4
	11	12	13	14	15	16	17	18	19	20	21
1999	0.6	0.9	0.0	1.0	0.7	2.4	1.8	2.1	-4.4	2.0	1.8
2000	1.4	1.2	1.8	3.0	0.5	13.0	1.5	2.5	-7.1	2.4	2.5
<i>Euro area enlargement</i>											
2001	4.5	2.9	7.0	1.2	0.9	2.2	1.8	3.6	-4.1	3.6	2.7
2002	3.1	3.1	3.1	1.0	1.5	-0.6	2.4	3.2	-0.3	4.2	3.4
2002 Q2	2.9	3.2	2.5	0.7	1.6	-2.3	2.4	3.2	-0.2	4.2	3.4
Q3	2.3	2.9	1.4	0.8	1.3	-0.7	2.4	3.4	0.0	4.3	3.5
Q4	2.3	2.7	1.7	1.6	1.2	2.9	2.5	3.0	-0.2	4.0	3.4
2003 Q1	2.0	3.2	0.2	2.0	0.7	7.0	2.4	3.2	-0.8	3.0	3.7
2002 May	2.7	3.2	2.1	0.6	1.6	-2.8	2.4	3.3	-0.1	4.5	3.5
June	2.3	3.1	1.2	0.4	1.5	-3.6	2.4	3.3	-0.1	4.3	3.4
July	2.2	3.0	1.0	0.7	1.3	-1.6	2.4	3.4	0.0	4.3	3.5
Aug.	2.3	3.0	1.4	0.9	1.3	-0.3	2.4	3.6	-0.1	4.4	3.5
Sep.	2.4	2.8	1.7	0.9	1.3	-0.2	2.4	3.2	0.1	4.3	3.4
Oct.	2.3	2.7	1.7	1.5	1.2	2.6	2.4	3.0	0.1	4.3	3.3
Nov.	2.4	2.6	2.0	1.5	1.3	2.4	2.5	3.2	-0.4	4.0	3.4
Dec.	2.2	2.7	1.3	1.7	1.2	3.8	2.5	2.8	-0.5	3.8	3.5
2003 Jan.	1.5	2.9	-0.6	1.7	0.6	6.0	2.5	3.3	-0.7	3.2	3.6
Feb.	2.1	3.3	0.3	2.2	0.7	7.7	2.4	3.3	-0.9	3.0	3.7
Mar.	2.3	3.3	0.8	2.2	0.8	7.4	2.4	3.0	-0.7	2.8	3.7
Apr.	.	.	.	.	.	.	.	.	.	.	.

Sources: Eurostat and ECB calculations.

1) Referring to the index period 2003.

2) Estimate based on first releases by Germany and Italy (and, when available, by other Member States), as well as on early information on energy prices.

3) Including alcoholic beverages and tobacco.



**Table 4.2**
**Selected other price indicators**
**1. Industry and commodity prices**
*(annual percentage changes, unless otherwise indicated)*

	Industrial producer prices											World market prices of raw materials <sup>1)</sup>	Oil prices <sup>2)</sup> (EUR per barrel)			
	Industry excluding construction <sup>3)</sup>								Construction <sup>4)</sup>	Manufacturing	Total excluding energy					
	Total		Industry excluding construction and energy					Energy								
	Index 1995 = 100		Total	Intermediate goods	Capital goods	Consumer goods										
1	2	3	4	5	Total	Durable consumer goods	Non-durable consumer goods	6	7	8	9	10	11	12	13	14
1997	101.4	1.1	0.6	0.2	0.3	1.1	0.6	1.2	3.2	1.3	0.8	10.7	14.6	17.0		
1998	100.6	-0.8	0.2	-0.4	0.6	0.5	0.7	0.5	-5.2	0.3	-0.6	-21.0	-12.5	12.0		
1999	100.2	-0.4	-0.6	-1.5	0.2	-0.1	0.7	-0.2	0.5	1.2	0.2	15.8	-5.9	17.1		
2000	105.7	5.5	2.6	5.0	0.6	1.5	1.4	1.6	19.0	2.4	5.2	50.8	16.7	31.0		
<i>Euro area enlargement</i>																
2001	108.2	2.2	1.9	1.2	1.1	3.0	1.8	3.1	2.7	2.1	1.2	-8.8	-7.6	27.8		
2002	108.1	0.0	0.7	-0.2	1.0	1.3	1.6	1.3	-2.2	2.4	0.3	-3.2	-1.7	26.5		
2002 Q1	107.5	-0.7	0.4	-1.5	1.2	1.7	1.9	1.6	-4.4	2.5	-0.5	-10.5	-3.6	24.6		
Q2	108.1	-0.7	0.4	-0.7	1.1	1.0	1.7	0.9	-4.5	2.3	-0.3	-8.7	-5.5	27.8		
Q3	108.3	0.0	0.8	0.3	0.9	1.1	1.4	1.1	-2.5	2.3	0.4	-4.2	-1.6	27.2		
Q4	108.6	1.3	1.1	1.0	0.9	1.4	1.3	1.4	2.9	2.7	1.5	14.0	4.4	26.5		
2003 Q1	110.2	2.4	1.2	1.6	0.4	1.3	0.9	1.3	7.8	.	2.3	9.9	-5.0	28.4		
2002 Apr.	108.1	-0.5	0.4	-1.0	1.2	1.2	1.8	1.1	-3.4	-	-0.1	-1.2	-1.4	29.3		
May	108.1	-0.7	0.3	-0.8	1.2	1.0	1.6	0.9	-4.6	-	-0.4	-9.5	-6.8	28.1		
June	108.0	-0.8	0.4	-0.4	1.0	0.9	1.6	0.8	-5.4	-	-0.5	-14.9	-8.4	25.8		
July	108.1	-0.2	0.7	0.1	0.9	1.1	1.3	1.0	-3.3	-	0.1	-10.2	-7.6	25.9		
Aug.	108.2	0.0	0.8	0.3	0.9	1.1	1.5	1.0	-2.4	-	0.4	-4.3	-1.3	27.0		
Sep.	108.5	0.2	0.9	0.5	0.9	1.3	1.5	1.3	-1.8	-	0.6	2.4	4.7	28.9		
Oct.	108.8	1.1	1.0	0.8	0.9	1.4	1.3	1.4	2.1	-	1.3	14.3	7.8	27.9		
Nov.	108.4	1.2	1.1	1.1	0.9	1.3	1.3	1.3	2.3	-	1.4	10.5	3.4	24.2		
Dec.	108.7	1.6	1.2	1.1	0.9	1.4	1.3	1.5	4.2	-	1.9	17.2	2.1	27.1		
2003 Jan.	109.8	2.3	1.1	1.4	0.6	1.3	1.0	1.3	6.9	-	2.1	16.9	-2.3	28.3		
Feb.	110.2	2.7	1.2	1.7	0.4	1.4	0.9	1.4	8.8	-	2.6	16.6	-4.5	29.8		
Mar.	110.5	2.4	1.2	1.7	0.4	1.2	0.7	1.3	7.6	-	2.3	-2.0	-8.1	27.2		
Apr.	.	.	.	.	.	.	.	.	.	-	.	-15.4	-7.5	22.9		

**2. Deflators of gross domestic product <sup>5)</sup>**
*(annual percentage changes, unless otherwise indicated; seasonally adjusted)*

	Total		Domestic demand	Private consumption	Government consumption	Gross fixed capital formation	Exports <sup>6)</sup>	Imports <sup>6)</sup>
	Index 1995 = 100							
	15	16	17	18	19	20	21	22
1997	103.6	1.5	1.7	2.0	1.3	0.9	1.8	2.6
1998	105.3	1.7	1.3	1.4	1.2	0.9	-0.1	-1.5
1999	106.4	1.1	1.2	1.1	1.9	0.8	-0.5	-0.3
2000	107.8	1.3	2.5	2.2	2.7	2.5	4.6	8.2
<i>Euro area enlargement</i>								
2001	110.8	2.4	2.2	2.4	2.4	2.0	1.5	0.8
2002	113.5	2.4	2.2	2.3	1.8	2.0	-0.7	-1.6
2001 Q2	110.7	2.5	2.6	2.8	2.7	2.1	2.5	2.6
Q3	111.0	2.3	2.1	2.4	2.2	2.1	0.7	0.0
Q4	112.1	2.9	1.8	2.1	2.3	1.8	-0.4	-3.1
2002 Q1	112.7	2.6	2.3	2.5	2.0	2.1	-0.7	-1.8
Q2	113.2	2.3	2.0	2.1	1.7	2.2	-1.0	-2.0
Q3	113.9	2.6	2.1	2.2	1.9	1.8	-0.4	-2.0
Q4	114.4	2.1	2.3	2.3	1.7	1.9	-0.7	-0.4

Sources: Eurostat, except columns 12 and 13 (HWWA - Hamburg Institute of International Economics), column 14 (Thomson Financial Datastream) and columns 15 to 22 (ECB calculations based on Eurostat data).

1) To December 1998, in ECU; from January 1999, in euro.

2) Brent Blend (for one-month forward delivery). To December 1998, in ECU; from January 1999, in euro.

3) Breakdown in accordance with the harmonised definition of Main Industrial Groupings.

4) Residential buildings, based on non-harmonised data.

5) Data to end-1998 are based on national data expressed in domestic currency.

6) Deflators for exports and imports refer to goods and services and include cross-border trade within the euro area.

## 5 Real economy indicators in the euro area

**Table 5.1**

### National accounts <sup>1)</sup>

#### GDP and expenditure components

##### 1. Current prices

(EUR billions (ECU billions to end-1998), seasonally adjusted)

	GDP								
	Total	Domestic demand					External balance <sup>3)</sup>		
		Total	Private consumption	Government consumption	Gross fixed capital formation <sup>5)</sup>	Changes in inventories <sup>2)</sup>	Total	Exports <sup>3)</sup>	Imports <sup>3)</sup>
1	2	3	4	5	6	7	8	9	
1998	5,883.6	5,743.8	3,330.9	1,176.4	1,203.6	33.0	139.8	1,949.1	1,809.3
1999	6,150.1	6,048.6	3,507.1	1,230.0	1,291.8	19.7	101.5	2,052.1	1,950.6
2000	6,449.4	6,380.5	3,674.6	1,288.8	1,389.0	28.0	68.9	2,415.9	2,347.0
<i>Euro area enlargement</i>									
2001	6,827.7	6,716.1	3,919.1	1,367.1	1,437.3	-7.4	111.6	2,551.7	2,440.1
2002	7,049.9	6,877.0	4,033.9	1,428.7	1,427.7	-13.3	173.0	2,564.3	2,391.4
2001 Q3	1,711.4	1,682.1	984.7	342.9	359.5	-5.0	29.3	633.9	604.6
Q4	1,724.0	1,686.0	989.2	347.3	357.7	-8.2	37.9	629.5	591.6
2002 Q1	1,740.4	1,701.0	995.5	351.9	357.6	-4.0	39.4	625.7	586.3
Q2	1,755.5	1,713.4	1,002.8	356.2	355.1	-0.7	42.1	637.8	595.7
Q3	1,771.7	1,722.4	1,012.8	359.0	356.5	-5.9	49.3	650.4	601.1
Q4	1,782.3	1,740.1	1,022.7	361.6	358.5	-2.7	42.2	650.4	608.2

##### 2. Constant prices

(ECU billions at 1995 prices, seasonally adjusted)

	GDP								
	Total	Domestic demand					External balance <sup>3)</sup>		
		Total	Private consumption	Government consumption	Gross fixed capital formation <sup>4)</sup>	Changes in inventories <sup>2)</sup>	Total	Exports <sup>3)</sup>	Imports <sup>3)</sup>
10	11	12	13	14	15	16	17	18	
1998	5,667.3	5,544.8	3,186.3	1,142.2	1,191.0	25.4	122.5	1,938.8	1,816.2
1999	5,826.1	5,738.1	3,299.2	1,164.7	1,260.6	13.7	88.0	2,039.4	1,951.4
2000	6,029.4	5,904.1	3,382.0	1,187.7	1,321.9	12.4	125.3	2,295.4	2,170.1
<i>Euro area enlargement</i>									
2001	6,223.2	6,073.9	3,519.8	1,227.6	1,338.9	-12.4	149.3	2,386.8	2,237.5
2002	6,274.7	6,086.7	3,542.6	1,259.9	1,303.8	-19.6	188.0	2,415.6	2,227.6
2001 Q3	1,557.6	1,517.2	881.6	307.4	333.8	-5.6	40.4	595.0	554.6
Q4	1,554.7	1,515.4	882.1	309.5	330.9	-7.1	39.4	589.6	550.3
2002 Q1	1,561.2	1,516.7	880.7	312.4	328.6	-4.9	44.6	588.6	544.0
Q2	1,567.0	1,519.4	883.0	314.8	324.5	-2.9	47.6	600.6	553.1
Q3	1,572.2	1,521.5	887.5	315.9	325.1	-7.0	50.7	613.0	562.4
Q4	1,574.3	1,529.1	891.4	316.8	325.6	-4.7	45.2	613.3	568.1

(annual percentage changes)

1998	2.9	3.5	3.0	1.4	5.1	-	-	7.4	10.0
1999	2.8	3.5	3.5	2.0	5.8	-	-	5.2	7.4
2000	3.5	2.9	2.5	2.0	4.9	-	-	12.6	11.2
<i>Euro area enlargement</i>									
2001	1.4	0.9	1.8	2.1	-0.6	-	-	2.8	1.4
2002	0.8	0.2	0.6	2.6	-2.6	-	-	1.2	-0.4
2001 Q3	1.3	0.7	1.8	2.4	-1.5	-	-	1.3	-0.5
Q4	0.5	0.0	1.6	1.8	-2.4	-	-	-2.7	-4.3
2002 Q1	0.4	-0.1	0.6	2.4	-2.9	-	-	-2.9	-4.5
Q2	0.7	-0.2	0.3	2.9	-3.4	-	-	0.8	-1.8
Q3	0.9	0.3	0.7	2.8	-2.6	-	-	3.0	1.4
Q4	1.3	0.9	1.1	2.4	-1.6	-	-	4.0	3.2

Source: Eurostat.

1) See the first section of the general notes for a brief explanation of features of current price data expressed in ECU up to end-1998.

2) Including acquisitions less disposals of valuables.

3) Exports and imports cover goods and services and include cross-border trade within the euro area. They are not fully consistent with Tables 8 and 9.

## Value added by economic activity

### 3. Current prices

(EUR billions (ECU billions to end-1998), seasonally adjusted)

	Gross value added							Intermediate consumption of FISIM <sup>1)</sup>	Taxes less subsidies on products
	Total	Agriculture, hunting, forestry and fishing activities	Manufacturing, energy and mining	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business activities	Public administration, education, health and other services		
	1	2	3	4	5	6	7	8	9
1998	5,471.0	138.7	1,276.8	295.4	1,139.8	1,441.3	1,179.0	202.2	614.8
1999	5,689.1	136.0	1,293.3	310.7	1,191.3	1,527.3	1,230.6	201.6	662.7
2000	5,972.6	136.9	1,347.3	326.5	1,261.1	1,619.9	1,280.9	212.1	688.8
<i>Euro area enlargement</i>									
2001	6,343.5	151.7	1,412.0	347.3	1,356.5	1,719.0	1,357.0	232.3	716.4
2002	6,545.2	155.3	1,427.8	358.2	1,392.3	1,789.6	1,421.9	237.7	742.4
2001 Q3	1,591.1	38.5	353.4	87.2	340.8	430.7	340.5	58.6	178.9
Q4	1,603.4	38.8	350.5	88.4	342.9	437.9	344.9	59.1	179.7
2002 Q1	1,616.0	39.0	352.8	89.4	344.4	440.6	349.7	59.1	183.6
Q2	1,630.7	38.6	356.9	89.0	346.7	445.9	353.6	58.9	183.7
Q3	1,643.9	39.0	359.5	89.5	349.1	449.7	357.2	59.2	187.0
Q4	1,654.5	38.8	358.6	90.3	352.0	453.4	361.5	60.5	188.3

### 4. Constant prices

(ECU billions at 1995 prices, seasonally adjusted)

	Gross value added							Intermediate consumption of FISIM <sup>1)</sup>	Taxes less subsidies on products
	Total	Agriculture, hunting, forestry and fishing activities	Manufacturing, energy and mining	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business activities	Public administration, education, health and other services		
	10	11	12	13	14	15	16	17	18
1998	5,319.6	142.3	1,256.7	291.9	1,114.3	1,388.4	1,126.1	222.4	570.2
1999	5,462.1	146.0	1,268.3	299.2	1,164.1	1,441.0	1,143.5	231.2	595.3
2000	5,666.9	145.6	1,319.0	306.2	1,220.5	1,507.7	1,167.9	247.6	610.1
<i>Euro area enlargement</i>									
2001	5,864.7	151.8	1,348.5	310.9	1,282.3	1,569.0	1,202.3	264.7	623.2
2002	5,928.9	152.5	1,352.6	307.1	1,299.6	1,590.8	1,226.3	271.5	617.3
2001 Q3	1,468.6	38.2	337.0	77.7	321.0	393.8	301.0	66.3	155.3
Q4	1,467.0	38.2	332.8	77.9	321.4	394.4	302.3	67.2	154.9
2002 Q1	1,473.9	38.2	336.1	77.5	322.6	395.2	304.2	67.0	154.4
Q2	1,481.2	38.1	338.7	76.7	324.1	397.7	305.9	67.4	153.1
Q3	1,485.3	38.2	339.5	76.5	325.6	398.5	307.0	68.1	154.9
Q4	1,488.4	38.0	338.3	76.3	327.3	399.3	309.2	69.0	154.9
<i>(annual percentage changes)</i>									
1998	2.9	1.5	3.2	0.4	4.0	3.7	1.5	3.6	2.6
1999	2.7	2.6	0.9	2.5	4.5	3.8	1.5	4.0	4.4
2000	3.8	-0.3	4.0	2.3	4.8	4.6	2.1	7.1	2.5
<i>Euro area enlargement</i>									
2001	1.7	-1.3	1.1	-0.6	2.6	2.6	1.4	5.4	0.2
2002	1.1	0.5	0.3	-1.2	1.4	1.4	2.0	2.6	-0.9
2001 Q3	1.6	-1.3	0.8	-0.7	2.3	2.5	1.5	4.7	0.0
Q4	0.8	-0.7	-1.4	-0.4	1.4	2.0	1.5	4.8	-0.4
2002 Q1	0.6	1.2	-1.6	-0.2	1.0	1.6	1.8	2.7	-1.3
Q2	1.1	1.2	0.5	-1.2	1.1	1.5	2.0	2.2	-2.2
Q3	1.1	0.0	0.8	-1.5	1.4	1.2	2.0	2.7	-0.2
Q4	1.5	-0.4	1.6	-2.0	1.8	1.2	2.3	2.7	0.0

Source: Eurostat.

1) The use of financial intermediation services indirectly measured (FISIM) is treated as intermediate consumption which is not allocated among branches.

**Table 5.2**
**Selected other real economy indicators <sup>1)</sup>**
**1. Industrial production**
*(annual percentage changes, unless otherwise indicated)*

	Total		Industry excluding construction <sup>2)</sup>								Construction	Manufacturing
	Total		Industry excluding construction and energy						Energy			
	Index (s.a.) 1995 = 100		Total	Inter- mediate goods	Capital goods	Consumer goods						
						Total	Durable consumer goods	Non-durable consumer goods				
1	2	3	4	5	6	7	8	9	10	11	12	
1999	2.0	111.4	1.9	2.0	1.9	2.5	1.5	1.4	1.6	0.9	3.9	2.0
2000	4.9	117.4	5.4	5.8	5.8	9.0	2.0	6.2	1.2	1.9	2.1	5.7
<i>Euro area enlargement</i>												
2001	0.2	118.0	0.4	0.2	-0.7	1.5	0.3	-1.7	0.7	1.0	0.0	0.3
2002	-0.7	117.2	-0.6	-0.7	0.3	-2.2	-0.7	-5.4	0.2	0.7	-0.3	-0.7
2002 Q1	-2.4	116.7	-2.8	-3.3	-2.1	-6.5	-1.4	-7.0	-0.1	1.5	1.8	-3.6
Q2	-1.1	117.1	-0.7	-0.9	0.0	-2.3	-1.1	-6.3	0.0	2.2	-0.4	-0.8
Q3	-0.2	117.6	0.0	-0.2	1.1	-1.3	-1.2	-4.6	-0.5	1.1	0.2	-0.1
Q4	0.7	117.6	1.2	1.6	2.4	1.5	0.7	-3.7	1.6	-1.6	-2.3	1.6
2003 Q1	.	.	.	.	.	.	.	.	.	.	.	.
2002 May	-1.7	117.0	-1.0	-1.3	0.2	-4.1	-0.6	-7.2	0.8	2.4	-2.0	-1.4
June	-1.0	117.5	-0.5	-1.0	-0.6	-1.0	-1.8	-5.4	-1.1	3.8	-1.1	-0.9
July	0.2	117.7	0.6	0.3	1.5	-0.3	-1.0	-2.3	-0.7	2.2	0.1	0.4
Aug.	-0.8	117.6	-0.8	-1.0	0.0	-1.5	-1.9	-9.3	-0.7	0.9	0.6	-0.8
Sep.	-0.2	117.5	0.1	-0.1	1.7	-2.1	-0.8	-3.6	-0.2	0.1	0.0	0.0
Oct.	0.3	117.8	1.2	0.9	1.5	0.4	0.4	-3.3	1.2	3.4	-3.5	1.0
Nov.	2.1	118.4	2.7	3.5	4.2	4.2	2.0	-1.6	2.7	-1.8	-1.5	3.5
Dec.	-0.3	116.7	-0.4	0.4	1.4	0.1	-0.5	-6.7	0.8	-5.4	-1.7	0.3
2003 Jan.	0.3	118.0	1.3	1.1	2.4	1.3	-1.2	-4.0	-0.6	1.0	2.3	1.1
Feb.	0.6	118.5	2.0	1.0	1.1	3.0	-1.0	-4.9	-0.2	8.0	-1.3	1.0
Mar.	.	.	.	.	.	.	.	.	.	.	.	.

**2. Retail sales and car registrations**
*(annual percentage changes, unless otherwise indicated)*

	Retail sales (s.a.)									New passenger car registrations		
	Current prices			Constant prices						Thousands <sup>3)</sup> (s.a.)		
	Total		Index 1995 = 100	Total		Food, beverages, tobacco	Non-food		Textiles, clothing, footwear			Household equipment
	Index 1995 = 100			Index 1995 = 100								
13	14	15	16	17	18	19	20	21	22			
1999	111.4	3.1	107.3	2.4	2.8	2.3	1.1	2.6	973	5.4		
2000	115.9	4.1	109.7	2.3	2.0	2.2	1.7	4.5	953	-2.1		
<i>Euro area enlargement</i>												
2001	121.0	4.2	111.2	1.4	1.5	1.3	1.1	-0.4	968	-0.8		
2002	123.3	1.9	111.4	0.1	0.7	-0.2	-0.9	-2.0	926	-4.3		
2002 Q1	122.5	2.6	111.3	0.4	0.8	-0.3	0.0	-2.1	920	-4.3		
Q2	122.9	1.8	111.0	-0.2	0.3	0.0	-1.4	-2.2	911	-7.7		
Q3	123.8	1.7	111.8	0.5	0.9	0.3	-1.5	-0.9	919	-4.8		
Q4	123.9	1.5	111.4	-0.1	0.9	-0.7	-0.8	-2.9	953	0.2		
2003 Q1	.	.	.	.	.	.	.	.	898	-2.6		
2002 May	122.6	1.4	111.3	0.2	0.8	0.1	-3.0	-1.5	908	-7.8		
June	123.0	1.3	110.9	-0.8	-0.6	-0.5	-0.7	-2.8	927	-7.6		
July	123.3	1.6	111.7	0.8	0.8	0.7	0.5	0.1	899	-7.1		
Aug.	124.1	2.0	112.2	0.5	1.4	0.2	-0.1	-2.1	925	-4.1		
Sep.	123.8	1.4	111.5	0.1	0.5	0.1	-4.8	-0.6	932	-2.6		
Oct.	124.7	3.3	112.2	1.7	1.9	1.6	4.8	-1.7	931	-3.3		
Nov.	123.5	0.8	111.3	-0.9	1.0	-1.6	-5.0	-3.5	945	-1.2		
Dec.	123.6	0.4	110.6	-1.2	-0.2	-1.9	-1.9	-3.4	983	6.1		
2003 Jan.	125.9	3.3	113.2	2.4	4.1	1.4	2.5	-0.5	887	-5.3		
Feb.	125.9	2.6	112.2	0.7	2.4	0.1	-1.7	-0.9	897	-3.5		
Mar.	.	.	.	.	.	.	.	.	910	0.6		

*Sources: Eurostat, except columns 21 and 22 (ECB calculation based on data from the ACEA, European Automobile Manufacturers' Association).*
*1) Adjusted for variations in the number of working days.*
*2) Breakdown in accordance with the harmonised definition of Main Industrial Groupings.*
*3) Annual and quarterly figures are averages of monthly totals.*

Table 5.3

European Commission Business and Consumer Surveys <sup>1)</sup>

## 1. Economic sentiment indicator, manufacturing industry and consumer surveys

(percentage balances <sup>2)</sup>, unless otherwise indicated; seasonally adjusted)

	Economic sentiment indicator <sup>3)</sup> (index 1995 = 100)	Manufacturing industry					Consumer confidence indicator				
		Industrial confidence indicator				Capacity utilisation <sup>4)</sup> (percentages)	Total <sup>5)</sup>	Financial situation over next 12 months	Economic situation over next 12 months	Unemployment situation over next 12 months	Savings over next 12 months
		Total <sup>5)</sup>	Order books	Stocks of finished products	Production expectations						
	1	2	3	4	5	6	7	8	9	10	11
1999	101.2	-7	-16	12	6	82.3	-3	3	-4	11	1
2000	103.7	5	3	5	16	84.4	1	4	1	1	2
2001	100.8	-8	-14	13	1	83.1	-5	2	-10	14	2
2002	99.0	-12	-25	12	3	81.2	-11	-1	-12	26	-3
2002 Q1	99.1	-14	-26	14	-1	81.1	-10	0	-12	28	0
Q2	99.4	-11	-25	12	4	81.1	-8	-1	-9	22	-3
Q3	98.9	-12	-27	11	4	81.3	-10	-1	-11	26	-3
Q4	98.6	-10	-23	11	3	81.4	-14	-3	-15	30	-8
2003 Q1	98.1	-11	-24	10	1	81.1	-19	-5	-23	39	-9
2002 Apr.	99.2	-11	-26	12	4	81.2	-9	-1	-10	23	-3
May	99.5	-10	-23	11	4	-	-8	-1	-8	22	-2
June	99.4	-11	-25	12	4	-	-8	0	-8	22	-3
July	99.1	-11	-26	11	4	81.0	-10	-1	-10	26	-4
Aug.	98.7	-12	-30	10	4	-	-11	-1	-12	27	-4
Sep.	99.0	-12	-26	12	3	-	-9	-1	-10	24	-2
Oct.	98.8	-11	-25	10	3	81.5	-12	-2	-12	27	-7
Nov.	98.4	-11	-23	12	2	-	-14	-4	-15	30	-7
Dec.	98.6	-9	-22	10	4	-	-16	-4	-19	33	-9
2003 Jan.	98.2	-10	-23	10	2	81.3	-18	-5	-21	36	-9
Feb.	98.4	-11	-23	11	2	-	-19	-5	-23	39	-9
Mar.	97.8	-12	-25	10	-1	-	-21	-6	-26	42	-9
Apr.	97.9	-13	-28	10	-1	80.9	-19	-5	-22	40	-9

## 2. Construction industry, retail trade and services surveys

(percentage balances <sup>2)</sup>, seasonally adjusted)

	Construction confidence indicator			Retail trade confidence indicator				Services confidence indicator			
	Total <sup>5)</sup>	Order books	Employment expectations	Total <sup>5)</sup>	Present business situation	Volume of stocks	Expected business situation	Total <sup>5)</sup>	Business climate	Demand in recent months	Demand in the months ahead
	12	13	14	15	16	17	18	19	20	21	22
1999	-10	-17	-2	-7	-7	17	2	27	25	26	31
2000	-5	-13	3	-2	1	17	9	30	36	23	33
2001	-11	-16	-4	-7	-7	17	2	15	16	8	20
2002	-20	-28	-12	-16	-23	18	-9	1	-4	-6	13
2002 Q1	-16	-23	-9	-16	-22	20	-6	3	3	-14	21
Q2	-18	-24	-10	-18	-24	20	-9	5	1	1	14
Q3	-23	-32	-14	-17	-23	15	-11	-1	-5	-8	11
Q4	-24	-31	-16	-15	-21	16	-8	-4	-13	-4	4
2003 Q1	-21	-28	-14	-17	-24	17	-10	-5	-16	-11	11
2002 Apr.	-18	-24	-11	-17	-25	21	-6	7	3	1	18
May	-17	-24	-9	-18	-24	21	-8	6	3	1	14
June	-18	-25	-11	-18	-23	18	-12	3	-3	1	10
July	-21	-31	-10	-17	-23	17	-11	0	-4	-7	10
Aug.	-25	-34	-16	-16	-22	14	-12	-2	-4	-12	11
Sep.	-23	-30	-15	-17	-25	15	-11	0	-6	-5	12
Oct.	-23	-32	-14	-16	-21	15	-11	-4	-13	-4	5
Nov.	-25	-32	-18	-14	-17	18	-7	-4	-13	-4	5
Dec.	-23	-30	-15	-16	-24	16	-7	-5	-13	-4	2
2003 Jan.	-22	-29	-15	-19	-29	18	-10	-4	-15	-12	14
Feb.	-21	-28	-13	-13	-17	14	-9	-4	-15	-8	10
Mar.	-21	-28	-14	-18	-25	18	-12	-7	-17	-13	9
Apr.	-21	-28	-14	-17	-24	17	-9	-4	-15	-2	5

Source: European Commission Business and Consumer Surveys.

