



EUROPEAN CENTRAL BANK

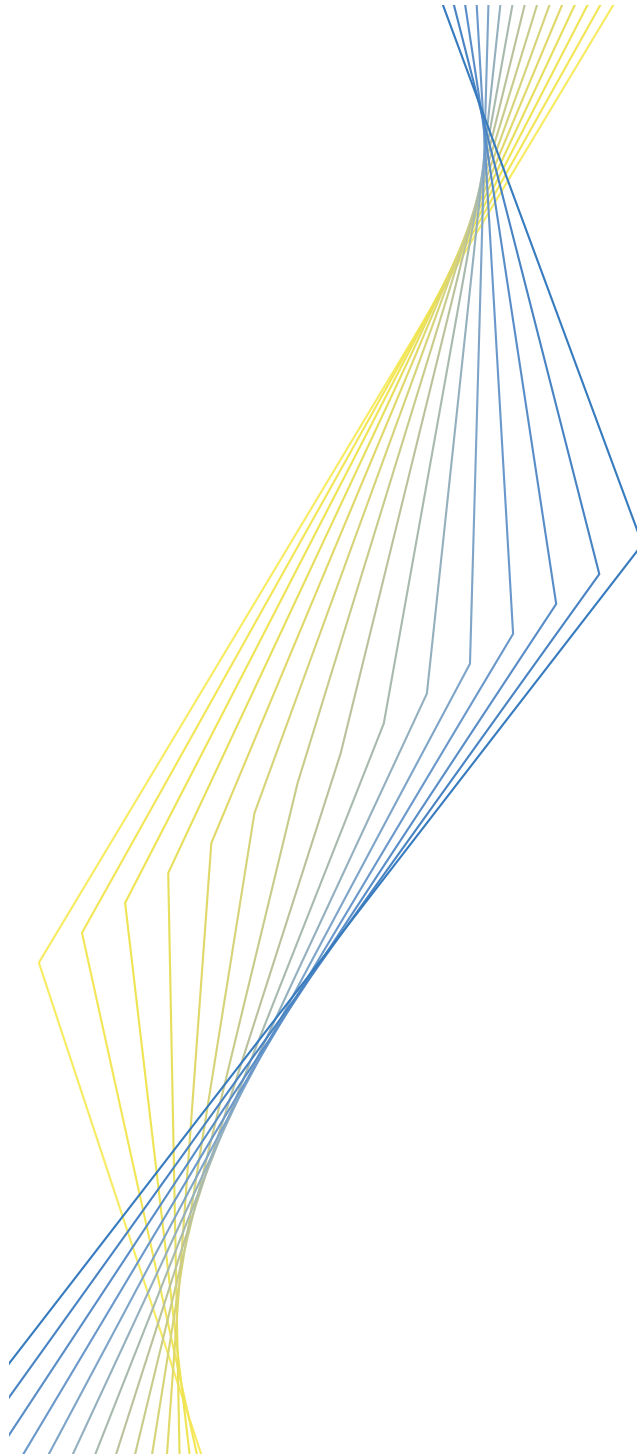
ECB EZB EKT BCE EKP

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

January 2003



EUROPEAN CENTRAL BANK



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

January 2003

© **European Central Bank, 2003**

<b>Address</b>	<b>Kaiserstrasse 29 D-60311 Frankfurt am Main Germany</b>
<b>Postal address</b>	<b>Postfach 16 03 19 D-60066 Frankfurt am Main Germany</b>
<b>Telephone</b>	<b>+49 69 1344 0</b>
<b>Internet</b>	<b><a href="http://www.ecb.int">http://www.ecb.int</a></b>
<b>Fax</b>	<b>+49 69 1344 6000</b>
<b>Telex</b>	<b>411 144 ecb d</b>

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

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

*The cut-off date for the statistics included in this issue was 15 January 2003.*

ISSN 1561-0136 (print)

ISSN 1725-2822 (online)

# Contents

Editorial	5
Economic developments in the euro area	7
Monetary and financial developments	7
Price developments	24
Output, demand and labour market developments	27
Exchange rate and balance of payments developments	33
Boxes:	
1 Monetary policy operations and liquidity conditions in the reserve maintenance period ending on 23 December 2002	12
2 Recent improvements in securities issues statistics	15
3 New ECB statistics on euro area investment funds	21
The demand for currency in the euro area and the impact of the euro cash changeover	39
CLS – purpose, concept and implications	53
Euro area statistics	1*
Chronology of monetary policy measures of the Eurosystem	91*
Documents published by the European Central Bank	95*

## 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.**

## Editorial

At its meeting on 9 January 2003, the Governing Council of the ECB decided to leave the minimum bid rate on the main refinancing operations of the Eurosystem unchanged at 2.75%. The interest rates on the marginal lending facility and the deposit facility were also left unchanged at 3.75% and 1.75% respectively.

These decisions were based on a comprehensive analysis of monetary, financial and economic developments, conducted within the framework of the ECB's monetary policy strategy. Overall, the Governing Council came to the assessment that the outlook for price stability in the medium term had not changed since its decision of 5 December 2002 to reduce the key ECB interest rates. The Governing Council judged the prevailing monetary policy stance appropriate to maintain a favourable outlook for price stability in the medium term.

As regards the analysis under the first pillar of the ECB's monetary policy strategy, the three-month average of the annual growth rates of M3 was 7.1% in the period from September to November 2002, unchanged from the period from August to October 2002. In an environment of continued financial market, economic and geopolitical uncertainty, a strong preference of investors for liquid and secure assets remains a major driving force behind the strong monetary dynamics. At the same time, the low level of interest rates prevailing in the euro area makes the holding of monetary assets relatively attractive.

As a result of the pace of monetary growth, liquidity in the euro area is ample. At the current juncture, however, given that the portfolio shifts due to economic and financial uncertainty may be a temporary phenomenon, and in light of the sluggish economic growth, the excess liquidity is deemed unlikely to translate into inflationary pressures. The continued decline in the growth of loans to the private sector supports this assessment.

Turning to the second pillar, the outlook for economic activity in the euro area has remained broadly unchanged since early December 2002. As recently published survey data indicate, economic growth is likely to have remained subdued around the turn of the year. A gradual increase in real GDP growth to levels close to potential later in 2003 remains the main scenario, provided that the factors currently contributing to the general climate of uncertainty gradually unwind. Although some stabilisation in financial markets has been observed over the past few months, investors continue to perceive a high level of uncertainty. At the same time, there are still risks relating to a disorderly adjustment of the past accumulation of macroeconomic imbalances outside the euro area. In addition, geopolitical tensions continue to weigh adversely on confidence. Indeed, the increase in oil prices over the recent past – besides being influenced by temporary supply constraints – reflects the risk of more acute tensions in oil markets in the future, which, in turn, would have a negative impact on the prospects for economic activity worldwide. There are still, therefore, downside risks to the outlook for economic activity in the euro area, although the current low level of interest rates should help to counterbalance these.

Turning to price developments, according to Eurostat's flash estimate, annual HICP inflation was 2.2% in December 2002, unchanged from November 2002. Due to the increase in oil prices, some renewed upward pressure on consumer prices is likely to have emerged around the turn of the year, and this pressure may have been reinforced by effects stemming from various increases in indirect taxes and administered prices which became effective at the beginning of 2003. At the same time, base effects – relating mainly to unprocessed food prices but, in part, also originating from past increases in services prices – will help to reduce annual HICP inflation figures in early 2003. Furthermore, the direct effects of the recent appreciation of the exchange rate of the euro on import prices and their gradual passthrough to the

euro area economy should contribute to dampening consumer price inflation. The current subdued pace of economic growth should also contain inflationary pressures. Overall, while the significant risks surrounding oil price developments make any short-term prediction difficult at this stage, the most likely outcome remains that inflation will fall and eventually stabilise at a level below 2% in the course of 2003.

A major condition for this outlook for inflation to materialise will be moderate wage developments. Reflecting the rigidities prevailing in euro area labour markets, wage growth remained on an upward trend until early 2002, despite the weakening of economic activity. It is not yet clear whether this trend has come to a halt. Wage moderation is crucial for maintaining price stability. Furthermore, it would help to improve the prospects for economic and employment growth.

An important contribution to strengthening growth prospects in the euro area should also come from fiscal and structural policies. Determined reform efforts are needed in these policy areas to increase incentives for investment and employment creation in the euro area.

Regarding fiscal policy, countries with remaining fiscal imbalances have committed themselves to implement consolidation plans in order to reach budgetary positions close to balance or in surplus in the medium term. As part of this process, governments should put emphasis on growth-oriented consolidation policies that strengthen the productive forces of the economy. Such policies are likely to be most effective when integrated into a comprehensive reform strategy based on structural retrenchment in spending.

The fiscal policy framework, as laid down in the Treaty and the Stability and Growth

Pact, provides a sound basis for limiting the risk of fiscal imbalances occurring. At the same time, it preserves an appropriate medium-term orientation for fiscal policy. In this context, it is important that stability programmes be based on clearly defined measures and realistic assumptions regarding economic developments, and that consolidation plans be sufficiently ambitious. The Governing Council supports the steps taken by the Commission to preserve the functioning of the framework, including the implementation of excessive deficit procedures and the issuing of early warnings, where required.

Turning to structural reforms, it is essential that governments intensify their efforts to expand the euro area's potential for non-inflationary growth and to reduce its high level of unemployment. The need for further progress in this field is particularly evident in a phase when the euro area economy has to adapt to a series of adverse shocks. Indeed, such reforms, which should aim to reduce rigidities in the labour and product markets, could significantly enhance 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 confidence among consumers and investors in long-term growth and employment opportunities in the euro area. This, in turn, should also have a positive effect on spending and investment decisions in the short and medium term.

This issue of the Monthly Bulletin contains two articles. The first examines currency demand in the euro area and the impact of the euro cash changeover. The second analyses the purpose, the concept and the implications of the Continuous Linked Settlement (CLS), a clearing and settlement system for foreign exchange transactions in seven major currencies, including the euro.

# Economic developments in the euro area

## I Monetary and financial developments

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

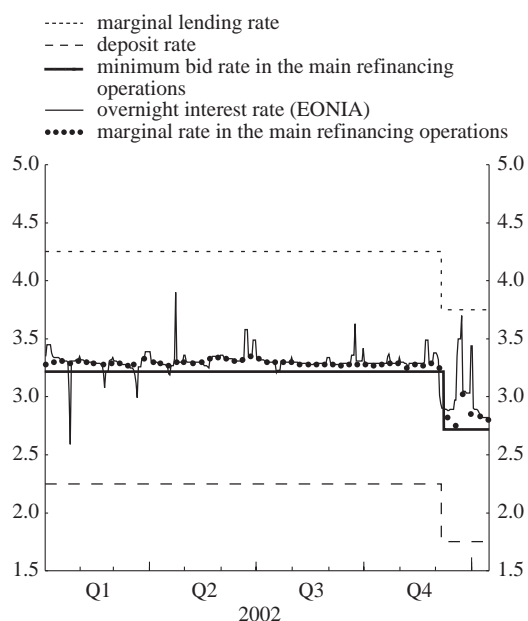
At its meeting on 9 January 2003, the Governing Council of the ECB decided to leave the minimum bid rate in the main refinancing operations, conducted as variable rate tenders, unchanged at 2.75%. The interest rates on both the marginal lending facility and the deposit facility were also kept unchanged, at 3.75% and 1.75% respectively (see Chart 1).

### M3 growth remained high in November

The annual growth rate of the broad monetary aggregate M3 was 7.1% in November 2002, compared with 7.0% in the previous month (see Chart 2). The three-month average of the annual growth rates of M3 stood at 7.1% in the period from September to November, unchanged from the period from August to October. At the same time, the short-term dynamics of M3

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

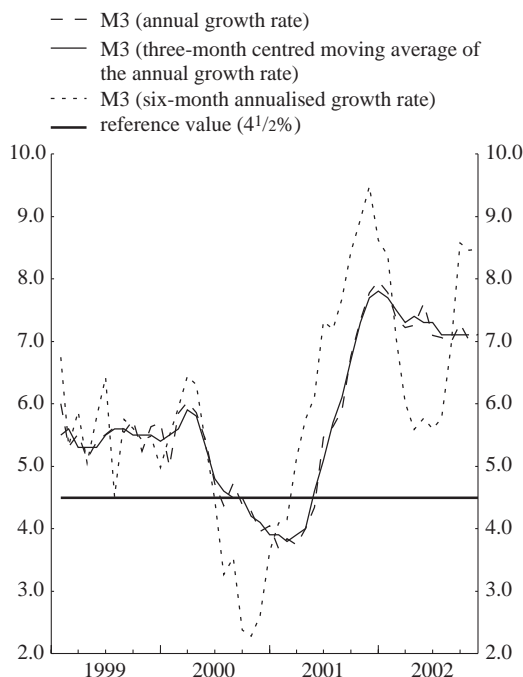
(percentages per annum; daily data)



Sources: ECB and Reuters.

### Chart 2 M3 growth and the reference value

(adjusted for seasonal and calendar effects)



Source: ECB.

remained strong, with the annualised six-month rate of growth standing at 8.5% in November.

The persistent strong growth of M3 continues to reflect to a large extent the pronounced preference among investors for safe and liquid assets in a context of high financial market, economic and geopolitical uncertainty. At the same time, the buoyant dynamics of M3 over recent months have also been driven by the low opportunity costs of holding money. The extended period of high M3 growth has led to ample liquidity accumulating in the euro area. If not corrected, this could be a matter of concern with regard to price stability in the medium term. However, given the significant impact of portfolio shifts on monetary developments, part of this excess liquidity may be temporary. Moreover, in the light of subdued economic growth, it is unlikely at the current juncture that the excess liquidity will lead to inflationary pressure.



Turning to the main components of M3, the annual growth rate of the narrow monetary aggregate M1 recorded a further increase to 9.1% in November 2002, from 8.2% in October (see Table I). The rise was driven by the significant rebound in currency in circulation, which continued to recover strongly, albeit at a somewhat slower pace than had been observed since early 2002 (in November a seasonally adjusted monthly increase of €5 billion was recorded, compared with an average of €8 billion between March and October). This trend reflects the gradual rebuilding of currency holdings by both domestic and non-euro area residents after the marked decline in the run-up to the euro cash changeover. The year-on-year growth rate of overnight deposits declined to 8.3% in November, from 8.6% in October. This decrease was mainly attributable to base effects, and the short-term dynamics of overnight deposits have in fact been relatively strong in recent months. Taking currency and overnight deposits together, the continuing robust demand for the most liquid assets included in M3 is likely to be due to both portfolio shifts in reaction to high financial market uncertainty and the

low opportunity costs of holding these instruments.

The annual rate of growth of short-term deposits other than overnight deposits declined in November 2002 to 4.9%, from 5.5% in the previous month. The annual rate of growth of marketable instruments rose slightly, to 8.5% in November from 8.3% in October. In particular, money market fund shares/units continued to expand at a strong pace. This development confirms the clear preference of non-MFIs for liquid and secure assets.

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) stood at 5.2% in November, almost unchanged from the previous month (5.1%). The demand for these instruments is likely to have been influenced by factors working in opposite directions. On the one hand, uncertainty in stock markets is tending to lead to a higher preference for longer-term deposits and bonds; on the other hand, the flattening of the yield curve and relatively high volatility in bond markets may have had a dampening effect.

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

(annual percentage changes; quarterly averages)

	2002 Q1	2002 Q2	2002 Q3	2002 Aug.	2002 Sep.	2002 Oct.	2002 Nov.
<i>Adjusted for seasonal and calendar effects</i>							
<b>M1</b>	6.2	6.6	7.6	7.6	8.2	8.2	9.1
<i>of which: currency in circulation</i>	-28.0	-19.9	-7.7	-5.7	-0.5	6.2	14.8
<i>of which: overnight deposits</i>	13.0	11.7	10.3	10.0	9.6	8.6	8.3
M2 - M1 (= other short-term deposits)	6.7	6.4	5.5	5.4	5.2	5.5	4.9
<b>M2</b>	6.5	6.5	6.5	6.4	6.6	6.8	6.9
M3 - M2 (= marketable instruments)	14.6	12.7	10.7	10.2	11.5	8.3	8.5
<b>M3</b>	7.6	7.3	7.1	7.0	7.3	7.0	7.1
<i>Not adjusted for seasonal and calendar effects</i>							
<b>Longer-term financial liabilities (excluding capital and reserves)</b>	3.1	4.0	5.0	5.2	5.1	5.1	5.2
<b>Credit to euro area residents</b>	5.1	4.5	4.2	4.2	4.3	4.3	3.9
Credit to general government	1.7	1.8	1.1	0.8	1.7	2.2	1.7
<i>of which: loans to general government</i>	-0.8	-0.9	-0.9	-1.4	-1.1	-0.8	-1.6
Credit to other euro area residents	6.1	5.2	5.0	5.1	5.0	4.9	4.6
<i>of which: loans to the private sector</i>	5.7	5.6	5.3	5.4	5.2	5.0	4.5

Source: ECB.

## Growth of loans to the private sector continued to decline

Turning to the asset side of the MFI balance sheet, the annual rate of growth of credit to euro area residents declined to 3.9% in November 2002, from 4.3% in October. This was the result of reductions in the annual rates of growth of both credit to general government (to 1.7%, from 2.2% in the previous month) and credit to the private sector (to 4.6%, from 4.9%). As regards the latter, the annual growth rate of loans to the private sector decreased further in November, to 4.5% from 5.0% in October. The continuing moderation in loan growth should be seen against the background of the subdued pace of economic growth and weak confidence. As for the other credit components, the growth of MFI holdings of securities other than shares increased to 6.0%, from 5.8% in October. Finally, the annual growth rate of MFI holdings of shares and other equities rose to 4.8%, from 3.6% in the previous month. This continues a development observed since August and might reflect in part the reluctance of non-MFIs to invest in equity.

In November 2002 the net external assets of the euro area MFI sector increased by

€36 billion, in absolute and non-seasonally adjusted terms. Over the 12 months up to November, it rose by €139 billion, compared with a rise of €130 billion over the 12 months to October (see Chart 3). According to balance of payments data, the continuing net inflows from outside the euro area reflected both an improvement in the euro area's current account balance and large net inflows of combined direct and portfolio investment. The latter were related to, inter alia, subdued portfolio investment of euro area residents in non-euro area equity, which must also be seen in the context of the high liquidity preference of euro area non-MFIs at present.

## Stable debt securities issuance in October

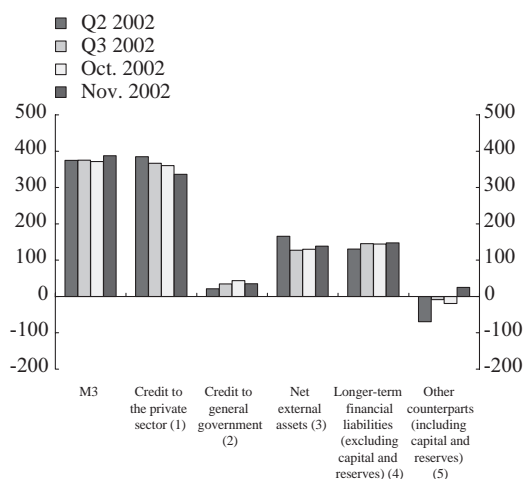
The annual growth rate of the amount outstanding of debt securities issued by euro area residents was 7.3% in October, unchanged from the previous month (see Chart 4).<sup>1</sup> Underlying this was the broadly unchanged annual growth rate of the amount outstanding of long-term debt securities at 7.3%. The annual growth rate of the amount outstanding of short-term debt securities increased by 0.9 percentage point to 7.3%. There were declines in the growth rates of the stock of debt securities across all private sectors, which were offset by an increase in the growth rate in the government sector.

The currency breakdown shows that the annual growth of the amount outstanding of euro-denominated debt securities issued by euro area residents declined from 6.7% in September to 6.5% in October. At the same time, the annual growth rate of non-euro-denominated debt securities held by euro area residents increased to 15.3% in October from 13.7% in September (see Box 2 on recent improvements in the calculation of growth rates for debt securities, notably for

**Chart 3**

### Movements in M3 and its counterparts

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



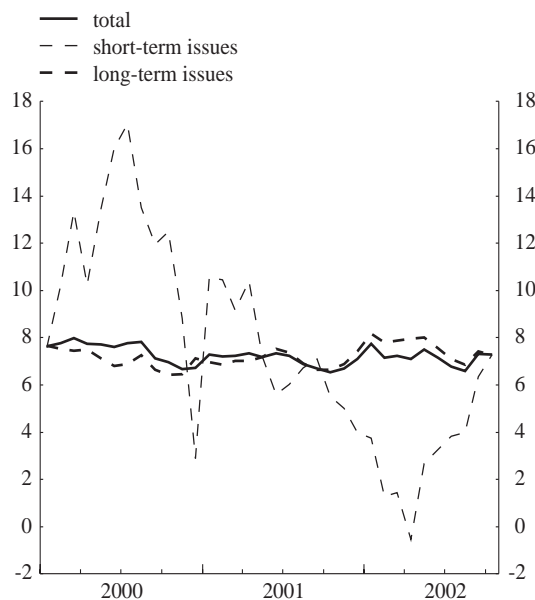
Source: ECB.

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

<sup>1</sup> Starting from this issue of the Monthly Bulletin, the text will comment on the annual growth rates of the amounts outstanding of debt securities based on an "index of notional stocks" as described in Box 2 of this issue, entitled "Recent improvements in securities issues statistics".

**Chart 4**  
**Amounts outstanding of debt securities issued by euro area residents**

(annual percentage rate of change)



Source: ECB.

Note: For the calculation of the annual growth rate, see the "Technical notes" of the "Euro area statistics" section.

foreign currency-denominated debt securities).

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 account for the largest part of outstanding non-government issues, decreased from 5.3% in September to 4.4% in October. The issuance activity of this sector has been relatively subdued since the start of 2002 by comparison with previous years. This reflects the relatively modest market-based funding needs of MFIs in an environment of strong deposit growth and weak loan demand.

In the non-MFI corporate sector, which includes both non-monetary financial and non-financial corporations, the annual growth rate of the amount outstanding of debt securities declined to 16.7% in October, from 17.7% in the previous month. The annual growth of the amount outstanding of debt securities issued by non-financial corporations declined from 6.4% in September to 5.9% in

October. Issuance by this sector has steadily slowed since the start of 2002. In particular, the short-term segment of the market has shrunk considerably, with the amount outstanding of short-term debt securities issued by non-financial corporations declining by 20.2% in October compared with the same period of last year, following a decline of 18.0% in September. Declines of this magnitude, which were last seen in the first half of the 1990s, suggest that demand for finance among corporations for working capital needs has been low because of cyclical conditions as well as the continuous decline in M&A activity. Moreover, some corporations may have faced difficulties in obtaining finance due to rising investor concern about credit risk.

As for the non-monetary financial corporation sector, the annual growth rate of the amount outstanding of debt securities slowed from 33.1% in September to 30.8% in October. The continuously high growth rate in this sector reflects the fact that many corporations used special-purpose vehicles to issue debt. In particular, companies in the automobile and telecommunication sectors took advantage of the possibilities for structured finance offered by their financial subsidiaries classified within the non-monetary financial sector. Thus, the relatively high growth of debt issuance by the non-monetary financial sector appears to some extent to be a substitute for debt issued by the non-financial corporation sector itself.

Turning to the general government sector, the annual growth of the amount outstanding of debt securities issued by central government increased from 4.5% in September to 5.0% in October. At the same time, the annual growth rate of the amount outstanding of debt securities issued by the other general government subsectors decreased slightly, from 30.2% in September to 28.6% in October. Nevertheless, these rates remained at very high levels in comparison with previous years, thereby reflecting the deterioration in the fiscal position of local governments in some countries.

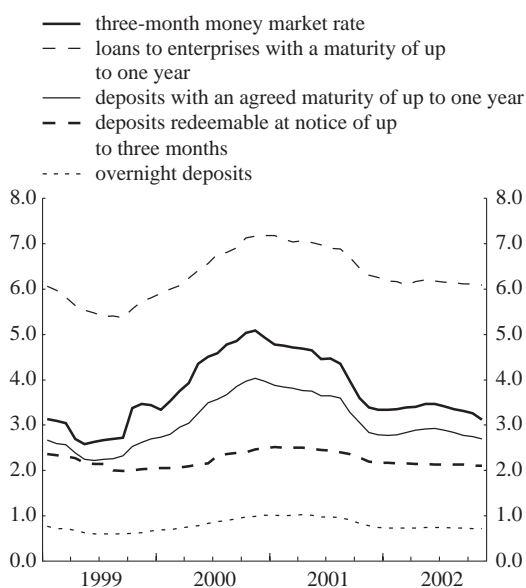
## Long-term retail bank interest rates declined in November

Short-term retail bank interest rates remained broadly unchanged in November around levels close to those prevailing at the start of 2002. This was in line with the overall change of money market rates over the first 11 months of the year (see Chart 5).

Long-term retail bank interest rates declined further in November, continuing the movement seen since June 2002 (see Chart 6). The overall declines from June to November were between 50 and 60 basis points. This compares with a decline in the average five-year government bond yield of slightly more than 100 basis points in the same period. Long-term retail bank interest rates are generally less volatile than comparable market rates. The variation in the spread between the long-term retail bank interest rates and the comparable government bond yields may reflect the more gradual adjustment of the retail bank interest rates, and, for lending rates, it may also reflect developments in credit risk.

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

(percentages per annum; monthly averages)

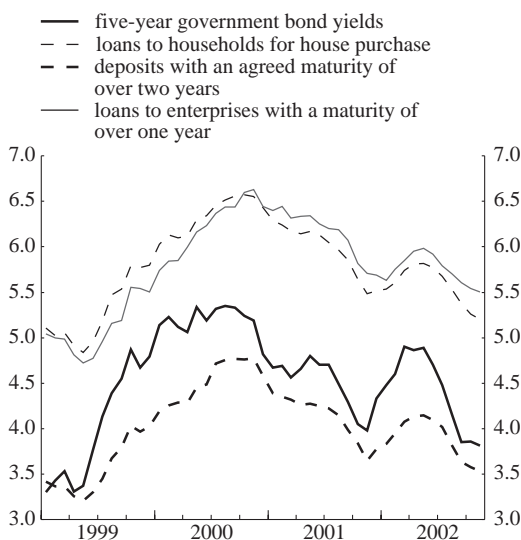


Sources: ECB aggregation of individual country data and Reuters.

Note: From January 2001, data include Greece.

## 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.

## Money market interest rates decreased in December

In December 2002 money market interest rates decreased, continuing the trend seen since mid-May. At short maturities, this reflected adjustments to the new level of the minimum bid rate in the Eurosystem's main refinancing operations, which was reduced by 50 basis points to 2.75%, with effect from the operation settled on 11 December. The slope of the money market yield curve, as measured by the difference between the twelve-month and the one-month EURIBOR, was slightly negative at the end of November, and remained broadly unchanged until 15 January, reflecting broadly parallel interest rate declines along the yield curve.

Developments at the very short end of the money market yield curve were somewhat volatile in December 2002 and early January 2003. Between the end of November and 15 January the overnight interest rate, as measured by the EONIA, fluctuated between 2.82% and 3.70%. Therefore, on some

**Box I****Monetary policy operations and liquidity conditions in the reserve maintenance period ending on 23 December 2002**

During the reserve maintenance period under review, the Eurosystem settled four main refinancing operations (MROs), two longer-term refinancing operations (LTROs) and one liquidity-providing fine-tuning operation.

**Open market 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	27/11/2002	11/12/2002	108.9	62.0	1.76	255	3.25	3.29	3.31
MRO	04/12/2002	18/12/2002	111.8	111.8	1.00	175	3.25	3.25	3.25
MRO	11/12/2002	24/12/2002	100.5	65.0	1.55	247	2.75	2.82	2.83
MRO	18/12/2002	31/12/2002	103.5	103.5	1.00	224	2.75	2.75	2.87
LTRO	28/11/2002	27/02/2003	38.6	15.0	2.58	162	-	3.02	3.04
LTRO	23/12/2002	27/03/2003	42.3	15.0	2.82	172	-	2.93	2.95
Other	18/12/2002	24/12/2002	28.5	10.0	2.85	50	2.75	2.80	2.82

Source: ECB.

The marginal rate fell from 3.29% in the first MRO of the maintenance period to 3.25% in the operation settled on 4 December. In the latter operation, the ECB satisfied all bids submitted, which were slightly below the level needed for a smooth fulfilment of reserve requirements during the week following the settlement of this operation. After the decision of the Governing Council of the ECB on 5 December to lower the minimum bid rate applicable to MROs from 3.25% to 2.75%, the marginal rate declined to 2.82% in the MRO settled on 11 December. In the MRO settled on 18 December, the last one of the reserve maintenance period, the amount of bids submitted again fell short of the level needed for the fulfilment of reserve requirements. The ECB satisfied all bids, which resulted in a marginal rate of 2.75% and a weighted average rate of 2.87%. To reduce the implied liquidity shortage, the ECB launched a liquidity-providing fine-tuning operation with a one week maturity on 18 December, and allotted €10 billion in this operation at a marginal rate of 2.80% and a weighted

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

(EUR billions)

Daily average during the reserve maintenance period from 24 November to 23 December 2002

	Liquidity providing	Liquidity absorbing	Net contribution
<b>(a) Monetary policy operations of the Eurosystem</b>	<b>216.2</b>	<b>0.2</b>	<b>+ 215.9</b>
Main refinancing operations	168.1	-	+ 168.1
Longer-term refinancing operations	45.0	-	+ 45.0
Standing facilities	1.1	0.2	0.9
Other operations	2.0	-	2.0
<b>(b) Other factors affecting the banking system's liquidity</b>	<b>371.5</b>	<b>458.2</b>	<b>- 86.7</b>
Banknotes in circulation	-	350.7	- 350.7
Government deposits with the Eurosystem	-	51.7	- 51.7
Net foreign assets (including gold)	371.5	-	+ 371.5
Other factors (net)	-	55.8	- 55.8
<b>(c) Credit institutions' holdings on current accounts with the Eurosystem (a) + (b)</b>			<b>129.3</b>
<b>(d) Required reserves</b>			<b>128.8</b>

Source: ECB.

Note: Totals may not add up due to rounding.

average rate of 2.82%. The allotment amount reflected a balance between the ECB's aim to both restore normal liquidity conditions and preserve incentives for counterparties to bid sufficiently in MROs.

The EONIA remained stable at around 3.30% at the beginning of the period. On 29 November it increased to 3.38% due to the end-of-month effect. The EONIA remained relatively high in the days that followed owing to concerns about underbidding motivated by market expectations that the Governing Council would reduce the level of the minimum bid rate in the MROs in its meeting on 5 December 2002. Following this decision, the EONIA gradually dropped to a level of slightly below 2.90%, where it remained from 9 to 16 December. Renewed upward pressure on short-term rates was triggered by the underbidding in the MRO allotted on 17 December and the subsequent tight liquidity conditions. The EONIA increased steadily during the rest of the reserve maintenance period, to reach 3.70% – a level only 5 basis points below the rate of the marginal lending facility – on 23 December, the last day of the reserve maintenance period.

Indeed, the maintenance period ended with a relatively large aggregate net recourse to the marginal lending facility of €18 billion, owing in part to higher than expected autonomous factors. The average difference between current account holdings and minimum reserve requirements was €0.75 billion.

The net liquidity-absorbing impact of the autonomous factors, i.e. factors not related to monetary policy operations (item (b) of the table above), was, on average, €86.7 billion. The published estimates of the average liquidity needs stemming from autonomous factors ranged between €72.6 billion and €93.8 billion. The largest deviation between the published estimate and the actual figure occurred for the period from 25 November to 3 December and amounted to €3.6 billion.

occasions the EONIA was substantially above the new minimum bid rate of 2.75% in the main refinancing operations. After hovering around a level slightly below 3.0% in mid-December, the EONIA rose significantly later in the month. This reflected exceptional market conditions which followed an episode of underbidding in the main refinancing operation of 17 December and the usual end-of-year effect (stemming from a desire on the part of financial institutions to adjust their balance sheets at the end of the year). In early January the EONIA gradually tended to stabilise, reaching levels closer to the minimum bid rate of 2.75%.

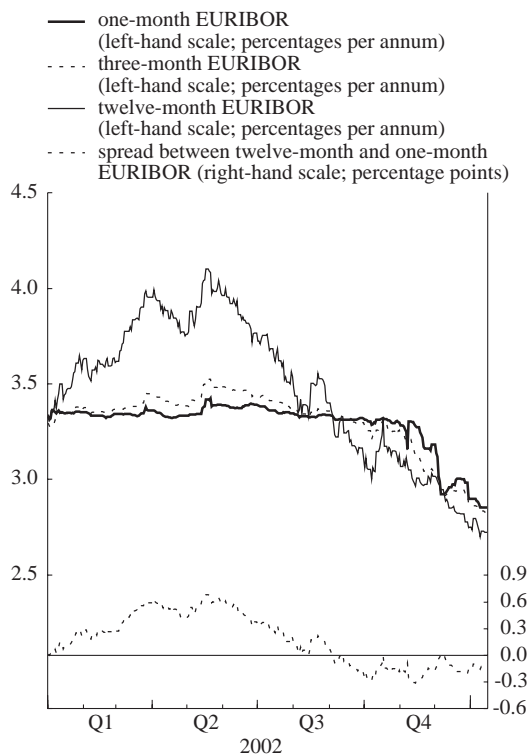
Whereas the marginal and average rates of allotment in the Eurosystem's main refinancing operation settled on 4 December 2002 were both 3.25%, equal to the then prevailing minimum bid rate, in the subsequent weeks of December and early January 2003, the marginal and average rates of allotment were, on average, 10 and 15 basis points respectively above the new minimum bid rate of 2.75% (see Box 1). In the operation settled on 15 January these

spreads were 5 and 6 basis points. Following the underbidding on 17 December and tight liquidity conditions, a fine-tuning operation was conducted on 18 December to provide counterparties with liquidity and facilitate a smooth ending of the reserve maintenance period.

Between the end of November and 15 January the one-month and three-month EURIBOR decreased by 33 and 22 basis points respectively, to stand at 2.85% and 2.83% on the latter date (see Chart 7). The marginal and average interest rates in the Eurosystem's longer-term refinancing operation settled on 23 December were 2.93% and 2.95% respectively, in line with the then prevailing three-month EURIBOR of 2.95%. For both the marginal rate and the average rate this was 9 basis points lower than the corresponding rates in the longer-term refinancing operation settled on 28 November.

The six-month and the twelve-month EURIBOR decreased by 22 and 30 basis points respectively between the end of November

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



Source: Reuters.

and 15 January, to stand at 2.77% and 2.72% on the latter date. The slope of the money market yield curve, as measured by the difference between the twelve-month and the one-month EURIBOR, was -13 basis points on 15 January, broadly unchanged from end-November.

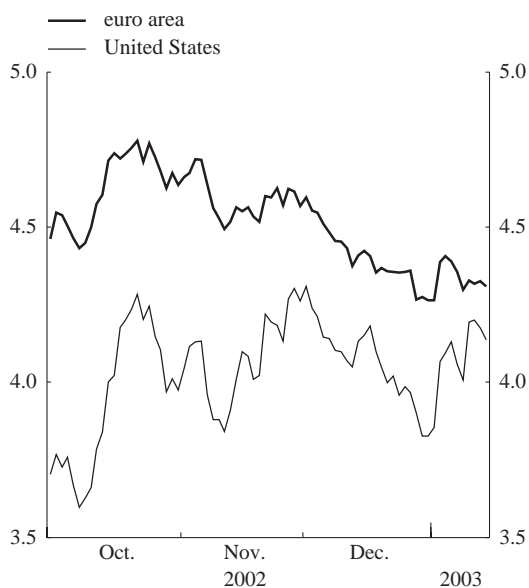
The expected path of the three-month EURIBOR, as implied in futures prices on contracts with delivery dates in 2003, has moved downwards since the end of November. The rates implied in prices on contracts with delivery dates in March, June, September and December 2003 decreased by 15, 35, 47 and 58 basis points respectively, to stand at 2.68%, 2.54%, 2.53% and 2.63% on 15 January.

**Long-term government bond yields volatile in December**

Bond yields were relatively volatile in December 2002 and early January 2003 (see Chart 8). Overall, between the end of November and 15 January, yields on ten-year government bonds in the euro area declined by 25 basis points, standing at a level of 4.3% on the latter date. In the United States, ten-year government bond yields declined less, by some 15 basis points to around 4.1% during the same period. The differential between ten-year government bond yields in the United States and those in the euro area thus narrowed by 10 basis points between the end of November and 15 January to around -20 basis points.

In the United States, government bond yields saw significant declines in December 2002, followed by a rebound in early January 2003. In the course of December market participants seemed to have perceived an increased likelihood of a war against Iraq,

**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.

## Box 2

### Recent improvements in securities issues statistics

In this issue of the Monthly Bulletin, the ECB is publishing monthly statistics on quoted shares for the first time (see Table 3.8 in the “Euro area statistics” section). In addition, new data are published which improve the way in which the growth in the stocks of debt securities is measured (see Table 3.7).<sup>1</sup> This box presents the new statistics on quoted shares and the improvements made to the existing debt securities issues statistics.

#### Publication of monthly statistics on quoted shares

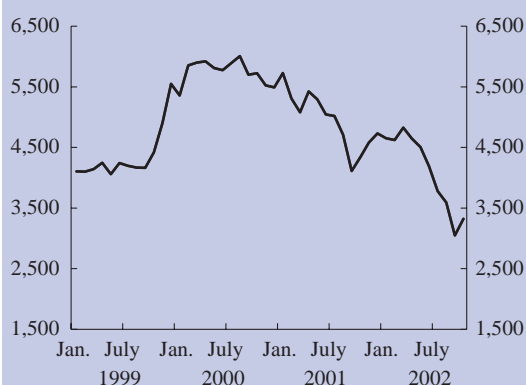
The new statistics on the amounts outstanding of quoted shares issued by residents of the euro area provide an overview of the size of the stock market in the euro area. From a monetary policy perspective, it is of interest to monitor these statistics given the links that exist between stock market developments and, for example, aggregate supply and demand and the transmission mechanism of monetary policy.<sup>2</sup>

According to the standards set out in the European System of Accounts (ESA 95), shares comprise all financial assets that represent property rights on corporations. These financial assets generally entitle holders to a share in the profits of corporations and to a share in their net assets in the event of liquidation. The category of quoted (listed) shares covers all shares with prices quoted on a recognised stock exchange or other forms of regulated markets. Quoted shares include capital shares and dividend shares issued by limited liability companies, redeemed shares in limited liability companies and preferred (preference) stocks or shares.

The quoted shares statistics are broken down by sector of the issuer, distinguishing between non-financial corporations, monetary financial institutions (MFIs) and non-monetary financial corporations. The time-series start in January 1999 and are reported at market value. Future enhancements may include the calculation of transactions data.

#### Chart A: Amounts outstanding of quoted shares issued by euro area residents from January 1999 to October 2002

(EUR billions; end-of-period stocks; market values)



Source: ECB.

Chart A illustrates that since January 1999, large fluctuations have occurred in the value of the outstanding quoted shares issued by euro area residents. In the period between January 1999 and March 2000, this value rose by 44%, largely as a result of the substantial increases in euro area stock prices during that period. However, from March 2000 the stock market experienced an even more substantial decline, with the amount outstanding of quoted shares issued by euro area residents declining from €5,841 billion in March 2000 to €3,262 billion in October 2002. Of the amount outstanding in October 2002 (see Chart B), more than three-quarters (76%) was issued by non-financial corporations. The remaining amount was issued by MFIs (14%) and non-monetary financial corporations (10%). The latter category comprises insurance corporations and pension funds as well as other financial intermediaries (OFIs).

<sup>1</sup> Securities issues statistics are produced by the Eurosystem on a monthly basis and the complete datasets are presented in Part 3 of the “Euro area statistics” section of the Monthly Bulletin as well as on the ECB’s website.

<sup>2</sup> For a discussion of the role of the stock market in the economy and in the ECB’s monetary policy strategy, see the article entitled “The stock market and monetary policy” in the February 2002 issue of the Monthly Bulletin.



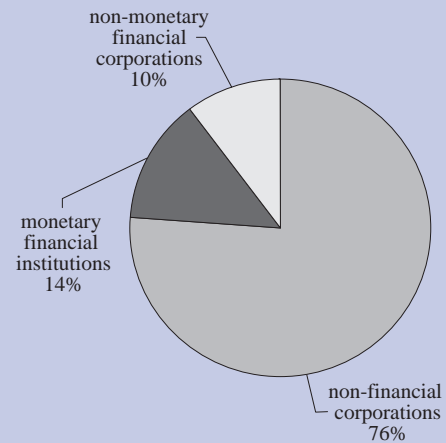
### Improved method for the calculation of growth rates for debt securities

Growth rates for debt securities are no longer calculated on the basis of changes in the stocks outstanding. The new method for calculating growth rates is based on an accumulation of actual flows, using available information on gross issues and redemptions. Therefore it reflects financial transactions that occur when an institutional unit acquires or disposes of financial assets and incurs or repays liabilities. This new approach yields more accurate and consistent annual growth rates for securities issues statistics and avoids distortions due to reclassifications, revaluations, exchange rate variations and any other changes that do not arise from transactions. The annual growth rates for debt securities are now calculated on the basis of an “index of notional stocks” as described in the “Technical notes” of the “Euro area statistics” section.

Chart C illustrates the difference between the calculation of the annual growth rates using an index

of notional stocks based on financial transactions (thick line) and the calculation using stocks that have not been adjusted (thin line). For total debt securities in all currencies, the differences between the adjusted and the non-adjusted annual growth rates averaged 0.7 percentage point during the period from January 1999 to October 2002, and reached a peak of 1.4 percentage points in October 2000. The main factor accounting for this difference, which was particularly pronounced in the first two years of Stage Three of EMU, was the exchange rate effect on debt securities issued by euro area residents in foreign currencies, related to the depreciation of the euro during this period. Indeed, for debt securities that had previously been issued in foreign currencies, the value of these liabilities expressed in euro increased as the euro depreciated, thereby giving rise to a higher growth rate of the series which did not correct for valuation changes.

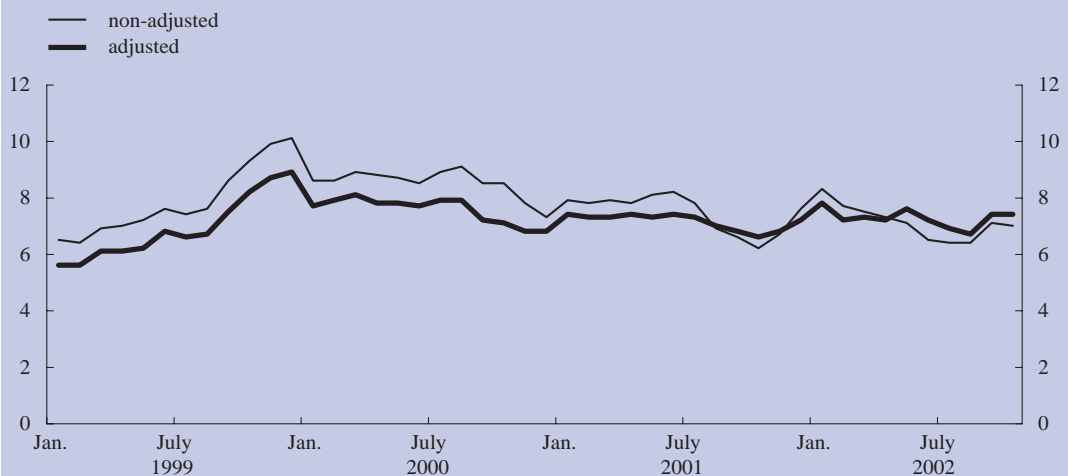
**Chart B: Sectoral breakdown of quoted shares issued by euro area residents based on amounts outstanding at end-October 2002**  
(percentage)



Source: ECB.

**Chart C: Annual growth of debt securities issued by residents of the euro area (all currencies combined) from January 1999 to October 2002**

(percentage changes)

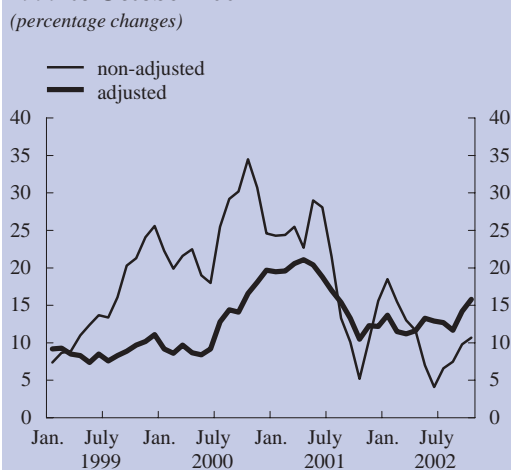


Source: ECB.

## The new data show strong issuance of foreign currency-denominated debt securities by euro area residents

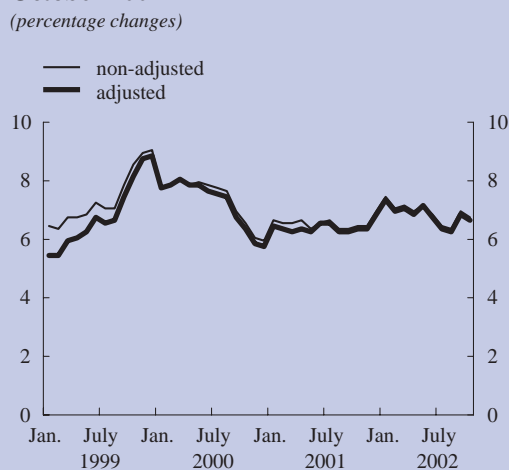
By adjusting the data to take into account these valuation changes related to currency movements, it is possible to measure more accurately the changes in the stock of foreign currency-denominated debt that reflect currency denomination decisions by issuers of debt securities. On average, for foreign currency-denominated debt securities issued by euro area residents the difference between the new, adjusted annual growth rates and the non-adjusted ones amounted to 7.2 percentage points, between January 1999 and October 2002, with a peak of 17.9 percentage points in October 2000 (see Chart D).