1) Data refer to the Euro 12.

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

3) The economic sentiment indicator is composed of the industrial, consumer, construction and retail trade confidence indicators; the industrial confidence indicator has a weight of 40% and the three other indicators have a weight of 20% each.

4) Data are collected in January, April, July and October each year. The quarterly figures shown are the average of two successive surveys. Annual data are derived from quarterly averages.

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

**Table 5.4**
**Labour market indicators <sup>1)</sup>**
**1. Employment**
*(annual percentage changes, unless otherwise indicated; seasonally adjusted)*

	Whole economy		By employment status		By economic activity					
	Millions		Employees	Self-employed	Agriculture, hunting, forestry and fishing	Manufacturing, energy and mining	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
Weight in the total <sup>2)</sup>	100.0	100.0	84.2	15.8	4.7	19.3	7.0	25.2	14.2	29.6
	1	2	3	4	5	6	7	8	9	10
1998	122.334	1.8	1.9	0.9	-1.3	1.0	0.1	2.0	5.3	1.6
1999	124.585	1.8	2.3	-0.6	-2.5	-0.2	1.9	2.3	5.6	1.9
2000	127.345	2.2	2.5	0.8	-1.5	0.6	1.7	3.1	5.8	1.6
<i>Euro area enlargement</i>										
2001	133.077	1.4	1.6	0.2	-0.6	0.3	0.4	1.6	3.8	1.3
2002	133.654	0.4	0.6	-0.6	-2.0	-1.2	-1.1	0.7	1.9	1.4
2001 Q4	133.458	0.8	1.1	-0.4	-1.3	-0.5	-0.4	1.2	2.9	1.1
2002 Q1	133.599	0.7	0.9	-0.3	-2.0	-1.0	-0.8	1.5	2.2	1.3
Q2	133.645	0.5	0.7	-0.7	-1.9	-1.2	-1.0	0.9	2.0	1.4
Q3	133.640	0.3	0.5	-0.8	-1.8	-1.2	-1.4	0.3	1.7	1.5
Q4	133.733	0.2	0.3	-0.6	-2.2	-1.4	-1.3	0.2	1.6	1.4

**2. Unemployment**
*(seasonally adjusted)*

	Total		By age <sup>3)</sup>				By gender <sup>4)</sup>			
			Adult		Youth		Male		Female	
	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force
	11	12	13	14	15	16	17	18	19	20
1998	13.270	10.2	10.146	8.9	3.124	20.0	6.445	8.6	6.825	12.5
1999	12.247	9.3	9.431	8.2	2.815	18.0	5.901	7.8	6.345	11.4
2000	11.104	8.4	8.555	7.3	2.549	16.2	5.286	7.0	5.818	10.3
<i>Euro area enlargement</i>										
2001	11.026	8.0	8.506	7.0	2.521	15.6	5.295	6.7	5.731	9.7
2002	11.522	8.3	8.942	7.3	2.580	16.1	5.693	7.2	5.829	9.7
2002 Q1	11.279	8.1	8.734	7.1	2.545	15.8	5.513	7.0	5.766	9.7
Q2	11.447	8.2	8.871	7.2	2.575	16.0	5.642	7.1	5.805	9.7
Q3	11.591	8.3	9.004	7.3	2.587	16.1	5.749	7.2	5.841	9.8
Q4	11.770	8.4	9.149	7.4	2.621	16.4	5.868	7.4	5.902	9.8
2003 Q1	12.069	8.6	9.364	7.6	2.705	16.9	6.037	7.6	6.032	10.0
2002 Mar.	11.330	8.2	8.775	7.1	2.555	15.9	5.552	7.0	5.779	9.7
Apr.	11.360	8.2	8.810	7.2	2.550	15.9	5.576	7.0	5.784	9.7
May	11.451	8.2	8.882	7.2	2.568	16.0	5.647	7.1	5.804	9.7
June	11.529	8.3	8.921	7.2	2.608	16.2	5.702	7.2	5.827	9.7
July	11.561	8.3	8.972	7.3	2.589	16.1	5.726	7.2	5.835	9.8
Aug.	11.590	8.3	9.002	7.3	2.588	16.1	5.750	7.2	5.840	9.8
Sep.	11.621	8.3	9.036	7.3	2.585	16.1	5.771	7.3	5.850	9.8
Oct.	11.680	8.4	9.087	7.4	2.593	16.2	5.811	7.3	5.869	9.8
Nov.	11.774	8.4	9.150	7.4	2.623	16.4	5.870	7.4	5.904	9.8
Dec.	11.855	8.5	9.209	7.5	2.645	16.5	5.922	7.4	5.932	9.9
2003 Jan.	11.967	8.6	9.286	7.5	2.680	16.7	5.981	7.5	5.986	10.0
Feb.	12.077	8.6	9.368	7.6	2.709	16.9	6.043	7.6	6.033	10.0
Mar.	12.163	8.7	9.437	7.6	2.727	17.0	6.086	7.6	6.078	10.1

Sources: ECB calculations based on Eurostat data (columns 1 to 10) and Eurostat (columns 11 to 20).

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 2002.

3) Adult: 25 years and over; youth: below 25 years; 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.

### 3. Unit labour costs, compensation per employee and labour productivity

(annual percentage changes, unless otherwise indicated; seasonally adjusted)

	Total		By economic activity					
	Index 1995=100 1	2	Agriculture, hunting, forestry and fishing 3	Manufacturing, energy and mining 4	Construction 5	Trade, repairs, hotels and restaurants, transport and communication 6	Financial, real estate renting and business services 7	Public administration, education, health and other services 8
Unit labour costs <sup>1)</sup>								
2000	104.3	1.3	1.5	-0.3	2.0	0.0	4.1	1.8
<i>Euro area enlargement</i>								
2001	107.2	2.7	3.2	1.7	4.1	1.5	4.1	2.8
2002	109.6	2.2	.	.	.	.	.	.
2001 Q4	108.8	3.3	3.0	3.2	3.4	2.6	3.8	3.1
2002 Q1	109.2	3.4	6.2	3.0	3.7	3.4	3.8	2.8
Q2	109.3	2.2	0.2	0.7	2.8	2.3	2.4	2.1
Q3	109.6	1.8	-0.2	0.7	2.5	1.5	2.5	1.8
Q4	110.2	1.3	.	.	.	.	.	.
Compensation per employee								
2000	110.2	2.5	2.8	3.0	2.6	1.7	3.0	2.3
<i>Euro area enlargement</i>								
2001	113.7	2.8	2.5	2.4	3.0	2.5	2.9	3.0
2002	116.6	2.6	.	.	.	.	.	.
2001 Q4	114.9	3.0	3.6	2.3	3.3	2.8	2.9	3.5
2002 Q1	115.7	3.1	9.7	2.4	4.3	2.9	3.2	3.2
Q2	116.2	2.4	3.4	2.4	2.6	2.6	1.9	2.7
Q3	116.9	2.4	1.5	2.7	2.3	2.7	2.0	2.3
Q4	117.6	2.4	.	.	.	.	.	.
Labour productivity <sup>2)</sup>								
2000	105.7	1.2	1.2	3.3	0.6	1.7	-1.1	0.5
<i>Euro area enlargement</i>								
2001	106.0	0.1	-0.7	0.8	-1.0	1.0	-1.1	0.1
2002	106.4	0.4	2.5	1.5	-0.1	0.6	-0.5	0.6
2001 Q4	105.6	-0.3	0.6	-0.8	-0.1	0.2	-0.9	0.4
2002 Q1	106.0	-0.3	3.3	-0.6	0.6	-0.5	-0.6	0.4
Q2	106.3	0.2	3.2	1.7	-0.2	0.3	-0.5	0.6
Q3	106.7	0.6	1.8	2.0	-0.1	1.1	-0.5	0.5
Q4	106.7	1.1	1.8	3.1	-0.8	1.6	-0.4	0.9

### 4. Hourly labour cost indicators

(annual percentage changes, unless otherwise indicated)

	Total <sup>3)</sup>		By component		By selected economic activity		
	Index (s.a.) 1995=100 9	10	Wages and salaries 11	Employers' social contributions 12	Manufacturing, energy and mining 13	Construction 14	Services 15
2000	109.9	3.2	3.4	2.3	3.2	3.9	3.0
<i>Euro area enlargement</i>							
2001	113.7	3.4	3.6	2.7	3.2	4.0	3.2
2002	117.8	3.6	3.7	3.3	3.4	4.1	3.6
2001 Q4	115.2	3.4	3.6	2.9	3.0	4.4	3.7
2002 Q1	116.4	4.0	4.2	3.4	3.8	5.0	4.0
Q2	117.2	3.4	3.4	3.3	3.0	3.7	3.6
Q3	118.3	3.5	3.5	3.2	3.3	3.9	3.4
Q4	119.4	3.6	3.6	3.4	3.6	3.7	3.3

Sources: ECB calculations based on Eurostat data (columns 1 to 8 and 15) and Eurostat (columns 9 to 14).

1) Compensation (at current prices) per employee divided by value added (at constant prices) per person employed.

2) Value added (at constant prices) per person employed.

3) Hourly labour costs for the whole economy, excluding agriculture, public administration, education, health and other services. Owing to differences in coverage, components are not consistent with the total.





## 6 Saving, investment and financing in the euro area

**Table 6.1**

### Financial investment and financing of non-financial sectors <sup>1)</sup>

(EUR billions; not seasonally adjusted; end of period)

#### Amounts outstanding

##### 1. Main financial assets <sup>2)</sup>

	Currency and deposits									Memo: deposits of non-banks with banks outside the euro area <sup>3)</sup>
	Total	Currency	Deposits of non-financial sectors other than central government with euro area MFIs					Deposits of central government with euro area MFIs	Deposits with non-MFIs <sup>4)</sup>	
			Total	Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements			
	1	2	3	4	5	6	7	8	9	10
1998 Q4	4,825.9	323.4	4,211.2	1,282.9	1,463.3	1,386.3	78.6	149.8	141.5	215.3
1999 Q1	4,676.1	318.6	4,075.8	1,239.1	1,464.6	1,306.2	66.0	133.4	148.3	243.9
Q2	4,702.4	324.8	4,114.2	1,321.8	1,418.3	1,315.7	58.4	125.0	138.4	242.7
Q3	4,713.7	328.3	4,112.8	1,324.6	1,416.5	1,313.1	58.7	133.3	139.4	238.6
Q4	4,859.9	350.8	4,215.1	1,370.9	1,457.7	1,323.5	63.0	142.0	152.0	229.7
2000 Q1	4,837.9	335.5	4,222.3	1,379.6	1,462.5	1,303.3	76.8	130.2	150.0	260.5
Q2	4,894.9	342.0	4,256.9	1,409.7	1,485.7	1,282.6	78.9	146.0	150.0	247.1
Q3	4,915.1	339.8	4,266.5	1,396.9	1,524.0	1,263.7	81.9	159.2	149.6	253.9
Q4	5,030.3	348.4	4,361.6	1,464.4	1,542.4	1,269.1	85.6	164.5	155.9	230.1
<i>Euro area enlargement</i>										
2001 Q1	5,140.9	336.3	4,494.1	1,446.1	1,620.9	1,314.6	112.6	150.3	160.1	259.6
Q2	5,238.8	333.0	4,579.2	1,526.1	1,616.7	1,321.1	115.3	165.5	161.0	268.8
Q3	5,226.7	309.6	4,609.0	1,547.9	1,605.2	1,333.7	122.2	147.8	160.2	265.6
Q4	5,362.7	239.7	4,816.3	1,690.3	1,613.0	1,396.3	116.7	139.0	167.6	297.7
2002 Q1	5,363.9	254.3	4,774.3	1,637.4	1,604.8	1,413.0	119.1	157.5	177.8	300.5
Q2	5,448.7	285.8	4,827.6	1,703.6	1,593.8	1,412.5	117.6	155.0	180.3	277.7
Q3	5,461.9	306.7	4,827.4	1,699.6	1,585.8	1,423.3	118.8	146.3	181.4	289.0
Q4	.	341.3	4,963.2	1,790.0	1,592.3	1,467.7	113.1	136.4	.	.

	Securities other than shares			Shares <sup>5)</sup>				Insurance technical reserves		
	Total	Short-term	Long-term	Total	Quoted shares	Mutual fund shares	Money market fund shares	Total	Net equity of households in life insurance reserves and pension fund reserves	Prepayments of insurance premiums and reserves for outstanding claims
1998 Q4	1,532.7	155.6	1,377.1	3,762.2	2,252.5	1,509.7	168.1	2,630.2	2,353.0	277.2
1999 Q1	1,583.9	136.7	1,447.3	4,042.1	2,423.7	1,618.4	194.9	2,686.3	2,403.5	282.8
Q2	1,502.5	126.7	1,375.8	4,164.3	2,447.0	1,717.4	211.4	2,755.8	2,468.9	286.9
Q3	1,512.7	114.3	1,398.5	4,081.3	2,356.5	1,724.9	210.0	2,797.9	2,507.1	290.8
Q4	1,595.6	166.3	1,429.2	4,822.5	3,002.5	1,820.0	204.2	2,943.0	2,648.9	294.1
2000 Q1	1,590.9	183.1	1,407.8	4,887.4	2,969.2	1,918.2	214.9	3,061.4	2,760.6	300.8
Q2	1,619.2	189.7	1,429.5	4,800.0	2,908.0	1,892.0	204.6	3,108.1	2,803.5	304.6
Q3	1,697.2	207.6	1,489.6	4,843.3	2,938.1	1,905.3	204.1	3,163.1	2,854.5	308.6
Q4	1,777.9	226.5	1,551.4	4,867.1	3,009.0	1,858.1	200.2	3,193.0	2,885.7	307.3
<i>Euro area enlargement</i>										
2001 Q1	1,916.5	315.3	1,601.2	4,543.6	2,725.1	1,818.6	223.7	3,243.7	2,930.5	313.2
Q2	1,910.1	268.4	1,641.7	4,519.1	2,669.7	1,849.4	232.2	3,302.6	2,987.2	315.4
Q3	1,938.1	263.4	1,674.7	4,039.1	2,312.0	1,727.0	253.0	3,277.8	2,958.7	319.2
Q4	1,948.0	251.9	1,696.1	4,384.0	2,566.1	1,817.9	259.9	3,373.1	3,049.9	323.3
2002 Q1	2,019.4	292.0	1,727.4	4,462.0	2,611.1	1,851.0	290.4	3,409.7	3,077.2	332.4
Q2	2,046.2	254.2	1,792.0	4,077.5	2,324.0	1,753.6	292.8	3,429.2	3,093.0	336.2
Q3	2,108.5	277.2	1,831.3	3,480.7	1,765.4	1,715.3	310.1	3,455.7	3,116.2	339.5
Q4	.	.	.	.	.	.	.	.	.	.

Source: ECB.

1) Non-financial sectors comprise general government (S.13), non-financial corporations (S.11), and households (S.14) including non-profit institutions serving households (S.15).

2) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.

3) BIS international banking statistics. The BIS definition of banks is close to that of MFIs.

4) Covering deposits with euro area central government (S.1311), other financial intermediaries (S.123) and insurance corporations and pension funds (S.125).

5) Excluding unquoted shares.

**Table 6.1 (cont'd)**
**Financial investment and financing of non-financial sectors <sup>1)</sup>**
*(EUR billions; not seasonally adjusted; end of period)*
**Amounts outstanding**
**2. Main liabilities <sup>2)</sup>**

	Loans taken from euro area MFIs and other financial corporations by											Memo: loans taken from banks outside the euro area by non-banks <sup>3)</sup>
	Total	Taken from euro area MFIs	General government			Non-financial corporations			Households <sup>4)</sup>			
			Total	Short-term	Long-term <sup>5)</sup>	Total	Short-term	Long-term	Total	Short-term	Long-term	
	1	2	3	4	5	6	7	8	9	10	11	12
1998 Q4	6,221.7	5,663.5	909.9	36.0	873.9	2,597.3	902.9	1,694.4	2,714.5	240.8	2,473.8	151.3
1999 Q1	6,253.6	5,682.7	900.8	36.3	864.5	2,592.5	921.3	1,671.1	2,760.3	251.8	2,508.5	156.8
Q2	6,417.4	5,817.5	898.2	39.0	859.3	2,684.6	964.2	1,720.4	2,834.5	255.6	2,578.9	183.3
Q3	6,485.3	5,886.6	883.4	37.9	845.5	2,699.6	943.7	1,755.9	2,902.4	255.4	2,647.0	191.4
Q4	6,658.7	6,039.5	898.8	42.1	856.7	2,791.8	979.8	1,811.9	2,968.2	264.1	2,704.1	201.4
2000 Q1	6,803.7	6,156.4	889.5	41.1	848.3	2,890.3	1,038.0	1,852.3	3,024.0	265.6	2,758.4	221.1
Q2	6,952.9	6,262.2	885.5	42.0	843.5	2,990.4	1,090.7	1,899.7	3,077.0	274.4	2,802.7	219.7
Q3	7,098.2	6,379.6	866.1	39.9	826.2	3,098.4	1,152.4	1,946.0	3,133.7	275.9	2,857.7	252.3
Q4	7,262.0	6,500.5	881.9	42.0	839.9	3,196.6	1,167.3	2,029.3	3,183.4	281.0	2,902.4	245.2
<i>Euro area enlargement</i>												
2001 Q1	7,456.2	6,671.7	897.6	41.8	855.8	3,322.3	1,244.0	2,078.3	3,236.3	279.3	2,957.0	257.3
Q2	7,561.6	6,762.2	881.8	42.1	839.6	3,394.0	1,266.4	2,127.6	3,285.8	285.2	3,000.6	279.2
Q3	7,633.6	6,805.2	875.5	45.1	830.4	3,434.5	1,244.6	2,189.9	3,323.7	280.7	3,042.9	249.7
Q4	7,748.2	6,897.7	901.9	50.6	851.3	3,474.1	1,227.4	2,246.7	3,372.3	282.1	3,090.1	268.7
2002 Q1	7,821.2	6,960.5	905.9	53.3	852.6	3,509.6	1,224.6	2,285.0	3,405.7	277.7	3,128.0	285.5
Q2	7,903.7	7,017.6	879.0	53.5	825.5	3,549.6	1,209.3	2,340.3	3,475.2	288.5	3,186.7	252.1
Q3	7,945.6	7,053.0	869.0	54.8	814.2	3,555.3	1,191.1	2,364.2	3,521.3	284.5	3,236.8	247.6
Q4		7,126.6										
<i>Securities other than shares issued by</i>												
	Total	General government			Non-financial corporations			Quoted shares issued by non-financial corporations	Deposit liabilities of central government	Pension fund reserves of non- financial corporations		
		Total	Short-term	Long-term	Total	Short-term	Long-term					
	13	14	15	16	17	18	19	20	21	22		
1998 Q4	3,924.3	3,591.8	468.0	3,123.9	332.4	55.0	277.4	2,817.3	140.3	217.2		
1999 Q1	3,970.3	3,635.6	466.6	3,169.1	334.6	65.9	268.7	2,964.9	146.9	219.6		
Q2	3,953.5	3,612.8	459.0	3,153.8	340.7	66.5	274.2	3,087.2	136.6	221.9		
Q3	3,932.7	3,578.3	449.1	3,129.2	354.5	74.9	279.6	3,012.8	137.6	224.2		
Q4	3,899.3	3,534.5	420.9	3,113.6	364.8	78.2	286.7	4,193.3	149.8	226.5		
2000 Q1	3,953.7	3,586.2	425.3	3,160.9	367.5	78.6	288.9	4,533.4	147.6	228.4		
Q2	3,987.8	3,608.1	426.0	3,182.1	379.6	88.8	290.8	4,378.8	147.6	230.2		
Q3	4,020.0	3,621.0	422.0	3,199.0	399.0	95.5	303.6	4,220.7	147.2	232.1		
Q4	4,066.8	3,648.0	400.7	3,247.3	418.8	101.0	317.8	4,068.3	153.7	233.9		
<i>Euro area enlargement</i>												
2001 Q1	4,243.6	3,787.5	429.8	3,357.7	456.1	111.9	344.2	3,713.5	154.7	236.1		
Q2	4,293.0	3,811.9	441.6	3,370.3	481.1	122.9	358.2	3,672.5	155.2	238.3		
Q3	4,377.8	3,879.6	450.3	3,429.4	498.2	136.9	361.2	3,031.5	155.4	240.5		
Q4	4,389.8	3,874.4	434.3	3,440.1	515.4	135.7	379.8	3,524.1	165.5	240.0		
2002 Q1	4,445.9	3,924.8	446.7	3,478.1	521.1	140.9	380.2	3,548.2	174.8	242.4		
Q2	4,535.6	4,020.3	481.8	3,538.5	515.3	126.5	388.8	3,035.1	176.1	244.8		
Q3	4,643.8	4,113.5	479.6	3,634.0	530.2	133.9	396.3	2,289.3	177.2	247.2		
Q4								2,393.0				

Source: ECB.

1) Non-financial sectors comprise general government (S.13), non-financial corporations (S.11), and households (S.14) including non-profit institutions serving households (S.15).

2) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.

3) BIS international banking statistics. The BIS definition of banks is close to that of MFIs.

4) Including non-profit institutions serving households.

5) Including all loans taken by central government from MFIs in the euro area.

## Transactions

### 1. Main financial assets <sup>1)</sup>

	Currency and deposits									Memo: deposits of non-banks with banks outside the euro area <sup>2)</sup>		
	Total	Currency	Deposits of non-financial sectors <sup>3)</sup> other than central government with euro area MFIs					Deposits of central government with euro area MFIs	Deposits with non-MFIs <sup>4)</sup>			
			Total	Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements					
	1	2	3	4	5	6	7	8	9	10		
1998 Q4	148.5	11.6	137.0	98.1	13.0	44.8	-18.9	-6.6	6.5	-24.5		
1999 Q1	-40.3	-5.2	-37.7	-19.4	-15.7	10.1	-12.7	-4.2	6.8	23.4		
Q2	22.0	6.2	34.2	81.3	-48.9	9.4	-7.6	-8.4	-9.9	-4.3		
Q3	12.9	3.5	0.2	3.5	-1.1	-2.6	0.3	8.3	1.0	-2.8		
Q4	138.7	22.3	95.1	44.2	36.4	10.3	4.2	8.7	12.7	-14.2		
2000 Q1	-28.9	-15.3	0.4	6.1	0.9	-20.4	13.7	-11.9	-2.1	26.1		
Q2	52.6	6.7	30.0	31.9	17.8	-21.8	2.1	15.8	0.1	-12.8		
Q3	6.4	-2.2	-4.2	-17.3	28.8	-18.5	2.9	13.3	-0.5	-1.7		
Q4	128.4	8.6	108.3	71.4	27.3	5.7	3.8	5.3	6.3	-16.7		
				<i>Euro area enlargement</i>								
2001 Q1	-17.3	-19.8	13.9	-34.4	42.6	-6.1	11.8	-15.6	4.2	13.6		
Q2	94.6	-3.3	81.8	77.1	-4.3	6.3	2.7	15.1	0.9	4.8		
Q3	6.4	-23.4	48.3	25.4	3.0	13.0	7.0	-17.7	-0.8	3.4		
Q4	138.6	-69.9	209.9	142.3	10.6	62.5	-5.4	-8.8	7.4	12.2		
2002 Q1	3.6	14.6	-40.2	-53.4	-4.1	14.9	2.3	19.0	10.2	1.9		
Q2	104.8	31.5	73.2	72.2	0.9	1.7	-1.7	-2.5	2.5	-9.2		
Q3	11.3	20.9	0.6	-4.4	-7.3	10.6	1.7	-12.5	2.3	9.1		
Q4	.	34.6	134.7	83.6	11.9	44.8	-5.6	-9.8	.	.		

	Securities other than shares			Shares <sup>5)</sup>				Insurance technical reserves				
	Total	Short-term	Long-term	Total	Quoted shares	Mutual fund shares	Money market fund shares	Total	Net equity of households in life insurance reserves and pension fund reserves	Prepayments of insurance premiums and reserves for outstanding claims		
											11	12
1998 Q4	-15.4	-2.3	-13.1	72.8	53.6	19.1	-15.4	51.7	50.0	1.8		
1999 Q1	32.8	-13.1	45.9	105.3	3.9	101.3	4.3	63.6	57.7	5.8		
Q2	-41.0	-11.9	-29.0	154.1	69.7	84.4	15.4	52.9	48.7	4.2		
Q3	-3.3	-13.0	9.7	90.1	49.7	40.4	-2.1	55.7	51.6	4.1		
Q4	90.1	50.4	39.6	-17.0	15.7	-32.6	-12.6	73.9	70.5	3.5		
2000 Q1	13.2	25.9	-12.7	-18.4	-65.2	46.7	13.6	79.6	72.9	6.7		
Q2	41.2	4.4	36.8	56.4	38.1	18.4	-7.4	55.9	52.0	3.9		
Q3	81.0	20.4	60.6	105.0	98.4	6.6	-1.3	56.0	52.0	4.0		
Q4	24.1	6.5	17.6	179.8	142.6	37.2	-5.0	60.0	61.2	-1.2		
				<i>Euro area enlargement</i>								
2001 Q1	133.2	89.4	43.8	45.3	-2.4	47.7	21.9	60.9	55.0	5.9		
Q2	-4.7	-41.7	37.1	41.0	38.7	2.3	3.4	55.6	53.3	2.2		
Q3	36.0	-4.9	40.9	54.9	28.2	26.7	14.1	50.8	47.1	3.7		
Q4	-0.1	-16.7	16.6	11.7	-13.6	25.3	2.9	68.2	64.1	4.1		
2002 Q1	77.8	36.8	41.0	47.7	2.8	44.8	25.9	70.6	61.4	9.2		
Q2	-5.5	-43.1	37.6	26.9	12.7	14.2	-1.8	50.8	47.0	3.8		
Q3	48.3	23.9	24.4	51.1	22.4	28.7	13.6	50.3	46.2	4.1		
Q4	.	.	.	.	.	.	.	.	.	.		

Source: ECB.

- 1) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.
- 2) BIS international banking statistics. The BIS definition of banks is close to that of MFIs.
- 3) Non-financial sectors comprise general government (S.13), non-financial corporations (S.11), and households (S.14) including non-profit institutions serving households (S.15).
- 4) Covering deposits with euro area central government (S.1311), other financial intermediaries (S.123) and insurance corporations and pension funds (S.125).
- 5) Excluding unquoted shares.

**Table 6.1 (cont'd)**
**Financial investment and financing of non-financial sectors <sup>1)</sup>**
*(EUR billions; not seasonally adjusted)*
**Transactions**
**2. Main liabilities <sup>2)</sup>**

	Loans taken from euro area MFIs and other financial corporations by											Memo: loans taken from banks outside the euro area by non-banks <sup>3)</sup>
	Total	Taken from euro area MFIs	General government			Non-financial corporations			Households <sup>4)</sup>			
			Total	Short-term	Long-term <sup>5)</sup>	Total	Short-term	Long-term	Total	Short-term	Long-term	
	1	2	3	4	5	6	7	8	9	10	11	12
1998 Q4	160.2	151.0	8.4	2.8	5.6	75.8	37.3	38.5	76.0	7.1	68.9	3.5
1999 Q1	89.5	75.6	-7.7	0.3	-8.0	21.1	23.3	-2.2	76.2	9.2	67.0	1.7
Q2	162.6	133.2	-4.1	2.7	-6.7	89.6	41.2	48.4	77.1	3.9	73.2	23.9
Q3	70.5	71.5	-14.7	-1.1	-13.6	17.4	-16.7	34.1	67.8	-0.3	68.1	8.4
Q4	170.0	146.6	15.0	4.2	10.9	86.2	34.0	52.2	68.7	8.8	59.9	-7.0
2000 Q1	141.8	108.8	-7.9	-0.9	-7.0	91.7	54.7	37.0	58.0	1.6	56.5	15.1
Q2	164.9	118.4	-4.3	0.9	-5.2	113.3	62.2	51.2	55.9	9.8	46.1	-0.8
Q3	132.7	91.6	-15.8	-2.1	-13.7	96.7	53.4	43.3	51.8	0.0	51.8	23.2
Q4	186.8	140.1	16.1	2.1	14.0	117.4	19.7	97.7	53.3	5.3	48.0	1.9
						<i>Euro area enlargement</i>						
2001 Q1	96.0	78.5	-3.6	-0.5	-3.2	63.3	39.6	23.7	36.3	-5.1	41.5	9.2
Q2	105.6	88.0	-16.2	0.3	-16.5	64.6	20.9	43.7	57.2	6.0	51.2	16.8
Q3	83.7	57.9	-5.8	2.9	-8.7	50.5	-15.8	66.3	38.9	-4.2	43.1	-21.4
Q4	112.0	92.4	25.5	5.5	20.1	37.6	-15.8	53.5	48.8	1.4	47.4	4.2
2002 Q1	72.0	61.9	3.9	2.7	1.2	29.1	-4.7	33.9	39.0	-4.9	43.9	15.8
Q2	108.9	83.0	-25.8	0.2	-26.0	66.3	-7.2	73.5	68.3	10.9	57.4	-18.2
Q3	36.2	34.2	-12.3	1.3	-13.6	1.3	-15.9	17.2	47.2	-4.0	51.1	-6.1
Q4	.	95.5	.	.	.	.	.	.	.	.	.	.

	Securities other than shares issued by								Quoted shares issued by non-financial corporations	Deposit liabilities of central government	Pension fund reserves of non- financial corporations
	Total	General government			Non-financial corporations						
		Total	Short-term	Long-term	Total	Short-term	Long-term				
	13	14	15	16	17	18	19	20	21	22	
1998 Q4	-11.3	-15.8	-31.5	15.6	4.6	0.5	4.1	28.7	6.4	1.9	
1999 Q1	73.3	59.8	0.4	59.4	13.5	10.5	3.0	10.8	6.6	2.3	
Q2	37.3	29.0	-7.8	36.7	8.4	0.6	7.8	34.4	-10.3	2.3	
Q3	56.8	38.8	-9.8	48.6	18.0	8.3	9.7	34.7	1.0	2.3	
Q4	-12.1	-19.5	-27.6	8.1	7.5	3.3	4.1	41.9	12.1	2.3	
2000 Q1	61.0	60.0	9.9	50.1	1.0	0.5	0.5	20.0	-2.2	1.9	
Q2	39.2	23.7	-1.0	24.8	15.5	10.3	5.2	29.2	0.0	1.9	
Q3	48.3	25.3	-2.7	28.1	23.0	7.0	16.0	68.6	-0.4	1.9	
Q4	-1.1	-20.1	-27.3	7.2	18.9	5.8	13.1	55.0	6.4	1.8	
					<i>Euro area enlargement</i>						
2001 Q1	74.5	37.6	32.3	5.3	36.8	11.1	25.7	52.4	1.1	2.2	
Q2	90.3	65.1	16.1	49.0	25.3	11.1	14.1	45.0	0.4	2.2	
Q3	48.0	29.5	8.8	20.7	18.5	14.4	4.1	10.1	0.2	2.2	
Q4	7.0	-8.8	-22.3	13.5	15.8	-1.8	17.6	7.2	10.1	-0.5	
2002 Q1	102.4	92.9	21.7	71.2	9.5	5.6	3.9	9.5	9.3	2.4	
Q2	59.6	61.7	33.9	27.8	-2.1	-15.1	13.0	4.2	1.3	2.4	
Q3	56.4	45.5	-1.4	46.9	10.9	7.5	3.4	-0.4	1.1	2.4	
Q4	.	.	.	.	.	.	.	.	.	.	

Source: ECB.

1) Non-financial sectors comprise general government (S.13), non-financial corporations (S.11), and households (S.14) including non-profit institutions serving households (S.15).

2) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.

3) BIS international banking statistics. The BIS definition of banks is close to that of MFIs.

4) Including non-profit institutions serving households.

5) Including all loans taken by central government from MFIs in the euro area.

**Table 6.2**
**Financial investment and financing of insurance corporations and pension funds**
*(EUR billions; not seasonally adjusted; end of period)*
**Amounts outstanding**

	Main financial assets <sup>1)</sup>										
	Deposits with euro area MFIs					Loans			Securities other than shares		
	Total	Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements	Total	Short-term	Long-term	Total	Short-term	Long-term
	1	2	3	4	5	6	7	8	9	10	11
1998 Q4	412.4	28.3	371.2	2.8	10.1	331.2	41.5	289.8	1,013.3	36.4	976.9
1999 Q1	426.0	32.1	380.1	3.0	10.8	323.3	42.6	280.8	1,008.6	37.1	971.6
Q2	430.9	36.4	380.5	3.3	10.7	321.7	42.5	279.2	1,020.3	35.7	984.6
Q3	436.6	32.0	389.8	3.3	11.5	313.6	41.3	272.3	1,031.1	35.4	995.7
Q4	447.5	32.2	400.3	3.3	11.7	313.6	41.1	272.5	1,035.3	38.5	996.8
2000 Q1	458.9	35.4	407.1	3.2	13.1	317.1	45.1	272.0	1,066.8	45.2	1,021.6
Q2	460.8	34.6	411.1	3.5	11.6	316.1	46.5	269.6	1,088.8	46.4	1,042.4
Q3	464.6	34.1	413.8	3.7	12.9	317.3	47.1	270.2	1,088.5	46.1	1,042.5
Q4	477.6	40.6	418.5	3.2	15.3	312.5	50.5	262.0	1,084.7	40.2	1,044.4
	<i>Euro area enlargement</i>										
2001 Q1	483.8	38.2	423.3	3.5	18.8	311.3	50.8	260.5	1,115.6	35.5	1,080.1
Q2	486.3	41.4	424.2	3.8	16.9	316.3	53.6	262.7	1,126.5	37.4	1,089.1
Q3	487.8	39.3	426.9	3.8	17.9	314.8	53.1	261.7	1,148.2	37.9	1,110.3
Q4	495.4	48.0	427.5	3.4	16.4	313.8	55.8	258.1	1,189.6	37.8	1,151.8
2002 Q1	498.6	43.9	433.0	4.0	17.7	325.5	56.1	269.3	1,240.7	49.1	1,191.5
Q2	503.9	48.4	432.9	3.7	19.0	329.9	60.6	269.3	1,230.5	37.9	1,192.5
Q3	506.3	50.1	437.9	3.9	14.4	327.1	61.6	265.5	1,356.5	47.2	1,309.3
Q4	522.6	56.3	445.4	3.5	17.4	.	.	.	.	.	.

	Main financial assets <sup>1)</sup>						Main liabilities <sup>1)</sup>						
	Shares <sup>2)</sup>				Prepayments of insurance premiums and reserves for outstanding claims	Loans taken from euro area MFIs and other financial corporations		Securities other than shares	Quoted shares	Insurance technical reserves			
	Total	Quoted shares	Mutual fund shares	Money market fund shares		Total	Taken from euro area MFIs			Total	Net equity of households in life insurance reserves and pension fund reserves	Prepayments of insurance premiums and reserves for outstanding claims	
													12
1998 Q4	860.9	496.5	364.5	26.4	66.6	41.9	27.4	1.5	293.3	2,390.4	2,076.4	313.9	
1999 Q1	931.9	538.5	393.4	33.7	70.1	49.8	36.1	2.1	290.5	2,444.3	2,123.7	320.6	
Q2	1,001.5	580.2	421.2	36.6	71.3	54.4	40.4	4.3	276.8	2,511.8	2,186.1	325.6	
Q3	1,011.9	585.7	426.1	33.7	72.5	56.4	41.9	5.0	269.1	2,552.5	2,221.8	330.7	
Q4	1,232.5	719.4	513.1	33.4	75.5	44.1	29.6	5.0	332.4	2,696.7	2,359.5	337.2	
2000 Q1	1,347.9	777.1	570.8	37.1	78.0	52.3	37.1	5.8	363.8	2,814.1	2,467.4	346.7	
Q2	1,362.9	771.4	591.5	40.6	78.9	54.2	38.8	5.9	332.2	2,859.1	2,508.0	351.1	
Q3	1,411.8	797.2	614.6	37.4	80.0	49.0	33.1	8.9	359.1	2,912.4	2,556.6	355.8	
Q4	1,332.1	727.5	604.6	36.9	78.4	47.3	31.5	10.2	328.8	2,937.8	2,582.5	355.3	
	<i>Euro area enlargement</i>												
2001 Q1	1,317.0	723.9	593.1	44.9	80.9	51.3	36.4	10.8	317.9	2,987.7	2,623.7	364.0	
Q2	1,346.7	746.8	599.9	46.7	81.9	51.2	36.2	12.0	315.6	3,045.1	2,678.2	366.9	
Q3	1,201.1	646.7	554.4	46.1	83.8	52.2	37.4	12.6	221.5	3,021.2	2,648.2	373.0	
Q4	1,304.7	713.3	591.4	46.1	85.2	48.5	34.9	13.5	234.7	3,116.7	2,738.3	378.4	
2002 Q1	1,381.5	772.0	609.5	47.8	89.2	54.5	38.9	13.6	257.0	3,154.5	2,763.5	390.9	
Q2	1,265.7	679.0	586.7	50.4	90.0	59.2	42.5	13.9	226.5	3,171.9	2,776.8	395.1	
Q3	1,139.2	566.5	572.7	49.0	91.2	64.2	42.1	14.0	127.1	3,198.6	2,798.2	400.4	
Q4	.	.	.	.	.	.	32.9	.	112.9	.	.	.	

Source: ECB.

1) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.

2) Excluding unquoted shares.

**Table 6.2 (cont'd)**
**Financial investment and financing of insurance corporations and pension funds**
*(EUR billions; not seasonally adjusted; end of period)*
**Transactions**

	Main financial assets <sup>1)</sup>										
	Deposits with euro area MFIs					Loans			Securities other than shares		
	Total	Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements	Total	Short-term	Long-term	Total	Short-term	Long-term
	1	2	3	4	5	6	7	8	9	10	11
1998 Q4	3.1	3.9	4.8	0.2	-5.9	-3.8	1.2	-5.0	10.8	-1.2	12.0
1999 Q1	12.7	3.8	8.1	0.1	0.7	2.1	1.3	0.8	26.9	0.8	26.1
Q2	4.8	4.3	0.4	0.3	-0.2	-1.7	-0.1	-1.6	18.2	-1.4	19.7
Q3	5.8	-4.4	9.3	0.0	0.8	-8.4	-1.2	-7.2	20.9	0.0	21.0
Q4	10.5	0.2	10.1	0.0	0.2	-0.1	-0.3	0.2	3.8	3.0	0.8
2000 Q1	11.4	3.2	6.8	0.0	1.4	3.8	4.1	-0.3	33.7	7.5	26.3
Q2	1.9	0.3	2.8	0.3	-1.5	-0.7	1.3	-2.0	18.4	1.0	17.4
Q3	1.2	-0.7	0.4	0.2	1.3	1.4	0.7	0.7	4.6	-0.2	4.8
Q4	13.0	6.5	4.6	-0.5	2.4	-4.6	3.1	-7.7	-12.6	-6.5	-6.1
	<i>Euro area enlargement</i>										
2001 Q1	3.9	-2.5	4.7	0.3	1.3	-1.2	0.3	-1.5	17.3	-4.8	22.1
Q2	2.8	3.4	1.0	0.3	-1.9	5.1	2.9	2.2	18.5	1.9	16.5
Q3	1.5	-2.1	2.7	-0.1	1.0	-1.6	-0.6	-1.0	31.2	0.4	30.8
Q4	7.6	8.8	0.6	-0.3	-1.4	0.3	2.7	-2.4	33.1	-0.6	33.7
2002 Q1	3.0	-4.2	5.3	0.5	1.3	12.3	1.0	11.3	59.4	11.4	48.0
Q2	5.3	4.5	-0.1	-0.3	1.2	5.1	5.1	0.0	-15.5	-11.3	-4.2
Q3	2.5	1.7	5.1	0.3	-4.6	-2.3	1.6	-3.9	33.0	9.1	24.0
Q4	16.3	6.2	7.5	-0.4	3.0	.	.	.	.	.	.

	Main financial assets <sup>1)</sup>					Main liabilities <sup>1)</sup>							
	Shares <sup>2)</sup>				Prepayments of insurance premiums and reserves for outstanding claims	Loans taken from euro area MFIs and other financial corporations		Securities other than shares	Quoted shares	Insurance technical reserves			
	Total	Quoted shares	Mutual fund shares	Money market fund shares		Total	Taken from euro area MFIs			Total	Net equity of households in life insurance reserves and pension fund reserves	Prepayments of insurance premiums and reserves for outstanding claims	
													12
1998 Q4	35.3	9.5	25.8	3.2	0.1	-7.1	-7.4	-0.3	3.4	47.3	47.7	-0.3	
1999 Q1	20.8	5.3	15.5	5.5	2.1	9.1	8.7	-0.4	0.4	62.7	54.5	8.2	
Q2	23.1	12.5	10.6	3.0	1.2	4.3	4.3	1.8	0.3	50.9	45.7	5.2	
Q3	14.8	11.7	3.1	-2.8	1.3	1.7	1.5	0.4	0.2	53.8	48.6	5.2	
Q4	51.2	11.6	39.6	-0.3	3.0	-12.6	-12.4	0.6	-0.4	73.5	66.8	6.7	
2000 Q1	46.2	9.0	37.3	4.4	2.4	8.2	7.5	0.5	0.7	78.6	69.1	9.5	
Q2	32.6	7.8	24.8	3.4	0.9	1.9	1.7	0.0	1.9	54.1	49.6	4.5	
Q3	35.8	18.3	17.5	-3.2	1.1	-5.2	-5.7	2.7	0.2	54.4	49.7	4.7	
Q4	14.9	0.5	14.4	-0.5	-1.6	-1.7	-1.6	1.0	0.1	58.2	58.6	-0.4	
	<i>Euro area enlargement</i>												
2001 Q1	46.2	29.9	16.2	8.3	2.5	3.9	4.8	0.0	0.4	59.7	51.0	8.7	
Q2	16.7	13.2	3.4	1.3	1.0	0.0	-0.2	0.6	0.0	54.2	51.3	2.9	
Q3	24.8	20.7	4.1	-0.8	1.9	1.2	1.5	0.1	4.1	51.1	45.1	6.1	
Q4	31.9	5.2	26.7	0.0	1.4	-3.8	-2.5	0.3	0.6	68.7	63.3	5.4	
2002 Q1	32.8	17.4	15.4	1.6	4.0	6.0	3.9	0.1	0.2	70.1	57.5	12.5	
Q2	18.4	5.8	12.6	2.5	0.8	4.4	3.3	0.2	0.2	48.1	43.9	4.2	
Q3	12.2	4.8	7.4	-1.5	1.2	2.8	-2.5	0.0	0.0	49.0	43.7	5.3	
Q4	.	.	.	.	.	.	-9.2	.	.	.	.	.	

Source: ECB.

1) Most of the financial asset and liability categories defined in the ESA 95 are covered. Financial derivatives, loans granted by general government and non-financial corporations, unquoted shares and other equity, and other receivables and payables are not included.

2) Excluding unquoted shares.

**Table 6.3**
**Saving, investment and financing <sup>1)</sup>**
*(EUR billions, unless otherwise indicated)*
**1. All sectors in the euro area <sup>2)</sup>**

	Net acquisition of non-financial assets					Net acquisition of financial assets							
	Total	Gross fixed capital formation	Consumption of fixed capital (-)	Changes in inventories <sup>3)</sup>	Non-produced assets	Total	Monetary gold and SDRs	Currency and deposits	Securities other than shares <sup>4)</sup>	Loans	Shares and other equity	Insurance technical reserves	Other investment (net) <sup>5)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12	13
1995	368.4	1,093.3	-751.7	26.6	0.1	1,539.0	0.7	489.7	222.9	422.4	164.6	202.1	36.5
1996	340.9	1,122.7	-783.9	1.7	0.4	1,727.2	-3.0	395.1	397.8	383.8	312.5	195.4	45.6
1997	353.2	1,139.5	-797.1	10.8	0.1	1,913.3	-0.2	393.2	332.2	449.7	483.5	223.7	31.2
1998	412.5	1,203.6	-823.6	32.3	0.2	2,374.9	11.0	430.2	360.8	519.7	813.4	214.0	25.9
1999	448.0	1,291.8	-863.7	19.7	0.1	3,046.6	1.3	554.3	437.1	880.0	903.6	253.6	16.6
2000	487.1	1,389.0	-913.1	27.8	-16.6	2,776.8	1.3	348.4	247.9	804.8	1,116.5	254.4	3.5
<i>Euro area enlargement</i>													
2001	456.1	1,437.3	-973.6	-8.3	0.7	2,486.8	-0.5	587.8	464.9	699.1	552.3	242.4	-59.1

	Changes in net worth <sup>6)</sup>				Net incurrence of liabilities					
	Total	Gross saving	Consumption of fixed capital (-)	Net capital transfers receivable	Total	Currency and deposits	Securities other than shares <sup>4)</sup>	Loans	Shares and other equity	Insurance technical reserves
	14	15	16	17	18	19	20	21	22	23
1995	413.1	1,159.8	-751.7	5.0	1,494.2	486.7	277.8	384.3	140.0	205.5
1996	410.7	1,190.0	-783.9	4.6	1,657.4	472.2	378.2	335.0	275.8	196.3
1997	456.2	1,241.8	-797.1	11.5	1,810.4	510.3	319.0	378.0	373.2	229.9
1998	486.5	1,299.1	-823.6	11.1	2,300.9	646.0	322.2	481.2	632.0	219.5
1999	498.4	1,352.0	-863.7	10.1	2,996.1	926.7	493.8	755.7	557.0	262.9
2000	514.3	1,419.4	-913.1	8.0	2,749.7	530.9	411.7	831.9	721.7	253.4
<i>Euro area enlargement</i>										
2001	483.6	1,449.4	-973.6	7.7	2,459.4	675.7	479.3	570.2	490.3	243.8

**2. Non-financial corporations**

	Net acquisition of non-financial assets			Net acquisition of financial assets					Changes in net worth <sup>6)</sup>		Net incurrence of liabilities			
	Total	Gross fixed capital formation	Consumption of fixed capital (-)	Total	Currency and deposits	Securities other than shares <sup>4)</sup>	Loans	Shares and other equity	Total	Gross saving	Total	Securities other than shares <sup>4)</sup>	Loans	Shares and other equity
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1995	155.0	569.8	-438.7	255.3	33.5	10.2	40.0	64.6	270.4	531.0	139.9	-87.3	126.0	90.5
1996	136.3	589.4	-454.8	265.7	54.4	-13.8	55.1	86.0	126.5	538.4	275.5	7.0	143.8	117.1
1997	157.5	615.2	-469.3	244.1	24.4	-13.4	46.3	94.8	114.3	546.6	287.4	12.0	154.5	111.4
1998	202.4	660.2	-487.8	432.5	55.0	-7.6	96.6	200.0	151.7	592.2	483.2	25.6	252.7	196.3
1999	221.7	708.1	-508.5	610.9	28.5	89.2	169.8	307.2	113.5	572.4	719.2	47.3	422.0	235.1
2000	319.4	774.1	-542.9	816.0	69.9	101.9	167.9	420.6	97.0	593.6	1,038.5	58.3	551.2	424.7
<i>Euro area enlargement</i>														
2001	217.9	799.5	-577.0	543.3	83.4	90.7	137.8	184.4	72.7	598.5	688.4	96.4	317.0	268.3

**3. Households <sup>7)</sup>**

	Net acquisition of non-financial assets			Net acquisition of financial assets					Changes in net worth <sup>6)</sup>		Net incurrence of liabilities		Memo:	
	Total	Gross fixed capital formation	Consumption of fixed capital (-)	Total	Currency and deposits	Securities other than shares <sup>4)</sup>	Shares and other equity	Insurance technical reserves	Total	Gross saving	Total	Loans	Disposable income	Gross saving ratio <sup>8)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1995	162.2	351.6	-192.0	394.7	185.2	82.3	1.2	179.6	420.0	606.8	136.9	135.8	3,604.7	16.8
1996	160.0	361.8	-203.4	433.3	145.6	24.6	93.6	190.9	431.9	620.0	161.3	160.1	3,762.9	16.5
1997	156.1	353.7	-198.7	421.6	69.1	-17.9	194.3	217.4	409.3	588.7	168.5	167.1	3,789.3	15.5
1998	163.8	363.8	-203.3	444.7	95.5	-118.5	288.8	208.9	395.7	567.0	212.7	211.4	3,897.8	14.5
1999	172.6	392.6	-217.5	476.4	115.1	-16.4	198.8	240.1	380.8	555.1	268.2	266.7	4,062.1	13.7
2000	180.5	413.1	-225.2	417.3	52.7	45.9	132.0	248.4	375.7	559.0	222.1	220.4	4,233.7	13.2
<i>Euro area enlargement</i>														
2001	176.0	422.4	-245.8	401.6	178.9	66.6	67.5	230.0	409.0	610.0	168.6	166.7	4,529.1	13.5

*Source: ECB.*
*1) Non-consolidated data.*
*2) All sectors comprise general government (S.13), non-financial corporations (S.11), financial corporations (S.12) and households (S.14) including non-profit institutions serving households (S.15).*
*3) Including net acquisition of valuables.*
*4) Excluding financial derivatives.*
*5) Financial derivatives, other accounts receivable/payable and statistical discrepancies.*
*6) Arising from saving and net capital transfers receivable, after allowance for consumption of fixed capital (-).*
*7) Including non-profit institutions serving households.*
*8) Gross saving as a percentage of disposable income.*

# 7 General government fiscal position in the euro area and in the euro area countries

**Table 7.1**

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

(as a percentage of GDP)

### 1. Euro area – revenue

	Total	Current revenue	Direct taxes			Indirect taxes	Received by EU institutions <sup>7)</sup>	Social contributions	Employers		Employees	Sales	Capital revenue	Capital taxes	Memo: fiscal burden <sup>3)</sup>
			Households	Corporations	Employers				Employees						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1993	48.0	47.5	12.1	10.0	2.0	13.2	0.8	17.5	8.7	5.6	2.5	0.5	0.3	43.1	
1994	47.6	47.1	11.6	9.5	1.9	13.4	0.8	17.5	8.5	5.7	2.5	0.4	0.2	42.8	
1995	47.2	46.6	11.6	9.5	2.0	13.3	0.9	17.3	8.4	5.6	2.5	0.5	0.3	42.6	
1996	48.0	47.5	12.0	9.6	2.3	13.4	0.8	17.6	8.7	5.6	2.5	0.5	0.3	43.3	
1997	48.3	47.6	12.2	9.6	2.5	13.5	0.7	17.6	8.8	5.6	2.5	0.7	0.4	43.7	
1998	47.7	47.2	12.4	9.9	2.5	14.1	0.7	16.5	8.5	5.0	2.5	0.5	0.3	43.3	
1999	48.2	47.7	12.8	10.1	2.6	14.3	0.6	16.4	8.5	5.0	2.5	0.5	0.3	43.8	
2000	47.8	47.3	13.0	10.2	2.7	14.2	0.6	16.2	8.4	4.9	2.4	0.5	0.3	43.6	
<i>Euro area enlargement</i>															
2001	47.1	46.6	12.6	10.0	2.5	13.9	0.6	16.0	8.4	4.8	2.3	0.5	0.3	42.8	
2002	46.6	46.0	12.1	9.6	2.4	13.8	0.5	16.0	8.4	4.7	2.3	0.6	0.3	42.2	

### 2. Euro area – expenditure

	Total	Current expenditure							Capital expenditure	Investment	Capital transfers	Paid by EU institutions <sup>9)</sup>	Memo: primary expenditure <sup>4)</sup>	
		Total	Compensation of employees	Intermediate consumption	Interest	Current transfers	Social payments <sup>3)</sup>	Subsidies						
														7
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1993	53.7	49.2	11.6	5.1	5.9	26.6	22.9	2.5	0.6	4.6	3.1	1.6	0.1	47.9
1994	52.7	48.3	11.3	5.0	5.5	26.5	23.0	2.4	0.6	4.3	2.9	1.5	0.0	47.2
1995	52.2	47.7	11.2	4.8	5.7	26.1	22.9	2.2	0.6	4.5	2.7	1.8	0.1	46.5
1996	52.3	48.3	11.2	4.8	5.7	26.6	23.3	2.2	0.6	4.0	2.6	1.4	0.0	46.6
1997	50.9	47.2	11.0	4.7	5.1	26.3	23.2	2.1	0.6	3.7	2.4	1.3	0.1	45.8
1998	50.0	46.0	10.7	4.6	4.7	26.0	22.7	2.0	0.5	3.9	2.4	1.5	0.1	45.3
1999	49.5	45.4	10.7	4.7	4.2	25.8	22.6	2.0	0.5	4.0	2.5	1.5	0.1	45.3
2000	48.7	44.8	10.5	4.7	4.0	25.5	22.3	1.9	0.5	3.9	2.5	1.4	0.0	44.7
<i>Euro area enlargement</i>														
2001	48.7	44.6	10.5	4.7	4.0	25.4	22.3	1.9	0.5	4.2	2.5	1.6	0.0	44.8
2002	48.8	44.8	10.6	4.8	3.7	25.7	22.8	1.8	0.5	4.0	2.4	1.6	0.0	45.1

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

	Deficit (-) / surplus (+)					Primary deficit (-) / surplus (+)	Government consumption <sup>5)</sup>							
	Total	Central government	State government	Local government	Social security funds		Total	Compensation of employees	Intermediate consumption	Transfers in kind via market producers	Consumption of fixed capital	Sales (minus)	Government collective consumption	Government individual consumption
1993	-5.7	-5.0	-0.4	-0.2	-0.1	0.2	21.2	11.6	5.1	5.0	1.9	-2.5	9.0	12.2
1994	-5.1	-4.4	-0.5	-0.2	0.0	0.4	20.8	11.3	5.0	5.1	1.9	-2.5	8.7	12.1
1995	-5.1	-4.2	-0.5	-0.1	-0.3	0.6	20.5	11.2	4.8	5.1	1.8	-2.5	8.6	11.9
1996	-4.3	-3.6	-0.4	0.0	-0.2	1.4	20.6	11.2	4.8	5.2	1.8	-2.5	8.6	12.0
1997	-2.6	-2.3	-0.4	0.1	0.0	2.5	20.4	11.0	4.7	5.1	1.8	-2.5	8.4	11.9
1998	-2.3	-2.2	-0.3	0.1	0.0	2.4	20.0	10.7	4.6	5.1	1.7	-2.5	8.2	11.8
1999	-1.3	-1.6	-0.1	0.1	0.4	2.9	20.0	10.7	4.7	5.1	1.7	-2.5	8.2	11.8
2000	-1.0	-1.4	-0.1	0.1	0.4	3.1	20.0	10.5	4.7	5.2	1.7	-2.4	8.1	11.8
<i>Euro area enlargement</i>														
2001	-1.6	-1.5	-0.4	0.0	0.3	2.3	20.0	10.5	4.7	5.2	1.7	-2.3	8.1	11.9
2002	-2.3	-1.9	-0.5	-0.1	0.2	1.5	20.2	10.6	4.8	5.3	1.7	-2.3	8.1	12.0

### 4. Euro area countries – deficit (-) / surplus (+) <sup>6)</sup>

	BE <sup>1)</sup>	DE <sup>2)</sup>	GR <sup>3)</sup>	ES <sup>4)</sup>	FR <sup>5)</sup>	IE <sup>6)</sup>	IT <sup>7)</sup>	LU <sup>8)</sup>	NL <sup>9)</sup>	AT <sup>10)</sup>	PT <sup>11)</sup>	FI <sup>12)</sup>
1999	-0.5	-1.5	-1.8	-1.2	-1.8	2.3	-1.7	3.5	0.7	-2.3	-2.8	2.0
2000	0.1	1.1	-1.9	-0.8	-1.4	4.3	-0.6	6.1	2.2	-1.5	-2.8	6.9
2001	0.4	-2.8	-1.4	-0.1	-1.5	1.1	-2.6	6.4	0.1	0.3	-4.2	5.1
2002	0.0	-3.6	-1.2	-0.1	-3.1	-0.1	-2.3	2.6	-1.1	-0.6	-2.7	4.7

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' deficit / surplus.