**Chart D: Annual growth of foreign currency-denominated debt securities issued by euro area residents from January 1999 to October 2002**  
(percentage changes)



Source: ECB.

**Chart E: Annual growth of euro-denominated debt securities issued by euro area residents from January 1999 to October 2002**  
(percentage changes)



Source: ECB.

Looking at the adjusted growth rates in the period from early 1999 until early 2000, the stock of debt securities issued in foreign currencies grew at a fairly steady annual pace of around 10%. However, around mid-2000, the pace of foreign currency debt security issuance by euro area residents began to accelerate, bringing annual growth rates above 20%. Thereafter, growth rates fell back to levels close to 10% again in 2001 and 2002 but remained constantly above the growth rates recorded for issues in domestic currency.

The significant rise in the issuance of foreign currency-denominated debt in the course of 2000 may have been due in part to hedging activities related to the considerable foreign direct investment (FDI) of euro area corporations in the United States (see Box 5 on page 39 of the October 2002 issue of the Monthly Bulletin entitled "Developments in the net financial flows between the euro area and the United States"). Other things being equal, this strong FDI activity increased the sensitivity of euro area corporations' balance sheets and net cash flows to swings in the value of the euro vis-à-vis the US dollar. In order to mitigate such risks, some euro area corporations may have been encouraged to hedge their foreign currency exposures by issuing more foreign currency-denominated debt. It is notable that as FDI activity tailed off in the course of 2001, so did foreign currency-denominated debt security issuance activity by euro area residents.

In addition to hedging considerations, it cannot be excluded that euro area issuers took speculative views on the likely future direction of the euro during 2000 with a view to lowering debt servicing costs in the longer term. Indeed, in the course of 2000, the euro depreciated further vis-à-vis the US dollar. If issuers in need of funds took the view that the euro would ultimately appreciate, thereby lowering the euro value of foreign currency-denominated debt and the concomitant servicing costs, they may have opted to issue debt in foreign currency rather than in euro.

Notwithstanding the aforementioned considerations relating to hedging and speculation, the growth in foreign currency debt securities issued by euro area residents has been systematically higher than the growth in euro-denominated issues since the start of Stage Three of EMU. This may be linked to the growing internationalisation of the capital markets, which has encouraged increased currency diversification by euro area debt securities issuers.

Turning to debt securities issued in domestic currency, the difference between growth rates calculated on an adjusted and on an unadjusted basis was small between January 1999 and October 2002 (see Chart E). On average, the difference was only 0.2 percentage point, with a peak of 1.0 percentage point in January 1999.

All in all, the enhancement made to the measurement of growth rates may allow a better understanding of the trends in debt security issuance and in particular that denominated in foreign currencies.

which caused the initial decline in bond yields. In addition, market participants seemed to become more concerned about the impact that tensions in the Middle East would have on oil prices as well as on economic activity. Other factors that contributed to the downward pressure on bond yields in December were macroeconomic data releases, which appeared to signal a somewhat weaker recovery than expected, as well as profit warnings issued by some corporations. The rebound in bond yields in early January was triggered by the release of better than expected data for the US manufacturing sector and the proposal of a new fiscal stimulus package in the United States.

The real yield on US ten-year index-linked government bonds declined by around 30 basis points between the end of November 2002 and 15 January 2003 to stand at 2.2% on the latter date, suggesting that market participants had become generally somewhat less optimistic about long-term growth prospects. As real bond yields fell further than nominal yields, the ten-year break-even inflation rate, calculated as the difference between ten-year nominal bond yields and ten-year index-linked bond yields, increased by around 10 basis points between end-November 2002 and 15 January 2003, to stand at 1.9% on the latter date. However, developments in break-even inflation rates need to be interpreted with some caution owing to the existence of a number of time-

varying premia. Although bond yields were subject to large swings during the period under review, bond market uncertainty, as measured by the implied volatility of options on ten-year US Treasury futures contracts, declined by around 1.2 percentage points between the end of November and 15 January to stand at 7.3% on the latter date.

Japanese government bond yields declined somewhat in December 2002 and early January 2003, reflecting market participants' concerns about the banking system and relatively weak macroeconomic data releases. Between the end of November and 15 January the yields on ten-year government bonds declined by around 15 basis points, standing at a level of around 0.9% on the latter date. These were the lowest levels seen since 1998.

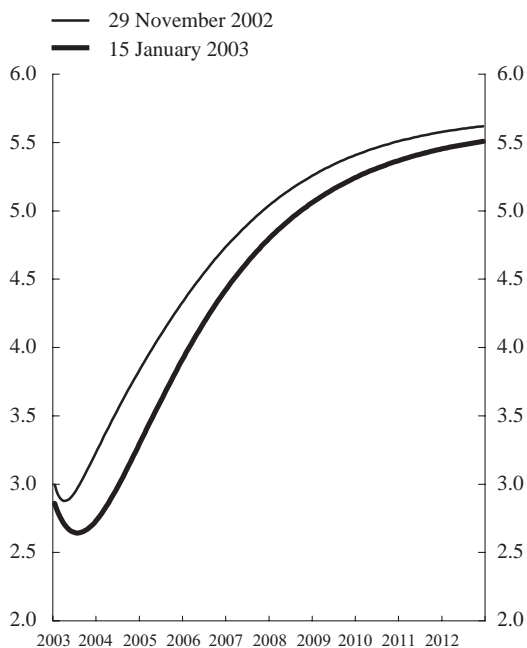
In the euro area, government bond yields saw significant declines in December 2002, with a rebound taking place in early January 2003. As in the United States, the declines in December mainly reflected a market perception of an intensification of geopolitical tensions in the Middle East. Market reactions to survey data releases in the euro area also contributed to the downward pressure on bond yields in December. Later on, in early January, long-term nominal bond yields in the euro area edged up again in parallel with developments in the US bond markets.

Overall, market participants seemed to have somewhat reduced their expectations for

economic growth between end-November 2002 and early January 2003. This can be seen from the fact that real bond yields in the euro area, as measured by the euro area ten-year index-linked bond yield (indexed on the euro area HICP excluding tobacco), declined by around 45 basis points between the end of November and 15 January to stand at 2.3% on the latter date. The more pessimistic views were also reflected in a downward shift in the euro area implied forward overnight interest-rate curve, particularly for short and medium-term maturities, between the end of November and 15 January (see Chart 9). As in the United States, the overall decline in real ten-year yields was larger than the decline in nominal yields, which caused the break-even inflation rate, as measured by the difference between ten-year nominal bond yields and ten-year

**Chart 9**  
**Implied forward euro area overnight interest rates**

(percentages per annum; daily data)

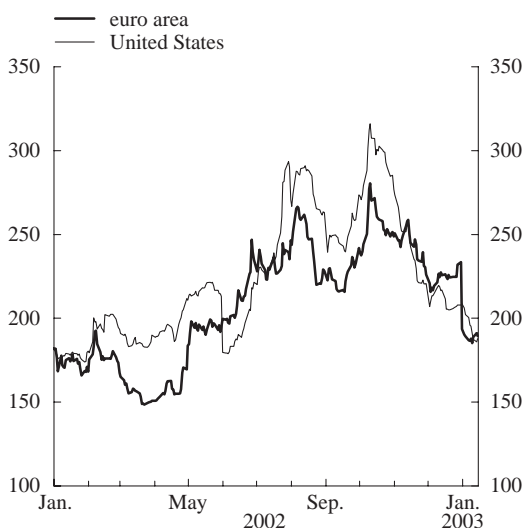


Source: ECB estimate.

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.

**Chart 10**  
**Corporate bond spreads in the euro area and the United States**

(in basis points; daily data; BBB rating)



Sources: Bloomberg and ECB calculations.

Note: Corporate bond spreads are calculated as the difference between seven to ten-year corporate bond yields and seven to ten-year government bond yields.

index-linked bond yields (indexed on the euro area HICP excluding tobacco), to rise by around 15 basis points during the period. A major part of this rise took place in early January as investors apparently shifted funds from government bonds to stocks.

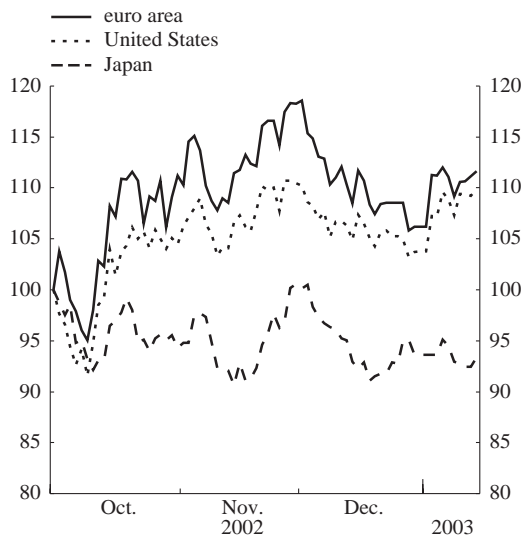
In the corporate bond market, spreads over government bond yields continued to narrow in December 2002 and early January 2003, both in the euro area and in the United States (see Chart 10). This points to some improvement in this segment of the capital markets, although by 15 January spreads still remained slightly higher than at the start of 2002.

### Fall in euro area stock prices in December

Following the rebound in October and November 2002, euro area stock prices fell somewhat in December before rebounding again in early January 2003. Stock prices in the euro area, as measured by the broad Dow Jones EURO STOXX index, decreased

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

(index: 1 October 2002 = 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.

overall by 7% between the end of November and 15 January (see Chart 11). In the United States the Standard & Poor's 500 index increased overall by 1%, while in Japan, the Nikkei 225 index fell by 7% over the same period.

In the United States, stock prices declined throughout most of December 2002, primarily driven by market participants' concerns about geopolitical tensions and profit warnings from some US corporations. The rebound in early January followed the release of better than expected US manufacturing data and the proposal of a new fiscal stimulus package in the United States. Uncertainty, as measured by the implied volatility derived from options on the Standard & Poor's 500, remained close to its average for the past two years in the period between the end of November and 15 January (see Chart 12).

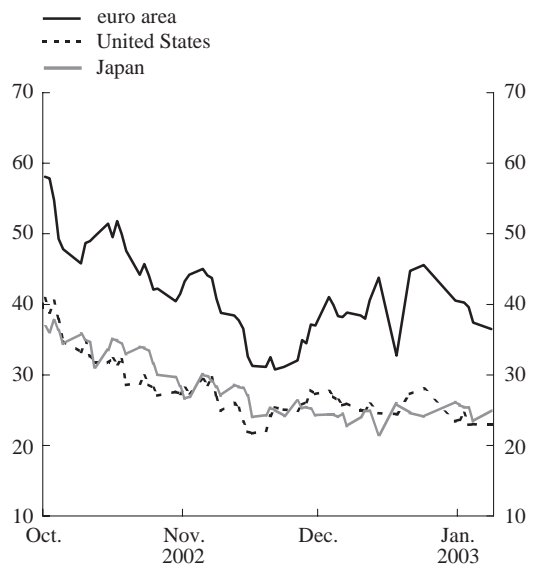
In Japan, the overall decline in stock prices between end-November and 15 January seemed to reflect a combination of global

spillover effects and market concerns about the short-term prospects for the Japanese economy. Uncertainty, as measured by the implied volatility extracted from options on the Nikkei 225 index, was stable between end-November and 15 January, remaining around 4 percentage points lower than the average of the past two years.

In the euro area, stock prices declined markedly during December 2002 before rebounding somewhat in early January. Overall, the decrease in euro area stock prices was broadly based and occurred against a background of geopolitical tensions and continued market concerns about the economic outlook. Moreover, profit warnings, especially from technology companies, airlines, retail companies and insurance corporations, added to the downward pressure on stock prices. The rebound in early January seemed to be a result of positive spillover effects from the United States. By contrast with the United

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

(percentages per annum; 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 the Dow Jones EURO STOXX 50 for the euro area, the Standard & Poor's 500 for the United States, and the Nikkei 225 for Japan.

States and Japan, investor uncertainty in the euro area, as measured by the implied volatility extracted from options on the EURO STOXX index, increased, by 4 percentage points between end-November and 15 January, to reach a level on the latter date some 5 percentage points higher than its two-year average. However, compared with the second and third quarters of 2002, uncertainty has come down substantially.

Euro area aggregate statistics on investment funds are published for the first time in this issue of the ECB's Monthly Bulletin (see Box 3). Investment funds are important investors in both the bond and stock markets. At the end of June 2002, euro area investment funds held bonds and equity amounting to €1,312 billion (19% of GDP) and €1,057 billion (16% of GDP) respectively. The new statistics will be published on a quarterly basis with a lag of around four months.

### **Box 3**

#### **New ECB statistics on euro area investment funds**

For the first time, this issue of the Monthly Bulletin includes the ECB euro area aggregate statistics on investment funds resident<sup>1</sup> in the euro area (see Tables 2.9, 2.10 and 2.11 in the section entitled "Euro area statistics"). These investment funds constitute the most important category within the financial corporations sub-sector headed "Other financial intermediaries, except insurance corporations and pension funds" (OFIs) in the European System of Accounts (ESA 95), accounting for approximately four-fifths of the total OFI assets. These new statistics on investment funds do not cover the money market funds forming part of the population of the monetary financial institutions (MFIs).

A key difference between OFIs and MFIs is that OFIs have no deposits made by non-MFIs on the liabilities side of their balance sheets. The ESA 95 defines OFIs as "all financial corporations and quasi-corporations which are principally engaged in financial intermediation by incurring liabilities in forms other than currency, deposits and/or close substitutes for deposits from institutional units other than monetary financial institutions, or insurance technical reserves". In addition to investment funds, the OFI category also comprises securities and derivatives dealers and financial corporations engaged in lending. Typically, the liabilities of investment funds are shares issued.

OFI data in general, and investment fund data in particular, are important for monetary and financial analyses in several respects. First, changes in investment funds' asset value are transmitted, through the valuation of their shares, to households and firms, indirectly generating wealth effects. Second, since investment funds are large professional investors, their portfolio choices may be indicative of more general trends in portfolio diversification, which is useful for explaining developments in M3, for example. Third, investment fund data provide insight into the euro area financial structure, in particular vis-à-vis the MFI sector.

#### **Main features of the newly published investment fund data**

The newly released quarterly euro area investment fund data are compiled by the ECB, drawing on existing data available in the Eurosystem. The data are not yet fully harmonised within the euro area. The basic definitions used in these investment fund statistics conform with European standards as set out in the ESA 95, wherever possible and appropriate.

Published data refer to end-of-quarter stocks. No data on flows (transactions) are available thus far. Therefore, it follows that only pseudo-growth rates, based on changes in stocks, can be calculated. Owing to a lack of data

*1 The term "resident" refers to institutions located in the euro area, including subsidiaries of parent companies located outside the euro area, and resident branches of institutions which have their head office outside the euro area.*

for Ireland, the euro area aggregates currently cover 11 euro area countries only. This data will be published with a time lag of around four months, with the series starting at the end of 1999.

Euro area aggregates are compiled for (i) all investment funds; (ii) investment funds broken down by investment policy; and (iii) investment funds broken down by restrictions, if any, on the purchase of the funds' shares. With regard to category (ii), i.e. the type of investment policy, five categories have been identified: equity funds; bond funds; mixed funds; real estate funds; and other investment funds. This classification indicates the type of asset in which the fund primarily invests (e.g. if the fund primarily invests in shares and other equity, then it is allocated to the equity funds category). Funds investing in both equity and bonds, whereby neither of the two prevails a priori, are allocated to the "mixed funds" category. Where it is impossible to classify funds under either equity, bond, mixed or real estate funds, they are included in the residual category headed "other funds". With regard to (iii), i.e. access to the fund, a distinction is drawn between general public funds and specialised funds. The latter restricts the purchase of the shares to certain types of investor (e.g. institutional investors).

Euro area investment fund data are available in the section entitled "Statistics" on the ECB's website (<http://www.ecb.int>), together with some methodological notes.

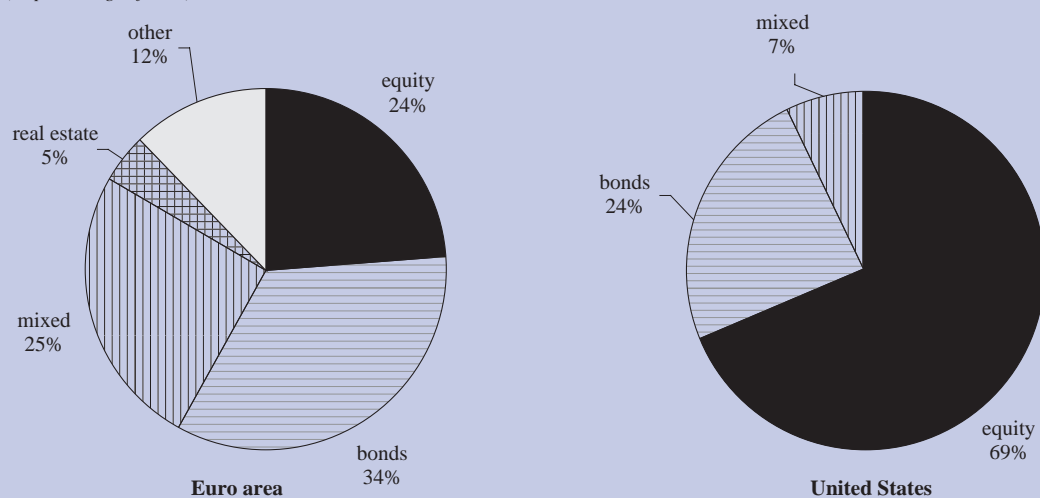
#### Some characteristics of the euro area investment fund industry

The total assets of the investment funds in the euro area (excluding Ireland) amounted to €3,038 billion at the end of the second quarter of 2002. With reference to this period, investment fund activity is strongest in Luxembourg, Germany and France, which have a market share of 26%, 25% and 21% respectively. They are followed by Italy, which has a share of 11%. The total assets of euro area investment funds amounted to 45% of GDP in the second quarter of 2002, which is the same percentage as that of the United States. The total assets of the euro area MFI sector (excluding the Eurosystem) amounted to 266% of GDP in the second quarter of 2002.

A decomposition of euro area investment fund assets by investment policy shows that bond funds are the most important, accounting for around one-third of total investment fund assets in the second quarter of 2002 (see chart). Equity and mixed funds each accounted for around one-quarter of investment fund assets. It is

#### Composition of investment fund assets by investment policy in the second quarter of 2002

(as percentage of total)



Sources: ECB and Investment Company Institute.

Notes: Euro area total assets excluding Ireland. United States net assets of mutual funds excluding money market funds, including closed-end funds, exchange-traded funds and unit investment trust sponsors.

worth noting that in the United States around two-thirds of all investment fund assets are equity fund assets. Consequently, holders of investment fund shares in the euro area may be more sensitive to bond yield variations and less sensitive to stock price changes than those in the United States.

With regard to the breakdown by type of investor, the investment fund industry in both the euro area and the United States predominantly consists of general public funds. However, specialised investor funds are far more important in the euro area (accounting for around 25% of investment fund industry assets) than in the United States (accounting for around 2%).

Over recent years, the importance of bonds in the total asset value of euro area investment funds has increased, whereas the importance of equity has declined (see table below, where bonds are indicated as “securities other than shares”). To a large extent, however, these diverging trends reflect mostly valuation changes to funds which invest in equity.

### **Asset decomposition of total investment funds in the euro area**

*(as percentage of total assets)*

	end-1999	end-2000	end-2001	2002 Q1	2002 Q2
Deposits	7.5	7.0	7.7	7.8	8.0
Securities other than shares	42.1	38.7	41.1	40.2	43.2
<i>of which:</i>					
Securities other than shares up to one year	2.7	1.8	2.0	2.2	2.5
Securities other than shares over one year	39.4	36.9	39.1	38.0	40.7
Shares and other equity	40.9	42.8	38.2	38.8	34.8
Investment fund shares	4.1	5.7	6.6	6.9	7.2
Fixed assets	2.6	3.0	3.4	3.4	3.6
Other assets (including financial derivatives)	2.8	2.8	3.1	3.0	3.3
Total assets	100.0	100.0	100.0	100.0	100.0
<i>Memo item:</i> total assets in EUR billions	2,969	3,256	3,189	3,259	3,038

*Source: ECB.*



## 2 Price developments

### HICP inflation likely to have remained unchanged in December 2002

Annual euro area HICP inflation is likely to have remained unchanged at 2.2% between November and December 2002, according to Eurostat's flash estimate (see Table 2). However, individual country data which have recently become available indicate that a somewhat higher outcome cannot be excluded. In November, the most recent month for which a detailed breakdown of the HICP is available, inflation declined by 0.1 percentage point from the previous month, when it stood at 2.3%. This decline was due to lower year-on-year rates of

change in prices of energy, processed food and services. Meanwhile, the annual rate of change in the HICP excluding unprocessed food and energy also decreased by 0.1 percentage point, from 2.4% in October to 2.3% in November. With regard to short-term movements, the annualised three-month rates of change in both the HICP and the HICP excluding unprocessed food and energy were below their year-on-year rates of change in November 2002. Hence, recent developments in the short-term dynamics are consistent with the expectation that annual inflation will moderate over the coming months.

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

(annual percentage changes, unless otherwise indicated)

	2000	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
				Q1	Q2	Q3	Q4	July	Aug.	Sep.	Oct.	Nov.	Dec.
<b>Harmonised Index of Consumer Prices (HICP) and its components</b>													
Overall index <sup>1)</sup>	2.3	2.5	.	2.6	2.1	2.0	.	1.9	2.1	2.1	2.3	2.2	2.2
<i>of which:</i>													
Goods	2.7	2.5	.	2.2	1.4	1.3	.	1.2	1.4	1.4	1.7	1.8	.
Food	1.4	4.5	.	4.9	2.8	2.2	.	2.1	2.3	2.3	2.2	2.3	.
Processed food	1.1	2.8	.	3.5	3.1	2.9	.	2.9	2.9	2.8	2.6	2.5	.
Unprocessed food	1.7	7.0	.	7.0	2.4	1.3	.	0.9	1.3	1.7	1.6	1.9	.
Industrial goods	3.4	1.5	.	0.9	0.7	0.9	.	0.7	0.9	1.0	1.5	1.5	.
Non-energy industrial goods	0.7	1.1	.	1.8	1.7	1.4	.	1.5	1.4	1.4	1.3	1.3	.
Energy	13.3	2.7	.	-2.1	-2.4	-0.9	.	-1.7	-0.5	-0.4	2.3	2.1	.
Services	1.7	2.5	.	3.1	3.2	3.3	.	3.2	3.3	3.3	3.2	3.1	.
<b>Other price and cost indicators</b>													
Industrial producer prices <sup>2)</sup>	5.5	2.2	.	-0.8	-0.8	-0.1	.	-0.3	-0.1	0.1	0.9	1.1	.
Unit labour costs <sup>3)</sup>	1.2	2.6	.	3.1	2.4	2.3	.	-	-	-	-	-	-
Labour productivity <sup>3)</sup>	1.4	0.1	.	-0.4	0.1	0.6	.	-	-	-	-	-	-
Compensation per employee <sup>3)</sup>	2.6	2.7	.	2.7	2.5	2.8	.	-	-	-	-	-	-
Total hourly labour costs <sup>4)</sup>	3.3	3.4	.	4.0	3.6	3.7	.	-	-	-	-	-	-
Oil prices (EUR per barrel) <sup>5)</sup>	31.0	27.8	26.5	24.6	27.8	27.2	26.5	25.9	27.0	28.9	27.9	24.2	27.1
Commodity prices <sup>6)</sup>	16.7	-7.6	-1.7	-3.6	-5.5	-1.6	4.4	-7.6	-1.3	4.7	7.8	3.4	2.1

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.

1) HICP inflation in December 2002 refers to Eurostat's flash estimate.

2) Excluding construction.

3) Whole economy.

4) Whole economy (excluding agriculture, public administration, education, health and other services).

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

6) Excluding energy. In euro. Weighted according to extra-euro area commodity imports.

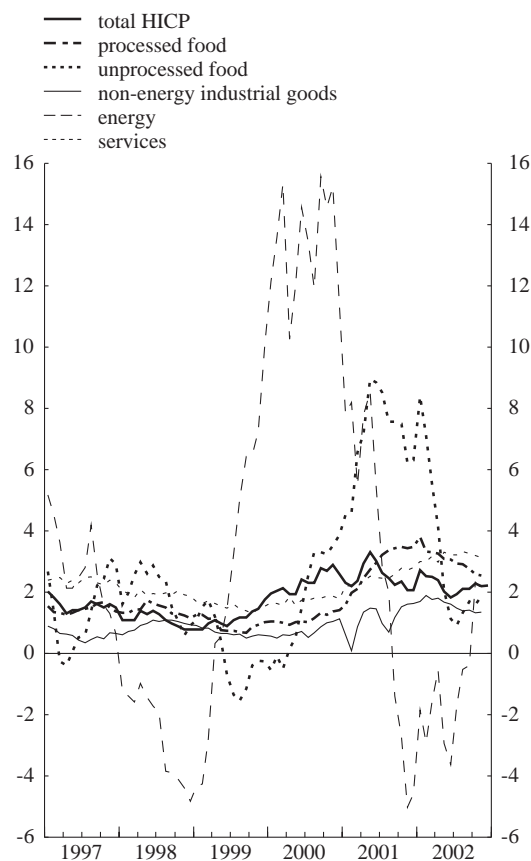
The year-on-year rates of change in the two more volatile components of the HICP, unprocessed food and energy, moved in opposite directions in November 2002. Despite a negative month-on-month rate of change in unprocessed food prices in November 2002 (due to lower prices of fruit and vegetables), a base effect led to an increase in the year-on-year rate of change to 1.9% in November 2002, from 1.6% in the previous month. By contrast, the annual rate of change in energy prices declined from 2.3% to 2.1% between October and November 2002 (see Chart 13), mainly explained by lower oil prices in euro in November. However, an unfavourable base effect, coupled with higher euro-denominated oil prices, is likely to have pushed up the year-

on-year rate of change of the energy price component in December 2002.

The year-on-year rate of increase in the HICP excluding unprocessed food and energy declined to 2.3% in November 2002, from 2.4% in October, reflecting a 0.1 percentage point decrease in the year-on-year rates of change in processed food (to 2.5%) and services prices (to 3.1%). The latter component was strongly influenced by lower prices of package holidays in November 2002. Meanwhile, the year-on-year rate of change in non-energy industrial goods prices remained unchanged at 1.3% between October and November 2002. However, it has been on a downward path since the beginning of 2002 – mainly explained by the unwinding of the indirect effects associated with the past price shocks.

**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.

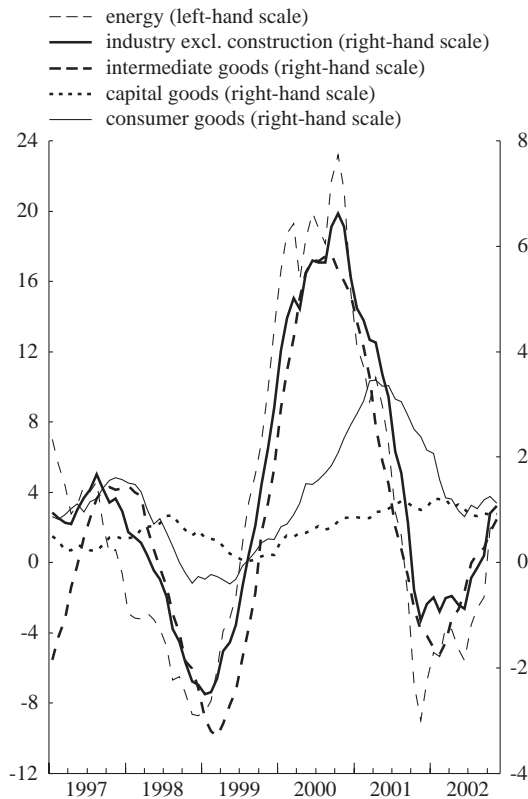
#### Producer price pressures remained moderate in November 2002

The annual rate of increase in euro area industrial producer prices increased to 1.1% in November 2002, from 0.9% in October (see Chart 14). This development solely reflects base effects from energy and intermediate goods prices. Further along the production chain producer price pressures remained moderate. Whereas the year-on-year rate of change in capital goods prices remained unchanged at 0.9% between October and November 2002, the year-on-year rate of change in consumer goods prices declined by 0.1 percentage point, to 1.1% over the same period.

The Purchasing Managers' Survey of December 2002 also supports the view that producer price pressures remained moderate. The Eurozone Price Index (EPI) dropped somewhat further, although it was still above 50 in December, suggesting only a slight upward pressure on producer prices (see Chart 15). Weak demand for non-oil raw materials and the appreciation of the euro against the US dollar were quoted by the respondents to the survey as the main

**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).

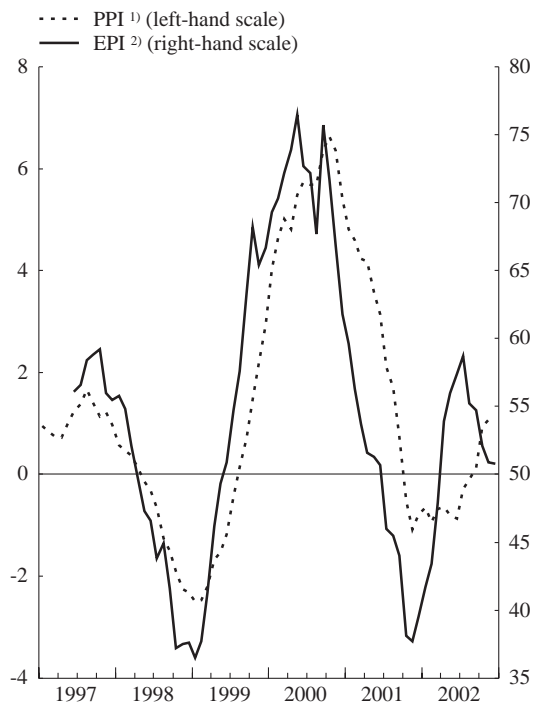
reasons behind the decline. Nonetheless, further base effects stemming from the energy and intermediate goods components will have had an upward impact on the overall rate of change in producer prices in December 2002. Moreover, the increase in oil prices, from €24.2 per barrel in November to €27.1 in December, is likely to exert some additional upward pressures on producer prices in the very short term.

**Growth in compensation per employee increased in the third quarter of 2002**

The annual growth rate in compensation per employee increased to 2.8% in the third quarter of 2002, from 2.5% in the second quarter (see Chart 16). In addition, according

**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.

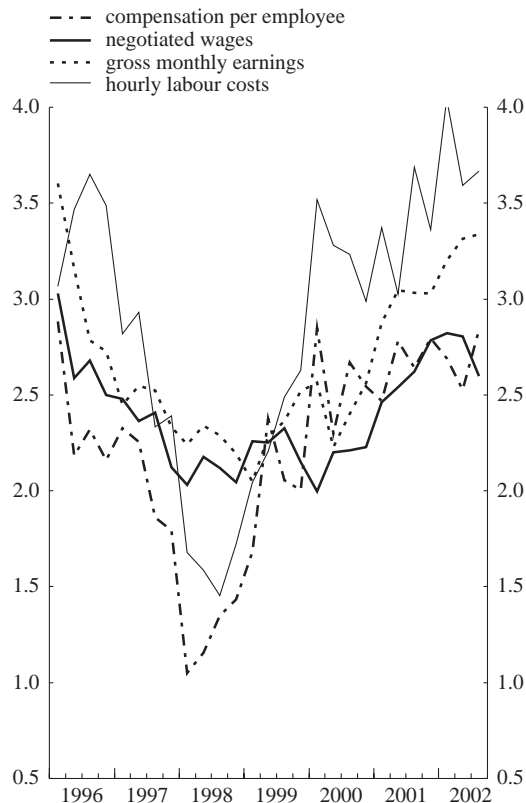
to the second estimate released by Eurostat, total hourly labour costs in the non-agricultural business sector are estimated to have increased by 3.7% year-on-year in the third quarter of 2002, which is 0.1 percentage point higher than the previous quarter. At the same time, the annual growth rate in gross monthly earnings was unchanged between the second and third quarter of 2002, whereas the annual growth rate of negotiated wages decreased from 2.8% to 2.6% over the same period.

Labour productivity growth recovered in the second and third quarters of 2002 after two quarters of negative growth. As a result,

**Chart 16**

**Selected labour cost indicators for the euro area**

(annual percentage changes)



Sources: Eurostat, national data and ECB calculations.

whole economy unit labour cost growth declined significantly, from 3.1% year-on-year

in the first quarter to 2.4% in the second quarter, and then to 2.3% in the third quarter. Hence, the increase in compensation per employee growth between the second and third quarters was more than offset by improvements in productivity growth.

**HICP inflation is expected to ease over the coming months**

The recent increase in oil prices, if sustained, is likely to exert some upward pressure on HICP inflation in the very short term. In addition, various increases in indirect taxes and administered prices are expected to add further pressure on consumer prices in early 2003. By contrast, base effects (from unprocessed food and services prices) will work in the opposite direction and contribute to a reduction in annual HICP inflation figures in the first months of 2003. Moreover, the recent appreciation of the exchange rate of the euro should help to dampen consumer price inflation via lower import price increases. Inflationary pressures should also be contained by the current subdued demand conditions. All these factors taken together are supportive of the view that annual HICP inflation is likely to fall and eventually stabilise at a level below 2% in the course of 2003.

**3 Output, demand and labour market developments**

**Second estimate confirms moderate real GDP growth in the third quarter of 2002**

According to Eurostat's second estimate, in the third quarter of 2002 real GDP increased by 0.3% quarter on quarter, which was unchanged from the first estimate. There were only minor revisions to components, with some offsetting downward revisions to imports and changes in inventories. Overall, therefore, the pattern of real GDP growth did not change compared with the first release. In particular, the second estimate confirmed the picture of subdued growth in the course of 2002. It also confirmed that the contribution to growth from final

domestic demand (i.e. excluding changes in inventories) continued to rise in the third quarter, while that from changes in inventories turned negative. The contribution of net exports to real GDP growth was positive in the third quarter, as strong and rising growth in exports more than offset growth in imports (see Table 3).

**Small rise in industrial production in October 2002**

Industrial activity began the fourth quarter with little momentum. Euro area industrial

**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>				
	1999	2000	2001	2001 Q3	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2001 Q3	2001 Q4	2002 Q1	2002 Q2	2002 Q3
Real gross domestic product	2.8	3.5	1.4	1.3	0.5	0.3	0.7	0.8	0.2	-0.2	0.4	0.3	0.3
<i>of which:</i>													
Domestic demand	3.5	2.9	0.9	0.7	-0.2	-0.3	-0.2	0.2	-0.3	-0.3	0.1	0.3	0.1
Private consumption	3.5	2.5	1.8	1.8	1.7	0.6	0.4	0.7	0.1	0.1	-0.1	0.3	0.5
Government consumption	2.0	1.9	1.9	2.2	1.6	2.2	2.5	2.3	0.4	0.5	0.8	0.7	0.3
Gross fixed capital formation	6.0	4.8	-0.7	-1.6	-2.5	-3.1	-3.6	-2.9	-0.7	-0.8	-1.0	-1.2	0.1
Changes in inventories <sup>3), 4)</sup>	-0.2	0.0	-0.4	-0.4	-0.8	-0.4	-0.1	-0.1	-0.3	-0.2	0.2	0.2	-0.2
Net exports <sup>3)</sup>	-0.6	0.6	0.5	0.6	0.6	0.6	0.9	0.7	0.5	0.0	0.3	0.1	0.2
Exports <sup>5)</sup>	5.3	12.6	2.7	1.4	-2.6	-2.5	0.5	2.8	-0.1	-1.1	0.0	1.7	2.2
<i>of which: goods</i>	5.0	12.5	2.6	1.3	-2.8	-1.8	0.8	3.6	-0.1	-1.3	0.7	1.5	2.8
Imports <sup>5)</sup>	7.4	11.3	1.4	-0.3	-4.4	-4.2	-1.9	1.2	-1.3	-1.2	-0.9	1.6	1.7
<i>of which: goods</i>	7.1	11.3	0.6	-1.4	-5.6	-4.1	-2.2	1.8	-1.7	-1.1	-0.8	1.4	2.3
Real gross value added:													
Agriculture and fishing <sup>6)</sup>	2.8	-0.8	-1.2	-1.1	-0.6	1.1	1.1	0.2	1.7	-0.4	-0.1	-0.1	0.8
Industry	1.3	3.7	0.7	0.5	-1.5	-1.8	-0.6	-0.2	0.0	-1.3	0.5	0.2	0.4
Services	3.3	3.9	2.3	2.2	1.7	1.4	1.5	1.3	0.4	0.2	0.4	0.5	0.2

*Sources: Eurostat and ECB calculations.**Note: Data refer to the Euro 12 (including periods prior to 2001).**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) Including acquisitions less disposals of valuables.**5) 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.**6) Also includes hunting and forestry.*

production (excluding construction) increased by 0.1% month on month in October 2002, after it was unchanged in September. However, there are indications that the October outcome might overstate the weakness of industrial production, as it partly reflects influences from factors such as strikes and working day effects. Looking at three-month averages, industrial production increased by 0.1% in the period August to October, compared with the period May to July, following zero growth in the three-month period including September (see Table 4). Over the same period, the three-month on three-month growth rate in manufacturing was unchanged at 0.1%.

In terms of the main industrial groupings, the latest data present a mixed picture. Compared with the previous three-month period, in the three-month period including

October the rate of growth declined further in industries producing capital goods and durable consumer goods. In non-durable consumer goods industries, the rate of growth became less negative. The only industry that recorded continued positive three-month on three-month growth rates was the intermediate goods industry.

### **Business survey data provide mixed signals for activity at the end of 2002**

Both the European Commission's industrial confidence indicator and the Purchasing Managers' Index (PMI) increased somewhat in the period October/November 2002, following a deterioration in the third quarter (see Chart 17). In December the two indicators moved in opposite directions, with the PMI falling and the industrial confidence

**Table 4****Industrial production in the euro area***(annual percentage changes, unless otherwise indicated)*

	2000	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	
			Aug.	Sep.	Oct.	Aug.	Sep.	Oct.	May	June	July	Aug.	Sep.	
							month-on-month			three-month moving averages				
Total industry excluding construction by main industrial groupings:	5.5	0.4	-1.2	-0.4	0.7	0.2	0.0	0.1	0.6	0.4	0.4	0.0	0.1	
Total indus. excl. construction and energy <sup>1)</sup>	6.0	0.2	-1.4	-0.7	0.1	0.7	-0.4	-0.3	0.6	0.2	0.4	0.0	0.1	
Intermediate goods	5.9	-0.8	0.0	1.3	1.1	1.4	-0.7	-0.8	0.8	0.1	0.3	0.3	0.3	
Capital goods	9.4	1.3	-2.5	-2.7	-0.7	0.1	-0.5	0.4	0.9	0.7	1.1	0.3	0.2	
Consumer goods	2.2	0.4	-2.6	-1.5	-0.1	0.7	-0.3	-0.1	0.0	-0.2	-0.1	-0.5	-0.2	
Durable consumer goods	6.5	-2.5	-9.2	-3.0	-2.4	-1.7	1.4	-1.4	-1.0	-0.5	0.4	-0.1	-0.9	
Non-durable consumer goods	1.4	1.0	-1.6	-1.2	0.0	0.8	-0.3	0.0	0.4	0.1	-0.2	-0.6	-0.2	
Energy	2.0	1.2	0.0	0.9	4.0	-0.6	0.6	1.1	1.2	1.2	0.4	-0.5	-0.2	
Manufacturing	5.9	0.2	-1.6	-0.4	0.3	0.0	0.1	-0.2	0.7	0.3	0.4	0.1	0.1	

*Sources: Eurostat and ECB calculations.**Notes: Annual percentage changes are calculated using data adjusted for variations in the number of working days; percentage changes on the previous month and three-month centred moving averages against the corresponding average three months earlier are calculated using seasonally and working day adjusted data. Data refer to the Euro 12 (including periods prior to 2001).**1) Manufacturing excluding the manufacture of coke and refined petroleum products, but including non-energy mining and quarrying activities.*

indicator rising. On average, in the fourth quarter of 2002 the PMI was lower than in the third quarter, while the industrial confidence indicator was higher (see Table 5). In both cases, however, the indicators

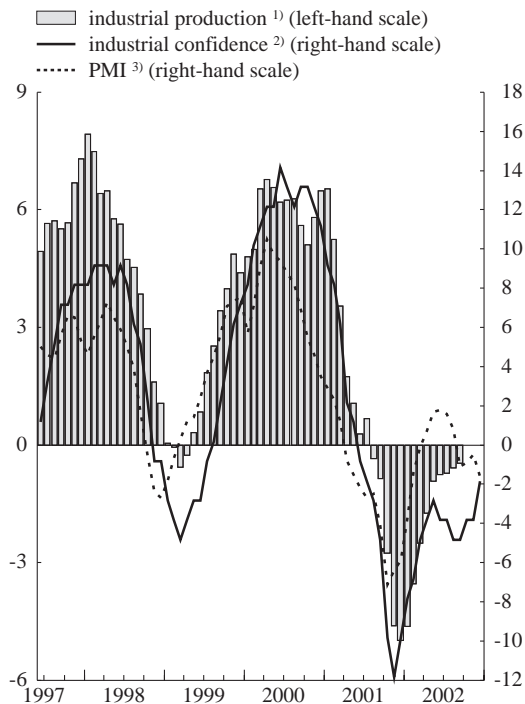
remained at relatively low levels and thus continued to point to weak activity in manufacturing. In terms of individual components, the rise in the industrial confidence indicator in December was mainly

**Table 5****Results from European Commission Business and Consumer Surveys for the euro area***(seasonally adjusted data)*

	2000	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
				Q1	Q2	Q3	Q4	July	Aug.	Sep.	Oct.	Nov.	Dec.
Economic sentiment index <sup>1)</sup>	2.5	-2.8	-1.9	0.3	0.3	-0.4	-0.3	-0.3	-0.3	0.3	-0.2	-0.4	0.1
Consumer confidence indicator <sup>2)</sup>	12	6	0	1	3	1	-3	1	0	2	-1	-3	-5
Industrial confidence indicator <sup>2)</sup>	12	-1	-5	-7	-4	-5	-3	-4	-5	-5	-4	-4	-2
Construction confidence indicator <sup>2)</sup>	16	10	1	5	3	-2	-3	0	-4	-2	-2	-4	-2
Retail trade confidence indicator <sup>2)</sup>	5	0	-9	-9	-11	-10	-8	-10	-9	-10	-9	-7	-9
Services confidence indicator <sup>2)</sup>	9	-6	-20	-18	-16	-22	-25	-21	-23	-21	-25	-25	-26
Business climate indicator <sup>3)</sup>	1.3	-0.1	-0.5	-0.8	-0.5	-0.5	-0.4	-0.4	-0.6	-0.5	-0.4	-0.4	-0.2
Capacity utilisation (%) <sup>4)</sup>	84.4	83.1	.	81.1	81.1	81.3	.	81.0	-	-	81.5	-	-

*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).**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.**4) Data are collected in January, April, July and October of each year. The quarterly figures shown are the average of two successive surveys, i.e. the surveys conducted at the beginning of the quarter in question and at the beginning of the following quarter. Annual data are derived from quarterly averages.*

**Chart 17**  
**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.

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

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

due to less pessimistic production expectations, but there was also an improvement in the assessment of order books and stocks of finished products. The decline in the PMI largely reflected a deterioration in new orders and in output.

With regard to the survey data for the market services sector, both the European Commission's services confidence indicator and the activity index in the services PMI survey declined in December 2002 after some positive indications in the previous month. On average in the fourth quarter, both indicators were somewhat lower than in the third quarter. The decline in the services confidence indicator in December was mostly

due to worsened demand expectations. As regards the PMI survey, while current business activity declined, expectations improved for the first time since mid-2002.

### Consumer confidence declined further in December 2002

The latest monthly indicators sent mixed signals concerning the strength of private consumption in the fourth quarter of 2002.

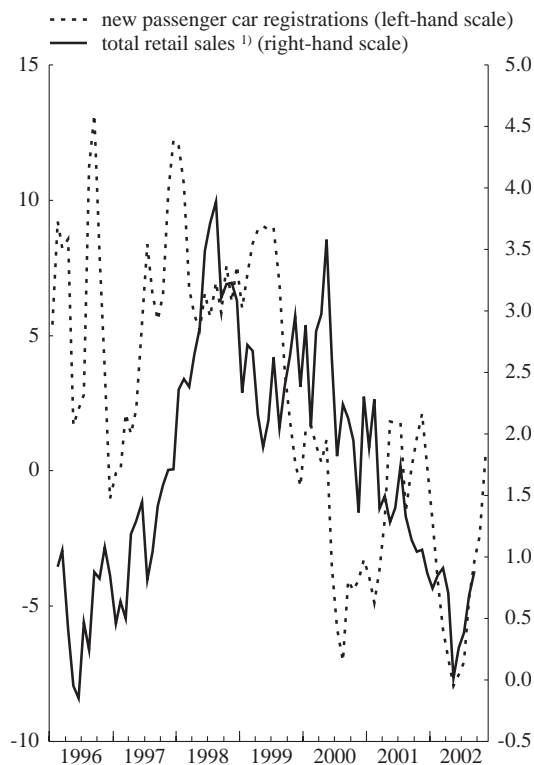
On the one hand, the European Commission's consumer confidence indicator declined further in December 2002, for the third consecutive month, and is now at its lowest level for approximately six years (see Table 5). The decline in December mainly reflects a further strong deterioration in expectations for the general economic situation and for unemployment. By contrast, households' expectations of their own financial situation were unchanged. This suggests that consumer sentiment is currently more affected by the ongoing general uncertainty arising from geopolitical tensions and from developments in financial and labour markets than by household-specific factors.