1) Revenue, expenditure and deficit / surplus based on the ESA 95, but the figures exclude proceeds from the sale of UMTS licences in 2000 (the euro area deficit / surplus including those proceeds is equal to 0.1). Transactions between countries and EU institutions are included and consolidated. Transactions among governments are not consolidated.

2) The fiscal burden comprises taxes and social contributions.

3) Comprises social benefits, social transfers in kind via market producers and transfers to non-profit institutions serving households.

4) Comprises total expenditure minus interest expenditure.

5) Corresponds to final consumption expenditure (P.3) of the general government in the ESA 95.

6) Including proceeds from the sale of UMTS licences.



**Table 7.2****Debt <sup>1)</sup>***(as a percentage of GDP)***1. Euro area – government debt by financial instrument and sector of the holder**

	Total	Financial instrument				Holder				
		Coins and deposits	Loans	Short-term securities	Long-term securities	Domestic creditors <sup>2)</sup>				Other creditors <sup>3)</sup>
						Total	MFI	Other financial corporations	Other sectors	
1	2	3	4	5	6	7	8	9	10	
1993	67.3	2.7	17.0	10.0	37.6	52.5	27.6	8.8	16.2	14.8
1994	70.0	2.9	16.1	10.3	40.6	55.8	29.8	10.0	16.0	14.2
1995	74.2	2.9	17.7	9.9	43.8	58.3	30.5	11.0	16.8	15.9
1996	75.4	2.9	17.2	9.9	45.5	58.9	30.3	13.2	15.4	16.5
1997	74.9	2.8	16.3	8.9	46.8	56.9	29.0	14.5	13.4	17.9
1998	73.2	2.8	15.1	7.9	47.3	53.4	27.0	16.3	10.2	19.8
1999	72.1	2.9	14.2	6.9	48.1	49.8	25.3	14.9	9.7	22.1
2000	69.6	2.7	13.0	6.2	47.6	45.9	22.8	13.3	9.8	23.6
<i>Euro area enlargement</i>										
2001	69.2	2.6	12.5	6.3	47.8	44.6	22.5	12.5	9.6	24.6
2002	69.0	2.5	11.8	6.7	48.0	43.3	21.7	12.1	9.5	25.7

**2. Euro area – government debt by issuer, maturity and currency denomination**

	Total	Issued by <sup>4)</sup>				Original maturity			Residual maturity			Currency		
		Central government	State government	Local government	Social security funds	Up to 1 year	Over 1 year	Variable interest rate	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Euro or participating currency <sup>5)</sup>	Non-domestic currency	Other currencies
1993	67.3	55.2	5.2	6.3	0.6	11.9	55.4	6.6	18.4	24.4	24.4	65.6	2.9	1.7
1994	70.0	57.9	5.4	6.1	0.5	11.2	58.8	7.4	16.5	26.8	26.7	68.1	3.0	1.9
1995	74.2	61.7	5.7	6.0	0.8	10.6	63.6	6.8	17.6	26.4	30.2	72.3	2.9	1.9
1996	75.4	62.9	6.1	5.9	0.5	10.2	65.2	6.3	19.2	25.4	30.8	73.5	2.7	1.9
1997	74.9	62.3	6.3	5.6	0.6	8.8	66.0	6.0	18.6	25.4	30.8	72.8	2.8	2.0
1998	73.2	61.1	6.3	5.4	0.4	7.7	65.4	5.5	16.4	26.1	30.7	71.4	3.2	1.7
1999	72.1	60.2	6.2	5.3	0.3	6.5	65.6	5.0	14.4	26.9	30.7	70.2	-	1.9
2000	69.6	58.1	6.1	5.1	0.3	5.7	63.8	4.4	14.3	27.6	27.7	67.7	-	1.9
<i>Euro area enlargement</i>														
2001	69.2	57.8	6.2	4.9	0.3	6.0	63.2	3.2	14.6	26.3	28.3	67.5	-	1.8
2002	69.0	57.5	6.4	4.8	0.3	6.2	62.8	3.2	15.7	24.8	28.5	67.4	-	1.6

**3. Euro area countries – government debt**

	BE	DE	GR	ES	FR	IE	IT	LU	NL	AT	PT	FI
	1	2	3	4	5	6	7	8	9	10	11	12
1999	114.9	61.2	105.1	63.1	58.5	49.3	114.9	6.0	63.1	67.5	54.3	47.0
2000	109.6	60.2	106.2	60.5	57.2	39.3	110.6	5.6	55.8	66.8	53.3	44.5
2001	108.5	59.5	107.0	56.9	56.8	36.8	109.5	5.6	52.8	67.3	55.6	43.8
2002	105.4	60.8	104.9	54.0	59.1	34.0	106.7	5.7	52.6	67.9	58.0	42.7

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' debt.

1) Data are partially estimated. General government gross consolidated debt at nominal value at the end of the year.

Holdings by other governments are not consolidated.

2) Holders resident in the country whose government has issued the debt.

3) Includes residents of euro area countries other than the country whose government has issued the debt.

4) Excludes debt held by general government in the country whose government has issued it.

5) Before 1999, comprises debt in ECU, in domestic currency and in the currencies of other Member States which have adopted the euro.

**Table 7.3****Change in debt <sup>1)</sup>***(as a percentage of GDP)***1. Euro area – change in government debt by source, financial instrument and sector of the holder**

	Total	Source of change				Financial instrument				Holder			
		Borrowing requirement <sup>2)</sup>	Valuation effects <sup>3)</sup>	Other changes in volume <sup>4)</sup>	Aggregation effect <sup>5)</sup>	Coins and deposits	Loans	Short-term securities	Long-term securities	Domestic creditors <sup>6)</sup>	MFLs	Other financial corporations	Other creditors <sup>7)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12	13
1993	8.0	7.5	0.3	0.1	0.1	0.2	1.2	0.1	6.5	3.6	2.0	1.3	4.4
1994	6.0	5.2	0.2	0.7	0.0	0.4	-0.1	0.9	4.9	5.9	3.6	1.7	0.2
1995	7.8	5.5	0.2	2.2	-0.2	0.2	2.3	0.0	5.2	5.3	2.2	1.5	2.4
1996	3.8	4.2	-0.2	0.1	-0.3	0.1	0.1	0.4	3.2	2.6	0.8	2.6	1.2
1997	2.3	2.4	0.2	-0.2	0.0	0.0	-0.2	-0.6	3.1	0.2	-0.1	1.8	2.0
1998	1.7	1.9	-0.2	0.0	0.0	0.1	-0.4	-0.6	2.6	-1.0	-0.8	2.4	2.6
1999	1.7	1.4	0.3	0.1	0.0	0.2	-0.4	-0.7	2.6	-1.5	-0.7	-0.7	3.1
2000	0.9	0.8	0.1	-0.1	0.0	0.0	-0.5	-0.3	1.7	-1.5	-1.3	-0.9	2.5
<i>Euro area enlargement</i>													
2001	1.7	1.7	0.0	0.0	0.0	0.0	-0.2	0.4	1.4	0.2	0.1	-0.1	1.5
2002	2.0	2.5	-0.1	-0.4	0.0	0.0	-0.4	0.6	1.7	0.2	0.0	0.0	1.9

**2. Euro area – deficit-debt adjustment**

	Change in debt	Deficit (-)/surplus (+) <sup>8)</sup>	Deficit-debt adjustment <sup>9)</sup>											Other <sup>11)</sup>
			Total	Transactions in main financial assets held by general government							Valuation effects	Exchange rate effects	Other changes in volume	
				Total	Currency and deposits	Securities <sup>10)</sup>	Loans	Shares and other equity	Privatisations	Equity injections				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1993	8.0	-5.7	2.3	1.5	1.3	0.2	0.3	-0.2	-0.3	0.1	0.3	0.3	0.1	0.3
1994	6.0	-5.1	0.9	0.0	-0.2	0.1	0.3	-0.1	-0.4	0.2	0.2	0.0	0.7	0.1
1995	7.8	-5.1	2.7	0.6	0.1	-0.1	0.5	0.1	-0.4	0.2	0.2	0.0	2.2	-0.3
1996	3.8	-4.3	-0.5	-0.2	-0.1	0.0	-0.1	-0.1	-0.3	0.2	-0.2	-0.1	0.1	-0.2
1997	2.3	-2.6	-0.3	-0.5	0.2	-0.1	0.0	-0.5	-0.8	0.3	0.2	0.2	-0.2	0.2
1998	1.7	-2.3	-0.6	-0.5	0.1	0.0	-0.1	-0.6	-0.8	0.3	-0.2	0.0	0.0	0.1
1999	1.7	-1.3	0.4	-0.1	0.5	0.1	0.0	-0.7	-0.9	0.2	0.3	0.2	0.1	0.1
2000	0.9	0.1	1.0	0.9	0.7	0.1	0.2	-0.2	-0.4	0.2	0.1	0.0	-0.1	0.1
<i>Euro area enlargement</i>														
2001	1.7	-1.6	0.1	-0.4	-0.6	0.1	0.2	-0.1	-0.3	0.2	0.0	0.0	0.0	0.6
2002	2.0	-2.3	-0.2	0.2	0.3	0.0	0.1	-0.2	-0.4	0.1	-0.1	-0.1	-0.4	0.0

Source: ECB.

1) Data are partially estimated. Annual change in gross nominal consolidated debt expressed as a percentage of GDP [ $debt(t) - debt(t-1)] \div GDP(t)$ .

2) The borrowing requirement is by definition equal to transactions in government 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) Comprises, 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, due to variations in the exchange rates used for aggregation before 1999.

6) Holders resident in the country whose government has issued the debt.

7) Includes residents of euro area countries other than the country whose government has issued the debt.

8) Including proceeds from sales of UMTS licences.

9) The difference between the annual change in gross nominal consolidated debt and the deficit as a percentage of GDP.

10) Excluding financial derivatives.

11) Comprises mainly transactions in other assets and liabilities (trade credit, other receivables/payables and financial derivatives).

## 8 Balance of payments and international investment position of the euro area (including reserves)

**Table 8.1**

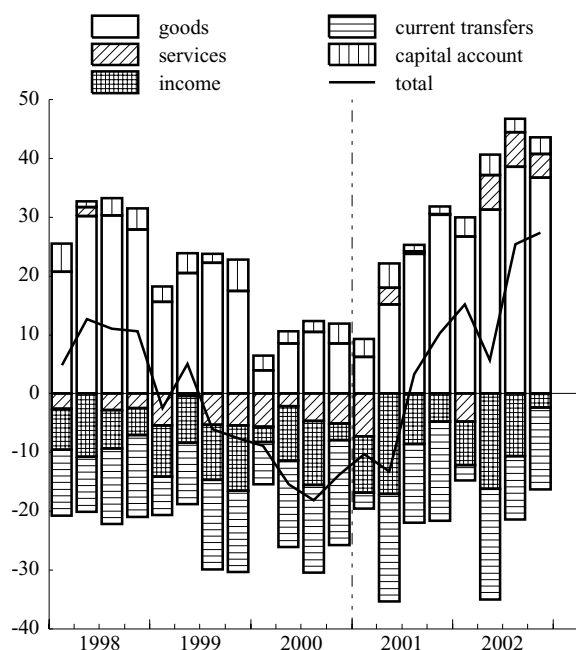
### Summary balance of payments <sup>1) 2)</sup>

(EUR billions (ECU billions to end-1998); net flows)

	Current account					Capital account	Financial account						Errors and omissions
	Total	Goods	Services	Income	Current transfers		Total	Direct investment	Portfolio investment	Financial derivatives	Other investment	Reserve assets	
	1	2	3	4	5	6	7	8	9	10	11	12	13
1997	56.7	116.4	-2.3	-15.2	-42.2	13.0	.	-44.4	-24.1	.	.	.	.
1998	26.7	109.0	-6.3	-28.8	-47.2	12.4	-67.0	-81.3	-109.9	-8.2	124.2	8.2	27.9
1999	-23.8	75.7	-16.5	-37.0	-46.1	12.8	13.5	-119.5	-41.4	3.3	161.0	10.1	-2.5
2000	-66.0	31.6	-17.5	-25.5	-54.6	9.8	66.9	-16.5	-111.6	-3.4	180.8	17.6	-10.7
<i>Euro area enlargement</i>													
2001	-19.4	75.5	-3.7	-39.9	-51.2	9.5	-24.9	-102.8	64.7	-3.5	-1.1	17.8	34.7
2002	61.7	133.3	11.0	-36.6	-46.0	11.8	-137.7	-45.5	110.6	-13.9	-186.7	-2.2	64.3
2001 Q4	9.0	30.4	0.2	-4.8	-16.8	1.3	-32.1	18.0	12.9	-6.6	-59.6	3.3	21.8
2002 Q1	12.0	26.7	-4.7	-7.4	-2.6	3.2	-8.2	-16.0	-35.8	2.5	44.1	-3.1	-6.9
Q2	2.2	31.3	5.9	-16.2	-18.8	3.5	-19.8	-9.2	72.2	-2.8	-86.7	6.7	14.1
Q3	23.0	38.5	5.9	-10.7	-10.7	2.3	-50.3	-12.0	35.7	-9.6	-59.7	-4.6	24.9
Q4	24.5	36.8	4.0	-2.3	-13.9	2.8	-59.5	-8.3	38.4	-3.9	-84.4	-1.3	32.2
2001 Dec.	3.9	10.5	1.7	-2.3	-6.1	0.7	-6.2	1.7	-13.4	-1.0	0.7	5.9	1.6
2002 Jan.	-0.1	3.1	-2.5	-6.4	5.7	2.6	-39.4	1.2	-33.6	3.3	-5.0	-5.3	37.0
Feb.	4.7	10.1	-1.4	-0.2	-3.9	0.4	13.3	-9.1	-8.6	2.1	26.4	2.5	-18.3
Mar.	7.4	13.5	-0.8	-0.8	-4.4	0.3	17.9	-8.1	6.4	-2.9	22.7	-0.2	-25.6
Apr.	-5.8	7.3	0.6	-7.7	-6.0	1.3	14.8	8.1	16.0	1.4	-19.1	8.4	-10.3
May	0.7	10.3	2.1	-6.4	-5.3	1.0	5.6	1.5	34.2	-2.0	-30.0	1.9	-7.3
June	7.4	13.7	3.2	-2.1	-7.5	1.1	-40.2	-18.8	22.0	-2.2	-37.7	-3.5	31.8
July	4.8	15.3	1.7	-9.0	-3.1	0.5	-17.4	-6.7	10.7	-8.2	-10.7	-2.6	12.1
Aug.	9.9	12.2	0.4	0.3	-3.0	0.6	-11.5	1.7	8.3	-2.1	-21.1	1.8	1.0
Sep.	8.3	11.1	3.9	-2.0	-4.6	1.2	-21.3	-7.0	16.7	0.7	-27.9	-3.8	11.8
Oct.	3.8	12.3	0.2	-2.4	-6.3	1.5	-18.5	-7.1	25.2	-0.4	-38.5	2.2	13.2
Nov.	11.5	13.7	1.4	0.4	-4.0	0.4	-26.0	0.5	15.8	-1.5	-38.4	-2.4	14.0
Dec.	9.1	10.7	2.4	-0.4	-3.7	0.9	-15.0	-1.7	-2.6	-2.0	-7.5	-1.2	4.9
2003 Jan.	-6.5	0.8	-0.4	-10.1	3.1	2.1	-15.6	-0.9	-5.5	-1.0	-9.6	1.5	20.0
Feb.	3.2	9.5	-0.3	-3.2	-2.8	-0.9	-3.1	0.7	10.7	0.9	-20.8	5.4	0.7

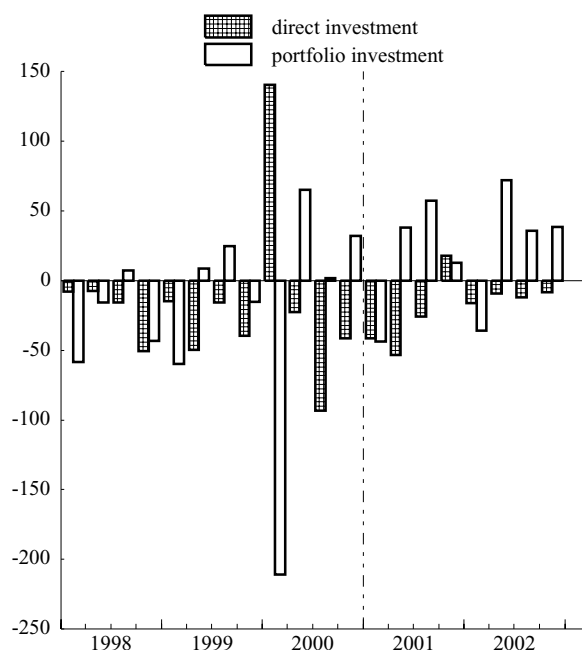
### Current and capital accounts

(EUR billions (ECU billions to end-1998); net flows)



### Direct and portfolio investment

(EUR billions (ECU billions to end-1998); net flows)



Source: ECB.

1) Inflows (+); outflows (-). Reserve assets: increase (-); decrease (+).

2) For the comparability of recent and some earlier data, see the general notes.

Table 8.2

Balance of payments: current and capital accounts <sup>1)</sup>

(EUR billions (ECU billions to end-1998))

## 1. Main items

	Current account											Capital account	
	Total			Goods		Services		Income		Current transfers		Credit 12	Debit 13
	Credit 1	Debit 2	Net 3	Credit 4	Debit 5	Credit 6	Debit 7	Credit 8	Debit 9	Credit 10	Debit 11		
1997	1,218.5	1,161.8	56.7	754.6	638.3	214.3	216.5	189.5	204.7	60.0	102.3	18.9	5.9
1998	1,277.3	1,250.6	26.7	784.4	675.4	231.6	237.9	198.5	227.3	62.9	110.1	17.7	5.3
1999	1,337.0	1,360.8	-23.8	818.3	742.5	246.7	263.2	207.3	244.2	64.8	110.9	19.1	6.3
2000	1,613.1	1,679.1	-66.0	989.8	958.3	287.5	304.9	269.1	294.6	66.7	121.3	18.3	8.5
<i>Euro area enlargement</i>													
2001	1,716.3	1,735.7	-19.4	1,033.0	957.6	325.0	328.7	283.1	322.9	75.3	126.5	17.0	7.5
2002	1,713.6	1,651.9	61.7	1,059.7	926.4	331.7	320.7	238.1	274.7	84.1	130.1	19.1	7.3
2001 Q4	434.7	425.8	9.0	264.0	233.6	83.5	83.3	71.0	75.8	16.3	33.1	4.4	3.1
2002 Q1	416.5	404.6	12.0	254.9	228.2	72.5	77.3	58.3	65.7	30.8	33.4	4.7	1.5
Q2	429.3	427.1	2.2	267.3	236.0	84.5	78.6	62.5	78.6	15.1	33.9	5.0	1.5
Q3	426.8	403.8	23.0	263.2	224.7	89.8	83.9	55.4	66.0	18.4	29.2	4.1	1.7
Q4	441.0	416.5	24.5	274.3	237.6	84.9	81.0	62.0	64.4	19.7	33.6	5.3	2.5
2001 Dec.	147.1	143.2	3.9	80.5	69.9	30.2	28.4	30.0	32.3	6.4	12.5	2.4	1.7
2002 Jan.	141.7	141.9	-0.1	79.6	76.6	24.3	26.8	20.3	26.7	17.4	11.7	3.0	0.5
Feb.	132.8	128.1	4.7	83.5	73.3	23.1	24.5	19.2	19.4	7.1	10.9	1.0	0.6
Mar.	142.0	134.5	7.4	91.8	78.3	25.1	25.9	18.7	19.6	6.3	10.8	0.7	0.5
Apr.	141.4	147.2	-5.8	88.4	81.1	27.5	26.8	20.2	27.9	5.3	11.3	1.9	0.6
May	143.0	142.3	0.7	88.9	78.6	28.2	26.1	20.5	26.9	5.3	10.6	1.5	0.4
June	144.9	137.6	7.4	89.9	76.3	28.8	25.6	21.7	23.8	4.5	12.0	1.6	0.5
July	151.1	146.3	4.8	93.5	78.2	31.3	29.6	20.1	29.1	6.3	9.4	1.1	0.6
Aug.	134.9	125.1	9.9	81.7	69.5	28.9	28.6	18.3	18.0	6.0	9.0	1.3	0.7
Sep.	140.8	132.4	8.3	88.1	77.0	29.6	25.7	17.0	19.0	6.1	10.7	1.6	0.4
Oct.	151.3	147.5	3.8	97.7	85.4	28.8	28.7	19.7	22.1	5.1	11.4	2.1	0.6
Nov.	144.9	133.3	11.5	91.7	78.0	26.7	25.3	19.7	19.3	6.7	10.7	1.2	0.8
Dec.	144.8	135.7	9.1	84.9	74.1	29.4	27.0	22.6	22.9	7.9	11.6	2.0	1.1
2003 Jan.	143.3	149.7	-6.5	81.8	80.9	25.2	25.6	18.7	28.7	17.6	14.4	2.6	0.5
Feb.	131.5	128.3	3.2	83.5	74.0	23.1	23.3	17.1	20.3	7.8	10.7	1.5	2.4

## 2. Main current account items (seasonally adjusted)

	Current account												
	Total			Goods		Services		Income		Current transfers			
	Credit 1	Debit 2	Net 3	Credit 4	Debit 5	Credit 6	Debit 7	Credit 8	Debit 9	Credit 10	Debit 11		
2000 Q4	438.8	457.0	-17.8	266.0	262.5	78.5	83.4	76.8	78.4	17.6	32.6		
<i>Euro area enlargement</i>													
2001 Q1	431.6	440.4	-8.8	261.0	245.6	78.8	81.9	72.7	83.6	19.1	29.4		
Q2	432.2	443.4	-11.2	261.3	244.1	81.5	82.3	70.7	83.3	18.7	33.7		
Q3	428.4	430.1	-1.8	257.2	238.9	82.1	82.5	70.6	78.1	18.4	30.6		
Q4	422.9	420.1	2.8	254.1	228.9	81.8	81.7	68.4	76.6	18.7	32.9		
2002 Q1	425.1	409.9	15.2	263.9	228.6	81.6	81.8	59.8	67.9	19.8	31.5		
Q2	427.8	418.2	9.6	265.8	232.4	82.9	80.7	59.6	71.3	19.5	33.9		
Q3	430.9	411.5	19.4	265.9	232.0	83.7	78.8	59.0	68.7	22.3	31.9		
Q4	430.2	412.5	17.7	264.6	233.5	83.2	79.3	60.1	66.3	22.3	33.5		
2001 Dec.	144.9	143.2	1.8	84.4	75.3	28.9	27.8	25.6	28.5	6.0	11.5		
2002 Jan.	142.3	134.8	7.5	86.5	74.5	27.3	27.4	21.3	24.2	7.2	8.8		
Feb.	142.3	138.5	3.8	88.3	77.0	27.2	27.3	20.7	22.8	6.0	11.4		
Mar.	140.5	136.6	3.9	89.2	77.2	27.1	27.1	17.7	21.0	6.5	11.4		
Apr.	142.7	142.4	0.3	88.1	77.9	27.9	27.6	20.2	25.6	6.4	11.4		
May	141.8	137.9	3.9	88.4	76.5	27.2	26.6	19.7	23.7	6.6	11.1		
June	143.3	137.9	5.4	89.3	78.0	27.8	26.5	19.7	22.0	6.5	11.4		
July	141.8	138.2	3.6	87.5	76.8	27.0	26.6	20.1	24.5	7.2	10.2		
Aug.	145.1	137.6	7.5	89.4	77.6	27.6	26.9	20.4	22.6	7.7	10.5		
Sep.	144.0	135.6	8.4	89.1	77.5	29.1	25.3	18.5	21.6	7.4	11.2		
Oct.	143.2	140.4	2.8	88.3	78.5	27.5	27.0	20.1	23.2	7.3	11.6		
Nov.	145.4	137.8	7.7	89.0	77.2	28.1	26.5	20.6	22.9	7.7	11.2		
Dec.	141.6	134.4	7.2	87.3	77.7	27.6	25.8	19.3	20.3	7.4	10.6		
2003 Jan.	143.5	141.2	2.2	88.6	78.6	28.3	26.1	19.4	25.5	7.2	11.0		
Feb.	140.8	139.0	1.9	88.1	77.7	27.4	26.1	18.5	24.1	6.8	11.1		

Source: ECB.

1) For the comparability of recent and some earlier data, see the general notes.

**Table 8.3****Balance of payments: income account***(EUR billions; gross flows)*

	Total		Compensation of employees		Investment income							
	Credit 1	Debit 2	Credit 3	Debit 4	Total		Direct investment		Portfolio investment		Other investment	
					Credit 5	Debit 6	Credit 7	Debit 8	Credit 9	Debit 10	Credit 11	Debit 12
1999	207.3	244.2	12.6	4.9	194.7	239.3	42.7	51.2	64.2	102.2	87.8	85.8
2000	269.1	294.6	13.2	5.3	255.9	289.4	61.3	64.5	76.7	107.4	117.9	117.5
<i>Euro area enlargement</i>												
2001	283.1	322.9	14.0	5.9	269.1	317.0	69.5	68.9	82.5	118.2	117.1	129.8
2002	238.1	274.7	14.4	5.7	223.7	269.0	56.9	55.3	83.2	121.9	83.6	91.8
2001 Q4	71.0	75.8	3.6	1.4	67.4	74.3	19.5	22.2	22.2	22.3	25.7	29.9
2002 Q1	58.3	65.7	3.5	1.2	54.7	64.5	11.3	12.9	20.6	26.4	22.8	25.1
Q2	62.5	78.6	3.5	1.4	58.9	77.2	17.2	16.3	22.0	38.6	19.8	22.3
Q3	55.4	66.0	3.6	1.6	51.8	64.5	10.9	11.8	20.5	31.0	20.3	21.6
Q4	62.0	64.4	3.8	1.5	58.2	62.9	17.4	14.3	20.1	25.9	20.7	22.7

	Income on direct investment				Income on portfolio investment			
	Equity		Debt		Equity		Debt	
	Credit 13	Debit 14	Credit 15	Debit 16	Credit 17	Debit 18	Credit 19	Debit 20
1999	36.2	46.7	6.5	4.6	9.5	34.0	54.7	68.3
2000	50.5	56.8	10.9	7.7	14.3	30.6	62.4	76.8
<i>Euro area enlargement</i>								
2001	59.3	60.1	10.2	8.9	17.3	43.8	65.2	74.4
2002	49.3	49.7	7.5	5.7	20.6	53.0	62.5	68.9
2001 Q4	16.4	20.1	3.1	2.1	4.8	6.3	17.4	16.0
2002 Q1	9.3	11.6	2.1	1.3	4.8	8.8	15.7	17.6
Q2	15.4	15.1	1.8	1.2	6.5	23.8	15.5	14.8
Q3	9.5	10.5	1.4	1.3	4.4	10.4	16.1	20.6
Q4	15.2	12.5	2.2	1.8	4.9	10.0	15.2	15.9

Source: ECB.

**Table 8.4**
**Balance of payments: direct investment account <sup>1)</sup>**
*(EUR billions (ECU billions to end-1998); net flows)*

	By resident units abroad							By non-resident units in the euro area						
	Total	Equity capital and reinvested earnings			Other capital (mostly inter-company loans)			Total	Equity capital and reinvested earnings			Other capital (mostly inter-company loans)		
		Total	MFIs <sup>2)</sup>	Non-MFIs	Total	MFIs <sup>2)</sup>	Non-MFIs		Total	MFIs <sup>2)</sup>	Non-MFIs	Total	MFIs <sup>2)</sup>	Non-MFIs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1997	-93.2	.	.	.	.	.	48.7	.	.	.	.	.	.	
1998	-172.7	.	.	.	.	.	91.4	.	.	.	.	.	.	
1999	-320.9	-239.5	-25.0	-214.6	-81.3	-0.6	-80.7	201.3	145.7	3.5	142.2	55.6	0.2	55.4
2000	-443.3	-351.7	-35.5	-316.2	-91.5	0.3	-91.8	426.7	301.0	12.4	288.6	125.8	0.1	125.7
<i>Euro area enlargement</i>														
2001	-259.2	-167.0	-13.9	-153.1	-92.1	-0.6	-91.6	156.4	99.9	5.3	94.6	56.5	0.7	55.8
2002	-174.5	-145.7	-18.4	-127.3	-28.8	-0.5	-28.3	129.0	94.1	3.2	90.9	34.9	0.7	34.2
2001 Q4	-28.0	-25.2	-3.3	-21.9	-2.7	-0.1	-2.6	45.9	15.6	8.4	7.2	30.3	0.1	30.1
2002 Q1	-55.5	-41.6	-2.5	-39.1	-13.9	0.0	-13.8	39.5	26.3	1.2	25.2	13.1	0.0	13.1
Q2	-47.0	-28.8	-6.0	-22.7	-18.2	-0.3	-17.9	37.7	22.1	2.8	19.3	15.6	0.1	15.6
Q3	-32.5	-36.2	-5.2	-31.0	3.7	-0.1	3.8	20.5	12.2	-0.4	12.6	8.4	0.6	7.8
Q4	-39.5	-39.1	-4.8	-34.4	-0.4	-0.1	-0.3	31.3	33.5	-0.3	33.9	-2.3	0.0	-2.3
2001 Dec.	-18.4	-9.0	-3.0	-6.0	-9.4	0.0	-9.3	20.1	11.0	6.3	4.7	9.1	0.0	9.1
2002 Jan.	-6.7	-8.6	-0.6	-8.0	1.9	0.0	1.9	7.9	2.8	0.2	2.6	5.1	0.1	5.1
Feb.	-21.4	-5.1	-0.4	-4.8	-16.2	0.0	-16.2	12.2	3.4	1.2	2.2	8.9	0.0	8.9
Mar.	-27.4	-27.9	-1.5	-26.4	0.5	-0.1	0.5	19.3	20.2	-0.1	20.3	-0.9	0.0	-0.8
Apr.	-7.7	-2.3	-4.1	1.8	-5.4	0.0	-5.4	15.8	9.4	2.0	7.4	6.4	0.0	6.4
May	-18.0	-10.5	-1.0	-9.5	-7.4	0.0	-7.4	19.4	6.5	0.7	5.8	13.0	0.0	12.9
June	-21.3	-15.9	-0.9	-15.0	-5.4	-0.3	-5.1	2.5	6.2	0.1	6.2	-3.7	0.1	-3.8
July	-13.1	-14.5	-3.4	-11.1	1.4	0.0	1.4	6.4	2.8	0.9	1.9	3.6	0.0	3.6
Aug.	-1.1	-6.6	-0.3	-6.3	5.5	-0.1	5.5	2.8	2.4	-0.8	3.2	0.4	0.7	-0.3
Sep.	-18.3	-15.2	-1.5	-13.7	-3.1	0.0	-3.1	11.3	7.0	-0.6	7.5	4.3	-0.1	4.4
Oct.	-13.3	-7.1	-0.9	-6.2	-6.1	0.0	-6.1	6.2	6.6	0.2	6.4	-0.4	-0.1	-0.2
Nov.	-22.0	-16.4	-0.3	-16.1	-5.6	0.0	-5.5	22.5	15.5	-0.4	15.9	7.0	0.1	6.9
Dec.	-4.3	-15.6	-3.5	-12.1	11.3	0.0	11.3	2.6	11.4	-0.2	11.6	-8.8	0.0	-8.9
2003 Jan.	-10.9	-6.7	-0.8	-5.9	-4.2	0.0	-4.2	10.0	8.4	0.3	8.1	1.6	0.0	1.6
Feb.	-7.0	-5.2	-0.9	-4.3	-1.8	0.0	-1.7	7.6	5.5	1.1	4.5	2.1	0.0	2.1

Source: ECB.

1) Inflows (+); outflows (-).

2) Excluding the Eurosystem.

**Table 8.5**
**Balance of payments: portfolio investment account <sup>1)</sup>**
*(EUR billions (ECU billions to end-1998); net flows)*
**1. By instrument <sup>2)</sup>**

	Total		Equity		Debt instruments					
	Assets	Liabilities	Assets	Liabilities	Assets			Liabilities		
					Total	Bonds and notes	Money market instruments	Total	Bonds and notes	Money market instruments
1	2	3	4	5	6	7	8	9	10	
1998	-363.3	253.3	-116.2	104.0	-247.1	-238.9	-8.2	149.4	121.3	28.1
1999	-311.3	269.8	-156.5	93.0	-154.8	-154.9	0.1	176.8	117.0	59.9
2000	-409.0	297.4	-285.9	49.9	-123.1	-114.3	-8.8	247.5	239.2	8.3
<i>Euro area enlargement</i>										
2001	-291.0	355.8	-108.3	233.2	-182.7	-160.1	-22.6	122.5	115.1	7.4
2002	-172.8	283.3	-40.8	89.2	-132.0	-78.1	-53.9	194.2	128.6	65.6
2001 Q4	-87.2	100.1	-24.9	61.3	-62.3	-51.0	-11.3	38.8	35.9	2.9
2002 Q1	-75.0	39.2	-32.1	34.5	-42.9	-21.9	-21.0	4.8	7.1	-2.3
Q2	-54.2	126.5	-13.9	36.0	-40.3	-25.3	-15.0	90.5	61.4	29.1
Q3	-19.8	55.5	12.7	6.0	-32.5	-17.3	-15.2	49.5	26.3	23.2
Q4	-23.7	62.1	-7.5	12.8	-16.2	-13.5	-2.7	49.4	33.7	15.6
2001 Dec.	-12.8	-0.7	-6.6	12.6	-6.2	-15.5	9.3	-13.3	-16.4	3.1
2002 Jan.	-27.5	-6.1	-13.5	13.3	-14.0	-3.0	-11.0	-19.4	-11.6	-7.8
Feb.	-18.6	10.1	-8.8	9.4	-9.8	-5.7	-4.2	0.6	1.2	-0.5
Mar.	-28.9	35.2	-9.9	11.7	-19.0	-13.2	-5.8	23.5	17.5	6.0
Apr.	-13.2	29.3	-1.9	6.5	-11.3	-10.1	-1.2	22.8	15.1	7.7
May	-29.5	63.7	-5.8	27.8	-23.6	-14.7	-9.0	35.9	22.8	13.1
June	-11.6	33.5	-6.2	1.7	-5.4	-0.6	-4.8	31.8	23.5	8.3
July	-15.8	26.5	-6.4	4.5	-9.4	-1.3	-8.1	22.0	13.4	8.6
Aug.	-4.4	12.7	5.1	-0.3	-9.5	-10.1	0.5	13.0	2.1	10.9
Sep.	0.4	16.4	14.0	1.9	-13.6	-6.0	-7.7	14.5	10.8	3.7
Oct.	1.0	24.2	-0.6	-3.7	1.6	-4.0	5.6	27.9	15.7	12.3
Nov.	-9.1	24.8	-0.3	16.5	-8.8	-5.0	-3.7	8.3	6.6	1.7
Dec.	-15.6	13.1	-6.6	-0.1	-9.0	-4.5	-4.6	13.1	11.5	1.7
2003 Jan.	-22.6	17.1	2.0	14.1	-24.7	-17.0	-7.7	3.0	4.3	-1.3
Feb.	-23.9	34.6	-0.1	4.2	-23.8	-25.1	1.3	30.4	17.8	12.6

**2. Assets by instrument and sector of holder**

	Equity					Debt instruments									
	Euro-system	MFIs <sup>3)</sup>	Non-MFIs			Euro-system	MFIs <sup>3)</sup>	Bonds and notes			Money market instruments				
			Total	General government	Other sectors			Euro-system	MFIs <sup>3)</sup>	Non-MFIs		Euro-system	MFIs <sup>3)</sup>	Non-MFIs	
										Total	General government			Other sectors	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1999	0.1	-1.5	-155.1	-2.1	-153.0	0.1	-15.4	-139.6	-1.7	-137.9	0.9	-8.1	7.3	-0.1	7.5
2000	-0.1	-4.3	-281.6	-2.6	-278.9	-1.9	-46.3	-66.1	-1.5	-64.6	2.2	-15.5	4.6	-1.0	5.5
<i>Euro area enlargement</i>															
2001	-0.4	3.8	-111.8	-2.1	-109.8	1.9	-71.1	-90.9	-1.2	-89.6	-2.3	-34.5	14.3	-0.2	14.5
2002	-0.3	-9.7	-30.8	-5.2	-25.6	3.7	-7.0	-74.8	-1.0	-73.8	2.1	-35.0	-21.0	-0.9	-20.1
2001 Q4	-0.1	4.8	-29.6	-0.5	-29.0	-0.7	-37.8	-12.5	-0.3	-12.2	-0.3	-3.6	-7.3	1.9	-9.3
2002 Q1	0.0	-4.8	-27.3	-1.4	-25.8	0.4	-4.7	-17.5	-0.5	-17.0	0.8	-13.0	-8.8	-1.1	-7.7
Q2	-0.1	-3.7	-10.1	-2.0	-8.1	2.4	-2.3	-25.4	0.2	-25.6	0.0	-1.9	-13.1	-0.1	-13.0
Q3	-0.1	2.8	10.0	-0.6	10.6	-1.1	-2.9	-13.3	-0.3	-13.0	0.9	-13.3	-2.7	0.2	-3.0
Q4	-0.1	-4.0	-3.5	-1.2	-2.3	2.1	3.0	-18.6	-0.4	-18.1	0.4	-6.8	3.6	0.1	3.5
2002 Sep.	0.3	-0.6	14.3	.	.	-0.4	0.5	-6.0	.	.	0.4	-6.0	-2.1	.	.
Oct.	0.0	-2.2	1.6	.	.	0.4	3.8	-8.3	.	.	0.4	3.5	1.7	.	.
Nov.	-0.1	-1.2	0.9	.	.	1.4	-6.2	-0.3	.	.	-0.1	-9.8	6.2	.	.
Dec.	0.0	-0.6	-6.0	.	.	0.2	5.3	-10.0	.	.	0.1	-0.5	-4.2	.	.
2003 Jan.	0.0	1.4	0.6	.	.	0.0	-12.7	-4.2	.	.	-0.3	-10.9	3.4	.	.
Feb.	-0.1	-0.9	0.9	.	.	1.0	-10.1	-16.0	.	.	-0.9	-0.3	2.5	.	.

Source: ECB.

1) Inflows (+); outflows (-).

2) For the comparability of recent and some earlier data, see the general notes.

3) Excluding the Eurosystem.

**Table 8.6****Balance of payments: other investment account and reserve assets***(EUR billions (ECU billions to end-1998); net flows)***1. Other investment by sector <sup>1) 2)</sup>**

	Total		Eurosystem		General government		MFIs (excluding the Eurosystem)						Other sectors	
	Assets 1	Liabilities 2	Assets 3	Liabilities 4	Assets 5	Liabilities 6	Total		Long-term		Short-term		Assets 13	Liabilities 14
							Assets 7	Liabilities 8	Assets 9	Liabilities 10	Assets 11	Liabilities 12		
1998	-81.5	205.6	-0.7	3.5	-1.0	-6.1	-22.6	192.4	-37.6	40.4	15.0	152.0	-57.1	15.9
1999	-31.8	192.7	-1.9	6.6	3.3	-13.0	16.3	161.2	-47.2	53.8	63.5	107.4	-49.4	37.9
2000	-179.0	359.8	-1.1	0.9	-2.2	0.7	-130.4	288.8	-50.0	52.5	-80.4	236.3	-45.4	69.5
<i>Euro area enlargement</i>														
2001	-250.2	249.0	0.6	4.4	2.9	-0.5	-227.6	233.5	-45.3	22.4	-182.3	211.1	-26.1	11.6
2002	-224.4	37.7	-1.2	0.1	0.0	-8.3	-167.3	29.5	-28.3	51.9	-139.0	-22.3	-55.9	16.4
2001 Q4	-69.8	10.2	-0.4	3.7	1.9	4.8	-46.3	4.6	-18.1	-5.9	-28.2	10.5	-25.2	-2.9
2002 Q1	19.8	24.3	-0.4	1.2	-0.6	-8.3	18.7	25.8	-2.5	11.4	21.2	14.4	2.2	5.6
Q2	-77.6	-9.1	-0.6	-3.5	0.9	3.8	-62.7	-11.8	-4.4	19.8	-58.3	-31.6	-15.2	2.4
Q3	-62.1	2.3	0.3	-0.1	-0.5	-2.8	-34.9	9.6	-4.7	4.6	-30.2	5.0	-26.9	-4.3
Q4	-104.5	20.1	-0.4	2.5	0.3	-1.0	-88.3	6.0	-16.6	16.1	-71.7	-10.1	-16.1	12.7
2001 Dec.	30.6	-30.0	0.1	-2.8	0.1	-0.2	30.4	-24.3	-4.3	2.9	34.7	-27.3	0.1	-2.7
2002 Jan.	2.0	-7.0	-0.7	2.6	-1.4	-8.8	14.7	0.5	-1.0	6.3	15.6	-5.8	-10.6	-1.3
Feb.	27.0	-0.6	-0.1	-3.8	1.0	-1.6	5.3	12.4	-7.7	1.3	13.1	11.1	20.8	-7.6
Mar.	-9.2	31.9	0.4	2.4	-0.2	2.1	-1.4	12.9	6.2	3.8	-7.5	9.1	-8.0	14.5
Apr.	-42.2	23.1	-0.4	-4.3	1.7	5.6	-30.1	22.2	-4.2	7.1	-25.9	15.1	-13.3	-0.4
May	-64.2	34.2	-0.1	-0.5	0.0	0.0	-56.0	36.4	-3.9	8.2	-52.1	28.2	-8.0	-1.7
June	28.8	-66.4	-0.1	1.3	-0.7	-1.8	23.4	-70.4	3.7	4.4	19.7	-74.8	6.2	4.5
July	-2.3	-8.4	0.4	2.7	-0.2	-1.2	14.0	-9.8	2.8	1.6	11.2	-11.4	-16.5	-0.1
Aug.	8.5	-29.7	0.1	-5.0	-0.6	-2.2	12.8	-17.9	0.4	2.0	12.4	-19.9	-3.8	-4.6
Sep.	-68.3	40.4	-0.2	2.1	0.3	0.6	-61.7	37.3	-7.9	0.9	-53.8	36.3	-6.6	0.4
Oct.	-68.8	30.3	-0.1	-0.3	-0.4	1.3	-54.2	22.4	-4.4	7.6	-49.8	14.8	-14.2	7.0
Nov.	-78.3	39.9	0.9	1.2	-1.6	-0.3	-65.5	34.8	-7.8	-7.0	-57.6	41.8	-12.1	4.2
Dec.	42.5	-50.1	-1.3	1.6	2.2	-2.0	31.3	-51.2	-4.4	15.5	35.8	-66.7	10.2	1.5
2003 Jan.	-9.5	-0.2	0.5	-2.4	-2.3	-6.2	6.5	3.4	-2.0	9.3	8.5	-5.8	-14.1	5.0
Feb.	-81.9	61.1	-0.5	-2.0	-3.8	-2.9	-55.1	54.5	-3.8	6.1	-51.3	48.4	-22.4	11.4

**2. Other investment by sector and instrument <sup>1)</sup>****2.1. Eurosystem**

	Loans/currency and deposits			Other assets/liabilities		
	Assets 1	Liabilities 2	Balance 3	Assets 4	Liabilities 5	Balance 6
1999	-1.1	6.7	5.6	-0.8	-0.1	-0.9
2000	-1.1	0.9	-0.2	0.0	0.0	0.0
<i>Euro area enlargement</i>						
2001	0.6	4.4	5.0	0.0	0.0	0.0
2002	-1.2	0.0	-1.1	0.0	0.0	0.0
2001 Q4	-0.4	3.8	3.4	0.0	0.0	0.0
2002 Q1	-0.4	1.2	0.7	0.0	0.0	0.0
Q2	-0.6	-3.5	-4.1	0.0	0.0	0.0
Q3	0.3	-0.2	0.1	0.0	0.0	0.0
Q4	-0.4	2.6	2.1	0.0	0.0	0.0

Source: ECB.

1) Inflows (+); outflows (-).

2) For the comparability of recent and some earlier data, see the general notes.



## 2.2. General government

	Trade credits			Loans/currency and deposits			Other assets/liabilities		
	Assets 7	Liabilities 8	Balance 9	Assets 10	Liabilities 11	Balance 12	Assets 13	Liabilities 14	Balance 15
1999	0.0	0.0	0.0	4.4	-13.1	-8.7	-1.2	0.2	-1.0
2000	0.1	0.0	0.1	-1.4	0.6	-0.8	-0.9	0.1	-0.8
<i>Euro area enlargement</i>									
2001	-0.1	0.0	-0.1	4.4	-0.6	3.9	-1.4	0.1	-1.3
2002	1.5	0.0	1.4	-0.6	-8.0	-8.6	-0.8	-0.3	-1.1
2001 Q4	0.0	0.0	0.0	2.1	4.7	6.8	-0.1	0.1	-0.1
2002 Q1	0.0	0.0	0.0	-0.3	-8.0	-8.3	-0.3	-0.3	-0.6
Q2	1.4	0.0	1.4	-0.2	3.6	3.4	-0.3	0.2	-0.2
Q3	0.0	0.0	0.0	-0.3	-2.7	-3.0	-0.2	0.0	-0.3
Q4	0.0	0.0	0.0	0.2	-0.9	-0.6	0.1	-0.1	-0.1

## 2.3. MFIs (excluding the Eurosystem)

	Loans/currency and deposits			Other assets/liabilities		
	Assets 16	Liabilities 17	Balance 18	Assets 19	Liabilities 20	Balance 21
1999	15.5	160.5	176.0	0.8	0.7	1.5
2000	-126.3	283.5	157.1	-4.1	5.3	1.3
<i>Euro area enlargement</i>						
2001	-213.6	223.7	10.0	-13.9	9.8	-4.1
2002	-163.6	32.5	-131.1	-3.7	-2.9	-6.6
2001 Q4	-41.6	3.3	-38.2	-4.7	1.3	-3.4
2002 Q1	24.1	19.7	43.9	-5.5	6.0	0.5
Q2	-61.8	-10.5	-72.3	-0.9	-1.3	-2.2
Q3	-32.6	7.6	-25.0	-2.3	2.0	-0.3
Q4	-93.4	15.6	-77.7	5.0	-9.7	-4.6

## 2.4. Other sectors

	Trade credits			Loans/currency and deposits			Other assets/liabilities		
	Assets 22	Liabilities 23	Balance 24	Assets 25	Liabilities 26	Balance 27	Assets 28	Liabilities 29	Balance 30
1999	-7.5	4.8	-2.7	-18.9	21.7	2.9	-23.0	11.3	-11.7
2000	-14.6	10.5	-4.0	-25.2	64.0	38.8	-5.7	-5.0	-10.7
<i>Euro area enlargement</i>									
2001	-0.4	0.6	0.1	-25.3	10.6	-14.7	-0.3	0.4	0.1
2002	-9.6	-2.3	-11.9	-43.5	14.4	-29.1	-2.8	4.3	1.5
2001 Q4	2.6	-1.2	1.4	-27.7	-2.3	-30.0	-0.1	0.5	0.4
2002 Q1	-1.2	-0.5	-1.7	5.0	5.3	10.3	-1.6	0.8	-0.8
Q2	-3.6	-1.4	-5.0	-11.4	2.9	-8.6	-0.1	0.9	0.8
Q3	-2.8	0.9	-1.9	-23.9	-7.2	-31.2	-0.1	2.0	1.9
Q4	-2.0	-1.4	-3.4	-13.1	13.5	0.4	-1.0	0.6	-0.4

## 3. Reserve assets <sup>1)</sup>

	Total 1	Monetary gold 2	Special drawing rights 3	Reserve position in the IMF 4	Foreign exchange							Other claims 12
					Total 5	Currency and deposits		Securities			Financial derivatives 11	
						With monetary authorities and the BIS 6	With banks 7	Equity 8	Bonds and notes 9	Money market instruments 10		
1999	10.1	0.3	1.0	2.0	6.1	12.5	-12.1	0.2	3.5	2.0	-0.1	0.8
2000	17.6	1.0	0.3	2.9	13.3	4.3	4.6	0.0	-5.6	10.1	-0.1	0.0
<i>Euro area enlargement</i>												
2001	17.8	0.6	-1.0	-4.2	22.5	10.0	-5.3	-1.1	20.4	-1.6	0.0	0.0
2002	-2.2	0.7	0.2	-2.0	-1.2	-2.3	-15.3	0.0	8.2	8.4	-0.2	0.0
2001 Q4	3.3	0.1	-0.1	0.8	2.4	2.7	1.7	0.0	4.8	-6.9	0.0	0.0
2002 Q1	-3.1	-0.2	0.0	-0.4	-2.4	-1.7	-12.4	0.0	4.2	7.4	0.0	0.0
Q2	6.7	0.5	0.5	-2.1	7.8	-0.6	1.2	0.0	4.3	3.1	-0.2	0.0
Q3	-4.6	-0.1	-0.2	0.2	-4.6	-2.4	-3.0	0.0	1.9	-1.2	0.0	0.0
Q4	-1.3	0.4	-0.1	0.3	-1.9	2.3	-1.2	0.0	-2.2	-0.9	0.0	0.0

Source: ECB.

1) Increase (-); decrease (+)

**Table 8.7****International investment position <sup>1)</sup> and reserve assets outstanding***(EUR billions (ECU billions in 1997); end-of-period positions)***1. Summary international investment position**

	Total		Direct investment 3	Portfolio investment 4	Financial derivatives 5	Other investment 6	Reserve assets 7
	1	as % of GDP 2					
<b>Net international investment position <sup>2)3)</sup></b>							
1997	16.3	0.3	181.5	-750.5	-5.9	223.8	367.3
1998	-170.1	-2.8	152.0	-748.5	2.3	86.5	337.6
1999	-297.3	-4.7	369.6	-881.2	16.0	-183.9	382.2
2000	-414.7	-6.3	428.4	-804.9	8.5	-437.2	390.4
2001	-152.2	-2.2	530.7	-682.7	-5.9	-387.0	392.7
<b>Outstanding assets</b>							
1999	5,796.7	92.5	1,174.5	2,058.1	111.1	2,070.8	382.2
2000	6,740.0	102.5	1,609.7	2,344.1	117.9	2,277.9	390.4
2001	7,459.4	109.3	1,859.9	2,499.8	123.7	2,583.4	392.7
<b>Outstanding liabilities</b>							
1999	6,094.0	97.2	804.9	2,939.3	95.1	2,254.7	-
2000	7,154.7	108.9	1,181.2	3,149.1	109.3	2,715.1	-
2001	7,611.6	111.5	1,329.2	3,182.5	129.5	2,970.5	-

**2. Direct investment**

	By resident units abroad						By non-resident units in the euro area					
	Equity capital and reinvested earnings			Other capital (mostly inter-company loans)			Equity capital and reinvested earnings			Other capital (mostly inter-company loans)		
	Total 1	MFIs <sup>4)</sup> 2	Non-MFIs 3	Total 4	MFIs <sup>4)</sup> 5	Non-MFIs 6	Total 7	MFIs <sup>4)</sup> 8	Non-MFIs 9	Total 10	MFIs <sup>4)</sup> 11	Non-MFIs 12
1999	938.7	85.7	853.0	235.8	1.8	234.0	606.3	24.3	582.0	198.6	1.7	196.9
2000	1,256.0	115.9	1,140.1	353.7	2.3	351.3	880.6	31.8	848.8	300.7	1.8	298.9
2001	1,478.4	132.0	1,346.4	381.5	2.6	378.9	985.6	42.4	943.2	343.6	2.6	341.0

**3.1. Portfolio investment by instrument**

	Equity		Debt instruments						
	Assets 1	Liabilities 2	Assets			Liabilities			
			Total 3	Bonds and notes 4	Money market instruments 5	Total 6	Bonds and notes 7	Money market instruments 8	
1999	1,013.6	1,698.1	1,044.4	937.2	107.2	1,241.2	1,138.5	102.7	
2000	1,183.6	1,627.6	1,160.5	1,038.4	122.1	1,521.5	1,399.9	121.6	
2001	1,111.5	1,577.6	1,388.3	1,208.1	180.1	1,604.9	1,505.5	99.4	

**3.2. Portfolio investment: assets by instrument and sector of holder**

	Equity					Debt instruments									
	Euro-system 9	MFIs <sup>4)</sup> 10	Non-MFIs			Bonds and notes			Money market instruments						
			Total 11	General government 12	Other sectors 13	Euro-system 14	MFIs <sup>4)</sup> 15	Non-MFIs			Euro-system 19	MFIs <sup>4)</sup> 20	Non-MFIs		
								Total 16	General government 17	Other sectors 18			Total 21	General government 22	Other sectors 23
1999	0.4	25.9	987.3	4.1	983.2	4.5	257.2	675.4	6.2	669.3	2.6	68.5	36.1	0.2	35.9
2000	0.9	42.7	1,140.0	5.6	1,134.4	3.4	328.5	706.5	5.7	700.9	0.5	85.6	36.0	0.1	35.8
2001	1.2	43.7	1,066.7	6.6	1,060.0	2.1	422.1	784.0	8.0	776.0	2.8	125.2	52.1	0.2	51.9

Source: ECB.