On the other hand, retail sales volumes increased by 0.7% month on month in October, following a decline in September. In terms of three-month on three-month changes, the rate of growth in the period including October was unchanged from the rate in the three-month period including September. Measured in year-on-year terms, the rate of growth in the three-month averages continued to increase gradually but remained below 1% (see Chart 18). The European Commission's retail confidence indicator fell somewhat in December 2002, but, on average, in the fourth quarter it was somewhat higher than in the third quarter. This would be consistent with a rise in the year-on-year growth rate of retail sales in late 2002. New passenger car registrations increased considerably in December and, in the fourth quarter as a whole, were more than 4% higher than in the third quarter.

## Chart 18

### 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.

### Uncertainty remains dominant feature of the outlook for growth

The information from recent indicators is, overall, in line with previous expectations for

continued moderate real GDP growth at the turn of the year. Looking further ahead, a number of factors such as lower inflation and low real interest rates should support a gradual recovery in growth in 2003. However, in the face of the ongoing high economic uncertainty in the euro area and in the world economy at large, the precise timing and strength of this recovery remain difficult to predict.

### Unemployment rate unchanged in November 2002

The standardised rate of unemployment for the euro area remained unchanged in November 2002, at 8.4% of the labour force (see Table 6). However, in terms of the number of unemployed persons, this conceals a further monthly increase of around 63,000. After several months of smaller increases over the summer, unemployment has once again risen at a rate comparable to that of the first half of 2002. Overall, the number of unemployed in the euro area reached 11.7 million in November.

The unemployment rate for those under 25 rose from 16.1% in October to 16.2% in November 2002. Increases in the number of young unemployed appear to have regained momentum in the autumn. Similarly, while the unemployment rate for those aged 25 years and over remained unchanged in November at 7.4%, this figure concealed a rise in the number of unemployed similar in

## Table 6

### Unemployment in the euro area

(as a percentage of the labour force; seasonally adjusted)

	1999	2000	2001	2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 June	2002 July	2002 Aug.	2002 Sep.	2002 Oct.	2002 Nov.
Total	9.4	8.5	8.0	8.0	8.1	8.2	8.3	8.3	8.3	8.3	8.3	8.4	8.4
Under 25 years <sup>1)</sup>	18.5	16.7	15.7	15.7	15.8	16.1	16.1	16.2	16.1	16.1	16.1	16.1	16.2
25 years and over	8.2	7.4	7.0	7.0	7.1	7.2	7.3	7.2	7.3	7.3	7.3	7.4	7.4

Source: Eurostat.

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

1) In 2001 this category represented 22.9% of total unemployment.



size to that of the previous month and significantly larger than the increases recorded during the summer.

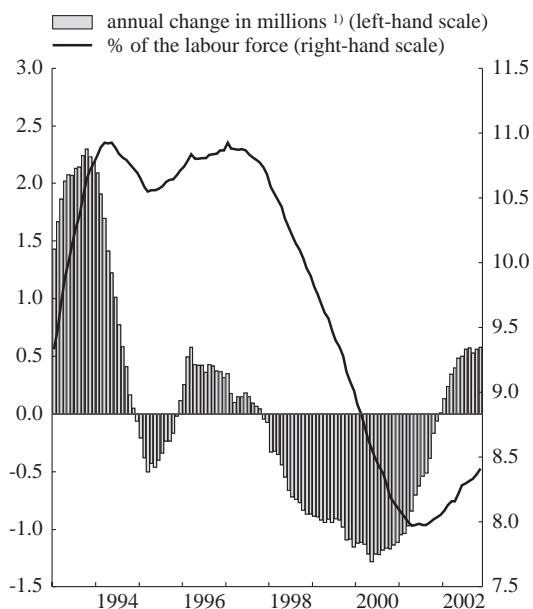
### Negative employment growth in the third quarter of 2002

Confirming previous estimates, national accounts employment data show that employment declined by 0.1% in the third quarter of 2002 compared with the second quarter (see Table 7). The annual rate of growth in employment continued to slow, from 0.5% in the second quarter to 0.3% in the third, reaching its lowest level since 1994.

All sectors have seen a further weakening of employment growth. While the decline in employment in industrial sectors had appeared to slow somewhat in the second quarter, in the third quarter it increased substantially again: quarter on quarter employment fell by 0.4% in industry excluding construction, and by 0.8% in construction. Meanwhile, employment growth in services, albeit still positive, fell by 0.1 percentage point to 0.1% quarter on quarter. This was mainly due to a marked slowdown in employment

### 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).

1) Annual changes are not seasonally adjusted.

growth in finance and business services, which declined from 0.6% to zero between the second and the third quarters of 2002. The level of employment in other market-related

### Table 7 Employment growth in the euro area

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

	1999	2000	2001	2001	2001	2002	2002	2002	2001	2001	2002	2002	2002
				Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3
	Quarterly rates <sup>1)</sup>												
Whole economy	1.8	2.1	1.4	1.2	0.8	0.7	0.5	0.3	0.2	0.2	0.1	0.0	-0.1
<i>of which:</i>													
Agriculture and fishing <sup>2)</sup>	-2.6	-1.6	-0.8	-1.1	-1.6	-2.2	-1.9	-1.9	-0.9	-0.5	-0.3	-0.2	-0.8
Industry	0.4	0.9	0.3	0.1	-0.5	-1.0	-1.0	-1.3	-0.2	-0.3	-0.4	-0.2	-0.5
Excluding construction	-0.2	0.6	0.3	0.0	-0.6	-1.1	-1.1	-1.2	-0.3	-0.3	-0.4	-0.2	-0.4
Construction	2.0	1.6	0.3	0.3	-0.2	-0.7	-0.8	-1.5	-0.1	-0.2	-0.4	-0.1	-0.8
Services	2.7	2.9	1.9	1.8	1.5	1.6	1.4	1.1	0.4	0.4	0.4	0.2	0.1
Trade and transport <sup>3)</sup>	2.3	2.8	1.5	1.4	1.2	1.6	1.0	0.4	0.6	0.3	0.2	-0.2	0.0
Finance and business <sup>4)</sup>	5.6	6.0	3.8	3.3	2.8	1.8	1.7	1.2	0.5	0.5	0.0	0.6	0.0
Public administration <sup>5)</sup>	1.8	1.5	1.4	1.4	1.2	1.6	1.5	1.5	0.2	0.4	0.6	0.2	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.

services (i.e. trade, transport and communications) was unchanged in the third quarter. This is a slight improvement when compared with the decline observed in the second quarter.

Employment expectations up to the end of 2002 do not indicate an improvement in employment prospects in the short-term and generally underline the risks of a further reduction in net job creation. According to the latest PMI survey results, employment

developments were negative both in manufacturing and services until the end of the year. Similarly, according to the European Commission Business and Consumer Surveys, employment expectations for the last quarter of 2002 point to a further deterioration in employment in construction and a continuation of weak employment growth in retail trade. In sum, survey evidence tends to indicate that employment may have continued to decline in the fourth quarter of 2002.

## 4 Exchange rate and balance of payments developments

### **Euro appreciated in December 2002 and first half of January 2003**

In December 2002 and in the first half of January 2003 the euro appreciated against all major currencies with the exception of the Swiss franc. The appreciation was particularly pronounced against the US dollar and, to a lesser extent, the pound sterling and the Japanese yen.

Throughout the first weeks of December, the US dollar continued to weaken against the background of ongoing uncertainty surrounding the US economic outlook and fiscal plans as well as of the persistence of the current account deficit. Towards the end of 2002 and in the first half of January 2003 rising geopolitical tension and the subsequent increase in investors' home bias were quoted as exerting further downward pressure on the US currency (see Chart 20). At the same time, economic data releases in the United States continued to point towards slow economic recovery, amid worsening labour market conditions and sluggish private sector investment growth. The Federal Reserve's decision on 10 December to keep interest rates unchanged was, like the announcement by the ECB to cut rates by 50 basis points on 5 December, widely anticipated by the markets and had no notable effect on exchange rates. On 15 January 2003 the euro was quoted at USD 1.05, that is 6.0% above its level at the end of November 2002 and about 11% higher than its 2002 average.

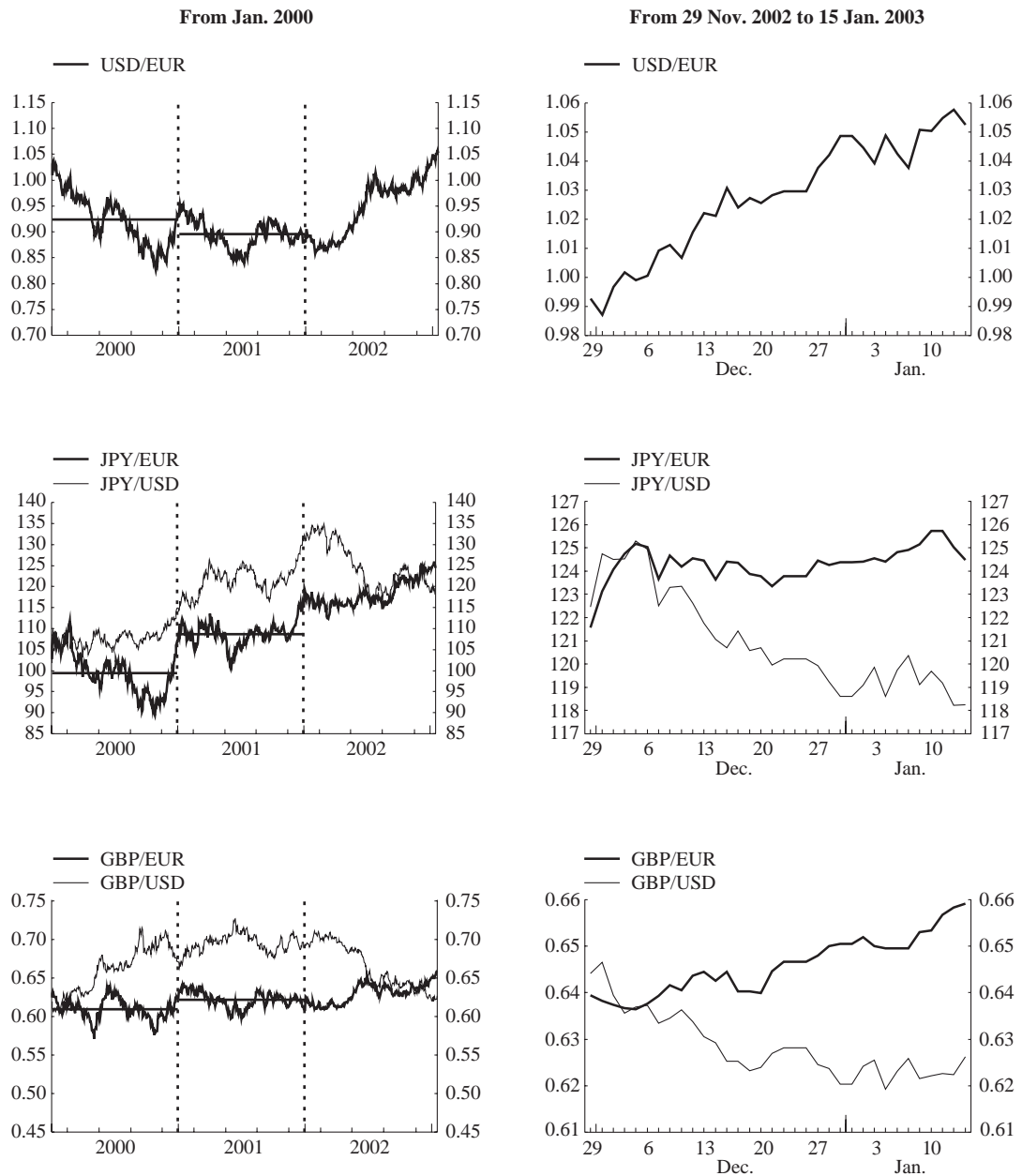
Against the Japanese yen, the euro, after appreciating during the first few days of December 2002, broadly stabilised at a higher level throughout the rest of the period (see Chart 20). These developments in the euro/yen exchange rate seem to have been associated with the deterioration in the short-term economic outlook for Japan which has mostly stemmed from the decline of Japanese exports. However, the Japanese yen appreciated sharply against the US dollar in December 2002, in line with the more broad-based weakening of the US currency. On 15 January 2003 the euro was quoted at JPY 124, 2.4% higher than at the end of November 2002 and 5.4% above its 2002 average.

In December 2002 and throughout the first half of January 2003 the pound sterling depreciated against the euro (see Chart 20). This weakening was associated with some concerns that the UK economic outlook could become slightly less positive than had earlier been anticipated. At the same time, the pound sterling strengthened against the US dollar, an appreciation which partly reflects the rather wide interest rate differentials in favour of the pound sterling. On 15 January 2003 the euro traded against the pound sterling at GBP 0.66, about 3.1% higher than at the end of November 2002 and about 4.8% above its 2002 average.

## Chart 20

### Patterns in exchange rates

(daily data)



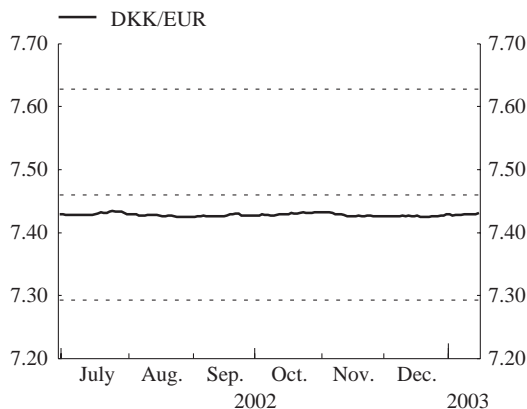
Source: ECB.

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

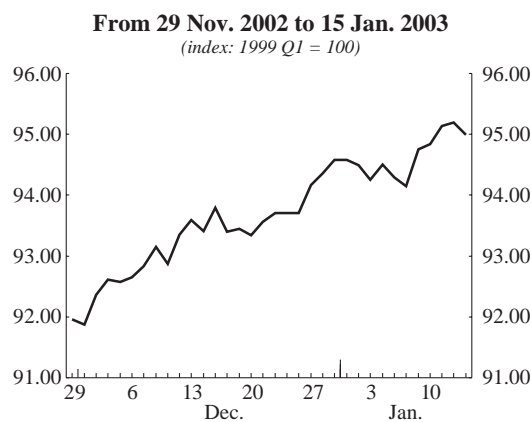
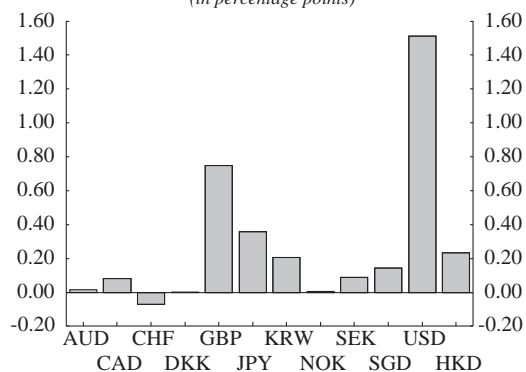
Turning to other European currencies, the Danish krone continued to fluctuate in a narrow range slightly below its central parity in ERM II (see Chart 21). The euro appreciated against the Swedish krona while easing against the Swiss franc. The Swiss currency saw a more broad-based appreciation against the other major currencies during the period under review,

due mainly to safe haven flows associated with the geopolitical situation. On 15 January 2003 the euro traded against the Swedish krona at SEK 9.17, 1.4% below its 2002 average, while against the Swiss franc it stood at CHF 1.46, close to its average 2002 level.

In the light of the above developments, the nominal effective exchange rate of the euro –

**Chart 21****Patterns in exchange rates within ERM II***(daily data)*

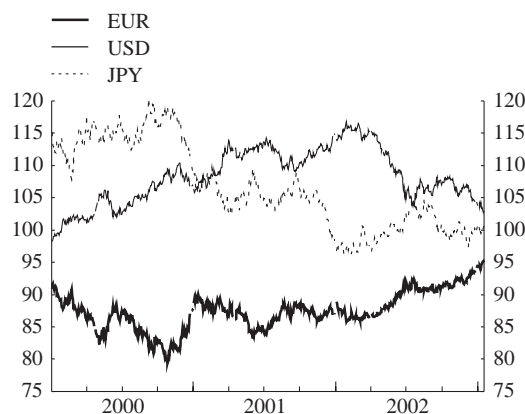
Source: ECB.

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)***From 29 Nov. 2002 to 15 Jan. 2003***(index: 1999 Q1 = 100)***Contributions to EER changes<sup>2)</sup>***(in percentage points)*

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.

**Chart 23****Effective exchange rates of the euro, the US dollar and the Japanese yen<sup>1)</sup>***(daily data; index: 1999 Q1 = 100)*

Source: ECB.

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

as measured against the currencies of 12 major trading partners of the euro area – was, on 15 January 2003, 3.3% higher than its end-November 2002 level (see Chart 22) and almost 6.0% above its average level in 2002. In nominal effective terms, the US dollar depreciated by about 3.5% in the period under review and on 15 January 2003 it stood more than 6% below its annual average for 2002 (see Chart 23). Over the same period, in nominal effective terms, the Japanese yen strengthened somewhat. On 15 January 2003 it was 1.1% stronger than at the end of November 2002 and almost 1% stronger than its average level in 2002 (see Chart 23).

**Current account surplus decreased slightly in October 2002**

The euro area current account showed a surplus of €3.7 billion in October 2002 compared with €4.1 billion in October 2001. This slight decrease was due mainly to the fact that the increase in the services surplus was more than offset by the rise in the income and the current transfers deficits. The goods surplus grew only marginally between October 2001 and October 2002 (see Table 8).

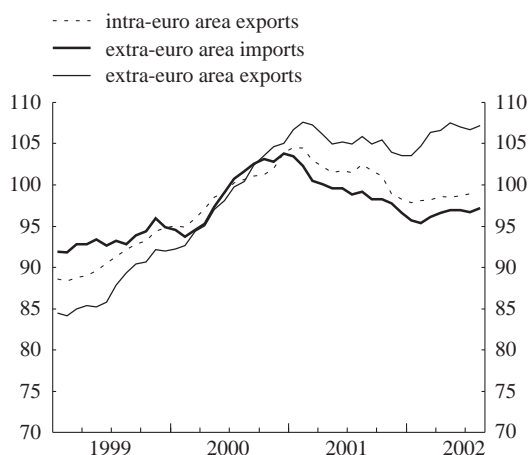
During the first ten months of 2002 the cumulated current account balance shifted from a deficit of €18.7 billion over the same period in 2001 to a surplus of €40.9 billion. This development resulted largely from a substantial €51.4 billion rise in the goods surplus and from an increase in the services surplus, while the deficits for both income and current transfers remained broadly unchanged. The rise in the goods surplus was due mostly to a decline (-4.0%) in the value of imports, combined with a small increase (2.2%) in that of exports.

Turning to developments in extra-euro area trade volumes and prices since the beginning of 2002 (data are available up to July 2002; see Table 9.1 in the “Euro area statistics” section), both exports and imports of goods were somewhat sluggish, particularly on the imports side (see Charts 24 and 25).

Although extra-euro area export volumes rose in response to the recovery in foreign demand in the course of 2002, this increase

**Chart 25**  
**Intra and extra-euro area trade volumes<sup>1)</sup>**

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



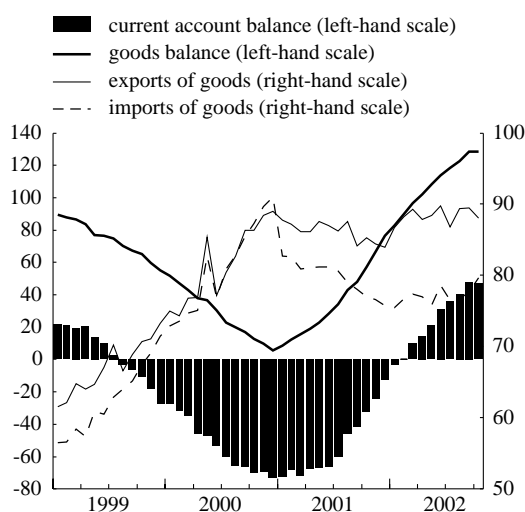
Sources: Eurostat and ECB calculations based on Eurostat data.  
 1) The latest extra-euro area observations are for August 2002, whereas the latest intra-euro area observations are for July 2002. Both are partly based on estimates.

was not fully reflected in value terms as it was partly offset by a fall in extra-euro area export prices (as measured by export unit value indices; see Chart 26). The decline in extra-euro area export prices suggests that euro area exporters might have cut profit margins in an effort to offset the loss in competitiveness resulting from the appreciation of the euro.

Meanwhile, the sluggish growth of import values in the first seven months of 2002 was due to both extra-euro area import volumes and import prices remaining broadly flat during this period and below their 2001 levels (see Charts 25 and 26). The lower level of import volumes since the beginning of 2002 mainly reflects weak euro area domestic demand and seems to be particularly associated with a fall in expenditure on some import-intensive categories, especially capital goods. Developments in intra-euro area import volumes (which are, by definition, equal to intra-euro area export volumes) in the first seven months of 2002 broadly mirrored the evolution of extra-euro area imports over the same period, also reflecting subdued euro area demand.

**Chart 24**  
**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.

## Net inflows of portfolio investment continued in October 2002

The euro area recorded net inflows of €14.4 billion of combined direct and portfolio investment in October 2002 mainly as a result of net portfolio investment inflows of €19.4

billion. At the same time, the direct investment account of the euro area registered net outflows of €5.0 billion (see Table 8). Direct investment developments in the euro area in October followed those in the recent past when this account generally registered small monthly flows.

**Table 8**  
**Balance of payments of the euro area**

(EUR billions; not seasonally adjusted)

	2001 Jan. - Oct.	2001 Oct.	2002 Jan. - Oct.	2002 Aug.	2002 Sep.	2002 Oct.
<b>Current account balance</b>	-18.7	4.1	40.9	9.7	8.0	3.7
Credits	1428.4	148.8	1416.1	132.8	139.5	150.2
Debits	1447.2	144.7	1375.2	123.1	131.5	146.5
Goods balance	56.5	11.4	107.9	11.7	11.3	11.7
Exports	862.9	94.5	881.8	80.8	88.4	97.6
Imports	806.4	83.1	773.9	69.1	77.1	85.9
Services balance	2.0	0.5	9.3	1.3	3.9	1.4
Exports	268.1	28.0	271.6	28.4	29.4	28.7
Imports	266.2	27.5	262.3	27.1	25.5	27.3
Income balance	-37.8	-2.4	-37.8	-0.1	-2.6	-3.1
Current transfers balance	-39.5	-5.4	-38.4	-3.2	-4.5	-6.3
<b>Capital account balance</b>	8.0	0.4	10.4	0.7	1.2	1.5
<b>Financial account balance</b>	-30.5	-22.0	-113.5	-11.8	-20.3	-21.5
Direct investment	-114.0	4.0	-29.7	1.7	-3.4	-5.0
Abroad	-220.3	7.3	-131.6	-0.2	-13.5	-11.4
Equity capital and reinvested earnings	-145.4	-8.2	-104.2	-5.7	-10.4	-6.4
Other capital, mostly inter-company loans	-74.8	15.5	-27.4	5.5	-3.1	-5.0
In the euro area	106.3	-3.3	101.9	1.9	10.1	6.4
Equity capital and reinvested earnings	77.0	-9.6	64.6	2.1	6.4	5.4
Other capital, mostly inter-company loans	29.3	6.2	37.3	-0.3	3.7	1.0
Portfolio investment	34.2	1.4	69.2	4.5	15.8	19.4
Equities	101.9	15.1	25.6	3.3	12.1	-3.5
Assets	-91.8	-8.0	-36.3	4.0	12.8	0.6
Liabilities	193.7	23.1	61.9	-0.7	-0.7	-4.2
Debt instruments	-67.7	-13.7	43.6	1.1	3.8	23.0
Assets	-141.9	-24.7	-106.1	-7.5	-10.9	-3.0
Liabilities	74.2	11.0	149.6	8.6	14.7	26.0
Memo item:						
Combined net direct and portfolio investment	-79.8	5.4	39.5	6.2	12.4	14.4
Financial derivatives	0.2	-2.9	-9.2	-1.9	0.9	-0.0
Other investment	37.2	-21.8	-145.1	-17.8	-29.8	-38.0
Reserve assets	11.9	-2.7	1.3	1.8	-3.8	2.1
<b>Errors and omissions</b>	41.3	17.5	62.2	1.4	11.1	16.3

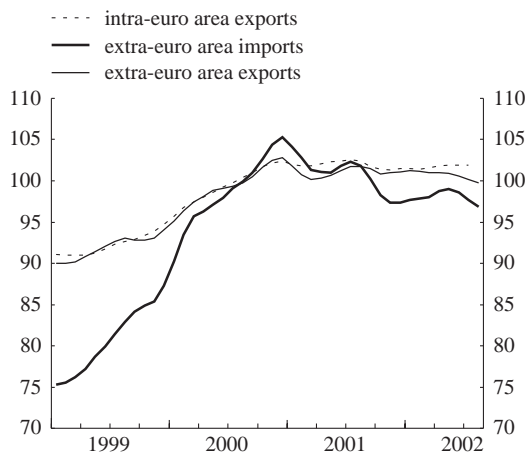
Source: ECB.

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 26

### Intra and extra-euro area trade unit value indices<sup>1)</sup>

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



Sources: Eurostat and ECB calculations based on Eurostat data.

1) The latest extra-euro area observations are for August 2002, whereas the latest intra-euro area observations are for July 2002. Both are partly based on estimates.

The sizeable net portfolio investment inflows in October were related to large net inflows in debt instruments of €23.0 billion (see Chart 27). The latter, in turn, were primarily accounted for by net inflows in money market instruments of €17.6 billion, mainly resulting from €13.9 billion of foreign investment in short-term paper issued by euro area residents. Overall, net investment in euro area debt instruments by non-euro area residents, amounting to €26.0 billion in October alone, continues to be a key explanation for the net inflows of combined direct and portfolio investment into the euro area. The net outflows of €38.0 billion under other investment mainly reflected the increase in net external assets of euro area resident MFIs.

October 2002 was the third consecutive month in which euro area residents

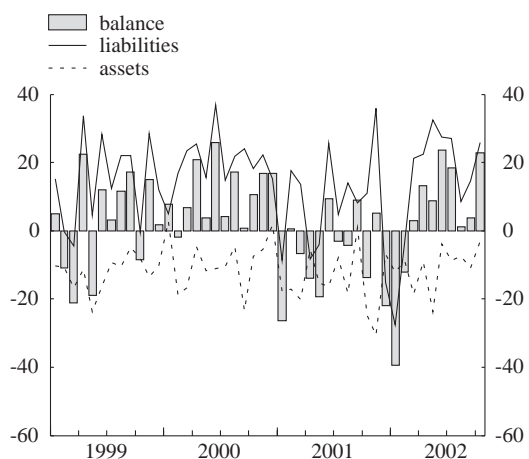
repatriated funds invested in equity securities abroad (€0.6 billion), although there was no repetition of the large net disinvestment seen in September (€12.8 billion). Similarly, non-euro area residents continued to be net sellers of equities issued by euro area residents (€4.2 billion). Overall, these developments indicate further portfolio rebalancing within the euro area financial account, with financial investment continuing to shift from equities into debt instruments in recent months.

On a cumulative basis, combined direct and portfolio investment shifted from net outflows of €79.8 billion in the first ten months of 2001 to net inflows of €39.5 billion over the same period in 2002. Furthermore, overall changes in portfolio flows are no longer primarily related to developments in equity portfolio investment, as was the case for most of 2001 and in early 2002, but have, in recent months, been increasingly determined by debt instrument flows.

## Chart 27

### Euro area portfolio investment in debt instruments

(EUR billions, monthly data)



Source: ECB.

# The demand for currency in the euro area and the impact of the euro cash changeover

*This article discusses the main determinants of currency demand in the euro area with a specific focus on the impact of the introduction of euro banknotes on currency demand. Currency is held for transactions, and for precautionary and speculative purposes. Transaction-related variables (such as private consumption) and opportunity costs of holding currency (for instance in the form of lost interest income), as well as additional factors, such as the demand for currency from abroad and taxes and regulations, play an important role in the demand for currency.*

*In the run-up to the cash changeover, primarily in 2001, currency holdings fell substantially, largely owing to a decline in the amount of hoarded banknotes. In the first eleven months following the euro cash changeover, currency in circulation rose substantially, mainly as a result of the replenishment of currency holdings by euro area residents as well as the recovery of demand for euro banknotes outside the euro area. Nonetheless, in November 2002 there remained a gap between the current level of currency in circulation and the level which was observed at the end of 2000. However, at the current juncture, it is too early to draw firm conclusions as to whether or not the introduction of euro banknotes has led to a structural change in the demand for banknotes.*

## I Introduction

On 1 January 2002 the euro banknotes and coins replaced those of the 12 euro area countries. This had a major impact on currency in circulation in 2001 and 2002. Looking ahead, this may, however, also have implications for the demand for currency in the euro area in the longer term. Against this background, the euro cash changeover provides a good opportunity to examine some of the aspects of the demand for currency.

Section 2 of this article presents the main determinants of currency demand in the euro area. Section 3 examines the main

developments in the run-up to the euro cash changeover. Section 4 analyses the demand for euro banknotes and coins in the period following the cash changeover using the information available. Finally, Section 5 concludes on the basis of the analysis in the previous sections. This article contains three boxes. Box 1 provides a definition of banknotes and currency in circulation. Box 2 discusses the impact of the cash changeover on the monetary aggregates M1 and M3, and Box 3 presents evidence on the demand for euro banknotes and euro-denominated deposits outside the euro area.

## 2 The main determinants of the demand for currency in the euro area

The demand for currency (see Box 1 for definitions) is mainly determined by its use for transactions as well as for precautionary and speculative purposes. It is positively related to transaction variables, such as output, private consumption or retail sales, and negatively related to the opportunity cost of holding currency, such as, for instance, short-term interest rates measuring the financial return which could be earned by investing in alternative assets. In addition to these determinants, the

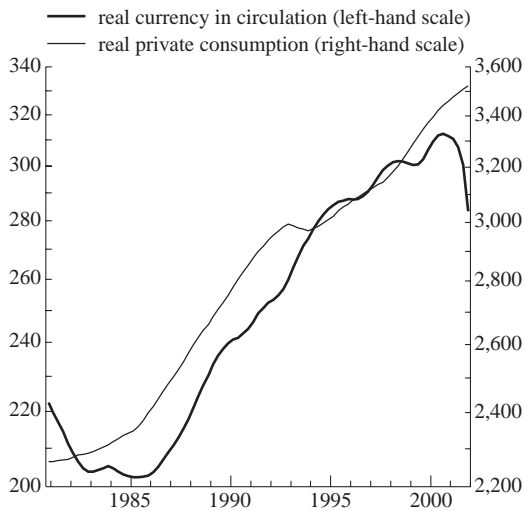
demand for currency in the euro area depends on other factors, such as the demand for banknotes from abroad, taxes and regulations, the informal economy or the substitution of currency for alternative payment instruments.

In the past, the heterogeneity in developments in the determinants of currency demand in the 12 euro area countries has led to considerable differences in the demand for currency. This is reflected, for instance, in



### Chart 1 Real currency and real private consumption in the euro area

(in EUR billions; logarithmic scale)



Source: ECB.

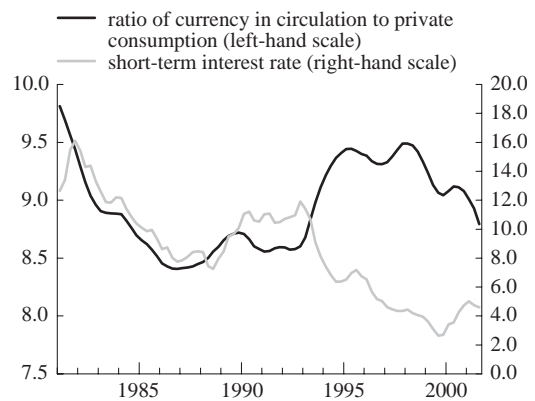
Note: Quarterly average of the stock of currency in circulation, deflated by the private consumption deflator. Annualised real private consumption.

the ratios of currency to private consumption in the 12 euro area countries (see Table 1). At the same time, however, the ratio of currency to private consumption remained relatively stable for the euro area as a whole between 1980 and 2000, at a level of around 9% to 10%.

As noted above, currency holdings generally increase in parallel with a higher level of real transactions. As currency is, to a large extent, used for small and medium-size purchases, private consumption may serve as an appropriate variable to reflect the transaction purpose of currency. As can be seen from Chart 1, real currency holdings in the euro area increased broadly in line with real private consumption in the last two decades. In

### Chart 2 Ratio of currency to private consumption and opportunity costs of holding currency

(in percentages; quarterly figures)



Source: ECB.

Note: The short-term interest rate is a GDP weighted average of the short-term interest rates in the euro area countries.

### Table 1 Ratio of currency in circulation to private consumption

(in percentages)

	1980	1985	1991 <sup>1)</sup>	1995	1998	1999	2000	2001
Euro area	10.0	9.2	8.8	9.6	9.4	9.3	9.2	8.0
Belgium <sup>2)</sup>	16.9	12.5	10.0	8.5	8.3	8.6	8.5	7.4
Germany <sup>1)</sup>	9.6	9.6	9.8	11.2	11.1	10.8	10.6	8.8
Greece	14.2	11.9	9.8	8.1	8.0	8.3	8.1	7.7
Spain	10.4	10.3	14.1	16.4	15.6	15.2	14.8	13.1
France	9.0	7.6	6.8	6.0	5.7	5.6	5.7	4.8
Ireland	4.4	6.6	7.4	7.5	8.0	9.2	8.8	7.6
Italy	9.5	8.4	8.1	8.7	8.6	8.9	9.1	8.8
Luxembourg <sup>2)</sup>	..	..	..	..	..	6.9	5.9	4.4
Netherlands	11.6	12.6	12.8	11.3	9.6	8.8	8.2	6.5
Austria	12.1	10.4	9.8	9.9	9.4	9.4	9.7	8.9
Portugal	15.7	9.8	8.3	7.4	6.5	6.7	7.0	6.6
Finland	3.8	3.3	3.2	3.8	4.1	4.1	4.0	3.9

Sources: ECB, NCBs, Eurostat, national accounts.

Note: Partly estimated for Ireland, Portugal and Luxembourg. From 2001, euro area data include Greece.

1) West Germany before 1991.

2) The figures for Luxembourg are included in the figures for Belgium before 1999.

## Box I

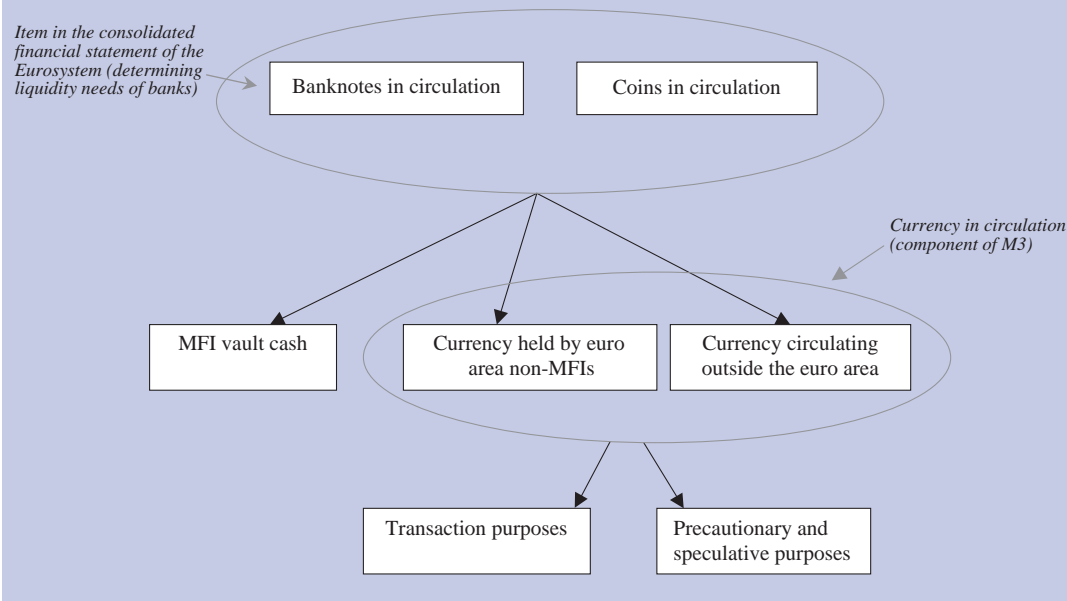
### Definition of banknotes and currency in circulation

This box briefly describes the terms banknotes and currency in circulation that are used in this article to analyse the demand for currency in the euro area.

The euro *banknotes* are issued by the Eurosystem. They are an important determinant of the liquidity needs of banks in the context of the ECB's monetary policy operations. By contrast, euro coins are issued by the central governments of the euro area countries.

The term "*currency in circulation*" (in the article, the term "*currency*" is often used as a synonym) has a narrower range than banknotes and coins in circulation as it includes only banknotes and coins held by non-MFIs, i.e. it does not include vault cash of euro area MFIs. Currency in circulation is a component of the broad monetary aggregate M3. In November 2002 its share was 6% of the amount outstanding for this aggregate. The holders of banknotes and coins outside the euro area MFIs are unknown. Therefore, currency in circulation does not only contain holdings of the euro area non-MFI sector, but also currency holdings from abroad.

### The definition of banknotes and currency in circulation



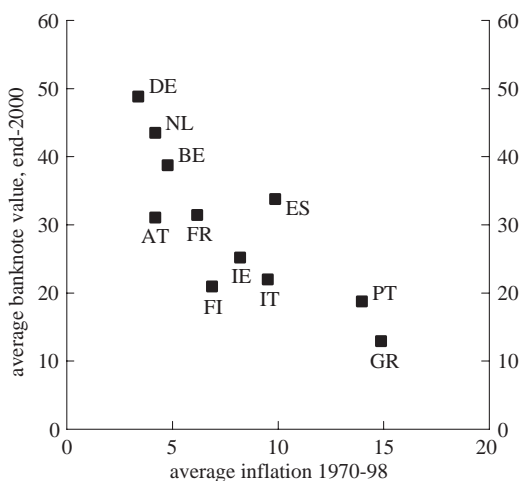
particular, the demand for low-value banknotes depends on the level of transactions.

By contrast, mainly reflecting the holding of currency for precautionary and speculative purposes, a decrease in the *opportunity cost* of holding currency generally increases the demand for currency. In particular, large-value banknotes in circulation, which are well suited as a store of value, are normally positively affected by a fall in the opportunity costs of holding currency. As can be seen from Chart 2, this has been the case for the euro area particularly since the

1990s, during which nominal interest rates fell to relatively low levels.<sup>1</sup>

In addition to the nominal interest rate, which might be broken down into a real interest rate and expected inflation, actual inflation also reflects the cost of holding currency, as this reduces the value of financial assets, by contrast with real assets. In this respect, it is interesting to observe that, as can be seen from Chart 3, in countries with a high inflation

<sup>1</sup> In times of high interest rates, the demand for currency may be relatively inelastic to interest rate changes.

**Chart 3****Average banknote value and average inflation in the euro area countries***(in EUR; annual figures in percentages)*

Source: ECB.

average over the period between 1970 and 1998, the average legacy banknote value (i.e. the total value of banknotes in circulation divided by the number of banknotes in circulation), converted to euro, was relatively low at the end of 2000. Conversely, it was particularly high in countries with low inflation (and low interest rates), which may explain the importance attached to the use of currency, and particularly the use of large-value banknotes, for hoarding purposes in these countries.<sup>2</sup>

In addition, currency developments in the euro area reflect foreign demand for the euro legacy currencies. In this context, it is important to note that, owing to the anonymity of currency, it is generally very difficult to determine the amount of currency circulating abroad. While there are some direct indications based on available statistics on cross-border shipments of banknotes via the banking system and on surveys, as well as some indirect indications based on econometric estimations, there are no statistics on the exact amount of currency circulating outside the home currency area.

Economic agents in currency areas with less stable monetary regimes may have held euro

area currencies as a store of value, in particular euro area currencies which had a tendency to appreciate in the past. The demand by non-residents for large-value banknotes, which are particularly appropriate for hoarding, was especially high.

In this respect, the demand for legacy banknotes from abroad varied considerably across the euro area countries in the last two decades. Of the euro legacy currencies, the Deutsche Mark was most widely held abroad. The Austrian schilling and the French franc were also held abroad, albeit to a much more limited extent. Worker's remittances, tourism flows, the political and economic transformation of central and eastern Europe at the end of the 1980s – initially implying an abrupt upward adjustment of domestic prices – and the war in the former Yugoslavia with its subsequent hyperinflation were all factors contributing to a higher demand for the Deutsche Mark. According to a study published by the Deutsche Bundesbank, it was estimated that around 30% to 40% of Deutsche Mark banknotes were circulating abroad in the mid-1990s, probably largely in central and eastern Europe, the western Balkans and Turkey, corresponding to around €35 to €45 billion at that time.<sup>3</sup> In the second half of the 1990s, by contrast, the stabilisation of the situation in eastern Europe probably led to a fall in the demand for euro legacy currencies in these countries.

Furthermore, *taxation of labour and capital income* as well as fiscal controls of tax payments have been important factors in explaining the demand for currency in euro area countries. These factors typically affect the amount of currency transfers abroad and the size of the *informal economy*, in which currency, owing to its anonymity, is to a large

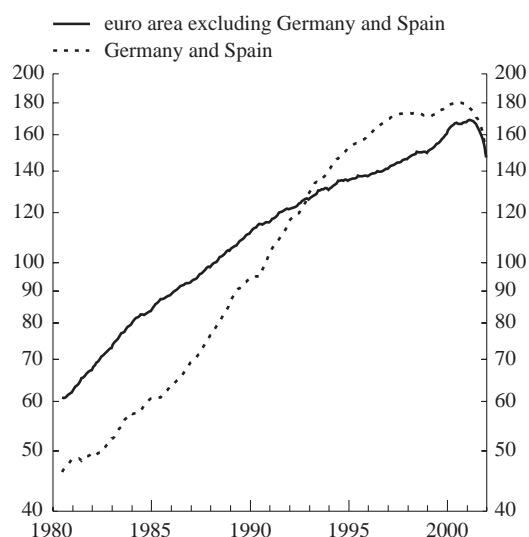
<sup>2</sup> For the denomination structure of the legacy banknotes of the euro area countries, converted to euro, see Table 1 in the article entitled "Implications of the euro cash changeover on the development of banknotes and coins in circulation" in the May 2002 issue of the ECB's Monthly Bulletin.

<sup>3</sup> See F. Seitz, "Circulation of Deutsche Mark Abroad", Discussion Paper 1/95, Deutsche Bundesbank, 1995. Holdings of US dollar currency abroad are estimated at around 60%. See R. Porter and R. Judson, "Overseas Dollar Holdings: What do we know?", *Wirtschaftspolitische Blätter*, 2001, 48 (4), pp. 431-440.

extent used.<sup>4</sup> Partly as a result of changes in national tax regulations, the average annual rate of change of currency in circulation between 1986 and 1994 was more than twice as high in Germany and Spain (together 10.6%) as in the euro area excluding these two countries (4.2%) (see Chart 4).<sup>5</sup> In Germany, both the announcement of the introduction of withholding tax on interest income from financial assets in 1987 and the decision by the Federal Constitutional Court on the taxation of capital gains in 1991 led to a substantial increase in currency holdings.<sup>6</sup> In Spain, currency in circulation also rose considerably during that period owing to the introduction of a law in 1985 on a more homogeneous fiscal treatment of capital gains from financial assets<sup>7</sup>, as well as the introduction of a value added tax in 1986 which led to a rise in tax evasion transactions.<sup>8</sup>

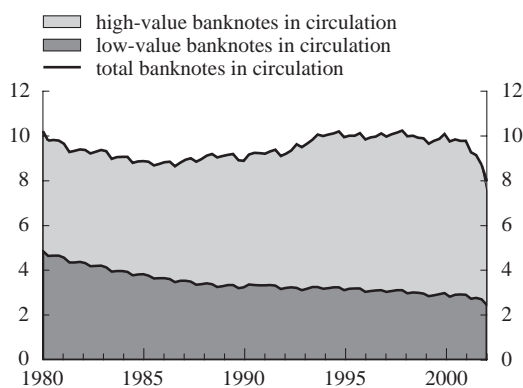
In the last two decades, the increasing use of cashless payment instruments also contributed towards reducing the demand for currency for transaction purposes. This is reflected, for instance, in the slightly declining ratio of currency in circulation to the monetary aggregate M3 observed since the beginning of

**Chart 4**  
**Currency in circulation in selected euro area countries**  
*(in EUR billions; six-month moving average; logarithmic scale)*



Source: ECB.

**Chart 5**  
**Developments in low and high-value legacy banknotes in the euro area**  
*(in value terms as a percentage of private consumption)*



Source: ECB and NCBs.

Note: Euro legacy banknotes have been converted into euro (with the fixed conversion rates) and aggregated. Low-value (high-value) euro legacy banknotes are defined as up to (above) €49.

the 1980s. While this ratio was around 9% on average in 1980, it declined to 7.1% in 2000 (and to 6.1% in 2001 as a result of the cash changeover). In line with this, the use of payment cards, such as debit and credit cards, in relation to private consumption is generally greater in those countries in which the ratio of currency to private consumption is relatively low, as for instance in Finland, where non-cash payments have a long tradition. By contrast, in Spain in particular, but also in Germany, Greece, Italy and Austria, the use of payment cards has been relatively moderate.