1) Data refer to the Euro 12, i.e. they include Greece.

2) Assets minus liabilities.

3) For the comparability of recent and some earlier data, see the general notes.

4) Excluding the Eurosystem.

#### 4. Other investment by sector and instrument

	Eurosysteem						General government							
	Total		Loans/currency and deposits		Other assets/liabilities		Total		Trade credits		Loans/currency and deposits		Other assets/liabilities	
	Assets 1	Liabilities 2	Assets 3	Liabilities 4	Assets 5	Liabilities 6	Assets 7	Liabilities 8	Assets 9	Liabilities 10	Assets 11	Liabilities 12	Assets 13	Liabilities 14
1999	3.1	27.4	3.0	27.1	0.1	0.3	125.5	57.3	2.5	0.1	72.4	45.4	50.6	11.8
2000	3.0	32.2	2.9	31.9	0.1	0.3	133.8	60.0	2.8	0.2	77.5	47.7	53.5	12.1
2001	3.0	36.4	2.9	36.2	0.1	0.2	132.5	63.8	3.1	0.2	73.6	51.4	55.9	12.3

	MFIs (excluding the Eurosysteem)						Other sectors							
	Total		Loans/currency and deposits		Other assets/liabilities		Total		Trade credits		Loans/currency and deposits		Other assets/liabilities	
	Assets 15	Liabilities 16	Assets 17	Liabilities 18	Assets 19	Liabilities 20	Assets 21	Liabilities 22	Assets 23	Liabilities 24	Assets 25	Liabilities 26	Assets 27	Liabilities 28
1999	1,317.7	1,823.5	1,291.8	1,798.1	25.9	25.5	624.5	346.5	161.0	90.7	394.2	225.7	69.3	30.1
2000	1,458.5	2,168.4	1,421.4	2,126.4	37.1	42.0	682.6	454.5	179.5	110.2	418.9	314.8	84.2	29.5
2001	1,719.5	2,407.3	1,668.6	2,354.1	50.9	53.2	728.4	462.9	177.6	109.7	478.4	321.9	72.4	31.4

#### 5. Reserves and related assets of the Eurosysteem and of the European Central Bank <sup>1)</sup>

(EUR billions; end-of-period positions, unless otherwise indicated)

	Reserve assets													Memo: related assets		
	Total	Monetary gold	In fine troy ounces (millions) <sup>2)</sup>	Special drawing rights	Reserve position in the IMF	Foreign exchange									Other claims	Claims on euro area residents denomi- nated in foreign currency
						Total	Currency and deposits		Securities				Financial derivatives			
							With monetary authorities and the BIS 7	With banks	Total	Equities	Bonds and notes	Money market instru- ments				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
<b>Eurosysteem <sup>3)</sup></b>																
1998 Dec. <sup>4)</sup>	329.4	99.6	404.131	5.2	23.4	201.2	12.6	19.6	169.0	0.0	116.6	52.4	0.0	0.0	7.6	
1999 Dec.	372.1	116.4	402.758	4.5	24.3	226.9	13.5	23.0	190.7	0.0	133.9	56.8	-0.2	0.0	14.6	
2000 Dec.	377.2	117.1	399.537	4.3	20.8	235.0	9.7	20.1	204.4	0.0	154.0	50.4	0.7	0.0	15.8	
<i>Euro area enlargement</i>																
2001 1 Jan.	390.4	118.4	404.157	4.3	21.2	246.5	16.8	20.5	208.5	0.0	158.1	50.4	0.7	0.0	16.3	
2001 Dec.	392.7	126.1	401.876	5.5	25.3	235.8	8.0	25.9	201.5	1.2	147.0	53.3	0.4	0.0	24.7	
2002 Dec.	366.1	130.4	399.022	4.8	25.0	205.8	10.3	35.3	159.8	-	-	-	0.4	0.0	22.4	
2003 Jan.	363.4	135.5	398.728	4.7	24.4	198.8	13.1	38.5	146.6	-	-	-	0.6	0.0	20.4	
Feb.	352.2	128.2	397.765	4.8	24.3	194.9	10.4	38.4	145.6	-	-	-	0.5	0.0	19.3	
Mar.	339.2	122.3	397.765	4.7	24.5	187.7	7.9	36.4	142.8	-	-	-	0.6	0.0	18.9	
<b>European Central Bank <sup>5)</sup></b>																
1999 Dec.	49.3	7.0	24.030	0.0	0.0	42.3	0.3	7.8	34.3	0.0	27.8	6.5	0.0	0.0	2.6	
2000 Dec.	45.3	7.0	24.030	0.0	0.0	38.2	0.6	6.8	30.6	0.0	20.4	10.2	0.3	0.0	3.8	
<i>Euro area enlargement</i>																
2001 Dec.	49.3	7.8	24.656	0.1	0.0	41.4	0.8	7.0	33.6	0.0	23.5	10.1	0.0	0.0	3.6	
2002 Dec.	45.5	8.1	24.656	0.2	0.0	37.3	1.2	9.9	26.1	-	-	-	0.0	0.0	3.0	
2003 Jan.	42.9	8.4	24.656	0.2	0.0	34.4	0.8	9.5	24.1	-	-	-	0.0	0.0	2.9	
Feb.	42.0	7.9	24.656	0.2	0.0	33.9	1.3	8.8	23.8	-	-	-	0.0	0.0	2.6	
Mar.	40.5	7.6	24.656	0.2	0.0	32.8	0.9	9.3	22.6	-	-	-	0.0	0.0	3.0	

Source: ECB.

1) More comprehensive data in accordance with the template on international reserves and foreign currency liquidity can be found on the ECB's website.

2) Changes in the gold holdings of the Eurosysteem are due to transactions in gold within the terms of the Central Bank Gold Agreement of 26 September 1999.

3) The figures are not fully comparable with those in Table 1.1 owing to differences in coverage and valuation.

4) Position as at 1 January 1999.

5) Part of the Eurosysteem's reserves.

## 9 External trade in goods of the euro area

Table 9

### 1. Values, volumes and unit values by commodity <sup>1) 2)</sup>

(not seasonally adjusted, unless otherwise indicated)

	Exports of goods (f.o.b.)					Imports of goods (c.i.f.)						Total (s.a.) (2000=100)	
	Total				Memo: Manufac- tures 5	Total				Memo:		Exports 12	Imports 13
	1	Inter- mediate 2	Capital 3	Consump- tion 4		6	Inter- mediate 7	Capital 8	Consump- tion 9	Manufac- tures 10	Oil 11		
Values (EUR billions; 2000=100 for columns 12 and 13)													
1999	832.8	386.5	183.2	224.2	725.0	781.2	423.2	143.6	192.1	590.6	61.5	82.5	78.1
2000	1,013.7	482.6	221.7	265.4	883.2	1,008.4	579.8	179.4	218.1	730.2	118.9	100.0	100.0
<i>Euro area enlargement</i>													
2001	1,060.8	491.6	235.8	287.0	930.8	1,011.1	575.1	178.2	226.1	738.1	107.5	106.3	98.9
2002	1,073.3	489.6	226.5	301.3	935.9	970.5	544.2	159.5	227.0	704.6	101.9	107.5	95.0
2001 Q4	272.9	122.4	63.1	75.1	238.8	247.5	137.0	44.8	57.3	181.8	23.1	104.9	94.2
2002 Q1	258.5	118.9	53.8	72.8	225.9	239.5	134.8	39.5	55.8	175.9	22.7	107.4	94.2
Q2	273.0	127.5	57.4	74.8	238.4	248.5	141.8	40.5	57.0	180.7	25.8	108.1	95.9
Q3	265.4	120.2	55.4	75.9	231.5	232.9	130.2	37.7	56.1	169.4	26.0	107.7	94.5
Q4	276.4	123.1	59.9	77.8	240.1	249.5	137.3	41.9	58.1	178.7	27.4	107.0	95.3
2002 Sep.	89.6	40.5	18.3	25.9	78.0	80.4	45.2	13.4	18.8	58.6	8.7	108.2	94.4
Oct.	98.6	43.9	20.4	28.9	85.9	89.1	50.1	14.1	20.9	64.2	9.9	106.7	95.8
Nov.	92.9	41.5	20.0	26.5	80.9	83.1	45.4	14.6	19.3	60.1	8.3	108.5	96.1
Dec.	84.8	37.7	19.5	22.4	73.3	77.4	41.8	13.2	18.0	54.3	9.2	105.7	94.0
2003 Jan.	82.1	38.1	15.9	23.2	71.0	83.0	46.6	13.2	19.2	58.8	10.1	107.2	96.7
Feb.	84.6	39.3	17.0	23.3	73.8	79.4	45.4	12.1	17.8	56.9	8.9	108.0	97.0
Volumes (annual percentage changes; 2000=100 for columns 12 and 13)													
1999	2.2	2.8	-0.8	3.3	1.4	6.1	3.5	12.9	7.7	7.1	6.0	89.3	95.1
2000	12.4	12.5	12.7	12.7	13.6	5.9	6.8	11.7	4.5	8.9	4.7	99.9	99.9
<i>Euro area enlargement</i>													
2001	5.1	1.8	8.6	7.9	5.8	-1.2	-1.0	-3.9	-0.1	-1.7	-1.6	105.3	98.7
2002	1.8	1.0	-3.5	4.3	1.2	-1.5	-2.5	-8.2	1.6	-2.7	-1.5	107.3	97.1
2001 Q4	-0.4	-3.8	0.9	3.1	-0.5	-5.7	-4.9	-12.8	-1.7	-8.0	0.5	103.9	96.8
2002 Q1	-2.3	-3.8	-7.1	1.9	-3.0	-6.1	-6.1	-17.9	-1.0	-8.8	-1.3	106.2	96.5
Q2	2.7	2.7	-2.5	4.8	2.4	-1.4	-1.7	-9.4	2.4	-2.7	-3.1	107.5	97.5
Q3	4.7	3.5	-0.3	6.5	3.9	0.8	-0.6	-0.3	1.6	0.7	-2.6	108.3	97.1
Q4	2.3	1.8	-4.0	4.2	1.6	0.4	-1.9	-4.2	3.0	0.0	-0.9	107.1	97.3
2002 Sep.	9.0	9.2	4.2	8.2	8.9	3.6	2.0	2.6	4.7	3.9	-3.9	108.8	96.9
Oct.	0.5	-0.6	-7.3	4.1	-0.4	-0.2	-0.9	-7.3	2.2	-0.3	-0.7	106.7	97.8
Nov.	1.9	0.4	-1.2	4.1	2.0	-3.0	-5.9	-3.3	-1.3	-3.7	-3.5	108.3	98.3
Dec.	4.9	5.4	-1.3	4.6	3.8	4.2	0.3	-0.5	8.3	4.0	0.9	106.4	95.8
2003 Jan.	3.8	3.2	-1.9	5.2	2.8	2.2	-1.9	9.6	4.8	3.6	-3.8	108.7	98.5
Feb.	2.7	3.4	1.2	-1.0	2.5	2.6	1.1	1.9	2.3	4.6	-7.3	109.3	99.5
Unit values (annual percentage changes; 2000=100 for columns 12 and 13)													
1999	2.3	1.7	2.7	1.4	2.4	3.5	3.9	3.4	1.4	2.0	39.4	92.4	82.0
2000	8.3	11.0	7.4	5.1	7.2	21.9	28.3	11.8	8.7	13.5	84.8	100.0	100.0
<i>Euro area enlargement</i>													
2001	1.0	0.7	0.3	1.9	1.0	0.2	-1.3	1.6	2.8	1.7	-11.0	101.0	100.2
2002	-0.7	-1.4	-0.6	0.5	-0.7	-2.4	-2.8	-2.2	-1.0	-1.6	-3.7	100.3	97.8
2001 Q4	-1.6	-3.1	-0.2	0.2	-1.0	-7.5	-11.5	-2.8	-1.0	-2.6	-34.5	101.0	97.3
2002 Q1	0.9	-0.5	1.5	2.9	0.9	-3.4	-5.7	-0.6	1.1	-0.6	-16.8	101.1	97.6
Q2	-0.7	-1.4	-0.3	0.4	-0.6	-3.2	-4.2	-1.8	-1.1	-1.6	-8.4	100.6	98.3
Q3	-1.9	-2.7	-1.8	-0.6	-1.9	-3.4	-3.6	-3.4	-2.8	-2.8	-4.6	99.5	97.3
Q4	-1.1	-1.0	-1.6	-0.7	-1.2	0.6	2.6	-2.9	-1.4	-1.5	19.7	99.9	97.9
2002 Sep.	-1.5	-2.6	-1.2	0.2	-1.6	-1.6	-1.4	-1.8	-1.8	-1.4	0.4	99.5	97.5
Oct.	0.0	-0.3	-0.8	0.9	0.0	1.4	3.2	-1.6	-0.4	-0.6	19.6	100.0	97.9
Nov.	-0.9	-0.8	-1.4	-0.6	-1.1	0.3	1.8	-3.2	-0.6	-1.4	15.4	100.2	97.8
Dec.	-2.3	-2.0	-2.7	-2.4	-2.5	0.1	2.8	-3.9	-3.2	-2.6	24.5	99.4	98.1
2003 Jan.	-2.5	-2.0	-2.7	-2.6	-2.7	1.3	4.5	-6.1	-1.8	-2.7	32.6	98.6	98.2
Feb.	-2.4	-1.5	-2.3	-3.3	-2.5	0.1	4.1	-6.9	-4.8	-4.4	33.8	98.8	97.4

Sources: Eurostat and ECB calculations based on Eurostat data (volume calculations and seasonal adjustment of unit values).

1) Owing to differences in definitions, coverage and time of recording, trade data (as compiled by Eurostat) are not fully comparable with the goods item in the balance of payments statistics compiled by the ECB (Table 8.2).

2) The commodity breakdown in columns 2 to 4 and 7 to 9 is in accordance with the Classification by Broad Economic Categories. Manufactured goods (columns 5 and 10) and oil (column 11) are in accordance with the SITC Rev.3.

## 2. Geographical breakdown <sup>1)</sup>

(EUR billions; not seasonally adjusted, unless otherwise indicated)

	Total 1	Total (s.a.) 2	United Kingdom 3	Sweden 4	Denmark 5	Acceding countries 6	Switzer- land 7	United States 8	Japan 9	Asia excl. Japan 10	Africa 11	Latin America 12	Other countries 13
Exports (f.o.b.)													
1999	832.8	-	161.4	33.1	21.1	77.3	56.1	135.1	26.8	119.2	48.4	39.1	115.2
2000	1,013.7	-	189.7	38.8	23.2	94.6	63.4	171.4	34.2	151.6	56.1	46.7	144.1
<i>Euro area enlargement</i>													
2001	1,060.8	-	201.9	36.9	24.3	105.9	66.3	180.0	34.5	165.3	60.3	49.8	135.6
2002	1,073.3	-	203.1	36.7	24.6	112.0	63.7	180.7	32.5	169.8	59.5	42.9	.
2001 Q4	272.9	262.5	50.9	9.6	6.2	27.7	16.2	45.0	8.8	43.3	15.8	12.6	36.7
2002 Q1	258.5	268.8	51.8	9.2	6.0	26.3	15.9	44.6	7.9	39.4	14.0	10.2	33.2
Q2	273.0	270.5	51.5	9.3	6.2	28.9	16.2	45.9	7.8	42.8	15.6	11.3	37.6
Q3	265.4	269.6	49.8	8.3	6.0	27.7	15.6	44.1	8.3	42.8	14.8	10.5	37.5
Q4	276.4	267.7	50.0	9.9	6.5	29.1	16.0	46.1	8.5	44.9	15.1	10.9	.
2002 Sep.	89.6	90.3	17.3	3.1	2.2	9.8	5.4	14.4	2.8	14.2	4.7	3.2	12.4
Oct.	98.6	89.0	17.9	3.6	2.3	10.7	5.8	16.6	3.0	15.6	5.3	4.1	13.7
Nov.	92.9	90.5	17.2	3.5	2.2	10.0	5.5	15.7	2.9	14.4	4.8	3.4	13.4
Dec.	84.8	88.2	14.9	2.8	1.9	8.3	4.7	13.8	2.6	14.9	5.0	3.4	.
2003 Jan.	82.1	89.4	15.3	3.0	1.9	8.9	5.3	14.2	2.5	12.3	4.5	3.1	.
Feb.	84.6	90.1	.	.	.	.	.	.	.	.	.	.	.
% change versus previous year 2003 Feb. 0.3 - . . . . .													
Imports (c.i.f.)													
1999	781.2	-	131.0	33.2	18.6	60.3	43.2	113.2	53.9	151.8	49.0	30.4	96.6
2000	1,008.4	-	156.6	38.0	21.8	76.8	49.8	140.7	65.5	211.6	72.2	39.7	135.8
<i>Euro area enlargement</i>													
2001	1,011.1	-	154.0	34.3	21.3	88.8	52.9	138.1	58.6	207.9	74.0	40.9	140.3
2002	970.5	-	143.4	34.1	21.5	93.4	51.9	124.5	52.0	202.8	68.3	38.9	.
2001 Q4	247.5	241.2	39.2	8.7	5.7	22.9	14.0	32.7	13.5	50.4	16.9	9.4	34.1
2002 Q1	239.5	241.0	36.1	8.2	5.1	22.2	12.7	32.9	12.8	49.2	17.8	9.3	33.2
Q2	248.5	245.5	37.5	8.9	5.2	23.9	13.6	32.9	13.5	48.7	17.1	10.6	36.6
Q3	232.9	241.9	33.5	7.9	5.2	22.5	12.3	28.4	12.3	51.0	16.2	9.8	33.8
Q4	249.5	243.9	36.4	9.1	6.0	24.7	13.3	30.2	13.4	53.8	17.2	9.1	.
2002 Sep.	80.4	80.6	11.9	3.0	1.8	8.0	4.3	8.9	4.2	17.8	5.8	3.3	11.4
Oct.	89.1	81.7	12.3	3.2	2.0	9.0	4.9	10.8	4.9	19.3	6.4	3.6	12.8
Nov.	83.1	82.0	12.1	3.0	2.0	8.3	4.4	10.6	4.6	18.0	5.4	2.9	11.8
Dec.	77.4	80.2	12.0	2.8	2.0	7.4	4.0	8.9	4.0	16.5	5.4	2.6	.
2003 Jan.	83.0	82.5	10.9	2.7	1.9	8.0	4.1	9.7	4.4	18.7	6.2	3.0	.
Feb.	79.4	82.7	.	.	.	.	.	.	.	.	.	.	.
% change versus previous year 2003 Feb. 2.7 - . . . . .													
Balance													
1999	51.6	-	30.4	-0.1	2.6	17.0	12.9	21.9	-27.1	-32.6	-0.6	8.7	18.6
2000	5.3	-	33.1	0.8	1.4	17.8	13.6	30.7	-31.3	-60.0	-16.1	7.0	8.3
<i>Euro area enlargement</i>													
2001	49.7	-	47.8	2.7	3.0	17.1	13.4	42.0	-24.1	-42.5	-13.7	8.9	-4.7
2002	102.8	-	59.7	2.6	3.1	18.6	11.8	56.3	-19.4	-32.9	-8.8	4.1	.
2001 Q4	25.3	21.3	11.8	0.9	0.5	4.8	2.2	12.3	-4.6	-7.1	-1.1	3.1	2.6
2002 Q1	19.0	27.7	15.7	1.0	0.9	4.1	3.2	11.7	-4.9	-9.8	-3.8	1.0	0.1
Q2	24.5	25.0	13.9	0.4	1.0	5.0	2.7	13.0	-5.7	-6.0	-1.5	0.6	1.0
Q3	32.5	27.6	16.4	0.5	0.8	5.2	3.3	15.7	-4.0	-8.2	-1.4	0.7	3.6
Q4	26.8	23.8	13.6	0.8	0.4	4.4	2.7	15.9	-4.9	-9.0	-2.1	1.8	.
2002 Sep.	9.2	9.7	5.4	0.1	0.4	1.8	1.1	5.6	-1.4	-3.6	-1.2	0.0	1.0
Oct.	9.6	7.3	5.6	0.4	0.3	1.7	0.9	5.8	-1.8	-3.7	-1.1	0.5	0.9
Nov.	9.8	8.5	5.1	0.4	0.2	1.7	1.1	5.1	-1.7	-3.6	-0.6	0.5	1.6
Dec.	7.4	8.0	3.0	0.0	-0.1	0.9	0.8	4.9	-1.4	-1.7	-0.4	0.8	.
2003 Jan.	-0.9	6.9	4.4	0.3	0.0	0.9	1.2	4.5	-1.9	-6.4	-1.7	0.1	.
Feb.	5.2	7.3	.	.	.	.	.	.	.	.	.	.	.

Sources: Eurostat and ECB calculations based on Eurostat data (balance and other countries).

1) Owing to differences in definitions, coverage and time of recording, trade data (as compiled by Eurostat) are not fully comparable with the goods item in the balance of payments statistics compiled by the ECB (Tables 8.1 and 8.2).

# 10 Exchange rates

**Table 10**

## Exchange rates

(period averages; units of national currency per ECU or euro (bilateral); index 1999 Q1=100 (effective))

	Effective exchange rate of the euro <sup>1)</sup>						Bilateral ECU or euro exchange rates <sup>2)</sup>			
	Narrow group				Broad group		US dollar	Japanese yen	Swiss franc	Pound sterling
	Nominal	Real CPI	Real PPI	Real ULCM	Nominal	Real CPI				
1	2	3	4	5	6	7	8	9	10	
1997	99.1	99.4	99.3	100.6	90.4	96.5	1.134	137.1	1.644	0.692
1998	101.5	101.3	101.6	99.4	96.6	99.1	1.121	146.4	1.622	0.676
1999	95.7	95.7	95.7	96.0	96.6	95.8	1.066	121.3	1.600	0.659
2000	85.7	86.3	87.1	87.1	88.2	86.0	0.924	99.5	1.558	0.609
<i>Euro area enlargement</i>										
2001	87.3	88.6	89.3	87.7	91.0	87.8	0.896	108.7	1.511	0.622
2002	90.0	92.5	92.9	90.7	95.6	91.7	0.946	118.1	1.467	0.629
2001 Q1	88.6	89.5	90.6	89.2	91.4	88.4	0.923	109.1	1.533	0.633
Q2	86.0	87.3	87.9	86.9	89.5	86.5	0.873	106.9	1.528	0.614
Q3	87.0	88.3	89.0	86.8	91.2	87.8	0.890	108.3	1.507	0.619
Q4	87.5	89.3	89.9	87.9	92.0	88.4	0.896	110.5	1.473	0.621
2002 Q1	87.1	89.4	89.9	87.5	91.3	87.8	0.877	116.1	1.473	0.615
Q2	88.8	91.4	91.6	90.0	93.9	90.2	0.919	116.5	1.465	0.629
Q3	91.3	93.9	94.4	92.4	97.9	93.8	0.984	117.2	1.464	0.635
Q4	92.5	95.4	95.6	92.9	99.4	95.0	0.999	122.4	1.467	0.636
2003 Q1	96.9	100.1	100.0	-	104.1	99.3	1.073	127.6	1.466	0.670
2001 Jan.	89.2	89.9	91.0	-	91.7	88.7	0.938	109.6	1.529	0.635
Feb.	88.3	89.1	90.4	-	91.0	88.1	0.922	107.1	1.536	0.634
Mar.	88.4	89.4	90.5	-	91.4	88.5	0.910	110.3	1.535	0.629
Apr.	87.6	88.8	89.6	-	91.0	88.0	0.892	110.4	1.529	0.622
May	85.9	87.2	87.7	-	89.3	86.3	0.874	106.5	1.533	0.613
June	84.7	86.0	86.5	-	88.1	85.1	0.853	104.3	1.522	0.609
July	85.4	86.8	87.2	-	89.1	86.0	0.861	107.2	1.514	0.609
Aug.	87.7	89.0	89.6	-	91.8	88.3	0.900	109.3	1.514	0.627
Sep.	88.0	89.3	90.0	-	92.6	89.0	0.911	108.2	1.491	0.623
Oct.	88.0	89.6	90.1	-	92.8	89.2	0.906	109.9	1.479	0.624
Nov.	86.8	88.4	89.2	-	91.3	87.6	0.888	108.7	1.466	0.618
Dec.	87.7	89.8	90.3	-	91.9	88.5	0.892	113.4	1.475	0.620
2002 Jan.	87.6	89.9	90.5	-	91.6	88.1	0.883	117.1	1.475	0.617
Feb.	86.8	89.0	89.6	-	91.1	87.5	0.870	116.2	1.477	0.612
Mar.	86.8	89.3	89.7	-	91.2	87.9	0.876	114.7	1.468	0.616
Apr.	87.2	89.7	90.1	-	91.7	88.2	0.886	115.8	1.466	0.614
May	88.6	91.1	91.4	-	93.7	90.0	0.917	115.9	1.457	0.628
June	90.6	93.2	93.4	-	96.4	92.5	0.955	117.8	1.472	0.644
July	91.7	94.4	94.7	-	98.2	94.2	0.992	117.1	1.462	0.639
Aug.	91.1	93.6	94.2	-	97.7	93.5	0.978	116.3	1.464	0.636
Sep.	91.2	93.7	94.4	-	98.0	93.7	0.981	118.4	1.465	0.631
Oct.	91.7	94.3	94.5	-	98.5	94.2	0.981	121.6	1.465	0.630
Nov.	92.5	95.1	95.3	-	99.3	94.7	1.001	121.7	1.467	0.637
Dec.	93.6	96.7	96.8	-	100.4	96.0	1.018	124.2	1.468	0.642
2003 Jan.	95.8	98.8	99.0	-	103.0	98.1	1.062	126.1	1.462	0.657
Feb.	97.1	100.2	100.2	-	104.4	99.4	1.077	128.6	1.467	0.670
Mar.	97.9	101.3	100.6	-	105.1	100.2	1.081	128.2	1.469	0.683
Apr.	98.6	102.0	101.3	-	105.2	100.2	1.085	130.1	1.496	0.689
% ch. vs. <sup>4)</sup> prev. month										
2003 Apr.	0.7	0.7	0.7	-	0.2	0.0	0.4	1.5	1.8	0.9
% ch. vs. <sup>4)</sup> prev. year										
2003 Apr.	13.0	13.7	12.5	-	14.8	13.7	22.5	12.4	2.1	12.2

Source: ECB.

1) More details of the calculation are given in the general notes.

2) To December 1998, rates for the ECU (source BIS); from January 1999, rates for the euro.

3) Indicative rates for these currencies are shown up to September 2000, as the ECB did not provide official reference rates for these currencies before that.