In this context, it is worth mentioning that in some countries there are legal regulations in place which enforce the use of cashless payments. In France, for instance, the use of currency for large-value payments and for

4 For estimates of the size of the informal economy, see Schneider, F., Enste, D. H., "Shadow Economies: Size, Causes, and Consequences" in the *Journal of Economic Literature*, Vol. XXXVIII, March 2000, pp. 77-114.

5 In Germany's case, this was also partly a result of the political and economic transformation in central and eastern Europe.

6 See the article entitled "Circulation of the Deutsche Mark – from currency reform to European monetary union" in the Deutsche Bundesbank's March 2002 Monthly Report.

7 Ley 14/1985, de 29 de mayo, de Régimen Fiscal de Determinados Activos Financieros.

8 See the article entitled "Determinantes de la demanda de efectivo en España" in the Banco de España's March 1996 Economic Bulletin.

salary payments is limited by law. In Belgium, merchants are obliged to accept certain cashless payment instruments for large-value payments. In the Netherlands ministries are required by law to promote the use of bank transfers for payments to the state, while in Finland there is a legal act in place for cashless rent payments.

Finally, it is worth noting that, in relation to private consumption, the share of large-value euro legacy banknotes (in the context of this article defined as legacy banknotes with a value of more than €49) in the value of total

euro legacy banknotes in circulation increased considerably between 1980 and 2000. Conversely, the share of low-value legacy banknotes (with a value of up to €49) declined during the same period, especially during the 1980s (see Chart 5). This presumably reflects both an increase in the importance of hoarding and the depreciation of the value of banknotes in real terms. At the end of December 2000, the share of large-value legacy banknotes accounted for 70% of the total value of euro legacy banknotes in circulation. The average banknote value at that time was €36.

### 3 The run-up to the euro cash changeover

In 2001 currency developments in the euro area were dominated by the run-up to the euro cash changeover. During this period, as well as in the period following the cash changeover, it was to a large extent not possible to explain currency developments in the euro area by the standard economic determinants of currency demand. It would appear that, in the run-up to the cash changeover, currency developments were mainly affected by a fall in hoarded legacy

banknotes in the euro area and abroad, which had been held as a store of value or used in the informal economy. This reflected the need to exchange them for euro banknotes or to move them to a bank account for the purpose of conversion into euro. The impact of the decline in currency in circulation on monetary aggregates in the euro area was, however, limited, as most of this decline was compensated for by shifts in other components of these aggregates (see Box 2).

#### Box 2

##### The short-term impact of the euro cash changeover on monetary aggregates

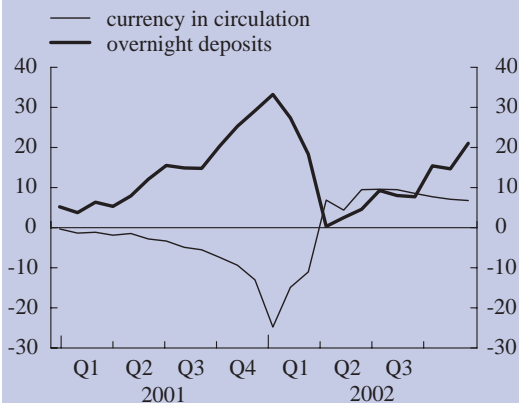
This box analyses the impact of the cash changeover on monetary developments. Currency in circulation only contributed 6% to the outstanding amount of the broad monetary aggregate M3 in November 2002. This notwithstanding, the question arises whether the sharp decline in currency in circulation in 2001 and the strong recovery of these holdings in 2002 significantly influenced monetary developments.

According to the evidence available, most of the reduced demand for cash was mirrored by a stronger demand for other components of M3. It seems that the main substitute for the returning euro legacy currency banknotes in 2001 was overnight deposits. These deposits have risen either directly, via the payment of banknotes into a bank account, or indirectly, via the cash purchase of goods and services from other economic agents belonging to the money holding sector. The chart below illustrates the close link between the reduction of currency and the simultaneous marked increase in overnight deposits in 2001. Furthermore, econometric models of M1<sup>1</sup>, consisting of both currency and overnight deposits, do not show a negative shock for the demand equation for M1 in 2001, thereby supporting the hypothesis that to a very large extent the substitution of currency with other assets has taken place within M1. Finally, other assets included in M3, e.g. short-term deposits other than overnight deposits, are obvious alternative candidates for substitution. Therefore, it is likely that most of the reduction in currency in circulation has been mirrored by corresponding increases in other assets

<sup>1</sup> For example the M1 demand model of Stracca L. (2001), "The functional form of the demand for euro area M1", ECB Working Paper No. 51.

### Overnight deposits and currency in circulation

(three-month average of monthly flows in EUR billions)



Source: ECB.

included in M3. In early 2002, the strong recovery in currency was accompanied by opposite developments in overnight deposits (see chart), confirming that a substantial part of the recovery of currency stems from asset substitutions within euro area M1.

While a significant effect of currency substitution on M3 can be rejected on the basis of the above evidence, it cannot be excluded that annual M3 growth might have been dampened slightly, principally at the end of 2001. This is mainly suggested by anecdotal evidence on the substitution of euro legacy banknotes with other assets outside M3 by non-residents in particular. The flowback of euro legacy banknotes in 2001 from outside the euro area might have led to a slight reduction in monetary aggregates, since non-residents are likely to have shifted these funds to assets outside

M3, for example euro-denominated deposits or deposits in local currency outside the euro area. In addition, the developments in other major currencies in 2001 and 2002, as described in Sections 3 and 4 of this article, suggest that to a relatively limited extent legacy banknotes were exchanged for other currencies' banknotes, mainly US dollars and Swiss francs. In the meantime, however, most euro legacy banknotes held abroad before the euro cash changeover seem to have been substituted for euro banknotes. This implies that most of the limited impact on M3 is likely to have dissipated by the autumn of 2002.

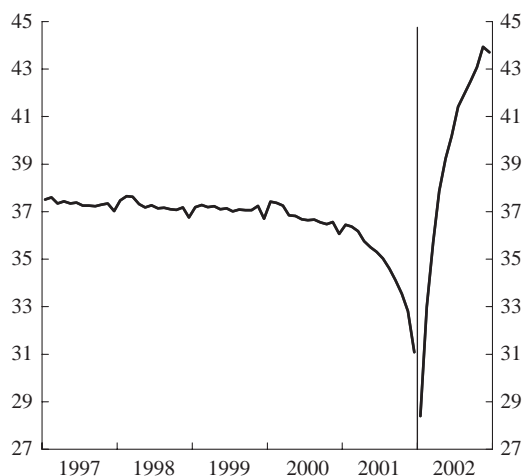
Between December 2000 and December 2001 currency in circulation fell by €116 billion, i.e. the outstanding amount fell by nearly one-third. Evidence of a substantial

decline in currency hoarding is reflected in the significant fall, by around 30% between December 2000 and December 2001, in large-value legacy banknotes, which were mainly used for hoarding purposes. By contrast, low-value legacy banknotes in circulation declined by only around 20% over the same period. In addition, their decline was concentrated in December 2001, reflecting the use of these low-value banknotes for transactions, while the large-value banknotes had already declined substantially in the second half of 2001. Consequently, the average value of the legacy banknotes fell from €36 in December 2000 to €31 in December 2001 (see Chart 6).

### Chart 6

#### Average banknote value in the euro area

(in EUR)



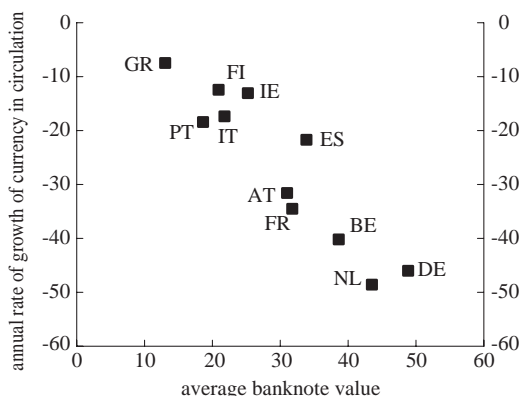
Source: ECB; partly estimated.

Note: For the period before 2002, euro legacy banknotes have been converted into euro (with the fixed conversion rates) and aggregated. From 1 January 2002 onwards, only EUR banknotes are taken into account.

This particularly significant decline in hoarding is further supported by the fact that in the run-up to the cash changeover currency in circulation fell most markedly in those countries in which the value of the legacy banknotes had been highest (see Chart 7). In particular, in Germany and the Netherlands, which had the highest-value legacy banknotes (i.e. the DEM 1,000 and the NLG 1,000

**Chart 7**  
**Annual rate of growth of currency in circulation in December 2001 and average banknote value in December 2000**

(in EUR; annual figures in percentages)



Source: ECB.

Note: Data for Luxembourg is not included, since banknotes from Belgium were used also in that country.

banknotes), this decline in currency in circulation between end-2000 and end-2001 was most pronounced of all, at -46.0% and -48.6% respectively. By contrast, the annual rate of change of currency in circulation in Greece, which had the lowest average value of legacy banknotes in circulation, was only -7.2% in December 2001.

There appears to have also been a decline in the hoarding of euro legacy currencies by non-euro area residents in 2001. As mentioned above, in central and eastern Europe, the western Balkans and in Turkey, euro legacy banknotes were, to a great

extent, used mainly as a store of value and, to some extent, for transactions as well. While euro legacy banknotes were in part held until the end of 2001 in order to exchange them directly for euro banknotes, there are also indications that non-euro area residents substituted their euro legacy banknotes for euro-denominated deposits in their home countries (see Box 3).<sup>9</sup>

In fact, the euro cash changeover may even have worked as a catalyst in increasing the holdings in local bank accounts in some central and eastern European countries as a result of increased confidence in both the domestic banking sectors and currencies of these countries following a period of several years of lower inflation and greater stability in the banking sectors compared with previous years. The banking sectors of several central and eastern European countries and the western Balkans countries even promoted this exchange process by offering favourable conditions for the exchange of euro legacy banknotes for euro-denominated or local currency assets when opening a local bank account. The euro cash changeover thus offered the banking sector in these countries the opportunity to increase their deposit liabilities. Euro-denominated deposits in central and eastern Europe, the western

<sup>9</sup> For evidence on the substantial exchange of euro legacy banknotes for euro banknotes and local currencies in central and eastern Europe see H. Stix, "The euro in central and eastern Europe – survey evidence from five countries", CESifo Forum, 3/2002 commissioned by the Oesterreichische Nationalbank and conducted by Gallup.

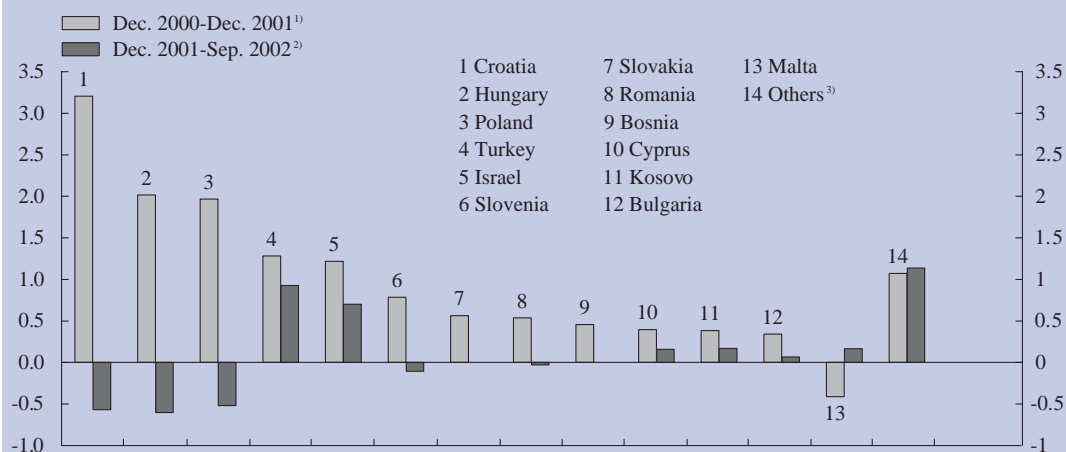
**Box 3**  
**The demand for euro banknotes and euro-denominated deposits abroad<sup>1</sup>**

The introduction of the euro banknotes and coins in January 2002 was a unique opportunity for the ECB to gather information on the demand for euro banknotes abroad, as the cash changeover implied the conversion of euro legacy banknotes into euro banknotes. The transfer of banknotes to third countries – conducted through the banking system – is likely to provide a good estimate of the demand for euro banknotes from abroad in 2002, as it is reasonable to assume that such shipments by banks of euro banknotes to destinations outside the euro area in early 2002 were the main channel of euro banknote outflows and were used principally to convert the stock of outstanding legacy banknotes outside the euro area.

<sup>1</sup> A more detailed account of the use of the euro as a parallel currency in third countries is provided in the ECB's 2002 Review of the international role of the euro.

## Changes in euro-denominated bank deposits

(in EUR billions; ordered according to the absolute increase in euro-denominated bank deposits in 2001)



Sources: Respective central banks and ECB calculations.

Note: No data available for most of 2002 for Albania, Bosnia and Herzegovina, FYR Macedonia, Lithuania, Slovakia, Belarus and Ukraine.

1) For Hungary and Slovakia: December 2001 versus June 2001.

2) For Croatia: June 2002, for South Africa: August 2002, for Moldova: May 2002. Montenegro introduced a new series in 2002.

3) FR Yugoslavia (Serbia), Latvia, South Africa, Egypt, Estonia, Albania, Macedonia (FYR), Morocco, Lithuania, Belarus, Moldova, Ukraine, Montenegro, Lebanon.

According to the information available, cumulated net shipments of euro banknotes – including the initial amount supplied during the frontloading period in December 2001 – amounted to around €27 billion at end-October 2002. A significant share of the frontloading and initial shipments was targeted at central and eastern European countries, the western Balkans, Turkey and other countries in the Mediterranean, where evidence had previously pointed to a substantial demand for euro legacy banknotes as a store of value and for conducting large-value transactions. Estimates available from the central banks of Bulgaria, Croatia, Kosovo, Serbia and Slovenia suggest that one-fifth of the amount shipped outside the euro area is held in these countries. At the same time, with the possible exception of Turkey, shifts from euro legacy banknotes to other currencies, whether foreign or domestic, seem to have been limited. Furthermore, in Russia, where the US dollar has been the dominant foreign currency, foreign cash transactions by authorised banks have increasingly involved the euro. According to data published by the Central Bank of Russia, in mid-2002 customers' purchases of euro even approached the level of US dollar purchases. This suggests that for the purpose of tourism the demand for foreign currency is now more evenly spread between the euro and the US dollar in that country.

There is evidence that the cash changeover was associated with a substantial increase in demand for euro-denominated deposits (see the chart above). A survey conducted by the ECB in co-operation with the central banks of 30 neighbouring countries showed that euro-denominated deposits rose by more than €13.5 billion (around 40%) in 2001, with the bulk of the increase taking place in the run-up to the cash changeover at the end of the year. One reason underlying this strong increase is that individuals have deposited their euro legacy currency holdings in the banking system, reflecting the greater stability of the banking systems in the regions concerned as well as favourable conditions for the exchange of euro legacy banknotes when opening a bank account. In fact, most of the above-mentioned central banks confirmed that the strong increase in euro-denominated deposits in 2001 was related to the euro cash changeover.

The increase in deposits was particularly pronounced in countries in the broad geographical vicinity of the European Union, such as Croatia, Hungary, Poland, Turkey and Israel. In terms of regions, the countries of the former Yugoslavia experienced the largest increase in euro-denominated deposits in 2001, rising by more than 80% (€4.4 billion). Accession countries followed, with an increase of roughly 50% (€4.0 billion).



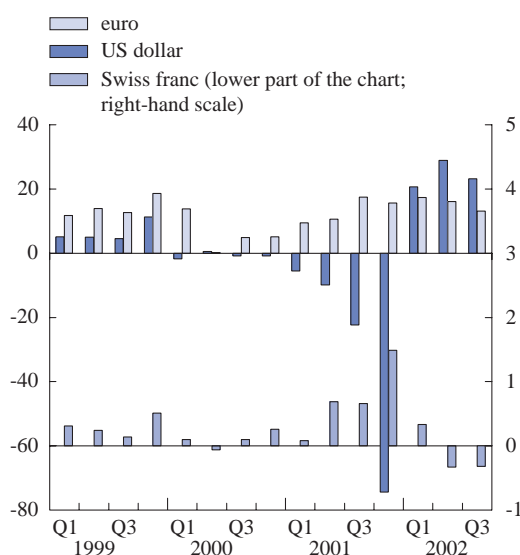
Evidence for the first nine months of 2002 suggests that in general euro-denominated deposits remained at the high levels recorded at the end of 2001. Only in some countries, mainly Croatia, Hungary and Poland, where the increase had been particularly significant in 2001, did the level of euro-denominated deposits decline somewhat. As there has also been no further significant growth in deposits (with only a few exceptions), the evidence suggests that there has been a one-time shift in demand from euro legacy currency to euro-denominated deposits associated with the cash changeover.

Balkans and Turkey increased strongly in 2001, particularly in the last quarter, in which, according to anecdotal evidence, the bulk of

the euro legacy banknotes was shipped back to the euro area from abroad.

### Chart 8 Quarterly flows of major currencies in circulation

(in EUR billions<sup>1)</sup>)



Source: BIS and ECB (seasonally adjusted figures for Swiss francs; ECB calculations).

1) Data on US dollars and Swiss francs are converted into euro using the average exchange rate in 2001.

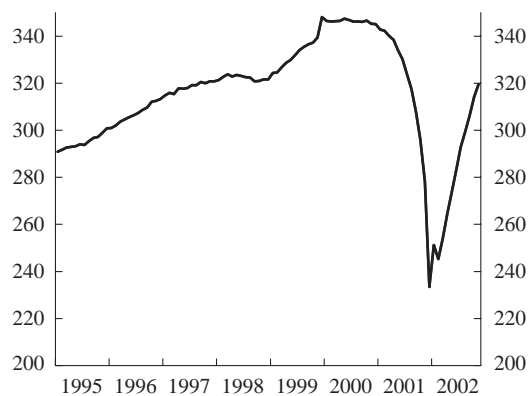
Finally, both non-euro area and euro area residents may have exchanged euro legacy banknotes for other major currencies' banknotes, such as the US dollar and the Swiss franc (see Chart 8). While there seems to have been some exchange for Swiss francs, the impact of this exchange on developments in euro area currency in circulation was small in 2001 and 2002, given the relatively low amount of Swiss francs in circulation. By contrast, the demand for the US dollar in 2001, but also in 2002, was clearly higher than the average demand over the period from 1995 to 2000. However, it is difficult to attribute this to euro cash changeover effects. For example, the situation in Latin America in 2001 and 2002 may have led to an increased demand for the US dollar outside the United States at this time, which probably had a more significant impact than any effects linked to the cash changeover. Taking both this and further anecdotal evidence into account, it is likely that the possible substitution of euro legacy banknotes for US dollar banknotes amounts, in euro billions, to a single-digit figure.

## 4 The impact of the euro cash changeover on the demand for currency

In the first eleven months of 2002, the growth of currency in circulation recovered steadily, by 40.9% on an annualised basis compared with December 2001. At the same time, in November 2002 a gap remained between the level of currency and the level observed at the end of 2000 (see Chart 9). However, given the pace of the recovery of currency demand, it is too early to answer the question

of whether the euro cash changeover has led to a structural shift in the demand for currency in the euro area.

Following the decline in currency hoarding in 2001, the recovery of the demand for currency in 2002 was, to a large extent, driven by the resumption of currency hoarding by both euro area residents and

**Chart 9****Developments of currency in circulation in the euro area***(outstanding amounts in EUR billions; end-of-month figures)*

Source: ECB.

non-euro area residents. In particular, large-value euro banknotes increased strongly, as evidenced by the number of €500 banknotes in circulation, which nearly tripled between January and December 2002. While demand for the other large-value banknotes also increased significantly, that for low-value banknotes in circulation declined over the same period.<sup>10</sup> As can be seen from Table 2, the average euro banknote value increased by more than 50% between end-January 2002 (€28) and end-December 2002 (€44).<sup>11</sup> Consequently, the end-December value was

21% above the average legacy banknote value in the euro area in December 2000.<sup>12</sup>

The average euro banknote value is now slightly above that of the Netherlands in December 2000, but still below that of Germany. In both countries, the denomination structure was very similar to that of the euro. In fact, in Germany and the Netherlands the average legacy banknote value at the end of 2000 was €49 and €43 respectively.

The rise in the average euro banknote value over the average legacy banknote value may indicate a structurally higher demand for euro currency based on the availability of large-value banknotes. This may also increase the incentives for economic agents to use currency for hoarding purposes in those countries in which such high denominations did not previously exist. At the same time, however, some of the currency hoarding in the informal economy which was “laundered”

<sup>10</sup> The increase in December, as compared with November, is to a significant extent linked to seasonal effects.

<sup>11</sup> The rise in the average euro banknote value was also affected by the high amount of low-value euro banknotes put into circulation for precautionary and logistical reasons in the first weeks following the cash changeover.

<sup>12</sup> In such a comparison, the average euro banknote value is slightly upwards-biased, as the nearest equivalent of some euro legacy banknotes are euro coins.

**Table 2****Euro banknotes in circulation in 2002***(figures in millions, value in EUR millions; non-seasonally adjusted figures)*

2002	EUR 500	EUR 200	EUR 100	EUR 50	EUR 20	EUR 10	EUR 5	Total (number)	Total (value)	average value per banknote in EUR
Jan.	61	75	364	1,417	1,962	2,000	1,922	7,800	221,489	28
Feb.	80	88	438	1,612	1,926	1,822	1,506	7,473	246,535	33
Mar.	93	95	477	1,780	1,910	1,742	1,302	7,398	264,150	36
Apr.	103	99	502	1,820	1,828	1,622	1,186	7,159	271,138	38
May	112	103	527	1,896	1,802	1,587	1,149	7,174	281,492	39
June	120	106	550	1,930	1,815	1,570	1,135	7,226	290,375	40
July	131	110	578	2,039	1,833	1,548	1,120	7,358	304,774	41
Aug.	134	110	583	2,068	1,814	1,518	1,110	7,336	307,710	42
Sep.	140	111	592	2,093	1,793	1,512	1,112	7,353	312,440	42
Oct.	147	113	606	2,143	1,802	1,523	1,115	7,448	320,875	43
Nov.	155	115	619	2,165	1,774	1,495	1,107	7,430	326,468	44
Dec.	167	121	673	2,435	1,975	1,643	1,191	8,204	358,535	44

Source: ECB.

as a result of direct substitution for interest bearing assets or indirect substitution (such as the purchase of luxury goods) may not be resumed.

In addition, there are currently no clear indications of a significant substitution of currency for credit and debit cards linked to the euro cash changeover. By contrast, the increased use of credit and debit cards reported in the first few days of January 2002<sup>13</sup> appears to have been a rather temporary phenomenon.

The effects of the changeover on the demand for banknotes for cross-border transactions are not clear. On the one hand, the single currency may lead to lower currency holdings, as travellers within the euro area no longer need to hold several currencies, there is no longer a need for exchange booths to keep the 12 euro area legacy currencies, and the cross-border transaction costs for cashless payment instruments (such as payment cards) are lower. On the other hand, for instance, lower fees for cross-border cash withdrawals from automated teller machines (ATMs) could lead to an increase in the use of currency by travellers within the euro area. At the same time, however, lower fees for cross-border ATM transactions may also bring down the level of currency holdings, as the need to hold large amounts of currency has decreased.

The substitution of euro legacy currency banknotes for US dollars and Swiss francs by both euro area residents and non-euro area

residents seems to have been, to a large extent, a temporary phenomenon, as indicated by the weaker growth of currency in circulation in the United States and negative flows of currency in circulation in Switzerland in the second and third quarters of 2002 (see Chart 8).

With regard to foreign demand for the euro, following relatively little frontloading of euro banknotes – of around €5 billion only – to destinations outside the euro area in December 2001, net outflows of euro banknotes of around €27 billion were recorded in the balance of payments for the period up to October 2002; this suggests that most of the legacy banknotes held abroad had already been substituted for euro banknotes (see Box 3). Consequently, it would appear that euro banknotes are likely to assume the role previously played by Deutsche Mark banknotes in some of the central and eastern European countries, as well as in the western Balkans. In addition, the relatively weak development in euro-denominated deposits in several euro area neighbouring countries in 2002 suggests that the increase in asset substitution of euro legacy currency banknotes for euro-denominated deposits in 2001 was more of a one-off event, most probably promoted by attractive conditions for converting legacy banknotes into euro banknotes when opening a bank account. Finally, both the close trade ties between the euro area and its neighbouring countries and the EU accession process may further strengthen the demand for the euro in these countries.

## 5 Conclusions

The main determinants of the demand for currency in the euro area are transaction variables (e.g. private consumption) and components reflecting the opportunity cost of holding currency (e.g. short-term interest rates). Furthermore, currency developments also seem to depend on foreign demand for banknotes, which in turn depends on the relative stability of currencies in other

countries vis-à-vis the euro. Finally, factors such as taxation, the size of the informal economy, the rising use of cashless payment instruments, as well as some legal regulations promoting the use of cashless payments also play an important role in currency demand in the euro area.

<sup>13</sup> See, for example, *Europay International News*, Issue 1, January 2002.

In the run-up to the cash changeover, primarily in 2001, currency holdings fell substantially, largely owing to a reduction in the amount of hoarded banknotes. The impact of this steep decline in currency holdings on euro area monetary aggregates was, however, limited, as it was largely compensated for by shifts in other components of these aggregates. In the first year following the euro cash changeover, currency holdings were replenished to a substantial degree, mainly as a result of the resumption of currency hoarding by both euro area residents and non-euro area residents. Nevertheless, in November 2002 the level of currency in circulation was still below that observed at the end of 2000.

Overall, it is too early, at the current juncture, to assess the long-term impact of the cash changeover. There are arguments to suggest that either a higher or a lower demand for euro currency could emerge over

a longer-term horizon. The availability of larger-value euro banknotes as compared with most of the euro legacy currencies may point to a continuing substantial or even increasing demand for the euro. In addition, the increasingly close ties between the euro area and its neighbouring countries may strengthen the demand for euro currency over the coming years. In addition, the euro may encourage increasing use of currency in the euro area owing to lower fees for cross-border cash withdrawals. Conversely, euro currency holdings may be lower as compared with euro legacy currency holdings on account of the fact that some currency holdings in the informal economy are likely to have been “laundered” prior to the cash changeover. Furthermore, lower cross-border transaction costs for cashless payment instruments, such as payment cards, and the existence of the euro instead of 12 national currencies may have a downward impact on currency demand.



# CLS – purpose, concept and implications

*On 9 September 2002, Continuous Linked Settlement (CLS), a clearing and settlement system that settles foreign exchange (FX) transactions in seven major currencies, including the euro, the US dollar and the Japanese yen, went live. CLS is the banking industry's response to the objective of the G10 central banks to reduce FX settlement risk since, by design, it largely eliminates this risk. When settling FX trades in CLS, settlement members need to meet a strict daily timeline and thereby face some challenges for liquidity management. CLS is also expected to have an impact on market infrastructures and market conditions. The euro is the second most settled currency in CLS and it is expected that the values and volumes processed in euro large-value payment systems will, ceteris paribus, decrease. Some market participants expect CLS to trigger the development of an intraday money market and the two-tier pricing of FX trades, but views are split on these issues and it is still too early to draw any firm conclusions.*

## I The nature of FX settlement risk

FX settlement risk is generally defined as the risk that one party to an FX transaction will pay the currency it sold but not receive the currency it bought. FX settlement risk has both a credit risk and a liquidity risk dimension. The party that makes the first payment for one leg of the FX transaction faces the possibility that its counterparty may not deliver the currency at the time it is due (liquidity risk). It would then have to finance the shortfall until the counterparty eventually honours its obligation. The party paying first also faces a risk that the counterparty may fail altogether to complete the second leg of the transaction (credit risk). With regard to both liquidity risk and credit risk, the party paying first is exposed for the full amount of the transaction. Of course, the parties to an FX transaction are also exposed to other risks (e.g. market risk, operational risk, replacement risk), but the amounts at risk in these cases represent only a fraction of the underlying value of the transaction. The size of FX settlement risk therefore makes this type of risk the most significant one.

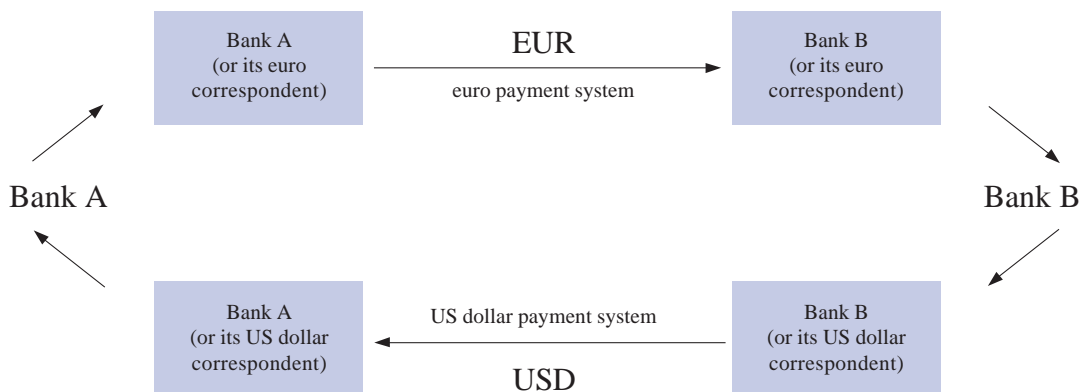
One well-known example of FX settlement risk is the case of Bankhaus Herstatt. This German bank was an active participant in the FX market. In June 1974 the German banking supervisory authority ordered the bank into liquidation after the close of the German payment system. The counterparties of Bankhaus Herstatt had irrevocably paid the Deutsche Mark leg of their USD/DEM transactions via the German payment system, but after Bankhaus Herstatt's collapse its

correspondents suspended the US dollar leg of the transactions, thus subjecting Bankhaus Herstatt's counterparties to substantial losses. In the literature, FX settlement risk is therefore often referred to as "Herstatt risk".

To illustrate the traditional settlement of FX transactions we can take the example of bank A buying US dollars from bank B against euro. Bank A (or its euro correspondent) would normally make the euro payment to bank B (or its correspondent) in the euro area using a euro payment system, such as TARGET, the real-time gross settlement (RTGS) system for the euro. Similarly, bank B (or its US dollar correspondent) would make the US dollar payment to bank A (or its correspondent) in the United States using a US dollar payment system. Although the operating hours of the euro and US dollar payment systems now overlap, the payments of the two currencies are normally not made simultaneously. Because of time zone differences and because US dollar large-value payments are often made towards the end of the business day in the United States, the counter-payment from bank B may be made 10 to 15 hours after the payment from bank A has been finally settled. The unsynchronised settlement of the two payments in our example exposes bank A to the risk that bank B will not make the US dollar payment as agreed. Depending on the currencies involved (e.g. Japanese yen and US dollars), time-zone differences may be more substantial.

## Chart I

### Settlement of an FX transaction via correspondent banks



## 2 Central banks' strategy for reducing FX settlement risk

The vast size of daily FX trading<sup>1</sup> combined with the global interdependence of FX markets and payment systems has raised some concerns in central banks. In the 1980s and early 1990s the G10 central banks published several studies and identified a number of issues related to cross-border payment arrangements. These studies recommended minimum standards and examined possible central bank service options that might decrease risk in the settlement of FX trades. In March 1996 the Bank for International Settlements (BIS) issued a report entitled "Settlement Risk in Foreign Exchange Transactions" (also known as the "Allsopp Report" after Peter Allsopp, the Chairman of the CPSS Steering Group which produced the report). This report analysed in particular the risks involved in FX settlement operations and outlined a strategy to reduce them. It also developed a definition of and a methodology for measuring FX settlement exposure. Empirical studies presented in the report showed that the FX settlement exposures of banks could last for up to two business days (and it may be another one or two days before banks know with certainty that they have received the currency that they bought), and that such exposures (even to a single counterparty) could in some cases exceed the bank's capital. In order to reduce these exposures and the systemic risk attached to them, the G10 central banks outlined a three-track strategy.

First, individual banks were requested to take measures to control their foreign exchange settlement exposures by improving their practices for measuring and managing exposure. In that respect, banks should take measures to improve their back-office procedures, correspondent banking arrangements and risk management controls by making greater use of netting arrangements<sup>2</sup>. Second, industry groups were encouraged to develop well-constructed multi-currency services that would contribute to the risk reduction efforts of individual banks. The G10 central banks felt that such services would be best provided by the private sector rather than by the public sector, and it is in this context that banks contributed by setting up the CLS project. Third, central banks committed themselves to encouraging and fostering private sector development in this field. They also agreed to improve national payment systems and to facilitate private sector risk reduction efforts.

In July 1998 the BIS issued a progress report ("Reducing Foreign Exchange Settlement Risk: a

<sup>1</sup> According to the Triannual Central Bank Survey conducted by the BIS in April and June 2001, the size of daily FX trading at that time was around USD 1.2 trillion. Since every transaction has two settlement legs (one for each currency involved in the trade) the total value of the related payments is USD 2.4 trillion.

<sup>2</sup> "Netting is an agreed offsetting of positions or obligations by trading partners or participants. The netting reduces a large number of individual positions or obligations to a smaller number of obligations or positions." ECB, Blue Book, June 2001

Progress Report”) which showed that many market participants had made significant progress in dealing with FX settlement risk by raising senior management awareness and by defining responsibilities. Banks had in fact reduced their exposures and improved the methods used to measure them. Industry groups had developed multi-currency services that had the potential of reducing FX settlement risk, and central banks had been improving large-value payment systems (e.g. extending the operating hours of payment systems to create

overlaps between different time zones). In order to support the strategy of the G10 central banks, the Basel Committee on Banking Supervision was invited to develop international supervisory guidance for banks on the prudential management and control of FX settlement risk in line with the recommendations of the Allsopp Report. The Basel Committee on Banking Supervision subsequently issued its report on “Supervisory Guidance for Managing Settlement Risk in Foreign Exchange Transactions” in September 2000.

### **3 CLS –the market’s response to FX settlement risk**

In pursuing the reduction of FX settlement risk, the banking industry developed several initiatives. Two multi-currency netting projects, ECHO and Multinet, received an unenthusiastic reception from the banking industry. When CLS was established in 1997, ECHO and Multinet were merged with CLS because banks did not wish to invest in several different initiatives to reduce FX settlement risk and preferred to concentrate their efforts on one project.

#### **General overview of CLS**

CLS became the banking industry’s contribution to the G10 strategy to reduce FX settlement risk. Central banks have supported the development of the CLS system and, by November 2002, 67 major financial institutions located in 17 countries had joined the system and had become CLS shareholders. Some 22 banks, i.e. one third of the shareholders, are located in the euro area. CLS Bank was granted a specific banking license in 1999 in New York, limiting its fields of activity. In fact, CLS Bank’s sole function is to engage in FX settlement activities. This design of CLS Bank as a single-purpose bank, was an important factor in gaining the support of central banks. It ensures that CLS Bank cannot expose itself to the risks that ordinary banks take by investing deposits in interbank or customer loans, and that such risks do not impinge on its activities as a settlement bank.

The multi-currency CLS system aims to eliminate FX settlement risk insofar as practicable. It achieves this by applying a strict risk management regime and by settling trades on a payment versus payment (PVP) basis in its own books. In a PVP system, the settlement of the two sides of an FX transaction is synchronised. The settlement of one side of the transaction occurs if – and only if – the other side of the transaction is also settled. The application of the PVP principle means that the debiting of one currency and the crediting of the other currency occurs simultaneously. CLS takes over the function of a trusted third party, making sure that the parties to the FX trade will either be paid the currency they expect to receive or be refunded in another currency. The function of CLS in the settlement process is strictly limited to that of a settlement agent. CLS does not at any point become a counterparty of the participants.

CLS started settling FX transactions on 9 September 2002. Currently seven major currencies are eligible to be settled in CLS, namely the US dollar, the euro, the Japanese yen, the pound sterling, the Swiss franc, the Australian dollar and the Canadian dollar. Participants in the CLS system make their funding payments to CLS through the RTGS systems in their respective currency areas to ensure that such funds are transferred with immediate finality. For this purpose CLS Bank



has opened accounts with the respective central banks. For the funding of euro positions, it has opened an account with the ECB to process euro payments via the ECB Payment Mechanism (EPM), the ECB component of TARGET. The asset that is transferred through the RTGS systems is central bank money, thus ensuring that CLS funding payments do not carry any credit risk or liquidity risk.

Each participant has an account in each eligible currency in the books of CLS. The FX trades of the participants are settled on a gross basis, i.e. each trade is settled individually. There is no netting in the settlement process. However, participants do benefit from a netting effect on the funding of their positions. For all the trades that participants send to CLS for settlement, CLS calculates only one net position per currency. Since participants conduct transactions in different currencies, with different maturities and with different counterparties, the net positions resulting from settlement in a single clearing and settlement system are significantly smaller than the positions resulting from settlement via several settlement arrangements. For example, if bank A sells USD 100 to bank B against euro and buys USD 100 from bank C against Japanese yen, its US dollar position is squared and it does not have to make any US dollar payments. For this reason the value of payments that banks need to make to settle their FX transactions is substantially lower in CLS than in traditional settlement mechanisms.

### **CLS system design**

The design of the CLS system is quite complex. In order for the system to operate properly, the participants need to strictly fulfil their responsibilities as defined in the system rules. These rules also define the risk management features of the system, the operational timeline and the procedures to be followed in the event of a failure by a member to fund its short positions.

### **The parties involved**

There are several parties involved in the CLS system, each performing different functions. *Settlement members* can submit instructions for the settlement of FX trades directly to CLS. Once these instructions are validated, they can be settled provided that they pass the required risk management tests (as described below). Settlement members fund their CLS accounts and receive amounts owed to them from CLS via RTGS accounts with the respective central banks. Settlement membership is the most common form of participation in CLS. To become a settlement member a participant must be a CLS shareholder, operate under an appropriate supervisory regime and fulfil strict financial and operational requirements.

*User members* also have to be CLS shareholders and can submit instructions directly to CLS. However, user members do not maintain accounts with CLS and therefore have to settle their transactions via a settlement member. User membership may be sought by banks which do not wish to manage their central bank liquidity so actively or which do not have the necessary infrastructure to do so. So far only a few shareholders have indicated an interest in becoming user members. Both settlement members and user members can provide CLS settlement services (*third-party services*) to other banks or corporate customers that are not participants in the CLS system.

For currencies in which settlement members do not have a central bank account or cannot provide sufficient liquidity, they can employ *nostro agents* to make and receive CLS payments on their behalf. For example, a Japanese bank that is an active participant in USD/JPY trading may have ample of liquidity to fund its Japanese yen payments. It may also have a strong position in the United States to cover its liquidity needs. However, its access to euro liquidity may be limited because this is not the focus of its activities. In such a case, the Japanese bank would look for a euro area bank with sufficient

access to euro liquidity to ensure that its euro payments can be made under all circumstances. Nostro agents do not have to be CLS shareholders, but in practice most of them are. Since nostro agents often provide their services to many different settlement members, they have an important role to play in the functioning of the CLS system. They may face significant liquidity demands in cases where many of the settlement members to whom they provide services are in a debit position. Sufficient access to liquidity is therefore indispensable for nostro agents. In addition, they must be operationally robust, as an operational problem on their side could affect a large number of settlement members. Although the responsibility for stable and reliable operation lies with the nostro agents, ultimate responsibility for the timely and accurate provision of funds to CLS still rests with the settlement members. Settlement members therefore need to ensure through service level agreements that nostro agents provide their services in an appropriate and reliable manner.

*Liquidity providers* play a crucial role in the event that a settlement member fails to honour its pay-in obligation. In such events, CLS will be short of whichever currency the failing settlement member was supposed to pay in and CLS will not be able to complete pay-outs in that currency to the other settlement members. In order to complete pay-outs, CLS will ask those liquidity providers which have made a commitment to provide liquidity up to a certain amount in the currency concerned to swap the needed currency for the currencies that the failing member has a positive balance in. Since CLS tries to obtain liquidity from the failing settlement member as long as possible to complete its normal operations, liquidity providers are only called in very late in the CLS day. Liquidity providers therefore need to respond to CLS requests very quickly. CLS normally requires at least three liquidity providers per currency. However, for smaller currencies there may be only two liquidity providers.

As outlined in the paragraphs above, nostro agents and liquidity providers play a crucial role in the operation of the CLS system. They need to ensure a specific operational capacity and sources of liquidity that can be used in the event of unexpected, increased demand. For these reasons, the ECB requires nostro agents and liquidity providers in euro to have direct access to TARGET and unrestricted access to Eurosystem intraday and overnight credit. These conditions can only be met by institutions that are located in the euro area.

### **Risk management features**

The CLS system has been designed to eliminate FX settlement risk. In order to strike an appropriate balance between credit risk, liquidity risk and settlement efficiency,<sup>3</sup> CLS allows participants to incur debit balances on condition that these debit balances are always “collateralised” by corresponding credit balances in other currencies. Several features have been integrated into the system design that allow for an appropriate management of risks. Every transaction is checked against three different risk management criteria and settled only if all three checks are passed.

First, there is the maximum debit balance which a settlement member is allowed to incur in any one currency. This is called the *short position limit* and varies from currency to currency. For each currency this limit is the same for all settlement members. For the euro, it is set at €1 billion. The value of the short position limit depends on the amount of liquidity that has been committed by liquidity providers in the currency concerned and is calculated in a way that ensures sufficient liquidity even if the participant with the largest debit position in that currency fails to honour its obligation. For the euro, there are four liquidity providers, each of which has committed €500 million. In

<sup>3</sup> CLS could completely eliminate credit risk if it only allowed settlement out of positive balances in the respective currencies. However, this would significantly increase the time-criticality of liquidity demands in these currencies and considerably reduce the settlement efficiency of the system. In addition, it would increase the impact of a participant's pay-in failure.

the event that a settlement member that is also a euro liquidity provider has a €1 billion short position and fails to make its pay-ins, euro liquidity facilities would still amount to €1.5 billion, thus exceeding the shortfall by €500 million.

Second, there is the maximum total debit balance that a settlement member is allowed to incur (the total of all debit balances in all currencies). This is called the *aggregate short position limit* and is defined individually for each settlement member according to the size of its Tier I capital and its short-term credit rating. The higher the capital and the better the short-term credit rating, the higher the aggregate short position limit. The maximum aggregate short position limit allowed for any settlement member is the equivalent of USD 1.5 billion.

Third, all settlement members are required to maintain a *net positive overall account value* with CLS at all times. This is a logical consequence of the fact that CLS is not allowed to extend credit to its settlement members. In order to protect CLS against market risk (i.e. the risk that credit positions in one currency that CLS holds as collateral for a settlement member's debit position in another currency might depreciate as a result of market fluctuations), haircuts are applied to debit and credit balances in all CLS accounts.

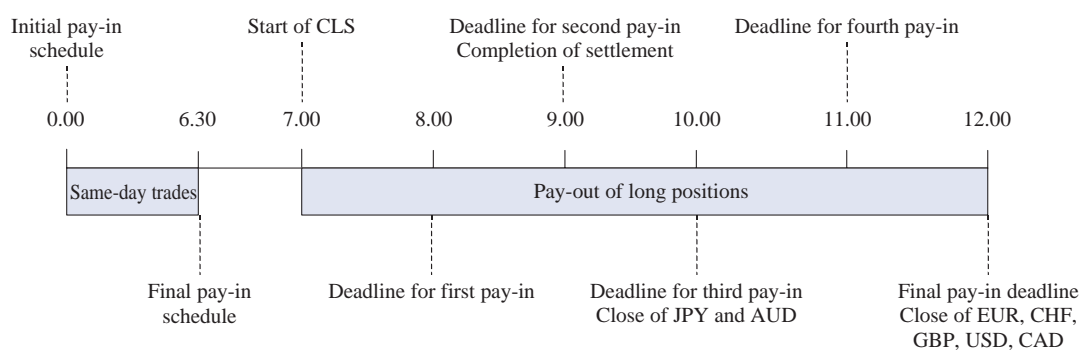
### The CLS daily timetable

The CLS timeline is very strict. It requires settlement members to make their (potentially very high-value) funding payments in a very limited time frame and by predetermined deadlines. European settlement members benefit slightly from this timeline since CLS operates at a time (7 a.m. to 12 noon CET) when European financial markets are open and fully liquid. In the Asia/Pacific region CLS operates very late in the business day (when the northern hemisphere is on winter time, CLS closes at 8 p.m. local time in Australia), and in North America it operates at night (1 a.m. to 6 a.m. Eastern Standard Time).

In general, settlement members first pay funds into CLS's central bank accounts in the currencies in which they have an overall short position. Once these pay-ins have been received, CLS starts the settlement process in its own books. If the settlement process is sufficiently advanced and funds are no longer needed for settlement, CLS pays out of its central bank accounts the currencies in which the settlement member has an overall long position. On a normal day, the more detailed timeline would be as shown in Chart 2.

Settlement members submit their FX settlement instructions to CLS before the actual settlement day. CLS matches the

**Chart 2**  
CLS daily timeline (CET)



instructions of the two parties that have agreed on an FX trade and, based on these settlement-eligible instructions, calculates the long/short positions of the settlement members in the seven eligible currencies. At 12 midnight CET, CLS establishes an initial pay-in schedule for each settlement member (see Box 1 for an example for one settlement member) listing the preliminary positions and pay-ins in each currency and sends these pay-in schedules to the settlement members.

After 12 midnight CET, settlement members can bilaterally agree on additional trades to be settled on that day or to cancel trades that had been submitted at an earlier stage. These transactions are primarily conducted in order to reduce pay-in requirements, as is illustrated by the fact that in/out swaps (see Box 2) are currently the most common type of same-day trade. At 6.30 a.m. CET, CLS

issues a final pay-in schedule that takes into account the trades agreed upon since the issuing of the initial pay-in schedule. The final pay-in schedule lists the minimum funding which settlement members have to make in each currency by a specific time.

At 7 a.m. CET, the CLS system starts its daily operations. Settlement members start making their funding payments and CLS starts the settlement process, always respecting the risk management procedures explained in the previous section. The pay-in schedule is calculated in such a way that all trades can be settled by 9 a.m. CET. The time remaining until the close of the CLS system is used to make the outstanding funding payments in the currencies in which settlement members have a short position and to make the respective pay-outs.

## Box 1

### Example of a settlement member's pay-in schedule

The pay-in schedule that CLS calculates for each settlement member is based on the positions that are projected to build up after all trades from this settlement member are settled. In our example, the settlement member ends up with long positions (i.e. pay-outs) in CAD, JPY, CHF and GBP and a short position (i.e. pay-ins) in AUD, EUR and USD. CLS divides the short positions into various instalments that have to be paid by the respective pay-in deadlines.

Pay-in schedule for an individual settlement member (cumulative amounts in millions of units for each currency)						
	Projected net position	By 8 a.m. CET	By 9 a.m. CET	By 10 a.m. CET	By 11 a.m. CET	By 12 noon CET
AUD	-300	-100	-250	-300	-300	-300
CAD	400	0	0	0	0	0
EUR	-500	-100	-280	-300	-400	-500
JPY	200,000	0	0	0	0	0
CHF	3,000	0	0	0	0	0
GBP	800	0	0	0	0	0
USD	-4,500	-900	-3,800	-3,800	-4,200	-4,500

The pay-ins take into account the fact that all payments in the Asia/Pacific currencies have to be made by 10 a.m. CET because the local RTGS systems close soon thereafter. Therefore, in our example, AUD pay-ins have to be completed by that time. The instalments are not divided equally as the CLS risk management procedures have to be respected. This means that pay-ins have to be calculated in such a way that all trades are settled by 9 a.m. CET. Consequently, in order to respect the short position limits for each currency, the aggregate short position limit and the net overall positive value of this settlement member at all times, the 9 a.m. CET pay-in in USD becomes quite large. Pay-ins by 10 a.m. CET have to be sufficiently large to enable CLS to complete the pay-outs of JPY.

## Box 2

### Rationale and drawbacks of in/out swaps

Settlement members' funding payments for the CLS system are highly time-critical and can grow quite large at times. As Box 1 illustrates, the settlement member in the example would have to pay in USD 3.8 billion by the 9 a.m. CET deadline, which is 3 a.m. Eastern Standard Time. In order to reduce this time-critical liquidity demand, banks have created an automated tool for swapping CLS positions for positions outside of CLS. Banks buy the currency in which they have a considerable short position in CLS (e.g. USD) and sell a currency in which they are long in CLS (e.g. CHF). In order to do so, they find another settlement member that has the opposite needs and agree on an FX deal to be settled the same day in CLS. Since the deal changes the FX positions of both banks, the two settlement members reverse the deal outside CLS (in this example the first settlement member would buy CHF against USD from the second settlement member in the market outside of CLS) and settle the deal on the same day. These transactions, called "in/out swaps", have the advantage of allowing settlement members to use the entire business day to raise sufficient liquidity to make this very large payment. However, they do have the drawback of re-introducing FX settlement risk for the outside leg of the swap. The ECB understands that banks find this tool useful for liquidity management in the early stages of CLS but expects in/out swaps to be phased out once banks are sufficiently acquainted with CLS and sufficient volume has been reached to reap high net funding benefits.

In/out swaps are not used by all settlement members because this is a tool that can only be used at a very late stage (between the issue of the initial pay-in schedule and the issue of the final pay-in schedule) and because of the investment and operational capabilities needed (it requires banks to operate on almost a 24-hour basis). For these reasons, some settlement members have developed an alternative tool whereby they post their CLS positions in the different currencies on a Reuters screen on the day before settlement and try to find solutions (e.g. outright trades, forward trades or swaps) to reduce their liquidity demands on the settlement day.

In contrast to the pay-ins that have to be made by predetermined deadlines, CLS does not pay out its dues according to a specific schedule. Long balances are paid out as soon as possible, but only if CLS's central bank account in the relevant currency has sufficient funds. As a general rule, Asia/Pacific currencies are paid out first, since these RTGS systems close first, and large balances are paid out before small balances. Pay-outs can only be made if settlement members maintain a net overall positive account balance after the pay-out has been made. A pay-out algorithm is used to calculate the pay-outs in a way that limits the drainage of liquidity in the relevant RTGS systems.

If all funding payments have been made according to the pay-in schedule, CLS concludes the pay-outs in JPY and AUD shortly after 10 a.m. CET, since the respective RTGS systems close soon afterwards. Short positions in European and North American currencies can be covered until 12 noon CET

and final CLS pay-outs should be completed soon thereafter.

### CLS failure management

CLS has implemented several procedures to help the system to complete settlement of the trades submitted to it and to ensure that settlement members receive the currency of the transactions they have settled via the system in the event that a settlement member fails to pay in.

If a settlement member fails to make its first pay-in, CLS sends a pay-in call for account value immediately after the 8 a.m. CET deadline. At the same time it temporarily suspends pay-outs from the account of the settlement member until it has covered the shortfall. If, owing to this pay-in failure, some transactions in the settlement queue remain unsettled by the 9 a.m. CET settlement completion time, CLS issues pay-in calls for

settlement to those (non-failing) settlement members whose instructions have not yet been completely settled. Should any settlement member still be in a debit position when a currency is about to close (10 a.m. CET for Asia/Pacific currencies and 12 noon for European/North American currencies), CLS issues a pay-in call for currency close to any such settlement members asking them to make up the shortfall. If that call is not honoured, CLS resorts to the liquidity providers in the respective currency, asking them to swap this currency against any other currency on the CLS accounts. Upon receipt of this liquidity, CLS completes the pay-outs by transferring any amounts still due to the settlement members. On the next business day, CLS reverses the swap with the liquidity provider and the failing settlement member has to bear the costs of that transaction (plus penalties).

In the extreme case of a failure by more than one settlement member or liquidity provider, the committed liquidity facilities may not be sufficient to complete the pay-outs. In such cases, CLS may either resort to non-

committed credit lines that it has arranged with some institutions, pay out alternative currencies that it has in its central bank accounts, or carry these balances over to the next business day and exchange them for the correct currencies on that day.

#### **Loss allocation**

In CLS, losses can only occur if a settlement member fails and, at the same time, there is an adverse movement of exchange rates against the currencies in which the failing participant has a credit balance. As explained above, CLS uses the credit positions of a settlement member in one currency to collateralise its debit position in another. Should the currency of the credit position depreciate beyond the level of the haircuts against the currency of the debit position, the collateral currency may not be sufficient to close out the debit position. In such a case, any resulting loss would be apportioned to the settlement members that traded with the failing settlement member on the day it failed.

## **4 The role of central banks in CLS**

Central banks have had a close relationship with CLS right from its inception in 1997. This is not surprising since CLS is the response of the banking industry to the central banks' objective of reducing FX settlement risk. CLS welcomed the comments of the G10 central banks throughout the development phase of the project and the G10 central bank governors have also voiced their support for the system. Central banks are closely involved in two areas. First, central banks oversee the CLS system and, second, they provide account and settlement services to CLS.

Central banks are now also looking into whether it would be advisable to use CLS for the settlement of their own FX operations.

#### **The co-operative oversight framework of the G10 central banks**

Oversight of the CLS system is carried out according to the framework for cross-border and multi-currency schemes as defined in the Lamfalussy Report.<sup>4</sup> The Federal Reserve System provides the lead oversight since CLS Bank is located in the United States. The Federal Reserve System also co-operates with the central banks of the other eligible currencies and the central banks of other countries in which settlement members are located. The ECB is the overseer for the euro, and in this capacity it has assessed the risks that inclusion in CLS would bring to the

<sup>4</sup> "Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries", BIS, Basel, November 1990

euro. In co-operation with the central banks of the other eligible currencies, the ECB has assessed the CLS system against the standards defined in the Lamfalussy Report. In addition, it has assessed the risks specific to the euro area. The ECB concluded that, in general, euro FX transactions would be settled safely and efficiently in the CLS system and that the system should not give rise to undue risks for the euro money market and payment systems. Hence it approved the inclusion of the euro in the list of eligible CLS currencies. The central banks of the other eligible currencies reached similar conclusions for their currencies and, eventually, the Federal Reserve System approved the start of live operations for CLS.

#### **Central banks' operational involvement**

Besides the oversight function, central banks also have an operational role in CLS. They provide accounts and, in most cases, settlement services for CLS. In this capacity, the ECB has opened a customer account for CLS and both

funding payments from and pay-outs to settlement members are processed via the EPM and consequently via TARGET. Given the time criticality of CLS payments, the Eurosystem has strengthened its contingency arrangements for TARGET to care for possible operational failure scenarios. Similar measures have also been taken by the central banks of other eligible currencies. In order to avoid systemic risks in the event of operational problems, in February 2001 the Eurosystem and the European banking industry reached agreement on the "Recommendations for CLS payments in euro". According to these recommendations, which are not legally binding, banks will try to make CLS-related payments sufficiently early and are prepared to reduce the number of such payments in the event of operational problems. The Eurosystem tries to assist banks in solving problems related to the submission of CLS payments. On the basis of these recommendations, the strengthened TARGET contingency arrangements have been successfully tested under live conditions in co-operation with the European banking community.

## **5 The expected impact on the euro market**

In its regulatory approval process for CLS, the ECB placed special emphasis on assessing its impact on euro markets. It concluded that the CLS system would create new challenges for banks' liquidity management but that, overall, banks should be able to manage their positions both under normal circumstances and in case of a pay-in failure of a participant. An analysis of the liquidity impact on euro large-value payment systems showed that all systems would probably experience a reduction in values and volumes.

The following sections discuss these analyses in more detail in light of the initial experience of live CLS operations. The analysis is based on information provided by CLS and has been discussed extensively in meetings with euro area CLS shareholders.

#### **The role of the euro in CLS**

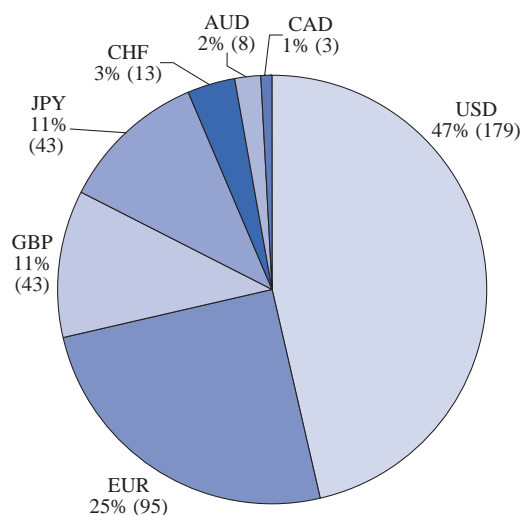
The settlement members have supported the start of CLS by quickly increasing the number and value of FX trades they conduct through the system. In November 2002, the daily value of FX trades settled in CLS was around USD 192 billion. Given the estimated total daily turnover of the whole FX market (USD 1.2 trillion in April 2001), this accounted for around 16% of all FX activities.

The euro is the second most settled currency in CLS, with a settlement value of 25% of all FX trades in November 2002. The US dollar share is 47%.

### Chart 3

#### Settlement values within CLS by currency in November 2002<sup>1)</sup>

(shares in %, average daily values in USD billion equivalent)



1) The value of settled transactions in each currency amounts to double the value of trades because every trade involves two settlement legs, one in each currency.

#### Impact on large-value payment systems

The ECB analysed the probable medium-term impact of CLS on the number and value of payments settled in individual large-value payment systems operating in euro. According to these analyses, the two most used systems for the settlement of FX trades in euro are TARGET and EURO I. Before the start of CLS, TARGET was estimated to

account for 62% of the total value of FX trades in euro, compared with 32% for EURO I. The remaining 6% are settled via smaller euro large-value payment systems.

The settlement members of CLS have indicated that in the medium term the value of FX trades involving euro that they intend to conduct through CLS on a daily basis would be around €271 billion. This would account for around 55% of the total value of the FX market in euro (with an estimated value of around €495 billion in 2001). If it is assumed that the settlement of FX trades would be transferred in equal measure from TARGET and EURO I to CLS, a rough estimate for the reduction of payments in these systems can be calculated. On the basis of this assumption, the value of payments settled in TARGET would shrink by a maximum of €185 billion per day in the medium term (a 12% decrease), and the value of payments settled in EURO I would fall by €77 billion (a 37% decrease). In terms of the number of payments, the reduction would be more modest, at around 13,000 (5%) in TARGET and 10,000 (9%) in EURO I.

Table I below summarises the estimated effects of CLS on the two main large-value payment systems in euro. The medium-term estimate relates to a scenario in which CLS has a 55% market share in the settlement of FX transactions while the maximum impact relates to a scenario in which all FX

**Table I**

#### The impact of CLS on daily values and volumes settled in TARGET and in EURO I

	Daily value of payments		Daily number of payments	
	TARGET	EURO I	TARGET	EURO I
	EUR billions	EUR billions	Thousands	Thousands
<b>Turnover</b>	1,485	208	264	114
<b>Absolute reduction in turnover</b>				
Medium-term estimate	185	77	13	10
Maximum impact	338	140	41	30
	%	%	%	%
<b>Relative reduction in turnover</b>				
Medium-term estimate	12	37	5	9
Maximum impact	23	67	15	26



transactions in euro are settled via CLS. The degree to which the reduction in values and volumes caused by CLS will be compensated by other factors still remains to be seen.

In November 2002 the value of FX transactions involving euro that were settled in CLS was €96 billion (i.e. one-third of the medium-term estimate). As a result, the impact on euro large-value payment systems has been rather modest so far. However, in the longer run, as settlement members bring more FX trades to CLS, new settlement members and third parties enter the system, and as the number of currencies eligible for settlement in CLS increases, the reduction in the number and value of payments will probably be more marked.

### Impact on banks' liquidity management

The reduction in payments that banks need to make in euro large-value payment systems will free payment capacity for the banks, and also reduce their liquidity needs in general. However, although the nominal amount of payments that need to be made to settle FX trades is reduced, the payments to CLS, which can be unexpectedly high, need to be made at specific points during the morning (CET). Currently, banks are able to operate with relatively low levels of liquidity compared with the value of payments they make in a real-time gross settlement system by synchronising their outgoing payments with payments they receive from other banks. In the CLS system banks can no longer wait for incoming payments to fund their CLS pay-ins, and the introduction of these "timed payments" to CLS presents a new challenge to the liquidity management of many banks.

In addition, although settlement members can estimate their probable pay-in requirements to CLS in advance, they do not know the precise amounts until the start of the settlement day. As a result, while liquidity requirements in general should decrease, temporary requirements might increase from current levels. Careful management of

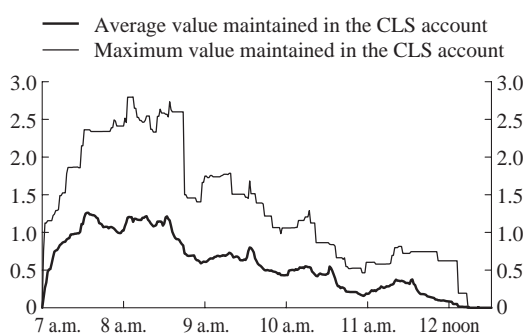
liquidity and monitoring of positions is therefore indispensable.

In simulations carried out by CLS prior to the introduction of the system, the daily pay-in requirements in euro amounted to an average of €15.6 billion (ranging from €10.0 billion to €22.7 billion on individual days). By making use of in/out swaps the average total pay-in requirements could be reduced to around €4.7 billion. In November 2002 pay-ins in euro amounted to €4.1 billion on average.

Another aspect that was analysed in the development phase of CLS was the amount of liquidity that CLS would maintain in its accounts during the day. Owing to the fact that the pay-ins to fund short positions are made to CLS before it pays out the long positions, some euro liquidity is blocked in the CLS account in the EPM. Simulations carried out by CLS showed that an average balance of only €500 million would be maintained in its account in the EPM between 7:30 a.m. and 10 a.m. CET. Relative to the available liquidity in TARGET, this is not very high and therefore the overall liquidity level of TARGET was not expected to be substantially affected. Chart 4 shows the average account balance of CLS in November 2002. The liquidity maintained in the CLS account has been somewhat higher than expected. On average, the CLS daily balance between 7:30 a.m. and 10 a.m. CET amounted to €919 million. The highest balance seen during November was €2.8 billion.

**Chart 4**  
Funds maintained in the CLS account in euro in November 2002

(value, EUR billions)



### **Impact of pay-in failures**

Before giving its approval for CLS to start operations, the ECB investigated the consequences of settlement members failing to provide CLS with the required pay-ins. Particular attention was given to compliance with Lamfalussy Standard IV, as defined in the Lamfalussy Report, which stipulates that the system should be capable of ensuring the completion of settlement in the event of an inability to settle by the participant with the largest single settlement obligation. The conclusion of the analysis was that CLS was considered to meet this standard. The systemic consequences of such an event in CLS would be mitigated to a high degree by the risk management facilities available in CLS.

It was noted, however, that the failure of a member to pay in would probably result in a substantial amount of trades that could not be settled with the failing member. In addition, to complete the settlement of all trades between non-failing members, a small number of settlement members would occasionally need to provide CLS with large amounts of additional funding.

No serious incidents affecting the smooth settlement of FX trades in CLS have been experienced since the system went live.

### **Possible consequences for market structure**

CLS has been operational for only a few months and a full assessment of its consequences for the market structure is therefore not yet possible. However, a number of topics have been discussed in industry fora concerning the possible implications of CLS.

For FX trades settled in CLS, settlement risk is largely eliminated. If this risk were priced, settlement in CLS would be "less expensive"

than traditional FX settlement. It is conceivable that spreads between buy and sell prices could be narrower for trades settled in CLS than for trades settled through traditional channels. However, it remains to be seen whether such a two-tier pricing of FX trades will emerge.

Intraday liquidity has a value because funds that are received early in the day can be used for settling payments later on that day. However, the pricing of credit is still based on value dates, and no market for funds that are paid back on the same day exists. Currently, the major source of intraday liquidity in euro is the intraday credit granted by the Eurosystem against eligible collateral. The collateral used for acquiring credit from the central bank cannot be used elsewhere (e.g. for securities lending), and the use of collateral therefore carries an opportunity cost. Since the start of CLS the need for liquidity only at specific points in time during the day has increased. This could become a trigger for the development of an intraday money market. However, it should be noted that the need for such a market is not evident, as central banks currently provide intraday credit free of interest. Also the operational cost of organising a liquid intraday money market would probably exceed the current opportunity cost of collateral.

A further issue that has been triggered by CLS, and which is being discussed extensively within the banking community, is the possibility of raising central bank liquidity against collateral held in foreign countries. Such a facility, called a cross-border collateral pool (CCP), would increase the ability of banks to raise intraday credit in foreign currencies. The exact benefits and costs, and the need for central bank involvement in creating the necessary infrastructure, are currently being discussed. A private sector CCP Task Force has been established to study these issues, and proposals to go forward are expected in early 2003.

## 6 Conclusions

CLS is the market response to the G10 central banks' efforts to reduce risks in FX settlement. These central banks were closely involved throughout its long development phase. CLS commenced operations in September 2002 after having gained the approval of central banks for the inclusion of their respective currencies in CLS and after final approval by the Federal Reserve System in its capacity as the lead overseer of the system.

For trades settled in CLS, the FX settlement risk is largely eliminated. On the other hand, CLS creates new challenges for the participating banks, especially in the field of liquidity management. It also establishes closer ties between the settlement

infrastructures of the countries whose currencies are settled in it. This also means that problems experienced in one country can swiftly spill over to systems in other countries. However, the risk management features in CLS should sufficiently mitigate these effects.

Finally, CLS has only been operating for a few months. The number of settlement members is still growing and turnover is still being built up. A more detailed analysis of its effects on the parties involved, on euro payment systems and on the structure of the market in general will be carried out by the ECB when more experience has been gathered and adequate statistics on CLS operations are available.



## **Euro area statistics**



# Contents <sup>1</sup>

	Euro area overview table	5*
I	Monetary policy statistics	
	1.1 Consolidated financial statement of the Eurosystem	6*
	1.2 Key ECB interest rates	8*
	1.3 Eurosystem monetary policy operations allotted through tenders	8*
	1.4 Minimum reserve statistics	10*
	1.5 Banking system's liquidity position	11*
2	Monetary developments and investment funds in the euro area	
	2.1 Aggregated balance sheet of the Eurosystem	12*
	2.2 Aggregated balance sheet of the euro area MFIs, excluding the Eurosystem	13*
	2.3 Consolidated balance sheet of the euro area MFIs, including the Eurosystem	14*
	2.4 Monetary aggregates and counterparts	16*
	2.5 MFI loans by counterpart, type and original maturity	21*
	2.6 Deposits held with MFIs, by counterpart and instrument	24*
	2.7 Main MFI claims on and liabilities to non-residents of the euro area	26*
	2.8 Currency analysis of certain liabilities and assets of the euro area MFIs	28*
	2.9 Aggregated balance sheet of euro area investment funds	30*
	2.10 Aggregated balance sheet of euro area investment funds broken down by investment policy	31*
	2.11 Aggregated balance sheet of euro area investment funds broken down by type of investor	33*
3	Financial markets and interest rates in the euro area	
	3.1 Money market interest rates	34*
	3.2 Government bond yields	35*
	3.3 Stock market indices	36*
	3.4 Retail bank interest rates	37*
	3.5 Securities issues other than shares by original maturity, residency of the issuer and currency denomination	38*
	3.6 Euro-denominated securities other than shares by original maturity, residency and sector of the issuer	40*
	3.7 Annual growth rates of securities other than shares issued by euro area residents	46*
	3.8 Quoted shares issued by euro area residents	48*
4	HICP and other prices in the euro area	
	4.1 Harmonised Index of Consumer Prices	50*
	4.2 Selected other price indicators	51*
5	Real economy indicators in the euro area	
	5.1 National accounts	52*
	5.2 Selected other real economy indicators	54*
	5.3 European Commission Business and Consumer Surveys	55*
	5.4 Labour market indicators	56*
6	Saving, investment and financing in the euro area	
	6.1 Financial investment and financing of non-financial sectors	57*
	6.2 Saving, investment and financing	61*

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

7	General government fiscal position in the euro area and in the euro area countries	
7.1	Revenue, expenditure and deficit / surplus	62*
7.2	Debt	63*
7.3	Change in debt	64*
8	Balance of payments and international investment position of the euro area (including reserves)	
8.1	Summary balance of payments	65*
8.2	Balance of payments: current and capital accounts	66*
8.3	Balance of payments: income account	67*
8.4	Balance of payments: direct investment account	68*
8.5	Balance of payments: portfolio investment account	69*
8.6	Balance of payments: other investment account and reserve assets	70*
8.7	International investment position and reserve assets outstanding	72*
9	External trade in goods of the euro area	74*
10	Exchange rates	76*
11	Economic and financial developments in the other EU Member States	78*
12	Economic and financial developments outside the EU	
12.1	Economic and financial developments	79*
12.2	Saving, investment and financing	80*
	<b>Technical notes</b>	81*
	<b>General notes</b>	85*

### Enlargement of the euro area on 1 January 2001 to include Greece

In the “Euro area statistics” section of the Monthly Bulletin, reference statistical series relating to the euro area cover the Member States comprising the euro area at the time to which the statistics relate. Thus euro area data up to end-2000 cover the Euro 11; from the beginning of 2001 they 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 the enlargement of the euro area. In the charts, the break is indicated by a dotted line. Absolute and percentage changes for 2001 calculated from a base in 2000 use, as far as possible, a series which takes into account the impact of the entry of Greece.

Data for the euro area plus Greece up to end-2000 are available in a downloadable format (CSV files) on the ECB’s website ([www.ecb.int](http://www.ecb.int)).

#### 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	5.4	-	7.8	27.3	4.26	5.03
2002	.	.	.	-	.	.	3.32	4.92
2002 Q1	6.2	6.5	7.6	-	5.7	29.2	3.36	5.13
Q2	6.6	6.5	7.3	-	5.6	24.4	3.45	5.26
Q3	7.6	6.5	7.1	-	5.3	18.1	3.36	4.77
Q4	.	.	.	-	.	.	3.11	4.54
2002 July	7.6	6.5	7.1	7.1	5.1	18.7	3.41	5.03
Aug.	7.6	6.4	7.0	7.1	5.4	16.3	3.35	4.73
Sep.	8.2	6.6	7.3	7.1	5.2	17.7	3.31	4.52
Oct.	8.2	6.8	7.0	7.1	5.0	16.6	3.26	4.62
Nov.	9.1	6.9	7.1	.	4.5	.	3.12	4.59
Dec.	.	.	.	.	.	.	2.94	4.41

### 2. Price and real economy developments

	HICP <sup>9)</sup>	Industrial producer prices <sup>10)</sup>	Hourly labour costs (whole economy) <sup>11)</sup>	Real GDP <sup>12)</sup>	Industrial production (excluding construction) <sup>13)</sup>	Capacity utilisation in manufacturing (percentages) <sup>14)</sup>	Employment (whole economy) <sup>15)</sup>	Unemployment (% of labour force) <sup>16)</sup>
2001	2.5	2.2	3.4	1.4	0.4	83.6	1.4	8.0
2002	.	.	.	.	.	81.2	.	.
2002 Q1	2.6	-0.8	4.0	0.3	-2.7	81.1	0.7	8.1
Q2	2.1	-0.8	3.6	0.7	-0.6	81.2	0.5	8.2
Q3	2.0	-0.1	3.7	0.8	-0.6	81.0	0.3	8.3
Q4	.	.	.	.	.	81.5	.	.
2002 July	1.9	-0.3	-	-	-0.2	-	-	8.3
Aug.	2.1	-0.1	-	-	-1.2	-	-	8.3
Sep.	2.1	0.1	-	-	-0.4	-	-	8.3
Oct.	2.3	0.9	-	-	0.7	-	-	8.4
Nov.	2.2	1.1	-	-	.	-	-	8.4
Dec.	2.2	.	-	-	.	-	-	.

### 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) <sup>21)</sup>	Effective exchange rate of the euro: broad group (1999 Q1 = 100)		USD/EUR exchange rate <sup>24)</sup>
	Current and capital accounts <sup>17)</sup>	Goods <sup>18)</sup>	Direct investment <sup>19)</sup>	Portfolio investment <sup>20)</sup>		Nominal <sup>22)</sup>	Real (CPI) <sup>23)</sup>	
2001	-4.9	75.8	-101.5	38.1	392.7	91.0	88.1	0.896
2002	.	.	.	.	.	95.6	92.0	0.946
2002 Q1	14.9	26.3	-15.0	-51.8	408.9	91.3	88.1	0.877
Q2	8.6	32.7	-4.4	67.1	367.0	93.9	90.5	0.919
Q3	22.7	37.2	-5.3	34.5	380.9	97.9	94.1	0.984
Q4	.	.	.	.	.	99.4	95.1	0.999
2002 July	3.1	14.2	-3.6	14.2	372.0	98.2	94.4	0.992
Aug.	10.4	11.7	1.7	4.5	373.0	97.7	93.8	0.978
Sep.	9.2	11.3	-3.4	15.8	380.9	98.0	94.1	0.981
Oct.	5.2	11.7	-5.0	19.4	375.5	98.5	94.6	0.981
Nov.	.	.	.	.	374.5	99.3	95.0	1.001
Dec.	.	.	.	.	.	100.4	95.9	1.018

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, money market paper 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	9 Aug.	128,323	239,409	19,302	4,824	192,067	136,998	54,999	0
	16	128,323	237,438	19,399	4,949	189,105	133,999	54,999	0
	23	128,323	239,979	17,924	4,827	189,037	133,999	54,999	0
	30	128,323	238,451	17,005	5,304	197,034	146,998	50,000	0
	6 Sep.	128,322	239,668	18,537	4,801	191,040	141,001	50,000	0
	13	128,322	241,413	18,246	4,574	186,051	136,002	50,000	0
	20	128,322	242,967	18,494	4,795	194,047	144,000	50,000	0
	27	128,322	242,538	18,267	4,961	194,085	149,000	44,998	0
	4 Oct.	131,211	248,348	18,472	4,475	190,377	145,000	44,998	0
	11	131,211	247,235	19,355	4,247	191,031	146,000	44,998	0
	18	131,211	246,437	19,628	4,239	187,124	141,999	44,998	0
	25	131,189	246,588	20,960	4,618	209,137	164,000	44,998	0
	1 Nov.	131,157	244,894	21,007	4,315	190,072	144,999	44,999	0
	8	131,157	246,441	19,802	3,844	189,009	143,999	44,999	0
	15	131,137	246,907	20,443	3,887	183,092	138,000	44,999	0
	22	131,137	246,911	21,014	3,789	196,263	150,000	44,999	0
	29	131,106	245,572	20,036	3,518	206,092	160,999	45,000	0
	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

### 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	9 Aug.	326,029	127,605	127,592	10	0	0	3	281	2,939
	16	325,804	129,440	129,406	31	0	0	3	209	2,939
	23	321,224	131,308	128,703	2,602	0	0	3	115	2,939
	30	321,780	126,066	125,935	130	0	0	1	131	2,939
	6 Sep.	325,814	129,856	129,836	15	0	0	5	260	2,939
	13	325,663	126,812	126,799	10	0	0	3	135	2,939
	20	324,542	129,987	129,927	58	0	0	2	142	2,939
	27	325,399	126,910	126,900	10	0	0	0	198	2,939
	4 Oct.	331,672	127,336	127,250	85	0	0	1	235	2,939
	11	331,640	132,319	132,288	31	0	0	0	374	2,939
	18	330,793	128,882	128,833	38	0	0	11	173	2,939
	25	329,550	136,845	136,823	11	0	0	11	131	2,939
	1 Nov.	334,839	122,651	122,615	35	0	0	1	132	2,939
	8	336,722	130,667	130,616	51	0	0	0	266	2,029
	15	335,687	129,674	129,603	71	0	0	0	183	2,029
	22	334,601	126,769	126,280	489	0	0	0	210	2,029
	29	340,039	121,903	121,860	43	0	0	0	192	2,029
	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

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	23	47	402	30,630	67,638	86,034	768,630	2002 9 Aug.
0	69	38	151	30,673	67,198	86,272	763,509	16
0	28	11	144	30,919	67,198	85,740	764,092	23
0	22	14	367	31,361	67,198	85,794	770,838	30
0	5	34	244	31,538	67,198	84,224	765,573	6 Sep.
0	12	37	164	31,480	67,198	84,690	762,139	13
0	3	44	213	31,524	67,198	85,077	772,638	20
0	55	32	312	31,503	67,199	85,634	772,822	27
0	355	24	616	32,125	67,209	85,503	778,337	4 Oct.
0	6	27	619	32,253	67,209	85,545	778,706	11
0	10	117	441	32,256	67,209	85,768	774,314	18
0	27	112	155	32,142	67,209	86,029	798,028	25
0	60	14	361	32,264	67,209	88,379	779,659	1 Nov.
0	3	8	360	32,554	67,201	87,126	777,495	8
0	66	27	364	32,675	67,222	87,604	773,332	15
0	1,229	35	154	33,099	67,223	89,076	788,667	22
0	65	28	258	33,242	67,225	89,414	796,464	29
0	892	21	211	33,231	67,224	89,080	812,706	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.

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
52,290	8,643	1,312	19,716	6,521	59,910	99,114	64,270	768,630	2002 9 Aug.
47,496	8,609	1,285	17,306	6,521	60,512	99,114	64,274	763,509	16
49,783	9,128	1,287	18,418	6,521	59,980	99,114	64,275	764,092	23
63,849	8,972	1,271	16,111	6,521	59,807	99,114	64,277	770,838	30
51,729	8,671	1,282	15,092	6,521	60,016	99,114	64,279	765,573	6 Sep.
50,133	8,588	1,309	16,613	6,521	60,031	99,114	64,281	762,139	13
55,839	8,992	1,518	18,110	6,521	60,651	99,114	64,283	772,638	20
58,763	8,903	1,443	17,851	6,521	60,495	99,114	64,286	772,822	27
47,782	9,245	1,303	18,145	6,567	62,516	106,307	64,290	778,337	4 Oct.
43,890	8,468	1,300	17,970	6,567	62,640	106,307	64,292	778,706	11
43,801	8,328	1,449	17,324	6,567	63,456	106,307	64,295	774,314	18
59,081	8,368	1,605	18,752	6,567	63,585	106,307	64,298	798,028	25
50,648	8,359	1,352	17,305	6,567	64,336	106,307	64,224	779,659	1 Nov.
41,235	8,454	1,355	17,013	6,567	62,653	106,307	64,227	777,495	8
36,809	8,400	1,629	17,097	6,567	64,722	106,307	64,228	773,332	15
55,095	8,252	1,683	19,268	6,567	63,446	106,307	64,440	788,667	22
64,849	8,634	1,338	17,292	6,567	62,870	106,307	64,444	796,464	29
62,194	8,489	1,341	20,045	6,567	62,616	106,307	64,448	812,706	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.

**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

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 3 July	108,626	57,000	-	3.25	3.33	3.33	14
10	102,931	69,000	-	3.25	3.30	3.32	14
17	104,849	65,000	-	3.25	3.30	3.31	14
24	108,732	84,000	-	3.25	3.30	3.31	14
31	86,879	55,000	-	3.25	3.30	3.31	14
7 Aug.	104,266	82,000	-	3.25	3.28	3.29	14
14	85,232	52,000	-	3.25	3.28	3.29	14
21	115,921	82,000	-	3.25	3.28	3.29	14
28	104,816	65,000	-	3.25	3.28	3.29	14
4 Sep.	124,579	76,000	-	3.25	3.28	3.29	14
11	105,528	60,000	-	3.25	3.27	3.28	14
18	116,252	84,000	-	3.25	3.28	3.29	14
25	105,130	65,000	-	3.25	3.28	3.29	14
2 Oct.	125,630	80,000	-	3.25	3.28	3.29	14
9	111,824	66,000	-	3.25	3.27	3.28	14
16	106,563	76,000	-	3.25	3.28	3.29	14
23	115,642	88,000	-	3.25	3.29	3.30	14
30	101,910	57,000	-	3.25	3.29	3.29	14
6 Nov.	104,397	87,000	-	3.25	3.25	3.26	14
13	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

## 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 25 Jan.	31,905	20,000	-	4.66	4.69	90	
1 Mar.	45,755	20,000	-	4.69	4.72	91	
29	38,169	19,101	-	4.47	4.50	91	
25 Apr.	43,416	20,000	-	4.67	4.70	92	
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	

## 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	Money market paper	Deposits (over 2 years' agreed maturity and notice period)	Repos	Debt securities over 2 years' agreed maturity
	1	2	3	4	5	6	7
2001 Nov.	10,798.1	6,073.4	199.0	191.3	1,300.9	656.5	2,376.9
Dec.	10,910.1	6,226.1	204.7	185.0	1,315.2	605.1	2,374.0
2002 Jan.	10,952.8	6,195.2	194.7	202.2	1,350.7	610.8	2,399.0
Feb.	10,964.1	6,164.7	196.8	196.0	1,337.1	653.2	2,416.3
Mar.	11,031.8	6,178.0	202.2	198.4	1,349.9	663.1	2,440.1
Apr.	11,076.4	6,176.1	205.1	199.8	1,355.1	699.1	2,441.2
May	11,111.6	6,150.4	204.3	206.2	1,355.8	741.7	2,453.2
June	11,009.1	6,083.3	203.3	204.2	1,355.3	699.2	2,463.9
July	10,999.6	6,069.3	202.3	206.3	1,368.0	691.0	2,462.7
Aug.	10,952.0	6,010.3	200.3	201.3	1,359.7	703.2	2,477.2
Sep.	11,054.3	6,055.4	201.3	203.7	1,373.5	747.6	2,472.7
Oct.	11,113.6	6,052.0	202.1	212.1	1,379.1	790.5	2,477.8
Nov. <sup>(a)</sup>	11,201.1	6,140.7	206.3	219.0	1,365.4	783.3	2,486.3

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 and of money market paper 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.

**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 Jan.	128.7	130.1	1.4	0.0	3.34
Feb.	131.7	132.4	0.7	0.0	3.30
Mar.	131.3	132.0	0.7	0.0	3.28
Apr.	130.6	131.1	0.5	0.0	3.30
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. <sup>(a)</sup>	130.8	.	.	.	.

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	
2001 Nov.	385.0	132.3	60.0	0.2	0.0	0.3	0.0	311.3	46.1	93.1	126.7	438.3
Dec.	383.7	122.5	60.0	0.5	12.4	0.8	0.0	298.0	43.5	109.3	127.4	426.2
2002 Jan.	385.2	118.5	60.0	0.4	3.7	0.6	0.0	344.3	38.3	54.2	130.4	475.2
Feb.	386.0	127.3	60.0	0.2	0.0	0.1	0.0	306.2	49.6	85.2	132.6	438.8
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. <sup>6)</sup>	371.5	168.1	45.0	1.1	2.0	0.2	0.0	350.7	51.7	55.5	129.5	480.5

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		General government	Other euro area residents	Holdings of securities other than shares issued by euro area residents			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>			2	3	4	MFIs	General government	Other euro area residents					5	6	7	8
1999	444.6	424.3	19.7	0.5	89.1	1.9	86.1	1.1	14.1	4.3	9.8	400.6	9.9	56.2	1,014.5			
2000 Q4	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			
2001 Nov.	370.0	342.4	27.1	0.6	107.3	3.8	102.2	1.2	13.6	4.7	8.9	400.5	12.1	55.0	958.5			
Dec.	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 Jan.	400.1	373.7	25.7	0.6	104.1	3.8	99.0	1.3	13.8	4.7	9.1	409.0	12.0	98.1	1,037.1			
Feb.	373.4	347.1	25.7	0.6	105.9	4.1	100.6	1.2	13.7	4.7	9.0	413.5	12.0	98.8	1,017.2			
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	111.3	986.8			
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	1,001.0			
Oct.	370.8	344.8	25.3	0.6	113.4	6.4	106.1	0.9	13.0	4.9	8.1	379.9	12.1	115.1	1,004.5			
Nov. <sup>(p)</sup>	377.3	351.3	25.3	0.6	115.0	7.0	107.1	0.9	13.6	5.0	8.6	378.8	9.8	119.2	1,013.8			

#### 2. Liabilities

	Currency in circulation		Deposits of euro area residents		Central government	Other general government/other euro area residents	Money market paper and debt securities issued	Capital and reserves	External liabilities <sup>1)</sup>	Remaining liabilities	Total
	1	2	3	4							
1999	393.3	341.5	279.3	53.4	8.8	7.9	174.3	49.8	47.6	1,014.5	
2000 Q4	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	
2001 Nov.	317.4	330.4	277.5	35.2	17.6	4.7	210.1	35.3	60.6	958.5	
Dec.	285.9	391.9	342.4	35.1	14.4	4.6	209.8	35.6	70.8	998.6	
2002 Jan.	339.7	344.8	284.7	44.9	15.2	4.6	214.5	37.4	96.1	1,037.1	
Feb.	308.2	349.1	282.3	52.1	14.7	4.6	219.9	33.9	101.5	1,017.2	
Mar.	309.1	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	329.3	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	107.3	986.8	
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	1,001.0	
Oct.	355.4	313.5	254.4	40.8	18.3	4.6	187.9	31.3	111.9	1,004.5	
Nov. <sup>(p)</sup>	360.8	319.3	255.2	46.2	17.9	3.6	185.7	31.5	112.9	1,013.8	

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.

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				Money market paper	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		9	10	11				
1999	9,779.9	3,414.1	828.2	5,537.6	2,179.4	828.8	1,123.8	226.7	129.9	650.6	211.5	439.1	1,719.6	154.0	919.4	15,532.8
2000 Q4	10,419.8	3,510.4	817.8	6,091.5	2,193.4	933.3	995.9	264.2	141.4	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	2,322.4	969.1	1,066.2	287.1	157.1	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	2,397.4	991.6	1,104.9	300.9	164.6	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	2,415.5	995.8	1,093.3	326.4	163.8	771.6	245.1	526.4	2,300.6	165.7	1,115.8	17,886.2
2001 Nov.	11,118.2	3,800.8	816.2	6,501.2	2,430.4	1,009.7	1,088.8	331.9	158.7	782.5	246.8	535.7	2,427.1	167.1	1,136.6	18,220.6
Dec.	11,134.7	3,794.0	822.1	6,518.7	2,421.3	1,008.3	1,077.4	335.6	153.1	811.0	251.9	559.1	2,408.7	168.1	1,129.5	18,226.3
2002 Jan.	11,066.2	3,713.4	819.1	6,533.7	2,466.9	1,018.9	1,107.3	340.6	168.8	811.5	252.3	559.2	2,420.4	165.4	1,159.9	18,259.1
Feb.	11,049.6	3,679.7	821.8	6,548.1	2,486.7	1,030.8	1,107.1	348.7	167.0	812.1	254.3	557.9	2,419.5	164.6	1,096.1	18,195.6
Mar.	11,210.8	3,778.4	826.8	6,605.5	2,519.6	1,046.2	1,128.1	345.3	174.0	811.6	260.1	551.5	2,430.6	164.5	1,031.1	18,342.2
Apr.	11,264.9	3,817.7	806.7	6,640.6	2,524.9	1,055.2	1,127.8	341.8	175.9	825.6	267.5	558.1	2,425.1	164.2	1,011.2	18,391.9
May	11,329.0	3,866.4	803.4	6,659.1	2,543.0	1,057.8	1,141.2	343.9	181.7	826.2	265.8	560.4	2,451.3	164.4	984.6	18,480.1
June	11,334.7	3,839.8	804.4	6,690.5	2,538.6	1,059.5	1,137.5	341.7	194.7	819.2	263.5	555.7	2,358.4	164.3	1,002.3	18,412.2
July	11,339.5	3,844.7	802.8	6,691.9	2,527.3	1,048.2	1,135.5	343.6	205.0	808.3	267.0	541.3	2,378.7	164.7	1,025.6	18,449.0
Aug.	11,321.2	3,836.8	792.7	6,691.7	2,515.3	1,044.7	1,131.7	338.9	203.1	816.8	265.7	551.2	2,367.2	165.6	1,011.0	18,400.2
Sep.	11,404.0	3,880.4	795.8	6,727.8	2,536.5	1,041.5	1,148.0	347.0	207.9	804.8	261.0	543.8	2,430.1	166.2	1,048.6	18,598.1
Oct.	11,460.4	3,921.8	795.4	6,743.3	2,529.7	1,037.0	1,141.8	350.9	209.8	818.7	263.3	555.3	2,486.5	167.1	1,011.5	18,683.6
Nov. <sup>(p)</sup>	11,587.6	4,028.3	804.2	6,755.2	2,540.9	1,039.6	1,146.9	354.4	227.2	822.9	260.9	561.9	2,561.2	167.1	1,047.2	18,954.1

## 2. Liabilities

	Currency in circulation	Deposits of euro area residents	MFIs	Central government	Other general government/other euro area residents					Money market fund shares/units <sup>1)</sup>	Money market paper and debt securities issued <sup>1)</sup>	Capital and reserves	External liabilities	Remaining liabilities	Total	
						Overnight	With agreed maturity	Redeemable at notice	Repurchase agreements							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1999	0.7	8,735.7	3,590.9	88.6	5,056.2	1,537.6	2,043.2	1,331.5	143.9	293.4	2,531.1	849.1	1,870.4	1,252.4	15,532.8	
2000 Q4	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	371.7	2,817.4	982.4	2,636.2	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	393.3	2,861.3	998.1	2,710.6	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	420.8	2,875.5	1,011.1	2,609.9	1,484.1	17,886.2	
2001 Nov.	0.0	9,601.5	3,875.9	115.1	5,610.5	1,780.8	2,238.8	1,365.0	225.9	443.8	2,888.6	1,023.9	2,690.9	1,571.9	18,220.6	
Dec.	0.0	9,696.6	3,829.6	103.9	5,763.1	1,882.1	2,257.5	1,405.0	218.5	440.5	2,882.9	1,041.9	2,683.4	1,480.9	18,226.3	
2002 Jan.	0.0	9,630.1	3,804.4	104.0	5,721.7	1,832.9	2,253.8	1,418.8	216.2	462.1	2,921.5	1,050.1	2,717.8	1,477.6	18,259.1	
Feb.	0.0	9,571.1	3,745.5	103.7	5,721.9	1,828.9	2,251.1	1,420.9	221.1	473.9	2,933.1	1,050.6	2,729.4	1,437.3	18,195.6	
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	482.5	2,966.1	1,057.6	2,749.8	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	489.7	2,969.4	1,064.1	2,736.8	1,389.4	18,391.9	
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	498.1	2,994.0	1,071.3	2,718.7	1,387.2	18,480.1	
June	0.0	9,836.5	3,926.6	103.5	5,806.4	1,898.8	2,256.3	1,421.7	229.6	502.0	2,984.6	1,071.6	2,584.4	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	516.0	2,989.6	1,081.4	2,607.8	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	529.6	3,002.0	1,088.2	2,579.9	1,420.5	18,400.2	
Sep.	0.0	9,869.8	3,956.1	106.7	5,807.0	1,891.4	2,242.8	1,432.7	240.0	522.9	3,004.1	1,091.6	2,639.9	1,469.9	18,598.1	
Oct.	0.0	9,941.0	4,015.7	113.2	5,812.2	1,873.1	2,263.8	1,438.0	237.2	526.7	3,010.2	1,094.5	2,664.1	1,447.1	18,683.6	
Nov. <sup>(p)</sup>	0.0	10,089.6	4,121.0	103.4	5,865.2	1,925.3	2,260.7	1,448.6	230.7	543.2	3,038.8	1,097.6	2,703.2	1,481.6	18,954.1	

Source: ECB.