Bilateral ECU or euro exchange rates <sup>2)</sup>								
Swedish krona	Danish krone	Norwegian krone	Canadian dollar	Australian dollar	Hong Kong dollar <sup>3)</sup>	Korean won <sup>3)</sup>	Singapore dollar <sup>3)</sup>	
11	12	13	14	15	16	17	18	
8.65	7.48	8.02	1.569	1.528	8.75	1,069.8	1.678	1997
8.92	7.50	8.47	1.665	1.787	8.69	1,568.9	1.876	1998
8.81	7.44	8.31	1.584	1.652	8.27	1,267.3	1.806	1999
8.45	7.45	8.11	1.371	1.589	7.20	1,043.5	1.592	2000
<i>Euro area enlargement</i>								
9.26	7.45	8.05	1.386	1.732	6.99	1,154.8	1.604	2001
9.16	7.43	7.51	1.484	1.738	7.37	1,175.5	1.691	2002
9.00	7.46	8.20	1.410	1.741	7.20	1,174.7	1.616	2001 Q1
9.13	7.46	8.01	1.345	1.701	6.81	1,138.9	1.583	Q2
9.41	7.44	8.01	1.374	1.734	6.94	1,150.1	1.582	Q3
9.48	7.44	7.97	1.416	1.751	6.99	1,155.2	1.634	Q4
9.16	7.43	7.81	1.398	1.692	6.84	1,155.3	1.607	2002 Q1
9.16	7.43	7.52	1.428	1.666	7.17	1,157.8	1.657	Q2
9.23	7.43	7.40	1.536	1.796	7.67	1,172.7	1.729	Q3
9.09	7.43	7.32	1.569	1.791	7.79	1,215.4	1.767	Q4
9.18	7.43	7.57	1.620	1.809	8.37	1,288.9	1.872	2003 Q1
8.91	7.46	8.24	1.410	1.689	7.32	1,194.9	1.630	2001 Jan.
8.98	7.46	8.21	1.403	1.724	7.19	1,153.8	1.607	Feb.
9.13	7.46	8.16	1.417	1.807	7.09	1,173.4	1.611	Mar.
9.11	7.46	8.11	1.390	1.785	6.96	1,183.5	1.617	Apr.
9.06	7.46	7.99	1.347	1.681	6.82	1,133.7	1.586	May
9.21	7.45	7.94	1.302	1.647	6.65	1,104.1	1.550	June
9.26	7.44	7.97	1.315	1.689	6.71	1,120.3	1.569	July
9.31	7.45	8.06	1.386	1.717	7.02	1,154.0	1.586	Aug.
9.67	7.44	8.00	1.426	1.804	7.11	1,178.3	1.593	Sep.
9.58	7.44	8.00	1.422	1.796	7.07	1,178.6	1.640	Oct.
9.42	7.45	7.92	1.415	1.717	6.93	1,137.5	1.625	Nov.
9.44	7.44	7.99	1.408	1.735	6.96	1,147.0	1.639	Dec.
9.23	7.43	7.92	1.413	1.709	6.89	1,160.8	1.625	2002 Jan.
9.18	7.43	7.79	1.388	1.696	6.79	1,147.2	1.594	Feb.
9.06	7.43	7.72	1.390	1.669	6.83	1,157.3	1.602	Mar.
9.14	7.43	7.62	1.401	1.654	6.91	1,163.2	1.619	Apr.
9.22	7.44	7.52	1.421	1.666	7.15	1,150.1	1.651	May
9.11	7.43	7.40	1.463	1.679	7.45	1,160.6	1.703	June
9.27	7.43	7.40	1.532	1.792	7.74	1,169.2	1.740	July
9.25	7.43	7.43	1.533	1.805	7.63	1,167.1	1.716	Aug.
9.17	7.43	7.36	1.543	1.793	7.65	1,182.6	1.732	Sep.
9.11	7.43	7.34	1.548	1.783	7.65	1,211.9	1.751	Oct.
9.08	7.43	7.32	1.574	1.785	7.81	1,208.2	1.767	Nov.
9.10	7.43	7.29	1.587	1.808	7.94	1,226.9	1.786	Dec.
9.17	7.43	7.33	1.636	1.822	8.28	1,250.1	1.843	2003 Jan.
9.15	7.43	7.54	1.630	1.811	8.40	1,282.8	1.880	Feb.
9.23	7.43	7.84	1.594	1.795	8.43	1,335.4	1.895	Mar.
9.15	7.43	7.83	1.585	1.781	8.46	1,337.4	1.928	Apr.
-0.8	0.0	-0.2	-0.6	-0.8	0.4	0.1	1.7	% ch. vs. <sup>4)</sup> prev. month 2003 Apr.
0.2	-0.1	2.8	13.2	7.7	22.5	15.0	19.1	% ch. vs. <sup>4)</sup> prev. year 2003 Apr.

4) The table shows the percentage change in the latest monthly observation vis-à-vis the previous month, and vis-à-vis the same month of the previous year. A positive change denotes an appreciation of the euro. Due to the change in the weighting scheme, effective exchange rate data as from January 2001 are not fully comparable with earlier observations.

## II Economic and financial developments in the other EU Member States

**Table 11**

### Economic and financial developments

(annual percentage changes, unless otherwise indicated)

	HICP	General government deficit (-)/surplus (+) as a % of GDP	General government gross debt as a % of GDP	Long-term government bond yield <sup>1)</sup> as a % per annum	Exchange rate <sup>2)</sup> as national currency per euro	Current and new capital account as a % of GDP	Unit labour costs <sup>3)</sup>	Real GDP	Industrial production index <sup>4)</sup>	Standardised unemployment rate as a % of labour force (s.a.)	Broad money <sup>5)</sup>	3-month interest rate <sup>1)</sup> as a % per annum
	1	2	3	4	5	6	7	8	9	10	11	12
Denmark												
1999	2.1	3.3	53.0	4.91	7.44	1.8	2.4	2.6	0.1	4.8	-0.2	3.44
2000	2.7	2.6	47.4	5.64	7.45	1.5	1.4	2.9	5.7	4.4	1.1	5.00
2001	2.3	3.1	45.4	5.08	7.45	3.1	3.7	1.4	1.3	4.3	5.7	4.70
2002	2.4	1.9	45.2	5.06	7.43	2.9	1.4	1.6	1.5	4.5	3.5	3.54
2001 Q4	2.0	-	-	4.83	7.44	0.7	3.7	1.0	-0.5	4.3	9.6	3.77
2002 Q1	2.5	-	-	5.21	7.43	2.7	3.0	1.2	-0.4	4.3	2.3	3.63
Q2	2.1	-	-	5.36	7.43	3.3	0.6	3.1	4.4	4.4	2.8	3.71
Q3	2.4	-	-	4.92	7.43	3.8	1.0	1.1	0.9	4.6	2.6	3.57
Q4	2.7	-	-	4.74	7.43	1.8	1.0	1.0	1.0	4.7	6.1	3.27
2003 Q1	2.8	-	-	4.30	7.43	.	.	.	.	.	19.1	2.83
2002 Nov.	2.8	-	-	4.79	7.43	-	-	-	-2.8	4.7	4.7	3.31
Dec.	2.6	-	-	4.61	7.43	-	-	-	-1.9	4.8	10.8	3.07
2003 Jan.	2.6	-	-	4.43	7.43	-	-	-	-2.2	4.9	17.7	2.97
Feb.	2.9	-	-	4.21	7.43	-	-	-	2.8	5.0	21.1	2.83
Mar.	2.8	-	-	4.26	7.43	-	-	-	.	.	18.5	2.67
Apr.	.	-	-	4.41	7.43	-	-	-	.	.	.	2.67
Sweden												
1999	0.6	1.5	62.7	4.98	8.81	2.6	-1.2	4.6	2.2	6.7	6.8	3.32
2000	1.3	3.4	52.8	5.37	8.45	3.8	5.0	4.4	6.3	5.6	6.2	4.07
2001	2.7	4.5	54.4	5.11	9.26	3.8	5.8	1.1	-0.3	4.9	3.4	4.11
2002	2.0	1.2	52.4	5.31	9.16	4.1	2.1	1.9	-1.2	4.9	5.3	4.24
2001 Q4	3.0	-	-	5.12	9.48	4.3	5.6	0.8	-2.3	4.9	6.2	3.85
2002 Q1	2.9	-	-	5.42	9.16	5.5	4.7	0.8	-1.1	4.9	7.0	4.00
Q2	1.9	-	-	5.64	9.16	5.3	0.8	3.1	0.2	4.9	5.3	4.43
Q3	1.5	-	-	5.16	9.23	4.1	1.4	2.4	-1.2	4.9	5.8	4.41
Q4	1.6	-	-	5.00	9.09	1.8	1.7	1.3	-2.5	5.1	3.1	4.09
2003 Q1	2.9	-	-	4.59	9.18	.	.	.	.	5.3	5.6	3.72
2002 Nov.	1.4	-	-	5.05	9.08	-	-	-	-1.6	5.1	2.8	4.12
Dec.	1.7	-	-	4.89	9.10	-	-	-	-3.5	5.1	4.2	3.85
2003 Jan.	2.6	-	-	4.71	9.17	-	-	-	1.7	5.4	5.2	3.83
Feb.	3.3	-	-	4.48	9.15	-	-	-	-2.2	5.2	5.7	3.75
Mar.	2.9	-	-	4.57	9.23	-	-	-	.	5.3	5.9	3.56
Apr.	.	-	-	4.73	9.15	-	-	-	.	.	.	3.56
United Kingdom												
1999	1.3	1.1	45.1	5.01	0.659	-2.1	2.9	2.4	0.8	5.9	5.5	5.54
2000	0.8	3.9	42.1	5.33	0.609	-1.8	2.3	3.1	1.6	5.4	6.6	6.19
2001	1.2	0.8	39.0	5.01	0.622	-1.1	4.1	2.1	-2.1	5.0	8.1	5.04
2002	1.3	-1.4	38.6	4.91	0.629	-0.7	.	1.8	-3.4	5.1	6.0	4.06
2001 Q4	1.0	-1.8	38.7	4.82	0.621	-1.5	3.4	1.9	-5.6	5.1	7.8	4.16
2002 Q1	1.5	2.8	37.7	5.13	0.615	-0.3	2.7	1.2	-5.7	5.1	6.1	4.08
Q2	0.9	-3.6	38.1	5.28	0.629	-1.7	2.6	1.6	-4.3	5.1	5.7	4.17
Q3	1.1	-0.7	37.7	4.71	0.635	0.3	1.5	2.2	-2.2	5.2	5.7	4.01
Q4	1.6	-3.0	38.3	4.52	0.636	-1.1	.	2.2	-1.1	5.0	6.3	3.98
2003 Q1	1.5	-1.8	37.6	4.34	0.670	.	.	2.3	.	.	6.9	3.80
2002 Nov.	1.6	-7.4	37.6	4.55	0.637	-	-	-	-1.6	5.1	6.1	3.97
Dec.	1.7	-4.5	38.3	4.49	0.642	-	-	-	-0.9	4.9	7.2	4.02
2003 Jan.	1.4	3.8	37.6	4.31	0.657	-	-	-	-2.1	5.0	6.6	3.98
Feb.	1.6	-1.5	37.3	4.29	0.670	-	-	-	-1.3	.	6.8	3.75
Mar.	1.6	-7.5	37.6	4.41	0.683	-	-	-	.	.	7.2	3.66
Apr.	.	.	.	4.56	0.689	-	-	-	.	.	.	3.65

Sources: Eurostat (columns 1, 8, 9 and 10); European Commission (Economic and Financial Affairs DG and Eurostat) (columns 2 (annual) and 3 (annual)); Reuters (column 12); national data (columns 2 (quarterly and monthly), 3 (quarterly and monthly), 4, 5, 7 (except Sweden) and 11); ECB calculations (columns 6 and 7 (Sweden)).

1) Average-of-period values.

2) For more information, see Table 10.

3) Whole economy; data for the United Kingdom exclude employers' contributions to social security.

4) Total excluding construction; adjusted for working days.

5) Average of end-month values; M3; M4 for the United Kingdom.



## 12 Economic and financial developments outside the EU

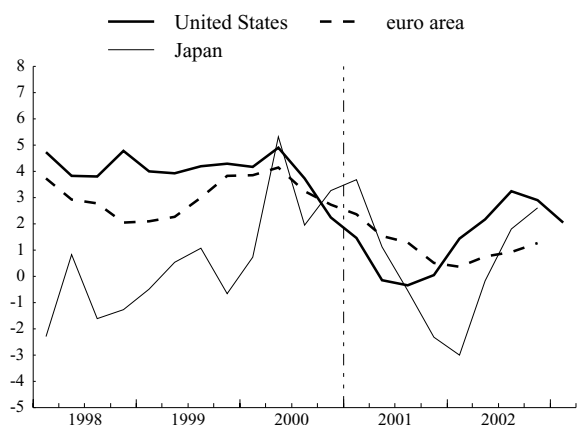
**Table 12.1**  
**Economic and financial developments**

(annual percentage changes, unless otherwise indicated)

	Consumer price index	Unit labour costs <sup>1)</sup>	Real GDP	Industrial production index <sup>1)</sup>	Unemployment rate as a % of labour force (s.a.)	M2 <sup>2)</sup>	3-month interbank deposit rate <sup>3)</sup> as a % per annum	10-year government bond yield <sup>3)</sup> as a % per annum	Exchange rate <sup>4)</sup> as national currency per euro	Fiscal deficit (-)/surplus (+) <sup>5)</sup> as a % of GDP	Gross public debt <sup>6)</sup> as a % of GDP
	1	2	3	4	5	6	7	8	9	10	11
United States											
1999	2.2	-1.1	4.1	5.0	4.2	7.6	5.42	5.64	1.066	0.7	49.6
2000	3.4	3.2	3.8	5.2	4.0	6.1	6.53	6.03	0.924	1.4	44.3
2001	2.8	0.7	0.3	-4.1	4.8	8.7	3.78	5.01	0.896	-0.5	43.9
2002	1.6	-1.1	2.4	-1.0	5.8	7.7	1.80	4.60	0.946	-3.4	46.1
2001 Q4	1.9	1.0	0.1	-6.2	5.6	10.3	2.15	4.74	0.896	-1.0	44.0
2002 Q1	1.3	-0.8	1.4	-4.0	5.6	9.1	1.90	5.06	0.877	-3.0	44.3
Q2	1.3	-1.5	2.2	-1.5	5.8	7.5	1.92	5.08	0.919	-3.3	44.6
Q3	1.6	-1.9	3.3	0.5	5.8	7.3	1.81	4.25	0.984	-3.4	45.2
Q4	2.2	-0.3	2.9	1.1	5.9	7.0	1.55	3.99	0.999	-3.8	46.1
2003 Q1	2.9	1.2	2.1	0.4	5.8	6.9	1.33	3.90	1.073	.	.
2002 Nov.	2.2	-	-	1.5	5.9	7.3	1.46	4.04	1.001	-	-
Dec.	2.4	-	-	0.9	6.0	6.6	1.41	4.03	1.018	-	-
2003 Jan.	2.6	-	-	0.9	5.7	6.7	1.37	4.02	1.062	-	-
Feb.	3.0	-	-	0.4	5.8	6.8	1.34	3.90	1.077	-	-
Mar.	3.0	-	-	0.0	5.8	7.1	1.29	3.79	1.081	-	-
Apr.	.	-	-	.	6.0	.	1.30	3.94	1.085	-	-
Japan											
1999	-0.3	-2.4	0.1	0.2	4.7	3.7	0.22	1.75	121.3	-7.2	118.2
2000	-0.7	-6.3	2.8	5.7	4.7	2.1	0.28	1.76	99.5	-7.4	126.1
2001	-0.7	5.8	0.4	-6.8	5.0	2.8	0.15	1.34	108.7	-6.1	134.6
2002	-0.9	-3.0	0.3	-1.4	5.4	3.3	0.08	1.27	118.1	.	.
2001 Q4	-1.0	11.1	-2.3	-12.6	5.4	3.2	0.08	1.35	110.5	.	.
2002 Q1	-1.4	6.6	-3.0	-9.9	5.3	3.6	0.10	1.46	116.1	.	.
Q2	-0.9	-1.7	-0.2	-3.8	5.4	3.5	0.08	1.37	116.5	.	.
Q3	-0.8	-7.6	1.8	3.2	5.4	3.3	0.07	1.24	117.2	.	.
Q4	-0.5	-8.5	2.6	5.9	5.4	2.9	0.07	1.01	122.4	.	.
2003 Q1	-0.2	.	.	5.4	.	1.9	0.06	0.80	127.6	.	.
2002 Nov.	-0.4	-8.2	-	5.3	5.3	3.2	0.07	0.99	121.7	-	-
Dec.	-0.3	-8.4	-	7.0	5.4	2.1	0.06	0.97	124.2	-	-
2003 Jan.	-0.4	-8.8	-	8.2	5.5	1.9	0.06	0.84	126.1	-	-
Feb.	-0.2	.	-	4.8	5.2	1.9	0.06	0.83	128.6	-	-
Mar.	-0.1	.	-	3.7	.	1.8	0.06	0.74	128.2	-	-
Apr.	.	.	-	.	.	.	0.06	0.66	130.1	-	-

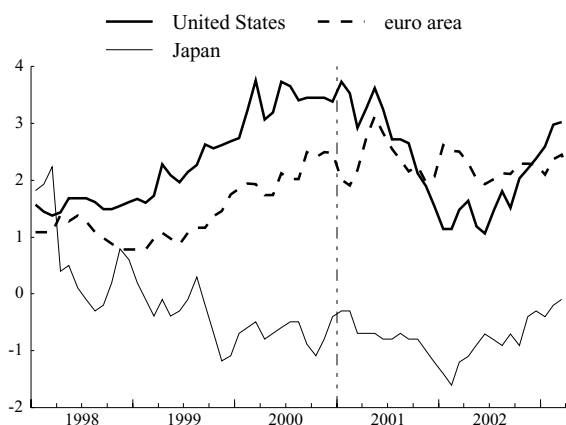
### Real gross domestic product

(annual percentage changes; quarterly)



### Consumer price indices

(annual percentage changes; monthly)



Sources: National data (columns 1, 2 (United States), 3, 4, 5, 6, 9 and 10); OECD (column 2 (Japan)); Eurostat (euro area chart data); Reuters (column 7 and 8); ECB calculation (column 11).

1) Manufacturing.

2) Average-of-period values; M2 and CDs for Japan.

3) For more information, see Tables 3.1 and 3.2.

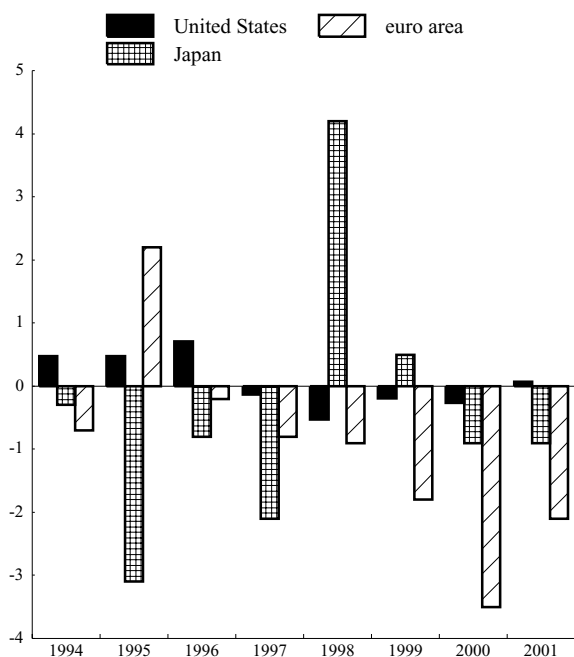
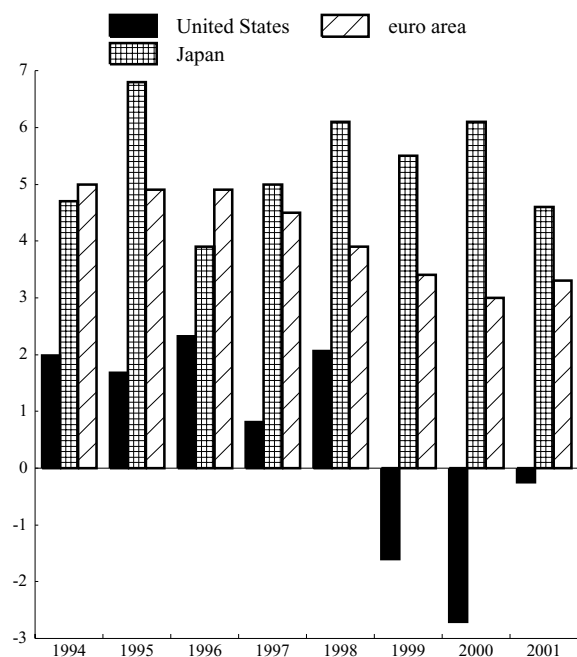
4) For more information, see Table 10.

5) Financial accounts sources for 1999.

6) Gross consolidated debt for the general government (end of period).

**Table 12.2**
**Saving, investment and financing**
*(as a percentage of GDP)*

	National saving and investment			Investment and financing of non-financial corporations						Investment and financing of households <sup>1)</sup>			
	Gross saving	Gross capital formation	Net lending to the rest of the world	Gross capital formation	Gross fixed capital formation	Net acquisition of financial assets	Gross saving	Net incurrence of liabilities	Securities and shares	Capital expenditure	Net acquisition of financial assets	Gross saving	Net incurrence of liabilities
	1	2	3	4	5	6	7	8	9	10	11	12	13
United States													
1999	18.4	20.9	-3.0	9.5	8.9	10.5	8.2	10.6	2.9	12.4	4.6	11.2	6.2
2000	18.4	21.1	-4.0	9.7	9.1	12.3	7.5	12.6	2.7	12.5	3.0	11.5	5.7
2001	16.5	19.1	-3.7	7.9	8.5	3.7	7.7	3.7	2.0	13.0	5.5	11.6	5.7
2002	15.2	18.6	-4.6	7.7	7.7	2.3	7.6	2.9	0.2	12.8	6.4	12.7	6.8
2001 Q1	16.9	20.0	-4.1	8.6	8.9	4.6	7.1	5.6	2.2	12.9	4.0	11.4	3.5
Q2	16.6	19.3	-3.8	8.1	8.6	4.0	7.4	4.1	2.8	12.9	6.2	11.2	6.6
Q3	16.5	18.8	-3.5	7.7	8.3	2.6	7.8	2.2	0.8	12.9	9.1	12.8	9.1
Q4	15.9	18.2	-3.6	7.1	8.0	3.8	8.5	2.8	2.3	13.4	2.7	10.9	3.7
2002 Q1	15.6	18.6	-4.1	7.5	7.8	2.6	7.9	2.8	0.3	12.8	6.5	12.3	6.7
Q2	15.5	18.7	-4.8	7.7	7.6	2.6	7.7	3.1	1.1	12.7	6.8	12.7	5.8
Q3	15.0	18.6	-4.7	7.8	7.6	1.2	7.5	2.1	-1.3	12.9	4.7	12.7	6.5
Q4	14.8	18.7	-5.0	7.8	7.6	2.7	7.3	3.5	0.8	12.7	7.5	12.8	8.2
Japan													
1999	27.8	25.9	2.2	14.4	14.8	2.4	13.7	-3.5	1.7	5.2	5.1	11.5	0.2
2000	27.7	26.2	2.3	15.8	15.4	2.4	14.3	0.3	1.2	5.2	4.1	10.7	0.0
2001	26.4	25.6	2.0	15.7	15.2	-2.3	14.1	-5.7	1.7	4.9	3.0	8.6	-0.1
2002	.	23.7	.	.	.	-2.4	.	-6.6	-0.3	.	1.2	.	-2.1
2001 Q1	30.1	26.4	2.3	.	.	8.9	.	-2.4	2.2	.	-4.1	.	3.2
Q2	24.2	25.4	1.7	.	.	-26.7	.	-15.3	4.0	.	11.8	.	-4.5
Q3	25.9	25.3	2.1	.	.	6.3	.	-8.9	-1.1	.	-5.2	.	2.6
Q4	25.5	25.5	2.0	.	.	2.3	.	3.2	1.5	.	8.8	.	-1.5
2002 Q1	29.6	22.8	3.4	.	.	10.0	.	-6.7	-2.5	.	-6.5	.	2.5
Q2	.	22.7	.	.	.	-25.0	.	-19.0	2.0	.	7.4	.	-8.0
Q3	.	23.7	.	.	.	-0.8	.	-7.5	-2.6	.	-4.3	.	-0.1
Q4	.	25.0	.	.	.	6.0	.	5.8	1.5	.	7.3	.	-2.6

**Net lending of non-financial corporations**
*(as a percentage of GDP)*

**Net lending of households <sup>1)</sup>**
*(as a percentage of GDP)*


Sources: ECB, Federal Reserve Board, Bank of Japan and Economic and Social Research Institute.

1) Households including non-profit institutions serving households.

## Technical notes

### Relating to Tables 2.3 to 2.7

#### Calculation of flows

Monthly flows are calculated from monthly differences in levels adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

If  $L_t$  represents the level outstanding at the end of the 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 flow  $F_t^M$  in month  $t$  is defined as:

$$a) F_t^M = (L_t - L_{t-1}) - C_t^M - E_t^M - V_t^M$$

Similarly, the quarterly flow  $F_t^Q$  for the quarter ending in month  $t$  is defined as:

$$b) F_t^Q = (L_t - L_{t-3}) - C_t^Q - E_t^Q - V_t^Q$$

where  $L_{t-3}$  is the level 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  $t$ .

### Relating to Table 2.4

#### Calculation of growth rates

Growth rates may be calculated from flows or from the index of adjusted stocks. If  $F_t^M$  and  $L_t$  are defined as above, the index  $I_t$  of adjusted stocks in month  $t$  is defined as:

$$c) I_t = I_{t-1} \times \left( 1 + \frac{F_t^M}{L_{t-1}} \right)$$

As a base, the index (of the non-seasonally adjusted series) is set equal to 100 on December 2001. The annual percentage change  $a_t$  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:

$$d) a_t = \left[ \prod_{i=0}^{11} \left( 1 + \frac{F_{t-i}^M}{L_{t-1-i}} \right) - 1 \right] \times 100$$

$$e) a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

Similarly, the month-on-month percentage change  $a_t^M$  for month  $t$  may be calculated as:

$$f) a_t^M = \left( \frac{F_t^M}{L_{t-1}} \right) \times 100$$

$$g) a_t^M = \left( \frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

Finally, the three-month moving average for M3 is obtained as  $(a_t + a_{t-1} + a_{t-2})/3$ .

Roundings may give rise to differences from the annual percentage changes shown in Table 2.4. The index of adjusted stocks is available with a higher level of precision on the ECB's website ([www.ecb.int](http://www.ecb.int)) on the "Euro area statistics – download" page (in CSV file format), from which the exact percentage changes in Table 2.4 may be calculated.

### Seasonal adjustment of the euro area monetary aggregates and loans<sup>1</sup>

The approach used relies on a multiplicative decomposition through X-12-ARIMA.<sup>2</sup> Seasonal adjustment for monetary aggregates includes a day-of-the-week adjustment for some components of M2. The seasonal adjustment of M3 is carried out indirectly by aggregating the seasonally adjusted series of M1, M2 less M1, and M3 less M2.

The seasonal adjustment procedures are first applied to the index of adjusted stocks.<sup>3</sup> The resulting

<sup>1</sup> For details, see "Seasonal adjustment of monetary aggregates and HICP for the euro area", ECB (August 2000).

<sup>2</sup> 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, 127-152, or "X-12-ARIMA Reference Manual", Time Series Staff, Bureau of the Census, Washington, D.C.

For internal purposes, multiplicative models of TRAMO-SEATS also are used. For details on TRAMO-SEATS, see Gomez, V. and Maravall, A. (1996), "Programs TRAMO and SEATS: Instructions for the User", Bank of Spain, Working Paper No. 9628, Madrid.

<sup>3</sup> 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.

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 flows. Seasonal (and trading day) factors are revised at annual intervals or as required.