1) 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	General government	Other euro area residents	Holdings of shares/ other equity issued by other euro area residents	External assets <sup>2)</sup>	Fixed assets	Remaining assets	
	1	2	3	4	5	6	7	8	9	10	11
2001 May	7,172.8	838.4	6,334.4	1,494.1	1,193.0	301.1	587.3	2,677.5	174.6	1,148.3	13,254.6
June	7,223.9	835.7	6,388.2	1,508.6	1,206.5	302.1	557.5	2,704.8	175.4	1,147.0	13,317.2
July	7,227.2	832.9	6,394.4	1,516.5	1,201.5	315.0	552.3	2,619.1	176.5	1,092.2	13,183.9
Aug.	7,198.4	828.8	6,369.6	1,516.6	1,192.9	323.7	545.1	2,624.7	176.9	1,082.6	13,144.3
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	568.3	2,807.6	180.0	1,137.6	13,576.6
2002 Jan.	7,379.1	844.8	6,534.4	1,548.3	1,206.3	341.9	568.2	2,829.4	177.5	1,164.8	13,667.3
Feb.	7,396.2	847.5	6,548.7	1,557.7	1,207.7	349.9	566.8	2,833.0	176.6	1,126.9	13,657.2
Mar.	7,458.8	852.6	6,606.1	1,575.7	1,229.1	346.6	560.6	2,845.1	176.4	1,077.7	13,694.3
Apr.	7,473.6	832.4	6,641.2	1,572.2	1,229.2	342.9	566.9	2,826.3	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	569.0	2,845.7	176.4	1,044.4	13,711.5
June	7,521.2	830.1	6,691.1	1,582.0	1,239.0	343.0	563.9	2,731.1	176.2	1,067.7	13,642.1
July	7,521.1	828.5	6,692.6	1,582.7	1,237.4	345.3	549.2	2,756.5	176.8	1,093.5	13,679.8
Aug.	7,510.4	818.0	6,692.3	1,576.0	1,235.0	341.0	559.2	2,745.1	177.7	1,080.7	13,649.1
Sep.	7,549.6	821.1	6,728.4	1,601.8	1,252.6	349.2	551.3	2,816.1	178.2	1,120.8	13,817.8
Oct.	7,564.6	820.7	6,743.9	1,599.7	1,247.9	351.7	563.4	2,866.4	179.2	1,085.2	13,858.5
Nov. <sup>(p)</sup>	7,585.3	829.5	6,755.8	1,609.3	1,254.0	355.2	570.5	2,940.0	176.9	1,127.1	14,009.1

## 2. Liabilities: levels

														Total
	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>3)</sup>	Money market paper and debt securities issued <sup>3)</sup>	Capital and reserves	External liabilities <sup>2)</sup>	Re-maining liabilities	Excess of inter-MFI liabilities	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2001 May	332.9	146.9	5,487.5	1,691.8	2,239.4	1,322.5	233.8	363.0	1,722.0	940.0	2,755.0	1,520.6	-13.2	13,254.6
June	333.0	165.5	5,521.1	1,731.8	2,237.0	1,330.8	221.5	360.5	1,740.5	965.9	2,743.3	1,504.4	-16.8	13,317.2
July	328.0	155.5	5,508.1	1,712.7	2,238.4	1,333.6	223.4	369.6	1,737.1	955.2	2,643.0	1,494.8	-7.4	13,183.9
Aug.	319.2	152.4	5,500.1	1,681.2	2,250.8	1,337.3	230.8	380.7	1,731.1	959.9	2,620.1	1,489.4	-8.6	13,144.3
Sep.	309.6	147.8	5,552.2	1,749.9	2,233.9	1,342.6	225.7	384.7	1,753.9	970.4	2,639.9	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	395.9	1,767.9	981.1	2,661.6	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	404.5	1,760.3	982.6	2,726.2	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	402.0	1,760.7	995.2	2,719.1	1,551.8	-8.5	13,576.6
2002 Jan.	246.5	148.9	5,736.9	1,847.8	2,254.2	1,418.8	216.2	420.8	1,775.8	1,007.6	2,755.2	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	431.6	1,778.2	1,011.5	2,763.3	1,538.9	1.1	13,657.2
Mar.	254.3	157.5	5,758.5	1,839.1	2,266.7	1,423.0	229.6	435.9	1,793.0	1,010.6	2,786.6	1,496.6	1.3	13,694.3
Apr.	261.7	157.5	5,781.8	1,869.7	2,269.4	1,414.7	228.1	442.2	1,785.4	1,004.5	2,769.2	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	447.3	1,805.0	1,008.7	2,750.3	1,485.2	-7.3	13,711.5
June	285.8	155.0	5,823.9	1,916.0	2,256.6	1,421.7	229.6	443.7	1,788.3	985.7	2,615.4	1,533.6	10.7	13,642.1
July	296.8	151.9	5,802.6	1,885.4	2,264.1	1,424.3	228.8	455.5	1,796.1	993.3	2,642.9	1,543.5	-2.9	13,679.8
Aug.	301.2	141.0	5,783.6	1,851.6	2,265.7	1,429.8	236.5	468.7	1,814.3	1,004.2	2,610.9	1,525.4	-0.2	13,649.1
Sep.	306.7	148.4	5,824.0	1,908.1	2,243.1	1,432.7	240.0	461.7	1,814.6	1,016.0	2,672.4	1,579.0	-5.1	13,817.8
Oct.	313.9	154.0	5,830.4	1,891.1	2,264.1	1,438.0	237.2	464.0	1,824.3	1,014.1	2,695.4	1,559.0	3.4	13,858.5
Nov. <sup>(p)</sup>	321.4	149.6	5,883.1	1,942.8	2,261.0	1,448.6	230.7	478.6	1,833.1	1,017.4	2,734.7	1,594.5	-3.4	14,009.1

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) See Table 2.1, footnote 1.

3) 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	General government		Holdings of shares/ other equity issued by other euro area residents	External assets <sup>2)</sup>	Fixed assets	Remaining assets	Total
	1	2			3	4					
2001 June	57.4	-2.6	60.0	14.0	13.3	0.7	-32.4	27.5	0.9	-1.4	66.0
July	12.7	-2.5	15.1	9.5	-3.2	12.7	-8.1	-41.3	1.1	-50.5	-76.5
Aug.	-18.9	-3.7	-15.2	4.9	-4.3	9.2	-6.0	57.2	0.3	-10.6	26.9
Sep.	48.6	1.0	47.5	-1.4	-4.3	2.9	-5.0	49.1	0.7	51.9	143.9
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	22.3	-26.4	1.1	-17.1	-3.0
2002 Jan.	9.5	-3.1	12.6	27.1	21.8	5.2	-0.3	-0.2	-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	-11.0
Mar.	64.2	5.2	59.0	14.1	16.9	-2.9	-7.6	19.9	0.0	-48.2	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	28.3	12.7	9.7	3.0	0.9	73.9	0.2	-20.8	92.4
June	40.8	1.4	39.3	-3.0	-1.3	-1.7	-5.2	-26.8	-0.2	23.7	29.2
July	-4.7	-1.8	-2.8	-2.5	-2.0	-0.6	-11.6	-2.4	0.5	24.7	4.1
Aug.	-10.6	-10.9	0.3	-5.6	-3.1	-2.5	9.2	-10.6	1.0	-12.9	-29.5
Sep.	40.6	3.2	37.5	18.7	11.0	7.7	-2.1	68.4	0.5	38.8	165.0
Oct.	17.7	-0.4	18.1	-0.5	-2.7	2.1	9.9	53.7	1.0	-36.2	45.5
Nov. <sup>4)</sup>	27.1	9.0	18.1	9.6	6.4	3.2	3.5	84.9	-2.3	41.6	164.3

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

	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>3)</sup>	Money market paper and debt securities issued <sup>3)</sup>	Capital and reserves	External liabilities <sup>2)</sup>	Re-maining liabilities	Excess of inter-MFI liabilities	Total
2001 June	0.1	18.6	34.8	40.4	-1.7	8.3	-12.3	-1.5	20.4	19.1	-5.3	-18.1	-2.3	66.0
July	-5.0	-10.0	-8.2	-17.4	4.4	3.0	1.9	9.5	2.9	-6.5	-58.0	-11.1	9.8	-76.5
Aug.	-8.8	-3.1	-1.8	-29.6	16.4	3.9	7.5	10.5	1.4	7.3	30.1	-7.5	-1.2	26.9
Sep.	-9.6	-4.6	51.2	68.4	-17.4	5.3	-5.1	3.7	15.8	9.0	18.0	41.4	19.1	143.9
Oct.	-14.2	5.4	22.6	0.9	3.0	9.2	9.5	11.6	13.0	7.9	18.4	46.0	-11.8	99.0
Nov.	-15.7	-3.0	51.4	47.2	0.3	13.1	-9.2	9.8	23.9	2.9	38.5	33.2	4.6	145.6
Dec.	-40.0	-11.2	149.3	98.4	18.4	40.0	-7.4	-1.1	-0.7	13.6	-17.8	-75.7	-19.5	-3.0
2002 Jan.	6.8	10.4	-42.5	-49.5	-3.1	12.4	-2.3	19.8	10.4	14.3	13.8	15.9	11.3	60.2
Feb.	-6.2	6.9	0.2	-4.3	-2.5	2.1	4.9	10.8	4.8	-0.8	10.7	-36.9	-0.7	-11.0
Mar.	14.0	1.7	22.8	-3.8	16.1	2.2	8.4	3.2	18.5	2.6	25.6	-55.3	9.3	42.4
Apr.	7.4	0.0	27.6	32.1	5.2	-8.2	-1.5	8.0	-1.7	-5.1	20.6	-16.4	-9.6	30.8
May	12.2	-8.5	24.6	2.4	14.4	1.1	6.7	4.0	29.7	3.8	35.0	-9.8	1.5	92.4
June	12.0	6.0	31.1	48.2	-17.3	6.4	-6.1	-7.4	1.4	-17.1	-67.4	55.1	15.6	29.2
July	11.0	-3.1	-24.5	-31.8	5.4	2.5	-0.7	12.7	0.2	9.8	-0.7	12.3	-13.5	4.1
Aug.	4.4	-11.0	-4.7	-33.6	15.7	5.5	7.7	12.4	4.1	8.7	-24.9	-21.4	2.8	-29.5
Sep.	5.6	3.7	41.2	56.5	-21.8	3.0	3.5	-1.6	17.5	10.1	44.8	45.1	-1.4	165.0
Oct.	7.2	5.5	7.4	-16.8	21.7	5.3	-2.8	2.1	11.7	0.0	25.3	-23.3	9.7	45.5
Nov. <sup>4)</sup>	7.5	-4.4	53.4	52.1	-2.8	10.6	-6.5	14.9	14.3	3.5	49.0	32.4	-6.2	164.3

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 May	332.9	1,759.2	2,092.1	94.58	1,069.0	1,273.2	4,434.3	94.90
June	333.0	1,798.4	2,131.4	96.38	1,066.2	1,283.0	4,480.6	95.91
July	328.0	1,780.3	2,108.3	95.41	1,073.2	1,287.2	4,468.7	95.74
Aug.	319.2	1,747.5	2,066.7	93.61	1,088.8	1,292.9	4,448.4	95.41
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	2,168.3	98.16	1,081.0	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	4,628.6	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	1,092.1	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	1,927.3	2,228.4	101.12	1,096.9	1,408.9	4,734.2	101.72
Sep.	306.7	1,984.1	2,290.9	103.96	1,073.7	1,411.0	4,775.6	102.61
Oct.	313.9	1,968.0	2,281.9	103.56	1,093.7	1,417.7	4,793.3	103.01
Nov. <sup>(p)</sup>	321.4	2,020.5	2,341.9	106.30	1,086.8	1,428.7	4,857.4	104.40

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 June	0.1	39.6	39.7	4.3	-2.2	9.8	47.3	4.5
July	-5.0	-16.4	-21.4	3.3	9.0	4.4	-7.9	4.4
Aug.	-8.8	-30.9	-39.7	3.2	18.4	5.9	-15.4	4.3
Sep.	-9.6	67.4	57.7	5.5	-18.2	6.8	46.3	5.3
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	11.5	6.3	12.3	3.4	27.2	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	-31.8	-27.5	8.0	13.5	6.0	-8.0	6.6
Sep.	5.6	56.9	62.4	8.0	-22.8	2.1	41.8	6.4
Oct.	7.2	-16.0	-8.8	8.3	20.5	6.7	18.3	6.8
Nov. <sup>(p)</sup>	7.5	52.9	60.4	9.5	-6.8	11.1	64.7	7.1

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, money market paper and debt securities up to 2 years.

M3 <sup>2)</sup>						
Repurchase agreements	Money market fund shares/units	Money market paper and debt securities up to 2 years	Total	Index Dec. 01=100 <sup>3)</sup>		
9	10	11	12	13		
233.8	363.0	135.0	5,166.1	95.04		2001 May
221.5	360.5	145.2	5,207.8	95.83		June
223.4	369.6	140.4	5,202.1	95.80		July
230.8	380.7	142.5	5,202.4	95.90		Aug.
225.7	384.7	147.6	5,253.4	96.71		Sep.
235.1	395.9	149.5	5,278.4	97.16		Oct.
225.9	404.5	152.2	5,330.8	98.16		Nov.
218.5	402.0	145.9	5,430.9	100.00		Dec.
216.2	420.8	141.8	5,418.6	99.83		2002 Jan.
221.1	431.6	138.8	5,420.1	99.85		Feb.
229.6	435.9	137.2	5,457.6	100.57		Mar.
228.1	442.2	134.7	5,496.2	101.37		Apr.
234.8	447.3	144.0	5,539.0	102.26		May
229.6	443.7	132.9	5,558.9	102.73		June
228.8	455.5	125.5	5,552.7	102.50		July
236.5	468.7	126.6	5,566.0	102.74		Aug.
240.0	461.7	132.1	5,609.4	103.63		Sep.
237.2	464.0	134.1	5,628.6	104.00		Oct.
230.7	478.6	131.7	5,698.4	105.31		Nov. <sup>4)</sup>

M3 <sup>2)</sup>						
Repurchase agreements	Money market fund shares/units	Money market paper and debt securities up to 2 years	Total	Annual growth rate <sup>3)</sup> (%)		
9	10	11	12	13		
-12.3	-1.5	9.2	42.9	5.6		2001 June
1.9	9.5	-4.9	-1.5	5.6		July
7.5	10.5	2.8	5.4	5.9		Aug.
-5.1	3.7	-0.9	43.9	6.9		Sep.
9.5	11.6	0.5	24.2	7.3		Oct.
-9.2	9.8	5.0	54.4	7.7		Nov.
-7.4	-1.1	-8.0	99.9	7.6		Dec.
-2.3	19.8	-0.4	-9.1	7.8		2002 Jan.
4.9	10.8	-3.9	1.2	7.4		Feb.
8.4	3.2	0.3	39.1	7.3		Mar.
-1.5	8.0	-3.3	43.1	7.3		Apr.
6.7	4.0	10.0	48.2	7.6		May
-6.1	-7.4	-7.0	25.8	7.2		June
-0.7	12.7	-8.9	-12.8	7.0		July
7.7	12.4	1.2	13.2	7.1		Aug.
3.5	-1.6	4.5	48.2	7.2		Sep.
-2.8	2.1	2.5	20.1	7.0		Oct.
-6.5	14.9	-2.4	70.6	7.3		Nov. <sup>4)</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.

**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							
	M1				Other short-term deposits <sup>5)</sup>		Total	Index <sup>4)</sup>
	Currency in circulation <sup>1)</sup>	Overnight deposits <sup>2)</sup>	Total	Index <sup>4)</sup>	Total	Index <sup>4)</sup>		
			3	4	5	6	7	8
2001 May	334.0	1,748.7	2,082.7	94.15	2,337.0	94.97	4,419.7	94.58
June	330.1	1,764.7	2,094.8	94.72	2,356.7	95.80	4,451.5	95.29
July	323.8	1,769.8	2,093.6	94.74	2,372.2	96.52	4,465.8	95.68
Aug.	317.5	1,789.2	2,106.6	95.42	2,378.0	96.88	4,484.7	96.19
Sep.	307.8	1,822.4	2,130.2	96.48	2,390.8	97.39	4,521.0	96.96
Oct.	295.8	1,843.6	2,139.4	96.92	2,405.6	97.97	4,545.0	97.47
Nov.	278.3	1,877.0	2,155.3	97.61	2,421.1	98.56	4,576.3	98.11
Dec.	233.4	1,922.1	2,155.5	97.63	2,441.6	99.39	4,597.1	98.55
2002 Jan.	251.2	1,927.2	2,178.5	98.62	2,450.4	99.73	4,628.8	99.21
Feb.	245.3	1,932.6	2,177.9	98.60	2,457.8	100.04	4,635.7	99.36
Mar.	254.1	1,923.7	2,177.8	98.61	2,473.6	100.71	4,651.4	99.72
Apr.	264.4	1,932.8	2,197.2	99.56	2,479.8	101.04	4,677.0	100.34
May	273.6	1,942.2	2,215.8	100.50	2,483.4	101.34	4,699.2	100.94
June	283.0	1,945.9	2,228.9	101.19	2,486.5	101.64	4,715.4	101.43
July	292.8	1,954.0	2,246.8	101.95	2,496.5	101.86	4,743.3	101.90
Aug.	299.3	1,964.1	2,263.4	102.71	2,502.1	102.10	4,765.5	102.39
Sep.	306.2	1,993.1	2,299.4	104.34	2,509.8	102.43	4,809.2	103.34
Oct.	314.1	1,997.5	2,311.7	104.91	2,531.7	103.34	4,843.3	104.08
Nov. <sup>(p)</sup>	319.6	2,026.6	2,346.2	106.50	2,532.5	103.39	4,878.8	104.86

**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	6	7	8	9	10	11
2001 June	-3.8	16.4	12.6	0.6	4.0	20.4	0.9	4.6	33.0	0.7	4.3
July	-6.3	6.8	0.5	0.0	3.4	17.8	0.8	5.3	18.2	0.4	4.4
Aug.	-6.4	21.3	15.0	0.7	3.6	8.8	0.4	5.1	23.8	0.5	4.4
Sep.	-9.6	32.9	23.3	1.1	5.0	12.4	0.5	5.2	35.7	0.8	5.1
Oct.	-12.0	21.7	9.7	0.5	5.2	14.2	0.6	5.7	24.0	0.5	5.5
Nov.	-17.5	32.7	15.2	0.7	5.9	14.5	0.6	5.9	29.7	0.7	6.0
Dec.	-44.9	45.4	0.5	0.0	5.5	20.4	0.8	7.2	20.9	0.5	6.4
2002 Jan.	17.9	4.1	21.9	1.0	6.6	8.4	0.3	6.8	30.4	0.7	6.7
Feb.	-6.0	5.5	-0.4	0.0	6.2	7.6	0.3	6.5	7.2	0.2	6.3
Mar.	8.8	-8.5	0.3	0.0	6.0	16.4	0.7	6.6	16.7	0.4	6.3
Apr.	10.3	10.6	20.9	1.0	6.6	8.2	0.3	6.1	29.1	0.6	6.3
May	9.2	11.6	20.8	0.9	6.7	7.3	0.3	6.7	28.1	0.6	6.7
June	9.4	5.7	15.1	0.7	6.8	7.4	0.3	6.1	22.6	0.5	6.4
July	9.8	6.9	16.7	0.8	7.6	5.2	0.2	5.5	21.9	0.5	6.5
Aug.	6.4	10.4	16.9	0.8	7.6	6.0	0.2	5.4	22.9	0.5	6.4
Sep.	6.9	29.0	36.0	1.6	8.2	8.2	0.3	5.2	44.1	0.9	6.6
Oct.	7.9	4.5	12.5	0.5	8.2	22.3	0.9	5.5	34.8	0.7	6.8
Nov. <sup>(p)</sup>	5.5	29.5	35.0	1.5	9.1	1.0	0.0	4.9	36.0	0.7	6.9

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, money market paper 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	
711.0	93.20	5,130.7	94.39	6,334.5	96.82	2001 May
725.3	95.07	5,176.8	95.26	6,364.2	97.37	June
737.2	96.68	5,203.1	95.82	6,381.1	97.77	July
752.2	98.66	5,236.9	96.54	6,398.0	98.17	Aug.
767.8	99.86	5,288.8	97.36	6,433.8	98.65	Sep.
787.1	102.27	5,332.0	98.15	6,465.5	99.12	Oct.
787.2	102.76	5,363.6	98.76	6,503.6	99.69	Nov.
794.8	103.71	5,391.9	99.28	6,510.0	99.86	Dec.
785.3	103.07	5,414.2	99.75	6,535.6	100.21	2002 Jan.
785.8	103.04	5,421.5	99.88	6,562.7	100.66	Feb.
788.8	103.51	5,440.1	100.25	6,597.2	101.21	Mar.
791.3	103.96	5,468.3	100.85	6,626.3	101.76	Apr.
802.7	105.41	5,501.9	101.57	6,657.3	102.38	May
805.1	105.66	5,520.5	102.02	6,665.7	102.64	June
814.4	106.81	5,557.7	102.59	6,680.6	102.80	July
830.0	108.75	5,595.5	103.29	6,722.9	103.46	Aug.
845.2	111.31	5,654.4	104.46	6,740.1	103.74	Sep.
840.8	110.79	5,684.1	105.03	6,757.7	104.06	Oct.
845.7	111.45	5,724.4	105.79	6,756.6	104.13	Nov. <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	
14.3	2.0	12.9	47.3	0.9	5.5	5.1	35.9	0.6	7.9	2001 June
12.3	1.7	13.6	30.5	0.6	5.6	5.7	25.9	0.4	7.8	July
15.1	2.0	16.0	38.9	0.7	5.9	6.1	26.6	0.4	7.2	Aug.
9.1	1.2	17.6	44.8	0.9	6.8	6.7	31.0	0.5	6.7	Sep.
18.5	2.4	19.5	42.5	0.8	7.3	7.3	30.4	0.5	6.5	Oct.
3.8	0.5	19.7	33.5	0.6	7.8	7.7	37.5	0.6	6.6	Nov.
7.3	0.9	18.1	28.2	0.5	8.0	7.8	10.9	0.2	6.1	Dec.
-4.9	-0.6	14.4	25.5	0.5	7.8	7.7	23.1	0.4	5.7	2002 Jan.
-0.3	0.0	13.7	6.9	0.1	7.4	7.5	29.0	0.4	5.6	Feb.
3.6	0.5	13.1	20.3	0.4	7.2	7.3	36.1	0.6	5.5	Mar.
3.5	0.4	13.0	32.5	0.6	7.3	7.4	35.7	0.5	5.5	Apr.
11.0	1.4	13.1	39.1	0.7	7.6	7.3	40.8	0.6	5.7	May
1.9	0.2	11.1	24.4	0.4	7.1	7.3	16.3	0.2	5.4	June
8.8	1.1	10.5	30.7	0.6	7.1	7.1	10.6	0.2	5.1	July
14.8	1.8	10.2	37.7	0.7	7.0	7.1	42.8	0.6	5.4	Aug.
19.6	2.4	11.5	63.7	1.1	7.3	7.1	18.6	0.3	5.2	Sep.
-4.0	-0.5	8.3	30.8	0.5	7.0	7.1	20.3	0.3	5.0	Oct.
5.1	0.6	8.5	41.1	0.7	7.1	.	4.9	0.1	4.5	Nov. <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, money market paper 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 May	1,170.6	123.2	1,584.5	940.0	2,031.3	7,222.8	6,334.4	96.82	-77.5	174.6
June	1,170.9	122.0	1,593.0	965.9	2,042.1	7,247.9	6,388.2	97.74	-38.5	175.4
July	1,165.3	120.7	1,594.1	955.2	2,034.4	7,261.6	6,394.4	97.97	-23.9	176.5
Aug.	1,162.0	119.5	1,586.2	959.9	2,021.6	7,238.5	6,369.6	97.74	4.6	176.9
Sep.	1,163.0	118.6	1,604.7	970.4	2,025.0	7,284.1	6,421.9	98.47	57.8	177.6
Oct.	1,162.9	116.9	1,617.0	981.1	2,014.0	7,325.2	6,451.6	98.90	80.9	178.3
Nov.	1,161.6	115.8	1,606.6	982.6	2,034.3	7,379.6	6,501.9	99.67	101.4	179.1
Dec.	1,169.1	115.8	1,613.6	995.2	2,026.9	7,424.5	6,519.3	100.00	88.5	180.0
2002 Jan.	1,173.2	112.3	1,632.9	1,007.6	2,051.1	7,444.5	6,534.4	100.19	74.2	177.5
Feb.	1,174.7	111.2	1,638.8	1,011.5	2,055.2	7,465.5	6,548.7	100.44	69.8	176.6
Mar.	1,178.2	109.9	1,655.8	1,010.6	2,081.7	7,513.3	6,606.1	101.35	58.4	176.4
Apr.	1,177.3	108.0	1,650.2	1,004.5	2,061.7	7,551.0	6,641.2	101.99	57.1	176.2
May	1,179.6	106.8	1,660.5	1,008.7	2,071.4	7,573.7	6,659.7	102.42	95.3	176.4
June	1,181.7	106.6	1,655.2	985.7	2,069.1	7,598.1	6,691.1	103.03	115.7	176.2
July	1,180.4	106.6	1,670.1	993.3	2,065.9	7,587.1	6,692.6	102.98	113.6	176.8
Aug.	1,168.9	106.8	1,687.0	1,004.2	2,053.0	7,592.6	6,692.3	102.99	134.2	177.7
Sep.	1,169.5	107.2	1,681.6	1,016.0	2,073.7	7,628.9	6,728.4	103.56	143.7	178.2
Oct.	1,170.5	106.2	1,689.6	1,014.1	2,068.6	7,659.1	6,743.9	103.84	171.0	179.2
Nov. <sup>(p)</sup>	1,174.2	105.7	1,699.9	1,017.4	2,083.5	7,681.6	6,755.8	104.12	205.3	176.9

**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 June	0.5	-1.1	11.5	19.1	10.7	28.4	60.0	7.9	32.8	0.9
July	-4.7	-1.4	7.5	-6.5	-5.6	19.8	15.1	7.7	16.7	1.1
Aug.	-2.1	-1.2	-1.2	7.3	-8.0	-11.9	-15.2	7.2	27.0	0.3
Sep.	0.8	-0.9	17.5	9.0	-3.3	45.5	47.5	6.7	31.2	0.7
Oct.	-0.3	-1.7	12.7	7.9	-12.3	36.8	28.4	6.5	25.2	0.7
Nov.	-1.6	-1.1	18.7	2.9	23.8	48.6	49.7	6.6	27.5	1.1
Dec.	7.3	0.1	7.6	13.6	-6.7	46.1	21.8	6.0	-8.6	1.1
2002 Jan.	3.6	-3.6	11.0	14.3	18.7	17.5	12.6	5.7	-14.0	-2.5
Feb.	1.6	-1.0	9.3	-0.8	3.9	24.9	16.2	5.6	-10.5	-0.9
Mar.	3.7	-1.3	18.7	2.6	22.2	48.6	59.0	5.5	-5.7	0.0
Apr.	-0.2	-1.9	1.0	-5.1	-18.5	44.7	41.7	5.5	-2.6	-0.2
May	3.5	-1.2	19.7	3.8	6.9	32.2	28.3	5.8	38.9	0.2
June	3.3	-0.2	8.6	-17.1	0.1	32.4	39.3	5.4	40.7	-0.2
July	1.3	0.0	8.8	9.8	-3.8	-15.0	-2.8	5.1	-1.6	0.5
Aug.	2.2	0.2	2.7	8.7	-14.0	7.0	0.3	5.4	14.3	1.0
Sep.	1.0	0.4	12.8	10.1	14.2	43.1	37.5	5.2	23.7	0.5
Oct.	1.3	-1.0	9.5	0.0	-3.1	30.1	18.1	5.0	28.4	1.0
Nov. <sup>(p)</sup>	4.0	-0.5	15.8	3.5	15.4	24.7	18.1	4.5	35.9	-2.3

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		Index Dec.01 =100 <sup>2)</sup>	Total		Index Dec.01 =100 <sup>2)</sup>	Central government <sup>3)</sup>	Other general government					Total	Index Dec.01 =100 <sup>2)</sup>
	1	Up to 1 year		2	Up to 1 year			3	State government	Local government		Social security funds		
			Over 5 years			Over 5 years				8	9		10	11
13	14													
2001 Q1	418.2	273.1	95.8	36.4	26.8	103.5	188.4	295.2	255.3	352.4	314.0	15.6	851.7	100.6
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	93.6	37.4	26.9	107.3	167.3	293.9	254.1	349.7	312.0	18.9	829.8	98.0
Q4	434.6	276.2	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	459.0	305.0	105.8	38.9	28.3	111.3	180.3	294.0	248.2	361.8	317.9	16.4	852.6	100.6
Q2	461.3	303.7	106.3	39.4	28.2	112.2	163.0	280.9	245.8	366.6	314.5	19.5	830.1	98.0
Q3 <sup>4)</sup>	453.3	290.6	104.4	43.1	30.7	116.8	155.4	274.7	241.6	371.3	319.4	19.7	821.1	96.9

**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		Annual growth rate <sup>2)</sup> (%)	Total		Annual growth rate <sup>2)</sup> (%)	Central government <sup>3)</sup>	Other general government					Total	Annual growth rate <sup>2)</sup> (%)
	1	Up to 1 year		2	Up to 1 year			3	State government	Local government		Social security funds		
			Over 5 years			Over 5 years				8	9		10	11
13	14													
2001 Q2	7.5	7.6	14.8	-0.2	-0.1	-6.9	-14.8	-1.3	-0.4	-2.0	-1.7	1.6	-16.4	-1.9
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	27.7	21.6	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	25.1	29.3	10.4	3.9	3.5	7.5	10.1	-4.3	-3.8	-1.1	-4.4	0.1	4.8	0.0
Q2	2.1	-1.3	9.0	0.3	-0.2	9.0	-16.2	-13.1	-2.4	4.8	-3.5	3.1	-21.4	-0.6
Q3 <sup>4)</sup>	-8.0	-13.1	11.5	1.6	2.6	8.8	-7.7	-6.8	-4.7	4.7	5.0	0.2	-9.6	-1.1

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 Q1	1,034.2	445.9	1,313.9	2,794.0	96.1	98.7	168.4	212.7	479.9	95.8
Q2	1,051.7	456.3	1,343.7	2,851.8	97.8	100.1	171.1	217.7	488.8	97.9
Q3	1,027.2	467.3	1,372.1	2,866.6	98.8	100.6	170.7	221.7	493.1	98.8
Q4	1,017.9	489.8	1,394.6	2,902.3	100.0	102.6	170.4	226.7	499.6	100.0
2002 Q1	1,018.7	494.8	1,418.9	2,932.4	100.8	99.3	170.5	229.2	499.0	99.9
Q2	1,010.2	504.9	1,437.4	2,952.4	102.4	102.3	173.6	233.0	508.9	101.4
Q3 <sup>(p)</sup>	998.6	505.2	1,450.2	2,954.0	102.4	104.5	177.3	237.1	518.8	103.0

**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 Q2	13.6	12.1	25.9	51.7	9.1	1.3	3.9	5.2	10.4	5.2
Q3	-19.2	14.3	32.3	27.4	7.5	0.9	-0.5	4.1	4.5	3.6
Q4	-10.1	23.2	22.5	35.6	6.1	1.9	-0.7	4.9	6.1	3.6
2002 Q1	-1.1	4.7	20.2	23.8	5.0	-4.2	1.2	2.5	-0.5	4.3
Q2	-0.4	15.5	30.9	46.0	4.7	2.9	0.7	3.8	7.4	3.6
Q3 <sup>(p)</sup>	-12.7	-0.1	13.0	0.3	3.7	2.2	1.8	4.1	8.1	4.3

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) 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	
21.8	62.0	1,831.6	1,915.4	95.1	146.9	104.5	342.1	593.5	99.0	2,988.7	95.9	37.3	95.3	2001 Q1
22.3	62.4	1,868.0	1,952.8	96.7	148.8	100.9	342.7	592.4	99.9	3,034.0	97.5	40.7	104.3	Q2
22.5	61.1	1,905.9	1,989.5	98.6	144.3	100.8	342.1	587.2	99.2	3,069.8	98.7	39.0	99.9	Q3
22.7	61.0	1,935.1	2,018.8	100.0	144.6	101.9	343.6	590.0	100.0	3,108.5	100.0	39.0	100.0	Q4
23.1	60.7	1,972.9	2,056.6	101.9	142.6	101.2	337.7	581.6	99.5	3,137.3	101.1	38.7	99.1	2002 Q1
23.7	60.7	2,016.9	2,101.3	104.1	145.7	103.3	339.5	588.6	100.9	3,198.7	103.0	39.4	101.0	Q2
24.5	60.9	2,053.6	2,139.0	105.9	143.3	101.5	340.7	585.6	100.9	3,243.4	104.5	39.9	102.2	Q3 <sup>(p)</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	
0.5	0.5	32.2	33.3	7.6	2.0	-1.8	5.3	5.5	2.9	49.3	6.2	3.5	8.1	2001 Q2
0.2	-1.4	38.4	37.3	7.6	-4.5	0.1	0.2	-4.3	2.3	37.4	5.9	-1.7	3.7	Q3
0.1	-0.1	28.9	29.0	6.8	0.3	2.3	2.0	4.6	2.0	39.7	5.3	0.0	2.2	Q4
0.4	-0.4	37.9	37.9	7.2	-1.6	-0.3	-1.2	-3.0	0.5	34.3	5.4	-0.4	3.9	2002 Q1
0.6	0.0	44.0	44.7	7.6	3.4	2.4	2.4	8.2	0.9	60.3	5.7	0.8	-3.2	Q2
0.9	0.2	36.4	37.5	7.5	-2.5	0.2	2.6	0.3	1.7	45.8	5.9	0.5	2.2	Q3 <sup>(p)</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 Q1	441.8	151.8	194.1	91.2	98.3	483.8	38.2	423.3	18.8	97.6	150.3	30.9	65.0	57.2	303.5	101.5
Q2	455.6	164.3	196.0	89.3	100.5	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	98.7	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	484.7	157.8	228.7	92.1	103.6	498.6	43.9	433.0	17.7	100.6	157.5	31.0	64.2	61.8	314.4	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	59.6	314.5	105.4
Q3 <sup>(p)</sup>	490.1	159.2	219.6	105.6	106.8	507.9	49.6	437.8	16.6	102.5	148.4	34.4	63.9	54.9	301.6	99.8

**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 Q2	10.0	12.4	-1.8	-1.8	4.6	2.8	3.4	1.0	-1.9	4.5	15.1	0.5	1.9	3.6	21.1	6.5
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	6.1	-4.7	10.8	-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	16.9	0.0	9.4	6.7	5.4	3.0	-4.2	5.4	1.3	3.1	19.0	1.0	-4.7	0.7	16.1	3.8
Q2	5.6	5.8	1.5	0.3	4.3	5.3	4.5	-0.1	1.2	3.6	-2.5	3.3	1.5	-2.1	0.2	-2.9
Q3 <sup>(p)</sup>	9.4	-5.2	1.9	12.7	8.3	4.1	1.3	5.0	-2.4	4.1	-10.3	0.1	-1.7	-4.7	-16.7	-3.4

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 Q1	479.0	344.4	24.1	29.0	876.5	88.6	906.1	1,192.4	1,287.1	78.9	3,464.5	94.0
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	335.3	27.5	36.2	976.1	100.0	1,043.5	1,194.5	1,365.7	76.6	3,680.3	100.0
2002 Q1	529.1	344.8	27.5	34.5	935.9	95.8	1,039.2	1,180.1	1,382.6	80.6	3,682.5	100.1
Q2	555.7	337.7	27.7	37.0	958.1	99.9	1,076.6	1,174.7	1,382.0	77.0	3,710.2	100.9
Q3 <sup>4)</sup>	561.5	336.6	28.9	35.5	962.5	100.3	1,067.0	1,173.4	1,391.5	78.4	3,710.2	100.9

**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 Q2	32.7	-13.3	0.3	0.0	19.7	6.3	41.1	6.4	6.3	2.3	56.2	4.4
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	14.2	2.0	4.3	82.6	10.1	80.1	-4.2	60.3	-8.0	128.2	7.6
2002 Q1	-48.5	9.3	0.0	-1.8	-41.0	8.1	-4.3	-10.1	15.1	4.0	4.7	6.5
Q2	33.0	4.5	0.2	2.3	40.1	10.2	37.0	-5.1	1.6	-3.7	29.8	5.7
Q3 <sup>4)</sup>	4.9	-0.6	1.2	-1.5	4.0	9.6	-9.1	-1.6	9.4	1.4	0.2	4.6

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 govern- ment	Other	Total	Index Dec.01 =100 <sup>3)</sup>			Total	Index Dec.01 =100 <sup>3)</sup>	General govern- ment	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 Q1	1,053.9	94.3	76.3	517.6	593.9	96.4	1,647.8	95.0	192.3	81.7	285.9	205.1	491.0	96.5	683.3	91.8
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	94.2
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	543.4	618.6	100.0	1,738.3	100.0	236.6	100.0	290.2	217.7	507.9	100.0	744.5	100.0
2002 Q1	1,104.8	98.5	76.8	556.2	633.1	102.5	1,737.9	99.9	262.9	110.8	275.9	217.8	493.7	97.4	756.6	101.6
Q2	1,085.2	103.1	72.9	528.4	601.3	104.6	1,686.4	103.6	244.3	109.4	244.2	214.6	458.9	96.1	703.2	100.4
Q3 <sup>(p)</sup>	1,123.6	105.8	76.9	539.2	616.1	106.3	1,739.7	105.9	254.2	112.3	252.5	229.1	481.6	99.8	735.8	103.7

**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 govern- ment	Other	Total	Annual growth rate <sup>3)</sup> (%)			Total	Annual growth rate <sup>3)</sup> (%)	General govern- ment	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 Q2	0.7	3.3	2.9	-12.6	-9.7	18.3	-9.1	8.3	14.0	31.0	9.2	-5.7	3.5	5.3	17.4	11.8
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	-2.3	14.3	7.2	40.3	14.3
2002 Q1	-17.3	4.4	3.6	11.9	15.4	6.4	-1.9	5.1	25.6	35.7	-10.9	-2.5	-13.4	0.9	12.2	10.7
Q2	51.9	9.3	-3.9	16.8	12.9	10.3	64.8	9.7	-3.4	24.9	-34.4	28.2	-6.2	-1.1	-9.5	6.6
Q3 <sup>(p)</sup>	28.1	8.6	4.0	5.7	9.7	7.4	37.8	8.2	6.4	26.4	5.9	11.4	17.3	2.7	23.7	9.8

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	
65.1	93.5	94.3	104.5	159.4	99.7	1,781.7	103.5	89.3	577.1	666.4	93.9	2,448.2	100.7	2001 Q1
61.1	87.6	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	Q2
63.6	91.1	89.9	99.2	153.5	95.7	1,710.8	100.7	93.0	588.5	681.5	97.2	2,392.3	99.7	Q3
73.0	100.0	89.8	100.0	162.8	100.0	1,718.4	100.0	95.3	615.0	710.3	100.0	2,428.8	100.0	Q4
76.9	104.5	98.5	110.9	175.4	108.0	1,740.4	100.4	99.0	636.8	735.8	103.3	2,476.3	101.3	2002 Q1
76.8	104.1	100.9	113.4	177.7	109.3	1,606.1	98.9	96.2	607.3	703.6	104.6	2,309.7	100.6	Q2
77.8	105.4	96.4	108.2	174.2	107.0	1,645.4	100.6	102.4	609.8	712.3	105.2	2,357.7	102.0	Q3 <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	
-4.1	15.3	2.7	45.4	-1.4	32.2	-3.6	14.6	5.6	-2.7	2.8	18.2	-0.8	15.6	2001 Q2
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	Q3
6.2	11.6	0.8	12.8	7.0	12.3	-12.0	8.7	2.3	17.5	19.8	17.9	7.8	11.2	Q4
3.3	11.8	9.8	6.1	13.0	8.3	7.6	-2.9	4.2	19.0	23.2	9.9	30.8	0.6	2002 Q1
-0.2	18.9	2.3	5.5	2.1	10.5	-25.9	-4.2	-2.8	12.1	9.3	10.8	-16.7	-0.1	Q2
0.9	15.7	-4.7	9.1	-3.7	11.8	27.0	-0.1	6.1	-1.6	4.4	8.3	31.4	2.3	Q3 <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>2)</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 Q1	4,067.9	3,563.6	55.4	448.9	316.6	43.7	67.8	20.7	5,570.0	5,363.2	31.2	175.6	130.8	20.2	12.3	12.2
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	174.9	127.4	23.9	10.5	13.0
2002 Q1	4,135.7	3,646.5	46.1	443.0	315.8	40.6	65.6	21.0	5,916.1	5,712.7	28.8	174.6	126.9	22.4	10.7	14.6
Q2	4,214.6	3,774.5	41.3	398.8	276.4	40.8	62.8	18.8	5,979.1	5,791.4	26.7	161.0	115.0	22.3	10.9	12.8
Q3 <sup>3)</sup>	4,217.0	3,797.1	38.5	381.3	265.8	37.7	58.2	19.7	5,972.4	5,785.4	25.8	161.2	117.8	21.2	9.4	12.9

**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>2)</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 Q1	1,781.7	698.6	142.6	940.6	776.8	66.4	65.8	31.5	666.4	295.7	70.6	300.2	255.9	17.6	14.2	12.4
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	661.9	144.8	933.8	781.0	44.4	74.6	33.8	735.8	312.7	66.6	356.5	302.8	20.0	18.9	14.8
Q2	1,606.1	649.1	141.6	815.4	665.8	40.5	73.4	35.7	703.6	322.2	63.3	318.1	268.7	19.4	17.8	12.2
Q3 <sup>3)</sup>	1,645.4	703.0	144.3	798.2	650.2	42.1	72.5	33.4	712.3	334.7	68.3	309.3	258.6	17.9	16.4	16.4

**3. Debt securities and money market paper issued by euro area MFIs**

	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>2)</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 Q1	2,667.7	2,327.9	48.3	291.4	172.0	61.5	37.5	20.5	278.5	227.8	2.1	48.6	41.6	3.0	2.6	1.5
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 <sup>3)</sup>	2,862.9	2,458.9	70.6	333.4	203.4	53.6	48.0	28.4	286.6	234.2	6.3	46.1	39.8	1.1	3.0	2.2

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.

**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 Q1	4,089.5	-	-	-	-	-	-	-	7,126.3	6,782.7	35.1	308.5	182.6	45.4	74.9	5.6
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	7,025.3	29.8	312.0	181.6	47.8	77.5	5.1
2002 Q1	4,133.3	-	-	-	-	-	-	-	7,458.8	7,106.8	30.5	321.5	187.4	51.0	76.8	6.3
Q2	4,201.2	-	-	-	-	-	-	-	7,521.3	7,209.1	28.9	283.3	152.5	46.7	78.3	5.8
Q3 <sup>3)</sup>	4,220.0	-	-	-	-	-	-	-	7,549.5	7,240.8	27.7	281.0	150.3	45.1	80.0	5.6

**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 Q1	971.8	931.6	9.7	30.5	20.6	6.3	1.7	1.8	1,455.6	1,415.8	3.8	36.0	21.2	13.1	1.1	0.6
Q2	994.7	951.6	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	999.5	960.0	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	1,012.1	967.1	12.4	32.6	23.1	6.3	1.4	1.8	1,516.4	1,478.6	3.7	34.1	20.4	12.1	1.1	0.6
2002 Q1	1,050.4	1,002.2	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	1,064.3	1,017.3	13.5	33.5	23.9	5.8	2.0	1.8	1,582.2	1,547.9	4.5	29.8	15.5	12.2	1.2	0.8
Q3 <sup>3)</sup>	1,047.2	1,002.5	14.1	30.7	22.2	4.9	2.0	1.7	1,601.8	1,567.0	5.2	29.6	15.2	12.2	1.4	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 Q1	1,053.9	469.7	98.7	485.6	365.8	47.3	34.5	37.0	593.9	198.2	48.6	347.0	300.8	11.9	26.2	8.0
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	202.6	46.8	369.3	323.2	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	633.1	199.5	49.9	383.7	331.2	16.4	26.9	9.2
Q2	1,085.2	459.4	129.9	495.9	375.0	61.4	36.1	23.4	601.3	204.2	46.6	350.5	300.8	12.8	28.1	8.8
Q3 <sup>3)</sup>	1,123.6	498.9	142.1	482.5	368.4	56.9	33.6	23.7	616.1	217.2	46.2	352.8	299.5	15.5	29.3	8.6

**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 Q1	192.3	65.2	23.0	104.1	89.9	7.3	2.3	4.6	491.0	121.0	24.4	345.5	307.1	25.7	2.7	10.1
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	507.9	131.5	27.0	349.4	306.2	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	244.3	87.5	32.6	124.2	111.8	4.3	2.3	5.9	458.9	132.4	25.0	301.4	260.7	24.0	5.0	11.7
Q3 <sup>3)</sup>	254.2	92.3	38.7	123.1	113.1	3.9	2.4	3.7	481.6	135.5	31.4	314.8	271.5	25.7	5.4	12.1



**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	
2000 Q4	226.4	1,258.6	58.0	1,200.6	1,394.8	187.1	96.9	92.5	3,256.2
<i>Euro area enlargement</i>									
2001 Q1	233.0	1,289.7	60.0	1,229.8	1,279.6	191.5	100.1	89.8	3,183.8
Q2	248.6	1,293.1	61.9	1,231.2	1,339.3	211.9	104.3	90.9	3,288.1
Q3	242.4	1,294.0	62.6	1,231.4	1,053.1	192.4	105.0	88.7	2,975.6
Q4	244.6	1,309.9	63.4	1,246.5	1,217.8	209.6	108.9	98.0	3,188.8
2002 Q1	253.6	1,308.7	70.7	1,238.0	1,263.3	224.6	111.0	97.5	3,258.6
Q2 <sup>(p)</sup>	242.6	1,312.5	75.4	1,237.1	1,056.8	219.2	108.0	99.3	3,038.3

**2. Liabilities**

				Total
	Deposits and loans taken	Investment fund shares	Other liabilities	
	1	2	3	4
2000 Q4	37.7	3,114.5	104.1	3,256.2
<i>Euro area enlargement</i>				
2001 Q1	37.3	3,044.8	101.7	3,183.8
Q2	39.3	3,136.4	112.4	3,288.1
Q3	41.5	2,838.7	95.3	2,975.6
Q4	41.1	3,050.4	97.3	3,188.8
2002 Q1	42.6	3,114.2	101.8	3,258.6
Q2 <sup>(p)</sup>	39.2	2,905.5	93.5	3,038.3

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

	Funds by investment policy							Funds by type of investor	Total
	Funds by investment policy					Funds by type of investor			
	Equity funds	Bond funds	Mixed funds	Real estate funds	Other funds	General public funds	Special investors' funds		
1	2	3	4	5	6	7	8		
2000 Q4	981.3	973.3	878.3	118.2	305.2	2,479.0	777.2	3,256.2	
<i>Euro area enlargement</i>									
2001 Q1	899.3	999.4	848.4	118.1	318.5	2,413.3	770.5	3,183.8	
Q2	945.4	1,019.1	856.5	123.6	343.6	2,507.1	781.0	3,288.1	
Q3	737.0	1,019.0	755.3	127.0	337.2	2,239.4	736.1	2,975.6	
Q4	838.1	1,031.6	810.1	134.0	375.0	2,406.1	782.7	3,188.8	
2002 Q1	862.1	1,039.3	820.3	142.3	394.6	2,463.7	794.9	3,258.6	
Q2 <sup>(p)</sup>	728.8	1,037.0	762.5	139.2	370.8	2,267.6	770.7	3,038.3	

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)) <sup>1)</sup>*
**1. Assets of equity funds**

	Deposits		Holdings of securities other than shares		Holdings of shares/ other equity	Holdings of investment fund shares	Other assets	Total
	1	2	Up to	Over				
			1 year	1 year				
2000 Q4	50.5	37.4	5.2	32.1	864.0	14.2	15.1	981.3
<i>Euro area enlargement</i>								
2001 Q1	50.2	34.3	4.6	29.6	788.6	13.7	12.6	899.3
Q2	48.6	34.2	4.4	29.7	829.3	21.0	12.4	945.4
Q3	41.2	30.7	4.3	26.4	635.3	16.7	13.2	737.0
Q4	39.5	29.0	3.0	26.1	733.9	19.4	16.3	838.1
2002 Q1	39.3	28.7	2.9	25.8	759.1	20.6	14.4	862.1
Q2 <sup>(p)</sup>	34.0	27.4	4.0	23.4	630.4	22.1	14.8	728.8

**2. Liabilities of equity funds**

	Deposits and loans taken		Investment fund shares		Other liabilities		Total
	1	2	3	4	5	6	
2000 Q4			3.7	967.8		9.7	981.3
<i>Euro area enlargement</i>							
2001 Q1			3.4	889.8		6.2	899.3
Q2			3.2	934.9		7.3	945.4
Q3			4.1	732.2		0.7	737.0
Q4			2.6	832.8		2.7	838.1
2002 Q1			3.5	856.0		2.7	862.1
Q2 <sup>(p)</sup>			4.4	725.7		-1.3	728.8

**3. Assets of bond funds**

	Deposits		Holdings of securities other than shares		Holdings of shares/ other equity	Holdings of investment fund shares	Other assets	Total
	1	2	Up to	Over				
			1 year	1 year				
2000 Q4	64.4	831.2	25.0	806.2	34.1	8.8	34.8	973.3
<i>Euro area enlargement</i>								
2001 Q1	67.4	856.0	26.6	829.4	33.2	9.8	33.0	999.4
Q2	78.6	858.4	29.3	829.1	36.4	12.3	33.4	1,019.1
Q3	74.9	865.5	32.2	833.3	34.3	12.7	31.5	1,019.0
Q4	73.2	875.4	33.1	842.3	38.5	11.3	33.3	1,031.6
2002 Q1	77.9	874.0	37.3	836.7	42.9	11.5	32.9	1,039.3
Q2 <sup>(p)</sup>	75.9	882.2	38.5	843.7	33.2	10.8	34.8	1,037.0

**4. Liabilities of bond funds**

	Deposits and loans taken		Investment fund shares		Other liabilities		Total
	1	2	3	4	5	6	
2000 Q4			7.1	928.9		37.3	973.3
<i>Euro area enlargement</i>							
2001 Q1			7.1	954.8		37.5	999.4
Q2			7.3	964.5		47.3	1,019.1
Q3			8.1	971.0		39.9	1,019.0
Q4			8.4	986.2		37.0	1,031.6
2002 Q1			8.5	992.0		38.8	1,039.3
Q2 <sup>(p)</sup>			7.9	990.1		39.0	1,037.0

Source: ECB.

1) Any negative values reflect different accounting practices.

**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))<sup>1)</sup>*
**5. Assets of mixed funds**

	Deposits		Holdings of securities other than shares		Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	Other assets	Total
	1	2	Up to	Over					
			1 year	1 year					
3	4	5	6	7	8	9			
2000 Q4	53.8	300.9	18.2	282.6	410.7	86.4	2.4	24.2	878.3
<i>Euro area enlargement</i>									
2001 Q1	54.8	302.2	19.0	283.2	373.4	88.6	2.5	27.0	848.4
Q2	55.8	296.3	18.0	278.3	382.8	93.8	2.6	25.2	856.5
Q3	55.2	290.4	16.4	274.0	297.5	85.7	2.5	24.1	755.3
Q4	56.9	286.5	17.0	269.5	347.5	92.7	2.4	24.1	810.1
2002 Q1	52.6	283.8	18.1	265.7	357.0	100.3	2.3	24.4	820.3
Q2 <sup>(p)</sup>	54.2	286.9	20.6	266.3	298.8	94.6	2.1	25.9	762.5

**6. Liabilities of mixed funds**

	Deposits and loans taken		Investment fund shares		Other liabilities		Total
	1	2	3	4	5	6	
2000 Q4			3.3	849.2		25.9	878.3
<i>Euro area enlargement</i>							
2001 Q1			3.1	817.6		27.8	848.4
Q2			3.4	827.9		25.2	856.5
Q3			3.3	729.9		22.1	755.3
Q4			2.9	785.2		22.0	810.1
2002 Q1			2.9	793.8		23.6	820.3
Q2 <sup>(p)</sup>			3.1	737.3		22.1	762.5

**7. Assets of real estate funds**

	Deposits		Holdings of securities other than shares		Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	Other assets	Total
	1	2	Up to	Over					
			1 year	1 year					
3	4	5	6	7	8	9			
2000 Q4	6.1	8.1	0.6	7.5	3.9	1.1	94.3	4.7	118.2
<i>Euro area enlargement</i>									
2001 Q1	6.0	8.3	0.5	7.8	0.9	1.5	97.5	4.0	118.1
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 <sup>(p)</sup>	13.5	9.8	0.6	9.2	0.9	3.9	105.1	6.0	139.2

**8. Liabilities of real estate funds**

	Deposits and loans taken		Investment fund shares		Other liabilities		Total
	1	2	3	4	5	6	
2000 Q4			22.3	91.2		4.7	118.2
<i>Euro area enlargement</i>							
2001 Q1			22.3	91.7		4.1	118.1
Q2			24.1	95.0		4.5	123.6
Q3			24.8	97.8		4.4	127.0
Q4			25.9	103.2		4.8	134.0
2002 Q1			26.7	110.7		4.9	142.3
Q2 <sup>(p)</sup>			22.3	112.1		4.8	139.2

Source: ECB.

1) Any negative values reflect different accounting practices.

**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**

	Deposits	Holdings of securities other than shares	Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	Other assets	Total
	1	2	3	4	5	6	7
2000 Q4	188.0	900.6	1,084.1	148.4	89.9	68.0	2,479.0
<i>Euro area enlargement</i>							
2001 Q1	192.2	917.9	994.8	151.6	92.9	63.8	2,413.3
Q2	209.2	918.6	1,046.5	170.4	96.5	66.0	2,507.1
Q3	196.4	912.1	819.5	151.6	96.4	63.4	2,239.4
Q4	201.0	928.7	947.8	167.1	99.1	62.5	2,406.1
2002 Q1	213.3	921.8	984.8	176.8	100.6	66.3	2,463.7
Q2 <sup>(p)</sup>	199.3	915.8	819.9	170.6	96.1	65.9	2,267.6

**2. Liabilities of general public funds**

	Deposits and loans taken	Investment fund shares	Other liabilities	Total
	1	2	3	4
2000 Q4	34.2	2,348.6	96.2	2,479.0
<i>Euro area enlargement</i>				
2001 Q1	33.9	2,288.7	90.7	2,413.3
Q2	35.7	2,369.6	101.8	2,507.1
Q3	37.4	2,117.3	84.7	2,239.4
Q4	36.5	2,287.6	82.0	2,406.1
2002 Q1	38.1	2,336.6	88.9	2,463.7
Q2 <sup>(p)</sup>	34.1	2,152.9	80.5	2,267.6

**3. Assets of special investors' funds**

	Deposits	Holdings of securities other than shares	Holdings of shares/ other equity	Holdings of investment fund shares	Fixed assets	Other assets	Total
	1	2	3	4	5	6	7
2000 Q4	38.4	358.0	310.7	38.7	7.0	24.5	777.2
<i>Euro area enlargement</i>							
2001 Q1	40.8	371.8	284.8	39.9	7.2	26.0	770.5
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 <sup>(p)</sup>	43.3	396.7	236.8	48.6	11.9	33.4	770.7

**4. Liabilities of special investors' funds**

	Deposits and loans taken	Investment fund shares	Other liabilities	Total
	1	2	3	4
2000 Q4	3.5	765.9	7.8	777.2
<i>Euro area enlargement</i>				
2001 Q1	3.4	756.1	11.0	770.5
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 <sup>(p)</sup>	5.1	752.6	13.0	770.7

Source: ECB.

### 3 Financial markets and interest rates in the euro area

**Table 3.1**

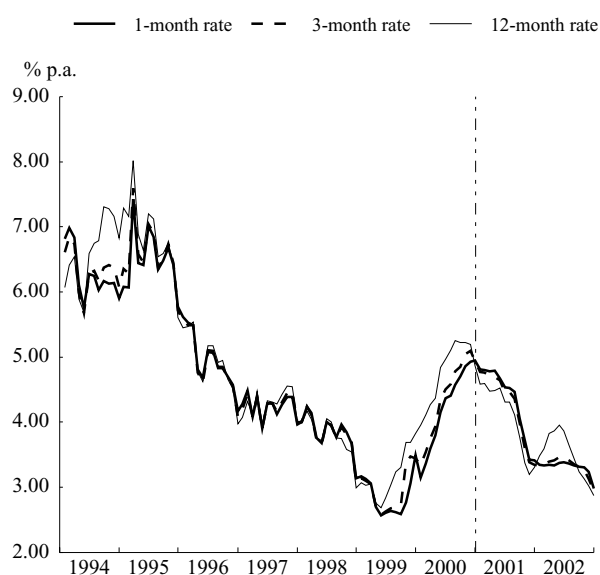
**Money market interest rates <sup>1)</sup>**

(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
2001 Dec.	3.34	3.42	3.34	3.26	3.30	1.92	0.08
2002 Jan.	3.29	3.35	3.34	3.34	3.48	1.82	0.09
Feb.	3.28	3.34	3.36	3.40	3.59	1.90	0.10
Mar.	3.26	3.35	3.39	3.50	3.82	1.99	0.10
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
2002 6 Dec.	2.90	2.92	2.92	2.91	2.95	1.42	0.07
13	2.89	2.96	2.94	2.89	2.85	1.41	0.06
20	3.50	3.01	2.94	2.88	2.82	1.40	0.06
27	3.03	2.98	2.93	2.84	2.78	1.40	0.06
2003 3 Jan.	2.89	2.90	2.86	2.81	2.80	1.39	0.06
10	2.82	2.85	2.84	2.77	2.73	1.38	0.07

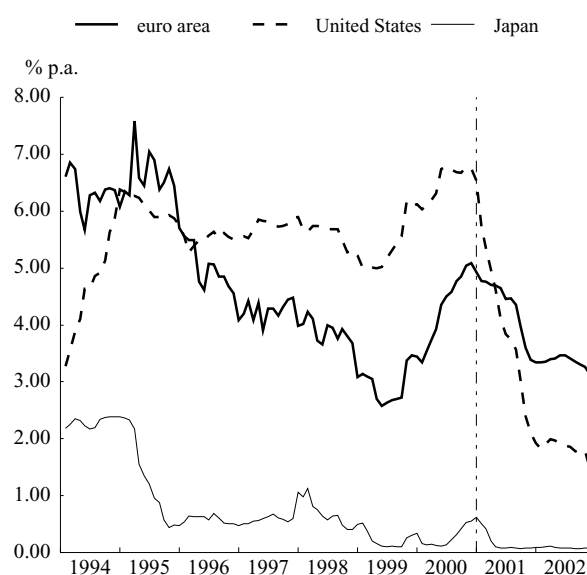
**Euro area money market rates**

(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**

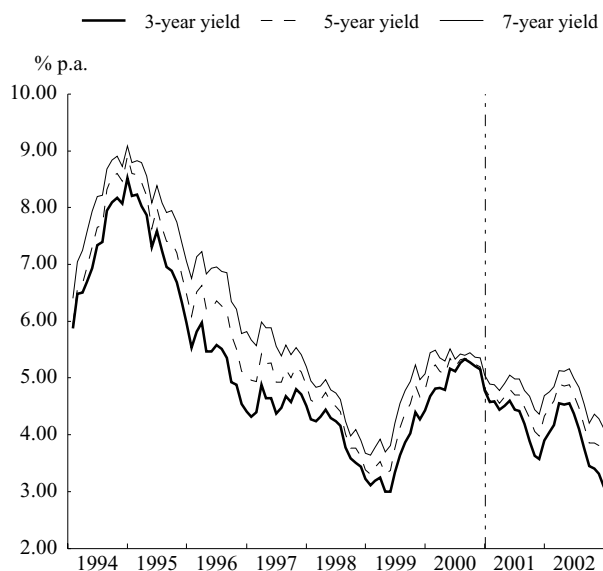
**Government bond yields <sup>1)</sup>**

(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
2001 Dec.	3.66	3.90	4.33	4.68	4.96	5.07	1.35
2002 Jan.	3.84	4.04	4.48	4.76	5.02	5.00	1.42
Feb.	3.96	4.17	4.60	4.85	5.07	4.90	1.52
Mar.	4.25	4.55	4.90	5.13	5.32	5.28	1.45
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
2002 6 Dec.	2.94	3.22	3.77	4.19	4.48	4.10	1.02
13	2.83	3.08	3.64	4.11	4.41	4.09	1.00
20	2.75	2.99	3.55	4.05	4.36	3.96	0.94
27	2.69	2.91	3.46	3.95	4.27	3.86	0.91
2003 3 Jan.	2.76	3.00	3.57	4.08	4.41	4.05	0.90
10	2.65	2.87	3.46	3.98	4.32	4.16	0.87

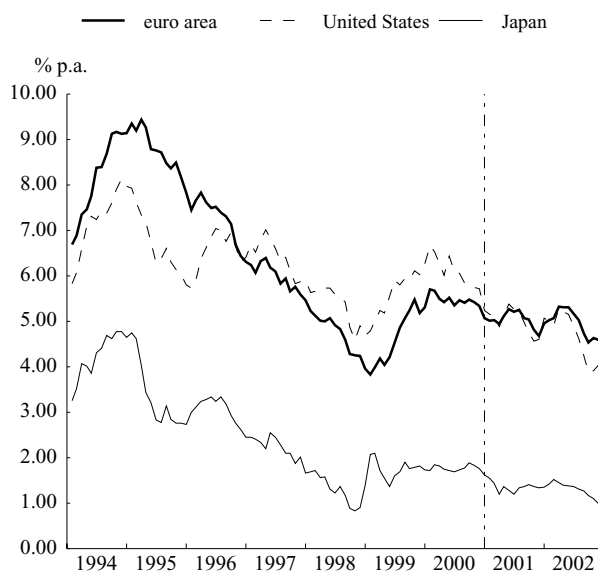
**Euro area government bond yields**

(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**

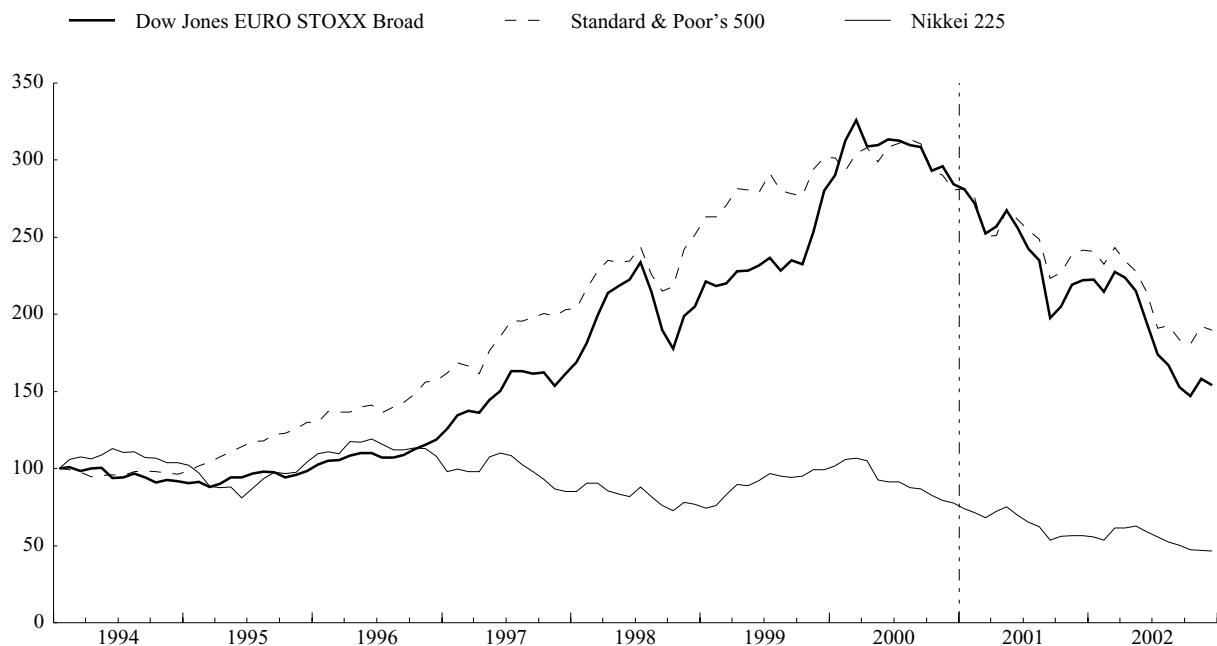
**Stock market indices**

(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
2001 Dec.	308.0	3,708.4	286.2	209.9	288.8	313.0	285.6	282.2	496.4	286.4	480.9	520.9	1,144.9	10,490.8
2002 Jan.	308.5	3,690.1	293.2	210.8	287.8	320.2	286.3	281.8	494.5	291.1	459.7	524.8	1,140.5	10,338.5
Feb.	297.9	3,537.6	294.9	198.6	288.5	334.0	275.1	279.3	463.7	291.1	406.3	490.1	1,101.5	9,966.9
Mar.	315.4	3,739.6	312.9	215.5	296.5	355.0	294.8	299.0	494.4	291.2	429.3	486.3	1,153.3	11,452.5
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
2002 6 Dec.	219.0	2,531.7	232.0	144.9	227.8	268.0	197.2	211.1	292.6	210.9	334.9	327.6	912.2	8,863.3
13	210.4	2,429.4	223.0	138.0	223.9	261.9	190.6	203.3	265.5	206.1	319.6	319.3	889.5	8,516.1
20	210.3	2,439.0	222.0	135.2	227.4	269.7	191.2	201.1	255.9	203.5	321.3	324.1	895.8	8,406.9
27	204.6	2,365.0	212.7	130.8	224.0	268.8	186.1	197.4	243.5	198.4	306.5	317.1	875.4	8,714.1
2003 3 Jan.	215.7	2,502.2	227.1	139.1	231.9	277.9	196.7	207.1	264.4	209.3	321.7	330.7	908.6	8,579.0
10	214.5	2,489.0	219.8	135.6	229.5	272.9	195.2	204.2	265.0	214.7	338.1	326.3	927.6	8,470.5

**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**

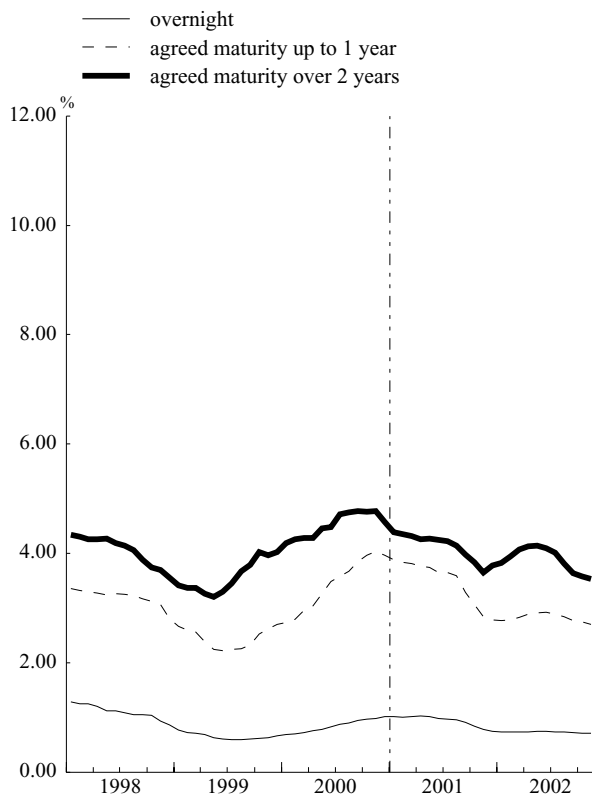
**Retail bank interest rates**

(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
1999	0.65	2.44	2.45	3.57	2.15	2.76	5.65	5.10	9.39	5.29
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
2001 Nov.	0.78	2.84	2.83	3.65	2.19	2.75	6.31	5.71	9.87	5.48
2001 Dec.	0.74	2.79	2.78	3.77	2.17	2.79	6.26	5.69	9.81	5.52
2002 Jan.	0.73	2.77	2.77	3.83	2.17	2.80	6.18	5.63	9.78	5.53
2002 Feb.	0.73	2.78	2.79	3.95	2.15	2.91	6.16	5.75	9.81	5.61
2002 Mar.	0.73	2.84	2.84	4.07	2.15	3.00	6.09	5.85	9.76	5.74
2002 Apr.	0.74	2.89	2.90	4.13	2.14	3.07	6.17	5.95	9.81	5.81
2002 May	0.74	2.91	2.92	4.15	2.15	3.08	6.20	5.98	9.85	5.82
2002 June	0.74	2.93	2.94	4.09	2.13	3.08	6.18	5.92	9.82	5.77
2002 July	0.74	2.89	2.90	4.02	2.13	3.02	6.16	5.79	9.76	5.68
2002 Aug.	0.73	2.84	2.85	3.81	2.12	2.94	6.14	5.70	9.77	5.53
2002 Sep.	0.73	2.77	2.77	3.64	2.13	2.73	6.11	5.61	9.82	5.37
2002 Oct.	0.72	2.74	2.74	3.58	2.11	2.63	6.12	5.54	9.70	5.26
2002 Nov.	0.71	2.70	2.69	3.53	2.11	2.55	6.09	5.50	9.67	5.20

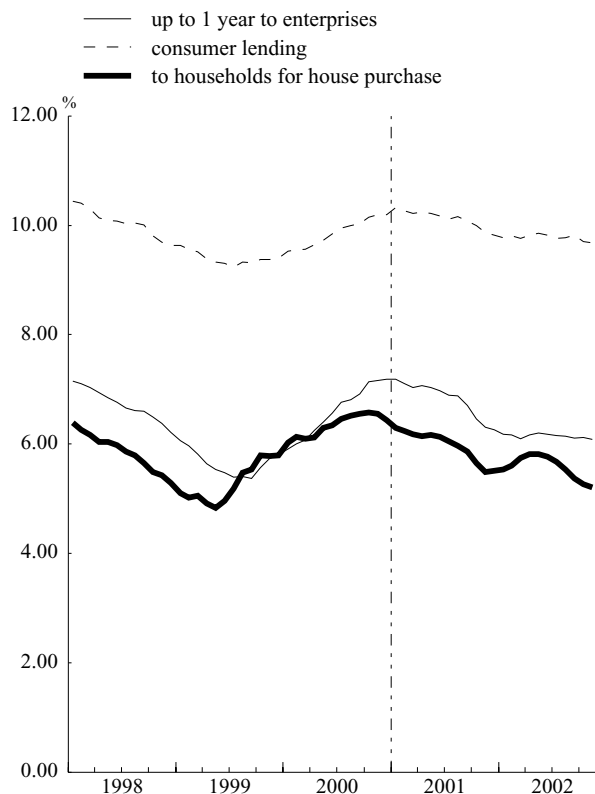
**Deposit interest rates**

(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
2001 Oct.	499.0	496.0	3.0	744.5	480.2	471.4	8.8	663.0	18.8	24.6
Nov.	486.7	490.5	-3.8	742.3	459.6	466.6	-7.0	655.9	27.0	23.9
Dec.	332.5	377.0	-44.4	697.9	308.1	353.9	-45.8	611.1	24.5	23.1
2002 Jan.	485.8	453.9	31.8	733.2	464.3	432.9	31.3	643.8	21.5	21.0
Feb.	406.7	408.5	-1.8	729.0	386.8	387.6	-0.8	644.2	19.9	20.9
Mar.	421.2	403.5	17.7	748.9	400.2	383.4	16.8	662.7	21.0	20.1
Apr.	401.9	406.9	-5.0	743.5	376.7	384.3	-7.6	655.3	25.2	22.6
May	400.9	378.5	22.3	765.4	377.3	358.5	18.8	673.7	23.5	20.1
June	336.5	342.0	-5.4	760.8	315.8	318.9	-3.1	672.3	20.7	23.0
July	404.2	392.0	12.2	766.6	381.4	371.2	10.2	680.8	22.8	20.8
Aug.	384.0	377.9	6.0	770.2	365.7	356.8	8.8	689.3	18.3	21.1
Sep.	414.8	400.2	14.6	787.8	392.1	380.9	11.2	703.3	22.7	19.3
Oct.	467.4	457.3	10.2	802.6	440.9	433.5	7.3	711.8	26.6	23.7

**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
2001 Oct.	145.2	108.4	36.8	6,937.9	123.8	91.5	32.2	6,342.6	21.5	16.9
Nov.	142.2	92.5	49.8	6,992.1	115.8	86.6	29.2	6,371.5	26.5	5.9
Dec.	126.9	86.9	39.9	7,031.1	114.5	77.5	37.0	6,407.6	12.4	9.5
2002 Jan.	174.1	111.0	63.1	7,099.0	156.3	105.0	51.3	6,457.2	17.8	6.0
Feb.	143.1	109.3	33.8	7,134.3	130.4	97.6	32.8	6,491.2	12.7	11.7
Mar.	165.0	102.0	63.0	7,196.2	143.1	90.9	52.2	6,542.8	21.9	11.1
Apr.	126.9	79.9	47.1	7,233.5	115.7	74.7	41.0	6,584.3	11.3	5.2
May	148.1	87.0	61.0	7,280.9	126.4	75.4	51.0	6,636.6	21.6	11.6
June	133.0	95.4	37.6	7,295.3	123.3	87.7	35.6	6,668.3	9.7	7.7
July	130.8	113.2	17.7	7,324.8	114.0	103.9	10.1	6,682.1	16.8	9.2
Aug.	68.6	63.9	4.7	7,327.0	59.1	54.6	4.5	6,686.2	9.5	9.3
Sep.	142.1	84.7	57.3	7,383.8	121.5	73.6	47.9	6,733.3	20.6	11.1
Oct.	121.6	92.6	29.1	7,412.5	105.9	82.6	23.4	6,757.2	15.7	10.0

**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
2001 Oct.	644.2	604.4	39.8	7,682.4	604.0	562.9	41.0	7,005.6	40.3	41.5
Nov.	628.9	583.0	45.9	7,734.4	575.4	553.2	22.2	7,027.4	53.5	29.7
Dec.	459.4	463.9	-4.5	7,728.9	422.6	431.4	-8.8	7,018.7	36.9	32.6
2002 Jan.	659.9	564.9	94.9	7,832.2	620.6	538.0	82.6	7,101.0	39.3	27.0
Feb.	549.8	517.8	31.9	7,863.3	517.2	485.2	32.0	7,135.4	32.6	32.6
Mar.	586.2	505.5	80.7	7,945.1	543.3	474.3	69.0	7,205.5	42.9	31.2
Apr.	528.8	486.7	42.1	7,977.0	492.4	459.0	33.4	7,239.6	36.4	27.7
May	548.9	465.6	83.4	8,046.2	503.8	433.9	69.9	7,310.2	45.2	31.7
June	469.5	437.4	32.1	8,056.1	439.1	406.7	32.5	7,340.6	30.4	30.8
July	535.0	505.2	29.8	8,091.4	495.4	475.1	20.3	7,363.0	39.6	30.1
Aug.	452.6	441.8	10.8	8,097.2	424.8	411.5	13.3	7,375.4	27.8	30.4
Sep.	556.9	484.9	72.0	8,171.6	513.6	454.5	59.1	7,436.6	43.3	30.4
Oct.	589.1	549.8	39.2	8,215.1	546.8	516.1	30.7	7,468.9	42.2	33.7

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	
-5.8	81.5	8.8	20.0	-11.1	44.3	489.0	491.4	-2.3	707.3	2001 Oct.
3.2	86.4	16.2	12.9	3.3	47.6	475.8	479.5	-3.7	703.5	Nov.
1.4	86.8	17.1	10.2	6.9	54.5	325.2	364.1	-38.9	665.6	Dec.
0.5	89.4	11.3	24.2	-12.9	41.6	475.6	457.1	18.5	685.4	2002 Jan.
-1.0	84.8	13.4	11.8	1.7	43.3	400.2	399.4	0.8	687.5	Feb.
0.9	86.2	24.3	7.9	16.4	59.7	424.5	391.3	33.2	722.4	Mar.
2.6	88.3	9.7	28.1	-18.4	41.3	386.4	412.4	-26.0	696.6	Apr.
3.5	91.7	13.7	13.4	0.3	41.5	391.0	371.9	19.1	715.2	May
-2.3	88.4	20.9	8.0	12.9	54.4	336.7	327.0	9.7	726.8	June
1.9	85.8	14.7	24.8	-10.1	44.4	396.1	396.0	0.2	725.2	July
-2.8	80.9	12.1	11.5	0.6	44.9	377.8	368.4	9.4	734.2	Aug.
3.5	84.5	31.7	7.7	24.0	68.9	423.8	388.6	35.2	772.3	Sep.
2.8	90.8									Oct.

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	
4.6	595.3	20.6	4.6	16.0	852.9	144.4	96.1	48.3	7,195.5	2001 Oct.
20.6	620.7	30.1	7.4	22.8	875.7	145.9	93.9	51.9	7,247.2	Nov.
2.9	623.4	14.2	13.4	0.8	876.5	128.7	90.9	37.8	7,284.1	Dec.
11.8	641.9	19.6	6.8	12.7	889.2	175.9	111.9	64.1	7,346.3	2002 Jan.
1.0	643.0	19.7	13.9	5.9	895.1	150.1	111.5	38.6	7,386.4	Feb.
10.8	653.4	25.4	12.0	13.5	908.6	168.5	102.9	65.7	7,451.4	Mar.
6.1	649.2	23.0	7.6	15.4	924.3	138.6	82.3	56.3	7,508.6	Apr.
10.0	644.3	26.3	8.2	18.0	942.4	152.7	83.7	69.1	7,579.0	May
2.0	627.0	29.3	10.9	18.4	960.8	152.6	98.6	54.0	7,629.1	June
7.6	642.6	11.7	8.2	3.5	964.3	125.7	112.2	13.6	7,646.4	July
0.3	640.9	7.1	8.1	-1.0	963.2	66.2	62.8	3.4	7,649.4	Aug.
9.4	650.5	24.3	11.5	12.9	976.1	145.8	85.1	60.8	7,709.4	Sep.
5.7	655.3									Oct.

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	676.8	29.5	24.6	4.9	897.2	633.4	587.5	45.9	7,902.8	2001 Oct.
23.7	707.1	46.3	20.2	26.0	923.3	621.7	573.4	48.2	7,950.7	Nov.
4.3	710.2	31.3	23.7	7.7	931.0	453.9	455.0	-1.1	7,949.7	Dec.
12.3	731.3	30.9	31.0	-0.1	930.8	651.5	569.0	82.5	8,031.8	2002 Jan.
0.0	727.9	33.2	25.6	7.5	938.4	550.3	510.9	39.5	8,073.9	Feb.
11.7	739.6	49.8	19.9	29.9	968.3	593.1	494.1	98.9	8,173.8	Mar.
8.7	737.4	32.7	35.7	-3.0	965.5	525.1	494.7	30.3	8,205.1	Apr.
13.5	736.0	39.9	21.6	18.3	984.0	543.7	455.5	88.2	8,294.2	May
-0.3	715.4	50.2	18.9	31.3	1,015.2	489.3	425.6	63.8	8,355.8	June
9.5	728.4	26.4	33.0	-6.6	1,008.6	521.8	508.1	13.7	8,371.6	July
-2.5	721.7	19.2	19.7	-0.5	1,008.1	444.0	431.1	12.8	8,383.6	Aug.
12.9	735.0	56.0	19.1	36.9	1,045.0	569.6	473.6	96.0	8,481.6	Sep.
8.5	746.2									Oct.

**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
2001 Oct.	663.0	261.2	3.8	110.6	284.0	3.4	44.3	23.3	16.4	4.0
Nov.	655.9	250.9	3.9	106.3	291.2	3.6	47.6	23.6	19.4	3.4
Dec.	611.1	240.5	3.4	95.6	267.4	4.1	54.5	23.8	24.4	4.4
2002 Jan.	643.8	257.6	3.7	100.2	278.8	3.5	41.6	18.8	18.9	3.1
Feb.	644.2	251.9	3.9	98.2	286.7	3.5	43.3	19.9	19.0	3.6
Mar.	662.7	259.0	4.3	97.1	299.0	3.3	59.7	26.4	26.2	6.4
Apr.	655.3	256.3	4.5	92.7	298.8	3.0	41.3	18.2	18.5	3.8
May	673.7	262.8	3.7	89.9	314.3	3.0	41.5	18.3	19.0	3.5
June	672.3	260.8	3.8	82.1	322.5	3.0	54.4	21.3	27.6	4.4
July	680.8	265.3	4.1	86.3	321.7	3.4	44.4	18.3	22.3	2.8
Aug.	689.3	266.0	4.4	86.7	328.8	3.3	44.9	18.1	23.5	2.6
Sep.	703.3	273.1	4.1	87.8	335.7	2.6	68.9	26.7	37.0	4.0
Oct.	711.8	280.3	4.2	88.7	335.6	3.0				

**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
2001 Oct.	6,342.6	2,319.2	327.9	327.3	3,240.8	127.5	852.9	224.1	277.5	96.6
Nov.	6,371.5	2,321.5	336.2	343.6	3,240.9	129.2	875.7	228.3	289.0	101.0
Dec.	6,407.6	2,323.8	365.9	349.2	3,238.3	130.4	876.5	230.5	288.6	102.1
2002 Jan.	6,457.2	2,328.6	371.6	354.6	3,269.0	133.4	889.2	230.7	292.2	105.5
Feb.	6,491.2	2,349.9	376.1	357.8	3,274.4	133.0	895.1	234.2	295.1	106.4
Mar.	6,542.8	2,372.3	381.7	358.1	3,293.1	137.6	908.6	236.6	305.8	108.1
Apr.	6,584.3	2,381.1	392.3	363.6	3,305.1	142.2	924.3	239.3	311.4	108.5
May	6,636.6	2,394.8	403.9	368.9	3,321.3	147.7	942.4	242.8	318.3	111.4
June	6,668.3	2,404.5	408.1	372.6	3,332.9	150.1	960.8	250.0	331.8	110.8
July	6,682.1	2,402.6	415.7	374.8	3,329.9	159.1	964.3	250.1	335.4	110.4
Aug.	6,686.2	2,402.5	414.9	373.0	3,335.8	160.0	963.2	249.4	335.8	110.6
Sep.	6,733.3	2,424.2	423.6	376.3	3,347.5	161.7	976.1	250.3	340.1	109.1
Oct.	6,757.2	2,420.4	429.7	375.0	3,366.7	165.4				

**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
2001 Oct.	7,005.6	2,580.4	331.6	437.9	3,524.8	130.9	897.2	247.4	293.9	100.6
Nov.	7,027.4	2,572.4	340.1	450.0	3,532.1	132.8	923.3	251.8	308.4	104.3
Dec.	7,018.7	2,564.3	369.4	444.9	3,505.6	134.6	931.0	254.4	313.0	106.5
2002 Jan.	7,101.0	2,586.2	375.3	454.8	3,547.8	136.9	930.8	249.5	311.2	108.6
Feb.	7,135.4	2,601.8	380.0	456.0	3,561.0	136.5	938.4	254.1	314.1	109.9
Mar.	7,205.5	2,631.2	386.0	455.3	3,592.1	140.9	968.3	262.9	332.0	114.4
Apr.	7,239.6	2,637.4	396.8	456.3	3,603.9	145.2	965.5	257.5	329.9	112.3
May	7,310.2	2,657.6	407.7	458.8	3,635.5	150.7	984.0	261.2	337.3	114.8
June	7,340.6	2,665.3	411.9	454.8	3,655.5	153.1	1,015.2	271.3	359.4	115.2
July	7,363.0	2,668.0	419.9	461.1	3,651.6	162.5	1,008.6	268.4	357.7	113.3
Aug.	7,375.4	2,668.5	419.4	459.7	3,664.6	163.3	1,008.1	267.6	359.2	113.2
Sep.	7,436.6	2,697.2	427.7	464.2	3,683.2	164.3	1,045.0	277.0	377.1	113.1
Oct.	7,468.9	2,700.7	434.0	463.6	3,702.3	168.3				

*Sources: ECB and BIS (for issues by non-residents of the euro area).**1) Including items expressed in the national denominations of the euro.*

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	0.3	0.2	707.3	284.5	20.2	114.6	284.2	3.7	0.2	2001 Oct.
0.1	0.4	0.6	703.5	274.5	23.3	109.7	291.3	4.0	0.6	Nov.
0.1	0.5	1.3	665.6	264.3	27.8	100.0	267.5	4.7	1.3	Dec.
0.1	0.4	0.2	685.4	276.4	22.6	103.3	279.0	4.0	0.2	2002 Jan.
0.1	0.3	0.4	687.5	271.8	22.9	101.8	286.8	3.8	0.4	Feb.
0.1	0.2	0.4	722.4	285.3	30.5	103.5	299.2	3.5	0.4	Mar.
0.1	0.2	0.5	696.6	274.5	23.0	96.5	298.9	3.2	0.5	Apr.
0.1	0.2	0.4	715.2	281.1	22.7	93.4	314.4	3.2	0.4	May
0.2	0.5	0.5	726.8	282.1	31.4	86.6	322.7	3.5	0.5	June
0.2	0.5	0.2	725.2	283.7	26.5	89.1	321.9	3.8	0.2	July
0.1	0.4	0.1	734.2	284.1	27.9	89.3	329.0	3.7	0.1	Aug.
0.2	0.3	0.6	772.3	299.8	41.1	91.9	335.9	3.0	0.6	Sep. Oct.

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	
91.8	49.9	113.0	7,195.5	2,543.2	605.4	423.8	3,332.6	177.4	113.0	2001 Oct.
91.5	50.3	115.7	7,247.2	2,549.7	625.2	444.6	3,332.4	179.6	115.7	Nov.
92.1	50.3	112.9	7,284.1	2,554.3	654.5	451.3	3,330.4	180.7	112.9	Dec.
91.3	55.1	114.4	7,346.3	2,559.3	663.8	460.1	3,360.3	188.5	114.4	2002 Jan.
92.0	54.9	112.5	7,386.4	2,584.1	671.2	464.2	3,366.4	188.0	112.5	Feb.
92.2	54.9	111.1	7,451.4	2,608.8	687.5	466.2	3,385.2	192.5	111.1	Mar.
94.1	60.0	111.0	7,508.6	2,620.4	703.7	472.2	3,399.2	202.1	111.0	Apr.
95.1	59.8	115.1	7,579.0	2,637.6	722.2	480.3	3,416.3	207.5	115.1	May
93.2	60.3	114.7	7,629.1	2,654.5	739.9	483.4	3,426.2	210.4	114.7	June
93.1	60.9	114.3	7,646.4	2,652.7	751.1	485.2	3,423.0	220.1	114.3	July
93.4	60.4	113.6	7,649.4	2,651.9	750.7	483.6	3,429.2	220.4	113.6	Aug.
94.1	65.3	117.3	7,709.4	2,674.4	763.7	485.4	3,441.6	227.0	117.3	Sep. Oct.

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	50.2	113.2	7,902.8	2,827.7	625.6	538.4	3,616.8	181.1	113.2	2001 Oct.
91.6	50.8	116.3	7,950.7	2,824.2	648.6	554.3	3,623.7	183.6	116.3	Nov.
92.2	50.8	114.1	7,949.7	2,818.6	682.3	551.3	3,597.9	185.4	114.1	Dec.
91.4	55.6	114.6	8,031.8	2,835.6	686.5	563.4	3,639.3	192.5	114.6	2002 Jan.
92.2	55.2	112.9	8,073.9	2,855.9	694.1	566.0	3,653.2	191.8	112.9	Feb.
92.3	55.2	111.5	8,173.8	2,894.1	718.0	569.7	3,684.4	196.0	111.5	Mar.
94.2	60.2	111.5	8,205.1	2,894.9	726.7	568.6	3,698.1	205.4	111.5	Apr.
95.2	60.0	115.5	8,294.2	2,918.7	744.9	573.7	3,730.7	210.7	115.5	May
93.4	60.7	115.2	8,355.8	2,936.6	771.3	570.0	3,748.8	213.9	115.2	June
93.3	61.4	114.5	8,371.6	2,936.3	777.6	574.3	3,744.9	223.9	114.5	July
93.5	60.9	113.7	8,383.6	2,936.0	778.6	572.9	3,758.2	224.2	113.7	Aug.
94.3	65.7	117.9	8,481.6	2,974.2	804.8	577.3	3,777.5	230.0	117.9	Sep. Oct.