## Relating to Tables 2.5 to 2.8

As far as possible, the data have been harmonised and are comparable over time. Nevertheless, as a result of the implementation of a new reporting scheme in January 1999, outstanding levels for periods prior to the first quarter of 1999 are not always directly comparable with those referring to later periods.

The values reported for Tables 2.5 to 2.8 are revised on a quarterly basis (in the March, June, September and December issues). As a consequence, minor discrepancies may arise between these tables and those reporting monthly data.

## Calculation of growth rates

Growth rates may be calculated from flows or from the index of adjusted stocks. If  $F_t^Q$  and  $L_{t-3}$  are defined as above, the index  $I_t$  of adjusted stocks for the quarter ending in month  $t$  is defined as:

$$h) I_t = I_{t-3} \times \left( 1 + \frac{F_t^Q}{L_{t-3}} \right)$$

As a base, the index is set equal to 100 on December 2001. The annual percentage change in the four quarters ending in month  $t$ , i.e.  $a_t$ , may be calculated using either of the following two formulae:

$$i) a_t = \left[ \prod_{i=0}^3 \left( 1 + \frac{F_{t-3i}^Q}{L_{t-3(i+1)}} \right) - 1 \right] \times 100$$

$$j) a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

Similarly, the quarter-on-quarter percentage change  $a_t^Q$  for the quarter ending in month  $t$  may be calculated as:

$$k) a_t^Q = \left( \frac{F_t^Q}{L_{t-3}} \right) \times 100$$

$$l) a_t^Q = \left( \frac{I_t}{I_{t-3}} - 1 \right) \times 100$$

Roundings may give rise to differences from the annual percentage changes shown in Tables 2.5 to 2.7. The index of adjusted stocks is available with a higher level of precision on the ECB's website ([www.ecb.int](http://www.ecb.int)) on the "Euro area statistics – download" page (in CSV file format), from which the exact percentage changes in Tables 2.5 to 2.7 may be calculated.

## Relating to Table 3.7

### Calculation of growth rates

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 flows or from the index of adjusted stocks. If  $N_t^M$  represents the flow (net issues) in month  $t$  and  $L_t$  the level outstanding at the end of the month  $t$ , the index  $I_t$  of adjusted stocks in month  $t$  is defined as:

$$m) I_t = I_{t-1} \times \left( 1 + \frac{N_t^M}{L_{t-1}} \right)$$

As a base, the index is set equal to 100 on December 2001. The annual percentage change  $a_t$  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:

$$n) a_t = \left[ \prod_{i=0}^{11} \left( 1 + \frac{N_{t-1-i}^M}{L_{t-1-i}} \right) - 1 \right] \times 100$$

$$o) a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

The method to calculate the growth rates in the field of securities issues statistics is the same as the one used for the monetary aggregates with the only difference being that an "N" is used here rather than an "F". The reason is to distinguish the different ways of obtaining "flows" used for the monetary aggregates and "net issues" for securities issues statistics, where the ECB collects information on gross issues and redemptions separately.

## Relating to Table 4.1

### Seasonal adjustment of the HICP<sup>4</sup>

The approach used relies on multiplicative decomposition through X-12-ARIMA (see footnote 2 on page 85\*). The seasonal adjustment of the total 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.

## Relating to Table 8.2

### Seasonal adjustment of the balance of payments current account

The approach relies on multiplicative decomposition through X-12-ARIMA (see footnote 2 on page 85\*). Goods raw data are first pre-adjusted to take into

account “working day”, “leap year” and “Easter” effects. Services include only a “working day” pre-adjustment. The seasonal adjustment for goods and services is carried out using these pre-adjusted series. Income and current transfers do not include any pre-adjustment at all. 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 factors are revised at annual intervals or as required.

<sup>4</sup> See footnote 1 on page 85\*.



## General notes

The basis for the statistics compiled by the European Central Bank (ECB) is presented in the document entitled “Statistical information collected and compiled by the ESCB”, dated May 2000. This document is an update of the report entitled “Statistical requirements for Stage Three of Monetary Union (Implementation Package)” of July 1996. The document covers money and banking and related statistics, balance of payments statistics, international investment position statistics and financial accounts statistics. The ECB’s requirements for statistics on prices and costs, national accounts, the labour market, government receipts and expenditure, short-term indicators of output and demand, and the European Commission Business and Consumer Surveys are set out in the document entitled “Requirements in the field of general economic statistics” of August 2000.<sup>1</sup>

The focus of these statistics is the euro area as a whole. New data will appear in the ECB’s Monthly Bulletin as they become available. More detailed and longer runs of data, with further explanatory notes, are available on the statistics section of the ECB’s website ([www.ecb.int](http://www.ecb.int)). The services available within “Statistics on-line” include a Browser interface with search facilities, subscription to different datasets and the possibility to download data directly in compressed Comma Separated Value (CSV) files.

Given that the composition of the ECU does not coincide with the currencies of the countries which have adopted the single currency, pre-1999 amounts converted from the participating currencies into ECU at current ECU exchange rates are affected by movements in the currencies of EU Member States which have not adopted the euro. To avoid this effect in the monetary statistics, the pre-1999 data in Tables 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 indicated otherwise, price and cost statistics before 1999 are based on the data expressed in national currency terms.

Methods of aggregation and/or consolidation (including cross-country consolidation) have been used where appropriate.

As a general rule, the cut-off date for the statistics included in the ECB’s Monthly Bulletin is the day preceding the first meeting in the month of the Governing Council of the ECB. For this issue, the cut-off date was 7 May 2003.

Recent data are often provisional and may be revised. Discrepancies between totals and their components may arise from rounding.

Reference statistical series relating to the euro area cover EU Member States that had adopted the euro at the time to which the statistics relate. This means that euro area data up to end-2000 cover the Euro 11 and, from the beginning of 2001, data cover the Euro 12. Exceptions to this rule are indicated where appropriate.

In the tables, the break is shown by means of a line denoting enlargement of the euro area. In the charts, the break is indicated by a dotted line. Where possible, absolute and percentage changes for 2001 calculated from a base in 2000 use a series which takes into account the impact of Greece’s entry into the euro area.

Data for the euro area plus Greece up to end-2000 can be downloaded (CSV files) from the ECB’s website ([www.ecb.int](http://www.ecb.int)).

The group “acceding countries” consists of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia.

<sup>1</sup> The ECB is responsible for money, banking and financial markets statistics at the European level; responsibility for balance of payments, international investment position and financial accounts statistics is shared with the European Commission (Eurostat); price and cost and other economic statistics are the responsibility of the European Commission (Eurostat).

## Overview

Key developments in the euro area are summarised in an overview table.

### Monetary policy statistics

Tables 1.1 to 1.5 show the consolidated financial statement of the Eurosystem, data on Eurosystem operations, statistics relating to minimum reserves, and the banking system's liquidity position. Tables 1.2 and 1.3 reflect the switch to variable rate tenders in June 2000.

### Monetary developments and investment funds

Monetary data relating to Monetary Financial Institutions (MFIs), including the Eurosystem, are shown in Tables 2.1 to 2.3. Table 2.3 is consolidated; inter-MFI positions within the euro area are not shown, but any difference between the sum total of such claims and liabilities as recorded is shown in column 13. Table 2.4 sets out monetary aggregates drawn from the consolidated MFI balance sheet; they also include some (monetary) liabilities of central government. The M3 data shown in Table 2.4 exclude holdings by non-residents of the euro area 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. Accordingly, these holdings are included in the external liabilities item shown in Table 2.3 and, as a result, have an impact on the item net external assets shown in Table 2.4. Table 2.5 shows a quarterly sectoral and maturity analysis of loans by MFIs to euro area residents. Table 2.6 shows a quarterly analysis of deposits held by euro area residents with MFIs. Table 2.7 provides a quarterly analysis of MFI claims on and liabilities to non-residents of the euro area. Table 2.8 shows a quarterly currency analysis of certain MFI balance sheet items. Tables 2.5 to 2.7 show flows adjusted for reclassifications, other revaluations, exchange rate variations

and any other changes which do not arise from transactions, and annual percentage changes. A complete list of MFIs is published on the ECB's website. Details of the sector definitions are set out in the "Money and Banking Statistics Sector Manual: guidance for the statistical classification of customers" (ECB, November 1999). The "Guidance Notes to Regulation ECB/2001/13 on the MFI Balance Sheet Statistics" (ECB, November 2002) explains recommended practices to be followed by the NCBs. From 1 January 1999 the statistical information is collected and compiled on the basis of the ECB Regulation concerning the consolidated balance sheet of the Monetary Financial Institutions sector (ECB/1998/16, as replaced from January 2003 by ECB/2001/13).

Further to the entry into force of Regulation ECB/2001/13, 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. The term "money market paper" still appears in the quarterly Tables 2.5 to 2.8 for which no data for 2003 are yet available – the latest available data are for the fourth quarter of 2002.

Table 2.9 shows end-quarter outstanding stocks for the balance sheet of the euro area investment funds (other than money market funds). The balance sheet is aggregated and thus 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). Table 2.10 shows the aggregated balance sheet for each investment fund sector as identified by investment policy, and Table 2.11 shows the aggregated balance sheet broken down by type of investor.



## Financial markets and interest rates

Statistics on money market interest rates, long-term government bond yields and stock market indices (Tables 3.1 to 3.3) are produced by the ECB using data from wire services. For details concerning the statistics on retail bank interest rates (Table 3.4), see the footnote at the bottom of the relevant page.

Statistics on securities issues cover securities other than shares (debt securities), which are presented in Tables 3.5, 3.6 and 3.7 as well as quoted shares, which are presented in Table 3.8. 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, in accordance with the ESA 95, 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. The statistics on debt securities are estimated to cover approximately 95% of total issues by euro area residents.

Table 3.5 shows securities issued, redemptions and amounts outstanding, broken down into short-term securities and long-term securities. Net issues differ from the change in amounts outstanding owing to valuation changes, reclassifications and other adjustments.

Table 3.6 contains a sectoral breakdown of issuers of euro-denominated securities, whether resident in the euro area or elsewhere. For euro area residents, the sectoral breakdown is in line with the European System of Accounts 1995 (ESA 95).<sup>2</sup> For non-euro area residents, the term "banks (including central banks)" is used to indicate institutions of a similar type to MFIs (including the Eurosystem) resident outside the euro area. The term "international organisations" includes the European Investment Bank. The ECB is included in the Eurosystem.

The totals (columns 1, 7 and 14) in Table 3.6 are identical to the data on amounts

outstanding (columns 8, 16 and 20), gross issues (columns 5, 13 and 17) and net issues (columns 7, 15 and 19) of euro-denominated securities in Table 3.5. The amounts outstanding of securities issued by MFIs (column 2) in Table 3.6 are broadly comparable with money market paper and debt securities issued as shown on the liabilities side of the aggregated MFI balance sheet in Table 2.8.3 (columns 2 and 10), although the coverage of securities issues statistics is at present somewhat narrower.

Table 3.7 shows annual growth rates for debt securities issued by euro area residents and by sector of the issuer, which are based on financial transactions that occur when an institutional unit acquires or disposes of financial assets and incurs or repays liabilities. The annual growth rates therefore exclude reclassifications, revaluations, exchange rate variations and any other changes which do not arise from transactions.

Table 3.8 shows 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 Table 6.1 (Main liabilities, column 20).

## HICP and other prices

The data described in this section and the "Real economy indicators" section are with a few exceptions, 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

<sup>2</sup> The code numbers in the ESA 95 for the sectors shown in tables in the ECB's Monthly Bulletin are: MFIs (including the Eurosystem) which comprises the ECB and the national central banks of the euro area member countries (S.121) and other monetary financial institutions (S.122); non-monetary financial corporations, which comprises other financial intermediaries (S.123), financial auxiliaries (S.124) and insurance corporations and pension funds (S.125); non-financial corporations (S.11); central government (S.1311); and other general government, which comprises state government (S.1312), local government (S.1313) and social security funds (S.1314).

harmonised and comparable. As a general rule, however, the availability of comparable data is better for the more recent periods than for earlier periods.

The Harmonised Index of Consumer Prices (HICP) for the euro area (Table 4.1) is available from 1995 onwards. The index is based on national HICPs that 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) used for the HICP. The HICP covers monetary expenditure on final consumption by households on the economic territory of the euro area. The table includes seasonally adjusted HICP data which are compiled by the ECB.

### **Real economy indicators**

With regard to statistics on national accounts (Tables 4.2 and 5.1), the implementation of the ESA 95 from 1999 has begun to pave the way for fully comparable data, including quarterly summary accounts, across the euro area. Before 1999 the deflators of GDP in Table 4.2.2 are derived from national data in domestic currency. National accounts in this issue are based on the ESA 95.

Table 5.2 shows selected other real economy indicators. The implementation of Council Regulation (EC) No. 1165/98 of 19 May 1998 concerning short-term statistics will enlarge the range of available euro area data. The breakdown by end-use of the products applied in Tables 4.2.1 and 5.2.1 represents the harmonised sub-division of industry excluding construction (NACE sections C to E) into Main Industrial Groupings as defined by Commission Regulation (EC) No. 586/2001 of 26 March 2001.

Opinion survey data (Table 5.3) draw on the European Commission Business and Consumer Surveys.

Employment data (Table 5.4) are based on the ESA 95. Whenever coverage of the euro area is incomplete, some data are estimated by the ECB on the basis of the information available. Unemployment rates conform to International Labour Organization (ILO) guidelines. The labour force estimates underlying the unemployment rate are different from the sum of the employment and unemployment levels published in Table 5.4.

### **Saving, investment and financing**

Table 6.1 shows quarterly data on financial accounts for non-financial sectors in the euro area, comprising general government (S.13), non-financial corporations (S.11), and households (S.14) including non-profit institutions serving households (S.15). The data cover amounts outstanding and transactions classified according to the ESA 95 and show the main financial investment and financing activities of the non-financial sectors. On the financing side (liabilities) the data are presented by ESA 95 sector and original maturity. Whenever possible the financing taken from MFIs is presented separately. The information on financial investment (assets) is currently less detailed than that on financing, especially since a breakdown by sector is not possible.

Table 6.2 shows quarterly data on financial accounts for insurance corporations and pensions funds (S.125) in the euro area. As in Table 6.1, the data cover amounts outstanding and financial transactions and show the main financial investment and financing activities of this sector.

The quarterly data in both tables are based on quarterly national financial accounts, MFI balance sheet and securities issues statistics. Table 6.1 also refers to data taken from BIS international banking statistics. Although all euro area countries contribute to the MFI balance sheet and securities issues statistics, Ireland and Luxembourg do not yet provide quarterly national financial accounts data.

Table 6.3 shows annual data on saving, (financial and non-financial) investment and financing for the euro area sectors as a whole, and for the non-financial corporations and households separately. These annual data provide, in particular, fuller sector information on the acquisition of financial assets and are consistent with the quarterly data in the two previous tables.

### **General government fiscal position**

Tables 7.1 to 7.3 show the general government fiscal position in the euro area. The data are mainly consolidated and are based on the ESA 95 methodology. The euro area aggregates are compiled by the ECB from harmonised data provided by the NCBs, which are regularly updated. Data on deficit and debt for the euro area countries may therefore differ from those used by the European Commission in the context of the excessive deficit procedure.

Table 7.1 shows general government revenue and expenditure on the basis of definitions laid down in Commission Regulation (EC) No. 1500/2000 of 10 July 2000 amending the ESA 95. Table 7.2 shows details of general government gross consolidated debt at nominal value in accordance with the Treaty provisions on the excessive deficit procedure. Tables 7.1 and 7.2 include summary data for individual euro area countries owing to their importance in the framework of the Stability and Growth Pact. Table 7.3 analyses changes in general government debt. The difference between the change in government debt and government deficit – the deficit-debt adjustment – is mainly explained by government transactions in financial assets and by foreign exchange valuation effects.

### **Balance of payments and international investment position (including reserves)**

The concepts and definitions used in balance of payments statistics (Tables 8.1 to 8.6) and

international investment position (Tables 8.7.1 to 8.7.4) statistics generally conform to the 5th edition of the IMF Balance of Payments Manual (October 1993), to the ECB Guideline of May 2000 (ECB/2000/4) on the statistical reporting requirements of the ECB, and to Eurostat's documentation.

The euro area balance of payments (b.o.p.) data are compiled by the ECB. Data up to December 1998 are expressed in ECU. The recent monthly figures for b.o.p. statistics should be regarded as provisional. Data are revised with the publication of the update for the next month and of the detailed quarterly b.o.p. data. Earlier data are revised periodically or as a result of methodological changes in the compilation of the source data.

Some earlier data have been partially estimated and may not be fully comparable with more recent observations. That is the case for the b.o.p. financial account before end-1998, the services account before end-1997, the monthly pattern of income for the years 1997 to 1999 and the international investment position (i.i.p.) at end-1997. Table 8.5.2 provides a sectoral breakdown of euro area purchasers of securities issued by non-residents of the euro area. For the time being, it is not possible to show a sectoral breakdown of euro area issuers of securities acquired by non-residents.

The euro area i.i.p. (Tables 8.7.1 to 8.7.4) is compiled on the basis of euro area member countries' positions vis-à-vis non-euro area residents (i.e. considering the euro area as a whole economy) from end-1999 positions with the result that euro area assets and liabilities are shown separately (see also Box 9 in the December 2002 issue). The i.i.p. is compiled on a "net" basis, i.e. by aggregating national data regarding end-1997 and end-1998 positions. The "net" and the "extra-euro area" based compilation methodologies may not give fully comparable results. The i.i.p. is valued at current market prices with the exception of direct investment stocks, where book values are used to a large extent.

The outstanding amounts of the Eurosystem's international reserves and related assets are shown in Table 8.7.5 with the corresponding reserves and related assets held by the ECB. The data in Table 8.7.5 are in line with the recommendations for the IMF/BIS template on international reserves and foreign currency liquidity. Earlier data are continually revised. Reserve assets data before end-1999 are not fully comparable with later observations. A publication on the statistical treatment of the Eurosystem's international reserves is available on the ECB's website ("Statistical treatment of the Eurosystem's international reserves", October 2000).

#### **External trade in goods**

Table 9 shows data on euro area external trade in goods. The main source for the data is Eurostat. The ECB derives volume indices from Eurostat value and unit value indices, and performs seasonal adjustment of unit value indices, while value data are seasonally and working day adjusted by Eurostat.

The commodity breakdown is in accordance with the classification by Broad Economic Categories (based on the SITC Rev. 3 definition) for intermediate, capital and consumption goods, and with the SITC Rev. 3 for manufactured goods and oil. The geographical breakdown shows main trading partners, individually or in regional groups.

Owing to differences in definitions, classification, coverage and time of recording, external trade data, in particular imports, are not fully comparable with the goods item in the balance of payments statistics (Tables 8.1 and 8.2). Part of the difference arises from the inclusion of insurance and freight services in the recording of goods imported, which accounted for about 3.8 % of the value of imports (c.i.f.) in 1998 (ECB estimates).

#### **Exchange rates**

Table 10 shows ECB calculations of nominal and real effective exchange rate indices for the euro based on weighted averages of bilateral euro exchange rates. Weights are based on 1995-97 manufactured goods trade with the trading partners and capture third-market effects. Up to December 2000, the narrow group is composed of the countries whose currencies are shown in the table plus Greece. When Greece joined the euro area in January 2001, it ceased to be a partner country in the effective exchange rate of the euro and the weighting scheme has been adjusted accordingly. In addition, the broad group includes the following countries: Algeria, Argentina, Brazil, China, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, the Philippines, Poland, Romania, Russia, Slovakia, Slovenia, South Africa, Taiwan, Thailand and Turkey. Real rates are calculated using consumer prices (CPI), producer prices in manufacturing (PPI) and unit labour costs in manufacturing (ULCM). Where deflators are not yet available, estimates are used. The bilateral rates shown are those against the 12 currencies used in the ECB's calculation of the "narrow" effective exchange rate of the euro. The ECB publishes daily reference rates for these and some other currencies. For more detailed information, see the ECB's Occasional Paper No. 2 ("The effective exchange rates of the euro", Luca Buldorini, Stelios Makrydakis and Christian Thimann, February 2002), which can be downloaded from the ECB's website.

#### **Economic and financial developments outside the euro area**

Statistics on other EU Member States (Table 11) follow the same principles as those for data relating to the euro area. Data for the United States and Japan contained in Tables/Charts 12.1 and 12.2 are obtained from national sources.

# Chronology of monetary policy measures of the Eurosystem<sup>1</sup>

## 2 January 2001

On 1 January 2001 the euro was introduced in Greece. Greece thus became the twelfth EU Member State to adopt the single currency and the first to do so since the start of Stage Three of Economic and Monetary Union (EMU) on 1 January 1999. As a result, the Bank of Greece is now a full member of the Eurosystem, with the same rights and obligations as the 11 national central banks of the EU Member States which previously adopted the euro. In accordance with Article 49 of the Statute of the European System of Central Banks and of the European Central Bank, the Bank of Greece pays up the remainder of its contribution to the capital of the ECB, as well as its share of the ECB's reserves, and also transfers to the ECB its contribution to the foreign reserve assets of the ECB.

Further to the announcement on 29 December 2000, the first main refinancing operation of 2001, in which the Greek counterparties of the Eurosystem participate for the first time, is successfully conducted. The allotment volume of €101 billion takes into account the additional liquidity needs of the euro area banking system resulting from the integration of the Greek Monetary Financial Institutions.

## 4 January 2001

The Governing Council of the ECB decides that the minimum bid rate for the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 4.75%, 5.75% and 3.75% respectively.

In addition, it decides on an allotment amount of €20 billion per operation for the longer-term refinancing operations to be conducted in 2001. This amount takes into consideration the expected liquidity needs of the euro area banking system in 2001 and the desire of the Eurosystem to continue to provide the bulk of refinancing of the financial sector through its main refinancing operations. The

Governing Council may adjust the allotment amount in the course of the year in the event of unexpected developments in liquidity needs.

## 18 January, 1 February, 15 February, 1 March, 15 March, 29 March, 11 April, 26 April 2001

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 4.75%, 5.75% and 3.75% respectively.

## 10 May 2001

The Governing Council of the ECB decides to lower the minimum bid rate on the main refinancing operations by 0.25 percentage point to 4.50%, with effect from the operation to be settled on 15 May 2001. In addition, it decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.25 percentage point, to 5.50% and 3.50% respectively, both with effect from 11 May 2001.

## 23 May, 7 June, 21 June, 5 July, 19 July, 2 August 2001

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 4.50%, 5.50% and 3.50% respectively.

## 30 August 2001

The Governing Council of the ECB decides to lower the minimum bid rate on the main

<sup>1</sup> The chronology of monetary policy measures of the Eurosystem taken in 1999 and 2000 can be found on pages 176 to 179 of the ECB Annual report 1999 and on pages 205 to 208 of the ECB Annual report 2000 respectively.

refinancing operations by 0.25 percentage point to 4.25%, with effect from the operation to be settled on 5 September 2001. In addition, it decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.25 percentage point, to 5.25% and 3.25% respectively, both with effect from 31 August 2001.

### **13 September 2001**

The Governing Council of the ECB decides that the minimum bid rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 4.25%, 5.25% and 3.25% respectively.

### **17 September 2001**

The Governing Council of the ECB decides to lower the minimum bid rate on the main refinancing operations by 0.50 percentage point to 3.75%, with effect from the operation to be settled on 19 September 2001. In addition, it decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.50 percentage point, to 4.75% and 2.75% respectively, both with effect from 18 September 2001.

### **27 September, 11 October, 25 October 2001**

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.

### **8 November 2001**

The Governing Council of the ECB decides to lower the minimum bid rate on the main

refinancing operations by 0.50 percentage point to 3.25%, starting from the operation to be settled on 14 November 2001. In addition, it decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.50 percentage point, to 4.25% and 2.25% respectively, both with effect from 9 November 2001.

### **6 December 2001**

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.

In addition, it decides that the reference value for the annual growth rate of the broad monetary aggregate M3 will remain at 4½%.

### **3 January 2002**

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.

The Governing Council also decides on an allotment amount of €20 billion per operation for the longer-term refinancing operations to be conducted in 2002. This amount takes into consideration the expected liquidity needs of the euro area banking system in 2002 and the desire of the Eurosystem to continue to provide the bulk of refinancing of the financial sector through its main refinancing operations. The Governing Council may adjust the allotment amount in the course of the year in the event of unexpected developments in liquidity needs.



**7 February, 7 March, 4 April, 2 May,  
6 June, 4 July 2002**

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.

**10 July 2002**

The Governing Council of the ECB decides to reduce the allotment amount for each of the longer-term refinancing operations to be conducted in the second half of 2002 from €20 billion to €15 billion. This latter amount takes into consideration the expected liquidity needs of the euro area banking system in the second half of 2002 and reflects the desire of the Eurosystem to continue to provide the bulk of liquidity through its main refinancing operations.

**1 August, 12 September, 10 October,  
7 November 2002**

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.

**5 December 2002**

The Governing Council of the ECB decides to lower the minimum bid rate on the main refinancing operations by 0.50 percentage point to 2.75%, starting from the operation to be settled on 11 December 2002. It also decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.50 percentage point, to 3.75% and 1.75% respectively, both with effect from 6 December 2002.

In addition, it decides that the reference value for the annual growth rate of the broad monetary aggregate M3 will remain at 4½%.

**9 January 2003**

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.

**23 January 2003**

The Governing Council of the ECB decides to implement the following two measures to improve the operational framework for monetary policy:

Firstly, the timing of the reserve maintenance period will be changed so that it will always 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 pre-scheduled. Furthermore, as a rule, the implementation of changes to the standing facility rates will be aligned with the start of the new reserve maintenance period.

Secondly, the maturity of the MROs will be shortened from two weeks to one week.

These measures are scheduled to come into effect during the first quarter of 2004.

Further to the press release of 10 July 2002, the Governing Council also decides to maintain at €15 billion the allotment amount for each of the longer-term refinancing operations to be conducted in the year 2003. This amount takes into consideration the expected liquidity needs of the euro area banking system in 2003 and reflects the desire of the Eurosystem to continue to provide the bulk of liquidity through its main refinancing operations.

### **6 February 2003**

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.

### **6 March 2003**

The Governing Council of the ECB decides to lower the minimum bid rate on the main refinancing operations by 0.25 percentage point to 2.50%, starting from the operation to be settled on 12 March 2003. It also decides to lower the interest rates on both the marginal lending facility and the deposit facility by 0.25 percentage point, to 3.50% and 1.50% respectively, both with effect from 7 March 2003.

### **3 April 2003**

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 May 2003**

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.

It also announces the results of its evaluation of the ECB's monetary policy strategy. This strategy, which was announced on 13 October 1998, consists of three main elements: a quantitative definition of price stability, a prominent role for money in the assessment of risks to price stability, and a broadly based assessment of the outlook for price developments.

The Governing Council confirms the definition of price stability formulated in October 1998, namely that "price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%. Price stability is to be maintained over the medium term". At the same time, the Governing Council agrees that in the pursuit of price stability it will aim to maintain inflation rates close to 2% over the medium term.

The Governing Council confirms that its monetary policy decisions will continue to be based on a comprehensive analysis of the risks to price stability. At the same time, the Governing Council decides to clarify in its communication the respective roles played by economic and monetary analysis in the process of coming to the Council's overall assessment of risks to price stability.

To underscore the longer-term nature of the reference value for monetary growth as a benchmark for the assessment of monetary developments, the Governing Council also decides that it will no longer conduct a review of the reference value on an annual basis. However, it will continue to assess the underlying conditions and assumptions.



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  - "Annual Report 1999", April 2000.
  - "Annual Report 2000", May 2001.
  - "Annual Report 2001", April 2002.
  - "Annual Report 2002", April 2003.
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## Convergence Report

- "Convergence Report 2000", May 2000.
  - "Convergence Report 2002", May 2002.
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## Monthly Bulletin

Articles published from January 1999 onwards:

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