**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
2001 Oct.	480.2	346.0	2.0	85.9	45.1	1.1	8.8	3.0	4.7	0.9
Nov.	459.6	347.5	2.3	66.4	42.2	1.3	16.2	6.4	7.9	1.1
Dec.	308.1	228.9	1.3	52.6	23.4	1.9	17.1	6.6	8.4	1.3
2002 Jan.	464.3	327.7	2.1	71.1	61.3	2.0	11.3	5.0	5.0	1.1
Feb.	386.8	268.6	2.6	65.9	47.9	1.9	13.4	5.0	6.5	1.5
Mar.	400.2	287.0	2.2	60.1	49.0	1.8	24.3	10.7	10.1	3.3
Apr.	376.7	255.3	2.5	63.4	53.8	1.8	9.7	4.4	4.1	0.9
May	377.3	254.4	2.1	62.2	57.0	1.6	13.7	5.2	7.0	1.2
June	315.8	207.0	2.5	51.7	52.5	2.2	20.9	6.3	12.3	1.8
July	381.4	259.2	1.8	65.6	52.6	2.2	14.7	5.9	8.2	0.6
Aug.	365.7	257.3	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	17.9	2.0
Oct.	440.9	318.6	2.2	64.7	53.1	2.3				

**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
2001 Oct.	123.8	58.7	13.9	4.4	40.8	5.8	20.6	4.4	7.9	2.3
Nov.	115.8	47.9	11.9	17.5	35.8	2.7	30.1	6.0	12.8	4.6
Dec.	114.5	43.0	36.7	9.6	23.0	2.2	14.2	6.4	4.0	2.2
2002 Jan.	156.3	47.6	11.1	6.5	88.0	3.2	19.6	4.1	4.5	3.7
Feb.	130.4	54.6	9.0	8.2	57.5	1.1	19.7	8.2	8.2	1.3
Mar.	143.1	56.9	9.3	2.8	68.8	5.3	25.4	8.6	12.1	3.3
Apr.	115.7	44.1	13.3	8.2	45.2	4.9	23.0	5.1	7.7	1.1
May	126.4	41.1	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	17.1	0.7
July	114.0	37.9	12.7	5.9	48.2	9.4	11.7	3.0	6.2	0.4
Aug.	59.1	28.2	2.2	2.2	25.2	1.3	7.1	3.1	2.8	0.3
Sep.	121.5	52.4	11.7	4.3	50.4	2.6	24.3	5.2	7.6	0.2
Oct.	105.9	39.0	9.8	0.7	52.1	4.4				

**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
2001 Oct.	604.0	404.7	15.9	90.3	86.0	6.9	29.5	7.5	12.6	3.2
Nov.	575.4	395.4	14.2	83.9	78.0	4.0	46.3	12.5	20.7	5.7
Dec.	422.6	271.9	38.0	62.2	46.4	4.1	31.3	13.0	12.4	3.6
2002 Jan.	620.6	375.3	13.2	77.6	149.3	5.2	30.9	9.1	9.5	4.8
Feb.	517.2	323.2	11.5	74.1	105.4	3.0	33.2	13.2	14.7	2.9
Mar.	543.3	343.9	11.5	63.0	117.8	7.1	49.8	19.3	22.2	6.6
Apr.	492.4	299.4	15.9	71.5	99.0	6.7	32.7	9.5	11.8	2.0
May	503.8	295.4	18.2	69.7	112.3	8.2	39.9	10.9	17.1	4.4
June	439.1	255.2	16.0	59.0	103.8	5.2	50.2	16.3	29.4	2.5
July	495.4	297.0	14.5	71.5	100.8	11.6	26.4	8.9	14.3	1.0
Aug.	424.8	285.4	4.0	53.1	79.1	3.2	19.2	7.7	9.6	0.9
Sep.	513.6	330.8	13.6	61.1	103.5	4.6	56.0	16.3	25.5	2.1
Oct.	546.8	357.6	11.9	65.4	105.2	6.7				

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

<sup>1)</sup> 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	489.0	349.1	6.7	86.8	45.1	1.2	0.2	2001 Oct.
0.1	0.2	0.4	475.8	353.9	10.2	67.5	42.3	1.5	0.4	Nov.
0.0	0.1	0.7	325.2	235.4	9.7	53.9	23.4	2.0	0.7	Dec.
0.1	0.0	0.1	475.6	332.8	7.1	72.2	61.5	2.0	0.1	2002 Jan.
0.0	0.1	0.2	400.2	273.7	9.1	67.4	47.9	2.0	0.2	Feb.
0.0	0.1	0.1	424.5	297.7	12.4	63.5	49.0	1.9	0.1	Mar.
0.1	0.0	0.2	386.4	259.7	6.6	64.3	53.9	1.8	0.2	Apr.
0.0	0.0	0.1	391.0	259.6	9.1	63.5	57.0	1.6	0.1	May
0.0	0.3	0.1	336.7	213.3	14.8	53.4	52.5	2.6	0.1	June
0.0	0.0	0.0	396.1	265.0	10.0	66.2	52.7	2.2	0.0	July
0.0	0.0	0.1	377.8	261.8	8.6	51.5	53.9	1.9	0.1	Aug.
0.1	0.1	0.5	423.8	289.5	19.8	58.7	53.1	2.1	0.5	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.

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	
0.2	5.4	0.4	144.4	63.1	21.8	6.8	41.1	11.2	0.4	2001 Oct.
1.0	0.5	5.1	145.9	53.9	24.7	22.1	36.8	3.2	5.1	Nov.
1.3	0.1	0.1	128.7	49.4	40.6	11.8	24.3	2.3	0.1	Dec.
0.0	5.1	2.1	175.9	51.7	15.6	10.2	88.0	8.3	2.1	2002 Jan.
1.5	0.3	0.3	150.1	62.7	17.2	9.5	59.0	1.4	0.3	Feb.
0.8	0.5	0.3	168.5	65.5	21.4	6.1	69.5	5.8	0.3	Mar.
3.3	5.1	0.7	138.6	49.1	21.0	9.3	48.5	10.0	0.7	Apr.
2.0	0.1	5.3	152.7	46.8	26.1	10.6	57.2	6.7	5.3	May
0.1	0.7	0.7	152.6	58.2	30.6	8.1	51.4	3.7	0.7	June
0.9	0.8	0.3	125.7	40.9	18.8	6.3	49.1	10.2	0.3	July
0.3	0.1	0.5	66.2	31.3	5.0	2.5	25.5	1.4	0.5	Aug.
0.7	5.2	5.5	145.8	57.6	19.3	4.5	51.1	7.8	5.5	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.

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	
0.2	5.4	0.5	633.4	412.2	28.6	93.6	86.2	12.3	0.5	2001 Oct.
1.1	0.8	5.6	621.7	407.8	34.9	89.6	79.1	4.7	5.6	Nov.
1.3	0.3	0.8	453.9	284.8	50.3	65.8	47.8	4.3	0.8	Dec.
0.1	5.1	2.2	651.5	384.4	22.7	82.4	149.5	10.3	2.2	2002 Jan.
1.5	0.4	0.5	550.3	336.4	26.3	77.0	106.9	3.3	0.5	Feb.
0.8	0.5	0.4	593.1	363.2	33.7	69.6	118.6	7.6	0.4	Mar.
3.3	5.1	0.9	525.1	308.9	27.6	73.5	102.3	11.8	0.9	Apr.
2.0	0.1	5.5	543.7	306.4	35.2	74.1	114.3	8.3	5.5	May
0.2	1.0	0.9	489.3	271.5	45.4	61.5	103.9	6.2	0.9	June
1.0	0.8	0.4	521.8	305.9	28.8	72.5	101.8	12.4	0.4	July
0.3	0.1	0.6	444.0	293.1	13.6	54.0	79.4	3.3	0.6	Aug.
0.8	5.3	6.0	569.6	347.0	39.2	63.2	104.3	9.9	6.0	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.

**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
2001 Oct.	8.8	9.1	-0.4	3.8	-3.5	-0.3	-11.1	-3.8	-5.8	-1.5
Nov.	-7.0	-10.3	0.1	-4.1	7.1	0.2	3.3	0.3	3.0	-0.6
Dec.	-45.8	-11.4	-0.5	-10.6	-23.8	0.6	6.9	0.2	5.0	1.0
2002 Jan.	31.3	15.7	0.2	4.6	11.4	-0.6	-12.9	-5.0	-5.5	-1.3
Feb.	-0.8	-6.6	0.2	-2.2	7.8	0.0	1.7	1.1	0.1	0.5
Mar.	16.8	5.3	0.4	-1.1	12.4	-0.2	16.4	6.5	7.2	2.8
Apr.	-7.6	-2.8	0.2	-4.4	-0.3	-0.3	-18.4	-8.1	-7.7	-2.6
May	18.8	7.0	-0.8	-2.8	15.5	0.0	0.3	0.1	0.5	-0.3
June	-3.1	-3.6	0.1	-8.0	8.3	0.0	12.9	3.0	8.6	1.0
July	10.2	6.3	0.3	4.1	-0.8	0.3	-10.1	-3.0	-5.2	-1.6
Aug.	8.8	1.0	0.3	0.4	7.2	0.0	0.6	-0.2	1.1	-0.2
Sep.	11.2	4.2	-0.4	1.2	6.9	-0.7	24.0	8.6	13.5	1.4
Oct.	7.3	6.3	0.2	0.8	-0.3	0.3				

**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
2001 Oct.	32.2	15.3	10.7	-2.4	3.7	5.1	16.0	3.0	6.5	2.0
Nov.	29.2	2.0	8.4	16.9	0.1	1.8	22.8	4.2	11.5	4.4
Dec.	37.0	3.2	29.7	5.6	-2.6	1.2	0.8	2.3	-0.4	1.1
2002 Jan.	51.3	6.5	5.7	5.5	30.7	2.9	12.7	0.1	3.6	3.4
Feb.	32.8	20.0	4.5	3.2	5.4	-0.4	5.9	3.5	2.8	0.9
Mar.	52.2	23.0	5.6	0.3	18.7	4.6	13.5	2.4	10.7	1.7
Apr.	41.0	8.3	10.6	5.5	12.0	4.6	15.4	2.7	5.5	0.5
May	51.0	12.5	11.6	5.3	16.1	5.5	18.0	3.6	6.9	2.8
June	35.6	13.8	3.9	3.7	11.7	2.4	18.4	7.1	13.6	-0.6
July	10.1	-4.6	6.7	2.2	-3.0	8.9	3.5	0.1	3.6	-0.4
Aug.	4.5	-0.6	0.0	-1.7	5.9	0.9	-1.0	-0.6	0.4	0.1
Sep.	47.9	22.5	8.7	3.2	11.7	1.7	12.9	0.8	4.3	-1.5
Oct.	23.4	-4.3	6.1	-1.5	19.4	3.7				

**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
2001 Oct.	41.0	24.4	10.3	1.4	0.2	4.7	4.9	-0.8	0.7	0.5
Nov.	22.2	-8.4	8.6	12.8	7.2	2.0	26.0	4.5	14.5	3.7
Dec.	-8.8	-8.3	29.2	-5.1	-26.4	1.7	7.7	2.5	4.5	2.1
2002 Jan.	82.6	22.2	5.9	10.0	42.2	2.3	-0.1	-4.9	-1.8	2.2
Feb.	32.0	13.4	4.7	1.0	13.2	-0.4	7.5	4.6	2.9	1.3
Mar.	69.0	28.4	6.0	-0.7	31.1	4.3	29.9	8.9	17.9	4.5
Apr.	33.4	5.5	10.8	1.0	11.8	4.3	-3.0	-5.4	-2.2	-2.1
May	69.9	19.4	10.8	2.5	31.6	5.5	18.3	3.7	7.4	2.5
June	32.5	10.3	4.1	-4.3	20.0	2.5	31.3	10.1	22.2	0.4
July	20.3	1.7	7.0	6.2	-3.9	9.2	-6.6	-2.9	-1.6	-2.0
Aug.	13.3	0.4	0.3	-1.3	13.0	0.8	-0.5	-0.8	1.5	-0.1
Sep.	59.1	26.7	8.4	4.4	18.6	1.0	36.9	9.4	17.9	-0.1
Oct.	30.7	2.0	6.3	-0.7	19.1	4.0				

*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	-0.2	0.1	-2.3	5.3	-6.1	2.3	-3.5	-0.5	0.1	2001 Oct.
0.0	0.1	0.4	-3.7	-10.1	3.2	-4.7	7.1	0.4	0.4	Nov.
0.0	0.1	0.7	-38.9	-11.2	4.5	-9.6	-23.9	0.6	0.7	Dec.
0.0	-0.1	-1.1	18.5	10.7	-5.2	3.3	11.5	-0.7	-1.1	2002 Jan.
0.0	-0.2	0.2	0.8	-5.6	0.3	-1.7	7.8	-0.2	0.2	Feb.
0.0	0.0	0.0	33.2	11.8	7.6	1.7	12.4	-0.3	0.0	Mar.
-0.1	0.0	0.1	-26.0	-10.9	-7.5	-7.0	-0.3	-0.3	0.1	Apr.
0.0	0.0	-0.1	19.1	7.1	-0.3	-3.1	15.5	0.0	-0.1	May
0.0	0.3	0.1	9.7	-0.6	8.7	-7.0	8.3	0.3	0.1	June
0.0	0.0	-0.2	0.2	3.3	-4.9	2.5	-0.8	0.3	-0.2	July
0.0	0.0	-0.1	9.4	0.8	1.5	0.2	7.1	-0.1	-0.1	Aug.
0.1	-0.1	0.5	35.2	12.8	13.2	2.6	6.9	-0.8	0.5	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.

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	5.3	-0.6	48.3	18.2	17.2	-0.4	3.5	10.3	-0.6	2001 Oct.
-0.4	0.4	2.7	51.9	6.2	19.9	21.2	-0.3	2.2	2.7	Nov.
0.6	0.0	-2.8	37.8	5.4	29.3	6.7	-2.0	1.2	-2.8	Dec.
-0.8	4.8	1.5	64.1	6.6	9.3	8.9	29.9	7.7	1.5	2002 Jan.
0.7	-0.2	-1.9	38.6	23.6	7.2	4.1	6.1	-0.5	-1.9	Feb.
0.1	0.0	-1.4	65.7	25.4	16.3	2.0	18.8	4.5	-1.4	Mar.
1.8	5.0	-0.1	56.3	10.9	16.1	6.0	13.9	9.6	-0.1	Apr.
0.9	-0.1	4.1	69.1	16.0	18.5	8.1	17.0	5.4	4.1	May
-1.9	0.5	-0.3	54.0	21.0	17.5	3.1	9.8	2.9	-0.3	June
-0.1	0.7	-0.5	13.6	-4.5	10.3	1.8	-3.1	9.5	-0.5	July
0.3	-0.5	-0.7	3.4	-1.2	0.4	-1.6	6.2	0.4	-0.7	Aug.
0.7	4.9	3.7	60.8	23.3	13.1	1.7	12.4	6.6	3.7	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.

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	
-0.2	5.1	-0.5	45.9	23.6	11.1	1.9	0.0	9.8	-0.5	2001 Oct.
-0.3	0.5	3.1	48.2	-3.9	23.1	16.5	6.9	2.6	3.1	Nov.
0.6	0.0	-2.2	-1.1	-5.7	33.8	-2.9	-25.9	1.8	-2.2	Dec.
-0.8	4.7	0.5	82.5	17.3	4.1	12.2	41.4	7.1	0.5	2002 Jan.
0.7	-0.3	-1.7	39.5	18.0	7.5	2.4	14.0	-0.7	-1.7	Feb.
0.1	-0.1	-1.4	98.9	37.2	23.9	3.7	31.2	4.3	-1.4	Mar.
1.8	5.0	0.0	30.3	0.0	8.6	-1.1	13.5	9.3	0.0	Apr.
0.9	-0.1	4.0	88.2	23.1	18.2	5.0	32.5	5.3	4.0	May
-1.8	0.7	-0.3	63.8	20.4	26.2	-3.9	18.2	3.2	-0.3	June
-0.1	0.7	-0.7	13.7	-1.2	5.4	4.3	-3.9	9.9	-0.7	July
0.3	-0.5	-0.8	12.8	-0.4	1.8	-1.4	13.3	0.3	-0.8	Aug.
0.8	4.8	4.2	96.0	36.1	26.2	4.3	19.3	5.8	4.2	Sep.
.	.	.	.	.	.	.	.	.	.	Oct.



**Table 3.7****Annual growth rates of securities other than shares issued by euro area residents <sup>1)</sup>***(annual rate of change)***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					
2001 Oct.	5.5	106.9	0.0	-15.3	27.8	4.7	44.8
Nov.	5.0	106.4	-2.1	-14.9	21.5	8.1	40.9
Dec.	4.0	100.0	-2.7	-23.3	12.1	9.4	63.7
2002 Jan.	3.7	104.6	-0.6	-27.2	12.2	6.5	22.6
Feb.	1.3	104.3	-5.0	-21.7	5.7	7.4	55.3
Mar.	1.4	106.8	-4.4	-16.3	4.1	7.5	48.8
Apr.	-0.5	106.1	-5.2	-18.0	1.4	4.4	36.1
May	2.7	109.3	-0.1	-32.8	-8.3	10.3	27.8
June	3.3	108.5	-2.1	-25.1	-15.1	16.5	50.8
July	3.8	110.3	0.7	-16.4	-13.9	14.4	-3.1
Aug.	4.0	111.1	1.6	2.9	-18.0	15.1	-1.3
Sep.	6.4	113.2	5.7	0.8	-16.9	16.2	-19.4
Oct.	7.3	114.7	6.8	14.9	-18.4	17.9	-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					
2001 Oct.	6.6	98.7	7.0	25.2	21.3	2.4	22.1
Nov.	6.9	99.4	7.7	27.0	23.2	1.9	21.9
Dec.	7.4	100.0	7.9	32.0	23.3	2.2	21.9
2002 Jan.	8.2	100.9	7.4	33.6	24.6	3.7	23.7
Feb.	7.8	101.4	6.8	32.1	23.5	3.7	21.6
Mar.	7.9	102.3	7.7	30.9	15.8	4.0	23.6
Apr.	7.9	102.9	7.6	32.5	16.3	3.8	25.4
May	8.0	103.8	8.1	33.1	14.5	3.5	29.5
June	7.6	104.3	7.8	30.5	13.0	3.1	31.6
July	7.1	104.6	6.8	27.4	11.8	3.1	36.6
Aug.	6.9	104.7	6.6	26.7	9.0	3.3	34.2
Sep.	7.4	105.5	7.3	27.4	11.9	3.6	31.1
Oct.	7.3	105.9	6.5	26.4	12.3	3.9	29.9

**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					
2001 Oct.	6.5	99.5	6.2	24.7	22.7	2.5	22.7
Nov.	6.7	100.1	6.6	26.5	22.8	2.4	22.4
Dec.	7.1	100.0	6.6	31.3	21.0	2.8	22.9
2002 Jan.	7.7	101.2	6.4	32.7	21.9	4.0	23.7
Feb.	7.1	101.6	5.4	31.4	19.6	4.0	22.3
Mar.	7.2	102.7	6.2	30.3	13.4	4.2	24.2
Apr.	7.1	103.2	6.0	31.8	13.3	3.9	25.6
May	7.5	104.3	7.1	32.2	9.7	4.0	29.5
June	7.1	104.7	6.6	29.7	7.2	4.2	32.0
July	6.8	105.1	6.1	26.9	6.4	4.0	35.3
Aug.	6.6	105.3	6.0	26.4	3.2	4.3	33.1
Sep.	7.3	106.2	7.1	27.1	5.6	4.6	29.6
Oct.	7.3	106.7	6.5	26.3	5.4	5.0	29.1

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	
5.4	108.7	-1.1	-15.3	26.9	4.7	49.0	2001 Oct.
5.4	107.5	-2.9	-14.9	21.1	8.1	43.3	Nov.
3.9	100.0	-3.1	-23.3	10.4	8.5	66.7	Dec.
3.5	105.1	-2.1	-27.2	11.2	6.6	23.0	2002 Jan.
1.6	105.0	-6.0	-21.7	4.5	8.0	58.5	Feb.
1.9	107.7	-4.9	-16.3	2.4	8.1	52.5	Mar.
-1.1	106.5	-7.5	-18.0	-0.2	4.7	38.6	Apr.
2.2	109.6	-1.6	-32.8	-10.1	10.6	26.0	May
2.9	109.1	-3.8	-27.1	-16.4	16.5	51.6	June
3.7	110.7	0.2	-18.5	-15.5	14.5	-7.0	July
4.3	112.2	2.4	0.5	-19.4	15.0	-7.0	Aug.
6.3	114.0	5.4	-1.8	-18.0	16.7	-29.0	Sep.
6.0	115.2	4.1	12.1	-20.2	18.1	-11.9	Oct.

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	
6.3	99.0	6.2	37.9	17.2	2.4	23.0	2001 Oct.
6.3	99.4	6.2	39.8	21.2	1.9	22.8	Nov.
6.9	100.0	6.4	45.8	21.9	2.3	22.9	Dec.
7.6	100.8	5.6	47.0	23.9	3.8	24.7	2002 Jan.
7.3	101.3	5.2	45.2	23.2	3.7	22.5	Feb.
7.4	102.1	5.7	43.3	18.7	3.9	24.7	Mar.
7.5	102.8	5.8	44.5	19.3	3.8	26.4	Apr.
7.5	103.6	6.0	42.9	17.2	3.6	30.5	May
7.0	104.1	5.8	39.4	15.8	3.2	32.6	June
6.5	104.3	4.7	33.7	15.7	3.1	37.8	July
6.3	104.3	4.6	32.5	12.8	3.3	35.2	Aug.
6.7	105.1	5.3	33.5	14.3	3.4	32.0	Sep.
6.6	105.5	4.4	31.0	14.7	3.9	29.7	Oct.

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	
6.2	99.8	5.5	36.9	19.5	2.6	23.7	2001 Oct.
6.2	100.1	5.2	38.8	21.2	2.4	23.4	Nov.
6.7	100.0	5.4	44.6	19.2	2.8	23.9	Dec.
7.2	101.2	4.8	45.6	20.9	4.0	24.7	2002 Jan.
6.8	101.6	4.0	44.0	18.6	4.1	23.2	Feb.
6.9	102.6	4.6	42.1	14.8	4.3	25.2	Mar.
6.7	103.1	4.3	43.2	14.8	3.9	26.7	Apr.
7.0	104.1	5.2	41.5	10.6	4.2	30.4	May
6.6	104.5	4.8	38.2	8.3	4.2	32.9	June
6.2	104.8	4.2	32.9	8.2	4.0	36.5	July
6.1	105.0	4.4	32.0	4.9	4.2	34.0	Aug.
6.7	105.9	5.3	33.1	6.4	4.5	30.2	Sep.
6.5	106.3	4.4	30.8	5.9	5.0	28.6	Oct.

**Table 3.8****Quoted shares issued by euro area residents***(EUR billions; end-of-period stocks; market values)***Amounts outstanding**

	Total economy 1	MFIs 2	Non-monetary financial corporations 3	Non-financial corporations 4
1999 Oct.	4,359.2	579.8	559.0	3,220.4
Nov.	4,843.7	597.0	581.0	3,665.7
Dec.	5,489.2	653.7	642.2	4,193.3
2000 Jan.	5,296.6	628.9	582.3	4,085.3
Feb.	5,794.1	647.8	600.1	4,546.2
Mar.	5,840.8	658.2	649.3	4,533.4
Apr.	5,859.6	670.4	654.4	4,534.8
May	5,750.6	673.4	647.7	4,429.5
June	5,716.0	692.0	645.3	4,378.8
July	5,833.2	700.3	695.8	4,437.2
Aug.	5,946.7	742.1	699.9	4,504.7
Sep.	5,638.2	730.3	687.2	4,220.7
Oct.	5,665.8	719.0	663.9	4,282.9
Nov.	5,464.8	674.5	673.0	4,117.4
Dec.	5,429.9	687.0	674.6	4,068.3
<i>Euro area enlargement</i>				
2001 Jan.	5,666.7	762.2	705.8	4,198.7
Feb.	5,247.4	710.1	661.1	3,876.2
Mar.	5,019.7	686.3	619.9	3,713.5
Apr.	5,363.9	715.3	643.0	4,005.6
May	5,233.4	697.9	626.5	3,909.0
June	4,983.7	676.5	634.7	3,672.5
July	4,959.3	647.0	571.9	3,740.4
Aug.	4,649.9	643.2	576.2	3,430.5
Sep.	4,052.0	535.7	484.9	3,031.5
Oct.	4,277.4	551.5	497.3	3,228.7
Nov.	4,522.3	587.5	511.5	3,423.2
Dec.	4,670.8	617.3	529.4	3,524.1
2002 Jan.	4,590.8	623.8	535.6	3,431.4
Feb.	4,561.7	622.4	525.9	3,413.4
Mar.	4,766.2	665.3	552.7	3,548.2
Apr.	4,585.8	678.0	533.5	3,374.2
May	4,447.2	666.3	500.0	3,280.9
June	4,126.8	614.8	476.9	3,035.1
July	3,720.5	515.6	406.2	2,798.7
Aug.	3,530.7	521.6	382.5	2,626.6
Sep.	2,989.6	412.6	284.7	2,292.3
Oct.	3,262.4	446.8	332.7	2,482.8

**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	61.1	61.1	38.9	38.9	100.0	100.0	61.1	38.9
	1	2	3	4	5	6	7	8	9	10
1998	102.7	1.1	101.8	0.7	104.4	1.9	-	-	-	-
1999	103.8	1.1	102.7	0.9	106.0	1.5	-	-	-	-
2000	106.3	2.3	105.5	2.7	107.8	1.7	-	-	-	-
<i>Euro area enlargement</i>										
2001	108.9	2.5	108.1	2.5	110.4	2.5	-	-	-	-
2001 Q4	109.5	2.1	108.6	1.7	111.2	2.8	109.6	0.3	108.6	111.6
2002 Q1	110.4	2.6	109.1	2.2	112.6	3.1	110.4	0.7	109.3	112.6
Q2	111.5	2.1	110.3	1.4	113.5	3.2	111.1	0.6	109.8	113.6
Q3	111.5	2.0	109.6	1.3	114.8	3.3	111.6	0.4	110.1	114.4
2002 Jan.	110.1	2.7	108.9	2.4	112.2	3.0	110.3	0.5	109.2	112.3
Feb.	110.2	2.5	108.8	2.1	112.7	3.0	110.3	0.1	109.1	112.6
Mar.	110.8	2.5	109.7	2.0	113.0	3.2	110.7	0.3	109.5	113.0
Apr.	111.4	2.4	110.4	2.0	113.2	3.0	111.0	0.3	109.9	113.1
May	111.5	2.0	110.4	1.3	113.6	3.3	111.2	0.2	109.9	113.7
June	111.5	1.8	110.2	1.0	113.9	3.2	111.2	0.0	109.7	113.9
July	111.3	1.9	109.4	1.2	114.8	3.2	111.3	0.1	109.8	114.1
Aug.	111.4	2.1	109.4	1.4	115.0	3.3	111.6	0.2	110.0	114.4
Sep.	111.7	2.1	110.1	1.4	114.7	3.3	111.9	0.3	110.4	114.7
Oct.	112.0	2.3	110.6	1.7	114.7	3.2	112.1	0.2	110.5	115.0
Nov.	111.9	2.2	110.5	1.8	114.6	3.1	112.0	0.0	110.4	115.1
Dec. <sup>2)</sup>	.	2.2	.	.	.	.	.	.	.	.

#### 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>	20.4	12.3	8.1	40.7	32.0	8.7	9.7	6.3	2.5	14.3	6.1
	11	12	13	14	15	16	17	18	19	20	21
1998	1.6	1.4	2.0	0.2	0.9	-2.6	2.3	1.7	-1.0	2.2	1.8
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	1.1	1.7	3.4	0.7	13.3	1.6	2.6	-4.2	2.3	2.4
<i>Euro area enlargement</i>											
2001	4.5	2.8	7.0	1.5	1.1	2.7	1.9	3.5	-2.8	3.3	2.6
2001 Q4	4.7	3.5	6.7	0.2	1.6	-4.1	2.0	3.8	-1.8	3.6	2.9
2002 Q1	4.9	3.5	7.0	0.9	1.8	-2.1	2.3	3.6	-1.2	4.0	3.2
Q2	2.8	3.1	2.4	0.7	1.7	-2.4	2.4	3.4	-0.8	4.2	3.3
Q3	2.2	2.9	1.3	0.9	1.4	-0.9	2.5	3.6	-0.7	4.3	3.4
2002 Jan.	5.6	3.8	8.4	0.9	1.7	-1.9	2.2	3.6	-1.2	3.9	3.1
Feb.	4.8	3.3	7.1	0.7	1.9	-2.9	2.2	3.5	-1.2	4.0	3.2
Mar.	4.2	3.3	5.5	1.0	1.8	-1.6	2.3	3.7	-1.0	4.2	3.2
Apr.	3.6	3.2	4.1	1.2	1.8	-0.5	2.5	3.2	-0.9	3.8	3.3
May	2.7	3.1	2.1	0.6	1.7	-2.9	2.4	3.5	-0.7	4.4	3.4
June	2.3	3.1	1.1	0.3	1.6	-3.6	2.4	3.5	-0.8	4.3	3.3
July	2.1	2.9	0.9	0.7	1.5	-1.7	2.5	3.5	-0.8	4.2	3.4
Aug.	2.3	2.9	1.3	0.9	1.4	-0.5	2.5	3.9	-0.7	4.3	3.5
Sep.	2.3	2.8	1.7	1.0	1.4	-0.4	2.4	3.4	-0.6	4.3	3.4
Oct.	2.2	2.6	1.6	1.5	1.3	2.3	2.5	3.2	-0.5	4.2	3.3
Nov.	2.3	2.5	1.9	1.5	1.3	2.1	2.5	3.3	-0.7	4.0	3.5
Dec.	.	.	.	.	.	.	.	.	.	.	.

Sources: Eurostat and ECB calculations.

1) Referring to the index period 2002.

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	13	14
	Total		Industry excluding construction and energy						Energy					
	Index 1995 = 100	2	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	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	0.8	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	1.8	1.2	1.0	2.9	2.1	3.1	2.8	2.2	1.3	-8.8	-7.6	27.8
2002	.	.	.	.	.	.	.	.	.	.	.	-3.2	-1.7	26.5
2001 Q4	107.3	-0.8	0.7	-1.2	1.0	2.2	1.9	2.4	-7.6	1.3	-1.2	-28.8	-15.6	22.4
2002 Q1	107.5	-0.8	0.3	-1.6	1.2	1.5	1.8	1.6	-4.7	2.0	-0.5	-10.5	-3.6	24.6
Q2	108.0	-0.8	0.3	-0.8	1.1	0.9	1.5	1.0	-4.8	1.7	-0.3	-8.7	-5.5	27.8
Q3	108.2	-0.1	0.7	0.1	0.9	0.9	1.3	1.1	-2.7	.	0.3	-4.2	-1.6	27.2
Q4	.	.	.	.	.	.	.	.	.	.	.	14.0	4.4	26.5
2001 Dec.	107.0	-0.8	0.5	-1.4	1.1	1.9	1.9	2.2	-6.8	-	-1.2	-20.6	-12.3	21.5
2002 Jan.	107.3	-0.7	0.4	-1.6	1.2	1.9	1.9	2.1	-5.1	-	-0.5	-14.4	-6.5	22.6
Feb.	107.4	-0.9	0.2	-1.8	1.2	1.4	1.7	1.6	-5.4	-	-0.8	-15.2	-4.0	23.5
Mar.	107.8	-0.7	0.2	-1.5	1.2	1.1	1.7	1.2	-3.7	-	-0.3	-1.6	-0.3	27.9
Apr.	108.1	-0.6	0.3	-1.1	1.0	1.0	1.6	1.1	-3.8	-	-0.2	-1.2	-1.4	29.3
May	108.0	-0.8	0.3	-0.9	1.1	0.8	1.5	0.9	-4.9	-	-0.4	-9.5	-6.8	28.1
June	107.9	-0.9	0.4	-0.6	1.0	0.7	1.4	0.8	-5.6	-	-0.5	-14.9	-8.4	25.8
July	108.0	-0.3	0.6	0.0	0.9	0.9	1.2	1.1	-3.6	-	0.1	-10.2	-7.6	25.9
Aug.	108.1	-0.1	0.7	0.2	0.9	0.8	1.3	1.0	-2.6	-	0.4	-4.3	-1.3	27.0
Sep.	108.5	0.1	0.8	0.3	0.9	1.0	1.4	1.2	-2.0	-	0.5	2.4	4.7	28.9
Oct.	108.6	0.9	0.9	0.6	0.9	1.0	1.2	1.3	1.9	-	1.2	14.3	7.8	27.9
Nov.	108.3	1.1	1.0	0.8	0.9	1.1	1.1	1.1	2.4	-	1.3	10.5	3.4	24.2
Dec.	.	.	.	.	.	.	.	.	.	-	.	17.2	2.1	27.1

**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	16						
	15	16	17	18	19	20	21	22
1996	102.0	2.0	2.1	2.4	2.2	0.9	0.8	0.8
1997	103.6	1.5	1.7	2.0	1.3	1.0	1.8	2.6
1998	105.3	1.7	1.2	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	-0.2
2000	107.9	1.3	2.5	2.2	2.6	2.5	4.6	8.2
2000 Q4	108.6	1.6	2.8	2.5	2.7	2.9	4.9	8.1
<i>Euro area enlargement</i>								
2001	110.8	2.4	2.2	2.4	2.3	1.9	1.5	0.8
2001 Q1	109.9	2.2	2.5	2.5	2.5	2.3	3.1	3.8
Q2	110.6	2.5	2.5	2.8	2.5	2.0	2.4	2.5
Q3	111.0	2.2	2.0	2.4	2.1	2.1	0.7	0.0
Q4	111.9	2.8	1.7	2.0	2.0	1.5	0.0	-2.9
2002 Q1	112.5	2.4	2.0	2.3	1.6	1.7	0.0	-1.3
Q2	112.9	2.1	1.7	1.8	1.4	1.9	-0.4	-1.7
Q3	113.6	2.4	1.7	1.8	1.5	1.8	0.4	-1.7

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	Changes in inventories <sup>2)</sup>	Total	Exports <sup>3)</sup>	Imports <sup>3)</sup>
1	2	3	4	5	6	7	8	9	
1997	5,648.7	5,500.4	3,201.0	1,150.7	1,138.5	10.2	148.3	1,827.3	1,678.9
1998	5,883.2	5,743.4	3,332.0	1,176.4	1,202.5	32.6	139.8	1,949.2	1,809.5
1999	6,151.1	6,049.7	3,507.4	1,230.4	1,292.4	19.6	101.5	2,052.4	1,950.9
2000	6,448.5	6,379.3	3,674.2	1,286.5	1,388.2	30.5	69.2	2,416.6	2,347.5
<i>Euro area enlargement</i>									
2001	6,824.4	6,711.3	3,920.2	1,361.0	1,433.4	-3.3	113.1	2,550.3	2,437.2
2001 Q2	1,702.1	1,681.5	980.0	339.0	358.9	3.7	20.6	639.4	618.7
Q3	1,710.7	1,681.7	984.9	341.5	358.5	-3.1	29.0	635.0	605.9
Q4	1,721.1	1,681.4	988.7	344.8	356.2	-8.3	39.7	630.8	591.1
2002 Q1	1,737.5	1,695.8	994.9	348.5	354.9	-2.6	41.7	629.1	587.3
Q2	1,749.4	1,706.1	1,001.4	352.3	352.3	0.1	43.3	640.0	596.7
Q3	1,766.1	1,713.1	1,010.3	354.6	354.6	-6.3	52.9	655.4	602.5

##### 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	Changes in inventories <sup>2)</sup>	Total	Exports <sup>3)</sup>	Imports <sup>3)</sup>
10	11	12	13	14	15	16	17	18	
1997	5,509.1	5,354.3	3,093.3	1,126.1	1,132.1	2.8	154.8	1,806.3	1,651.5
1998	5,667.5	5,545.1	3,187.9	1,142.2	1,189.8	25.1	122.4	1,939.2	1,816.9
1999	5,826.4	5,737.5	3,300.3	1,164.8	1,260.7	11.7	88.9	2,040.5	1,951.6
2000	6,027.9	5,902.2	3,382.7	1,186.9	1,320.8	11.8	125.8	2,297.0	2,171.2
<i>Euro area enlargement</i>									
2001	6,221.5	6,071.0	3,521.3	1,225.2	1,336.4	-11.9	150.5	2,387.6	2,237.1
2001 Q2	1,554.9	1,521.6	880.8	305.6	335.5	-0.2	33.3	596.7	563.5
Q3	1,557.7	1,517.5	881.9	306.9	333.0	-4.3	40.3	596.2	556.0
Q4	1,553.9	1,513.5	882.6	308.4	330.4	-7.9	40.4	589.8	549.4
2002 Q1	1,560.3	1,514.6	881.7	311.0	327.2	-5.2	45.8	590.0	544.2
Q2	1,565.6	1,518.4	884.0	313.1	323.3	-2.0	47.2	600.0	552.8
Q3	1,570.7	1,520.2	888.4	313.9	323.5	-5.6	50.6	613.0	562.5

(annual percentage changes)

1997	2.3	1.7	1.6	1.3	2.4	-	-	10.4	9.0
1998	2.9	3.6	3.1	1.4	5.1	-	-	7.4	10.0
1999	2.8	3.5	3.5	2.0	6.0	-	-	5.2	7.4
2000	3.5	2.9	2.5	1.9	4.8	-	-	12.6	11.3
<i>Euro area enlargement</i>									
2001	1.4	0.9	1.8	1.9	-0.7	-	-	2.7	1.4
2001 Q2	1.5	1.3	1.8	2.0	-0.2	-	-	4.3	3.8
Q3	1.3	0.7	1.8	2.2	-1.6	-	-	1.4	-0.3
Q4	0.5	-0.2	1.7	1.6	-2.5	-	-	-2.6	-4.4
2002 Q1	0.3	-0.3	0.6	2.2	-3.1	-	-	-2.5	-4.2
Q2	0.7	-0.2	0.4	2.5	-3.6	-	-	0.5	-1.9
Q3	0.8	0.2	0.7	2.3	-2.9	-	-	2.8	1.2

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 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
1997	5,270.4	138.6	1,227.8	291.7	1,086.1	1,382.4	1,143.8	203.7	582.1
1998	5,469.8	138.9	1,275.9	294.8	1,139.6	1,441.8	1,178.9	202.1	615.5
1999	5,690.4	136.0	1,293.6	310.3	1,191.6	1,529.3	1,229.6	202.4	663.1
2000	5,972.3	136.7	1,348.4	325.9	1,261.1	1,621.3	1,278.9	211.9	688.1
<i>Euro area enlargement</i>									
2001	6,337.9	151.5	1,410.0	346.7	1,355.8	1,721.4	1,352.4	230.7	717.3
2001 Q2	1,579.6	37.4	352.8	86.1	338.1	428.9	336.3	57.4	179.9
Q3	1,589.6	38.6	353.2	86.9	340.5	431.0	339.3	58.3	179.4
Q4	1,600.2	38.3	348.9	88.1	342.6	438.6	343.6	58.7	179.6
2002 Q1	1,611.4	38.9	350.4	89.2	345.5	439.8	347.7	57.6	183.7
Q2	1,623.7	38.0	353.3	88.8	347.3	444.7	351.5	57.5	183.2
Q3	1,637.3	38.7	356.4	89.2	350.0	447.3	355.7	58.5	187.3

### 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
1997	5,167.8	140.2	1,217.6	290.1	1,071.3	1,339.1	1,109.4	214.6	555.9
1998	5,319.0	142.5	1,256.7	291.3	1,114.1	1,388.3	1,126.0	222.3	570.8
1999	5,461.5	146.1	1,269.1	298.7	1,163.9	1,441.1	1,142.7	231.0	595.8
2000	5,663.2	145.3	1,320.6	305.1	1,219.2	1,507.4	1,165.5	245.5	610.3
<i>Euro area enlargement</i>									
2001	5,860.8	151.6	1,349.0	310.1	1,281.5	1,570.9	1,197.8	263.0	623.7
2001 Q2	1,463.8	37.6	337.4	77.4	320.3	392.2	298.9	65.6	156.7
Q3	1,468.3	38.3	337.5	77.5	321.0	394.3	299.7	66.0	155.5
Q4	1,465.3	38.1	332.2	77.6	321.1	395.1	301.2	66.7	155.4
2002 Q1	1,470.7	38.1	334.7	77.1	322.1	395.9	302.9	66.2	155.8
Q2	1,476.6	38.0	336.3	76.2	323.5	397.9	304.6	66.1	155.1
Q3	1,480.8	38.4	338.1	76.0	324.4	398.4	305.7	67.2	157.1
<i>(annual percentage changes)</i>									
1997	2.4	0.4	3.3	-1.8	3.1	3.3	1.0	3.8	2.4
1998	2.9	1.6	3.2	0.4	4.0	3.7	1.5	3.6	2.7
1999	2.7	2.5	1.0	2.5	4.5	3.8	1.5	3.9	4.4
2000	3.7	-0.5	4.1	2.2	4.8	4.6	2.0	6.3	2.4
<i>Euro area enlargement</i>									
2001	1.7	-1.2	1.0	-0.6	2.6	2.8	1.3	5.7	0.2
2001 Q2	1.9	-1.8	1.4	-0.8	3.0	3.0	1.0	5.9	0.1
Q3	1.6	-1.1	0.8	-0.7	2.5	2.7	1.3	5.2	0.1
Q4	0.7	-0.6	-1.7	-0.5	1.3	2.2	1.4	4.9	-0.1
2002 Q1	0.5	1.1	-2.1	-0.7	1.0	1.7	1.6	2.2	-0.3
Q2	0.9	1.1	-0.3	-1.6	1.0	1.5	1.9	0.9	-1.0
Q3	0.9	0.2	0.2	-1.9	1.1	1.0	2.0	1.8	1.0

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	2.1	111.3	1.9	2.0	1.9	2.5	1.5	1.4	1.6	0.9	4.1	1.9
2000	5.0	117.5	5.5	6.0	5.9	9.4	2.2	6.4	1.4	1.8	2.0	5.9
<i>Euro area enlargement</i>												
2001	0.2	118.1	0.4	0.2	-0.8	1.3	0.4	-2.5	1.0	1.2	0.0	0.2
2002	.	.	.	.	.	.	.	.	.	.	.	.
2001 Q4	-2.9	116.1	-3.6	-4.7	-6.0	-4.8	-2.6	-7.4	-1.7	3.5	1.5	-4.6
2002 Q1	-2.4	116.6	-2.7	-3.2	-2.1	-6.5	-1.3	-6.7	-0.1	1.5	1.3	-3.5
Q2	-1.1	117.4	-0.6	-0.9	0.3	-2.6	-1.0	-5.9	0.1	2.4	-1.8	-0.9
Q3	-1.0	117.4	-0.6	-0.8	0.7	-2.0	-1.9	-4.3	-1.4	0.8	-2.3	-0.6
Q4	.	.	.	.	.	.	.	.	.	.	.	.
2002 Feb.	-2.6	116.5	-3.0	-3.6	-2.5	-7.1	-1.2	-6.2	-0.1	1.5	0.4	-3.9
Mar.	-2.0	116.9	-2.2	-2.4	-0.4	-6.1	-1.6	-7.2	-0.4	0.6	2.2	-3.1
Apr.	-0.6	117.3	-0.7	-0.8	0.4	-2.2	-1.5	-5.8	-0.4	1.7	0.5	-0.5
May	-1.8	117.0	-0.9	-1.2	0.6	-4.3	-0.5	-6.8	0.8	2.1	-3.2	-1.5
June	-0.9	117.8	-0.3	-0.7	0.0	-1.5	-1.1	-5.0	-0.2	3.3	-2.5	-0.7
July	-0.6	117.2	-0.2	-0.4	0.5	-0.7	-1.8	-2.2	-1.6	1.5	-1.4	0.0
Aug.	-1.5	117.5	-1.2	-1.4	0.0	-2.5	-2.6	-9.2	-1.6	0.0	-1.6	-1.6
Sep.	-1.1	117.5	-0.4	-0.7	1.3	-2.7	-1.5	-3.0	-1.2	0.9	-3.8	-0.4
Oct.	-0.8	117.6	0.7	0.1	1.1	-0.7	-0.1	-2.4	0.0	4.0	-6.4	0.3
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
Dec.	.	.	.	.	.	.	.	.	.	.	.	.

**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	111.6	3.2	107.3	2.4	2.9	2.3	1.0	2.6	973	5.4		
2000	116.2	4.1	109.8	2.3	1.9	2.2	2.0	4.5	952	-2.1		
<i>Euro area enlargement</i>												
2001	121.3	4.0	111.4	1.5	1.3	1.5	1.3	0.0	968	-0.8		
2002	.	.	.	.	.	.	.	.	927	-4.3		
2001 Q4	122.3	3.3	111.6	1.1	1.1	1.1	0.5	-0.5	956	2.1		
2002 Q1	122.8	2.8	112.0	0.8	1.4	0.3	0.5	-2.1	913	-4.1		
Q2	123.0	1.3	111.6	0.0	0.3	0.2	-1.0	-2.4	913	-7.9		
Q3	123.8	1.5	112.3	0.7	1.0	0.8	-0.5	-1.1	920	-4.7		
Q4	.	.	.	.	.	.	.	.	960	0.6		
2002 Feb.	122.4	3.1	111.8	1.2	1.5	0.6	0.4	-1.3	920	-3.2		
Mar.	123.7	3.1	112.4	1.3	2.3	0.4	2.1	-3.0	893	-6.2		
Apr.	122.6	2.0	111.4	0.3	0.6	0.5	0.6	-2.7	895	-7.9		
May	123.7	1.7	112.0	0.6	1.3	0.3	-2.5	-1.6	915	-6.8		
June	122.8	0.2	111.3	-0.8	-0.8	-0.3	-1.1	-3.0	930	-9.2		
July	123.5	1.8	112.1	1.0	1.1	1.3	1.9	0.2	901	-6.6		
Aug.	124.8	1.9	112.9	0.9	1.5	0.6	-0.5	-2.1	927	-4.5		
Sep.	123.2	0.9	111.9	0.1	0.5	0.7	-2.9	-1.2	933	-2.4		
Oct.	124.3	2.7	112.6	1.6	1.8	1.6	3.2	-2.3	934	-3.2		
Nov.	.	.	.	.	.	.	.	.	950	-1.5		
Dec.	.	.	.	.	.	.	.	.	996	7.7		

*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

## 1. Economic sentiment indicator, manufacturing industry and consumer surveys

(percentage balances, seasonally adjusted, unless otherwise indicated)

	Economic sentiment indicator <sup>1)2)</sup> (index 1995 = 100)	Manufacturing industry					Consumer confidence indicator <sup>1)</sup>				
		Industrial confidence indicator				Capacity utilisation <sup>3)</sup> (percentages)	Total <sup>4)</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>4)</sup>	Order books	Stocks of finished products	Production expectations						
	1	2	3	4	5	6	7	8	9	10	11
1999	101.2	-7	-17	11	7	81.8	-3	3	-4	11	1
2000	103.7	5	3	5	17	83.8	1	4	1	1	2
<i>Euro area enlargement</i>											
2001	100.8	-8	-14	13	1	83.6	-5	2	-10	14	2
2002	98.9	-12	-25	12	3	81.2	-11	-1	-12	26	-3
2001 Q4	98.7	-18	-27	17	-9	82.2	-12	0	-18	30	2
2002 Q1	99.0	-14	-26	14	-1	81.1	-10	0	-12	28	0
Q2	99.3	-11	-25	12	4	81.2	-8	-1	-9	22	-3
Q3	98.9	-12	-27	11	4	81.0	-10	-1	-11	26	-3
Q4	98.6	-10	-23	11	3	81.5	-14	-3	-15	30	-8
2001 Dec.	98.7	-17	-28	16	-8	-	-11	0	-16	30	1
2002 Jan.	98.9	-15	-28	14	-2	-	-11	0	-14	29	1
Feb.	98.9	-14	-26	14	-3	-	-10	0	-11	28	0
Mar.	99.2	-12	-25	13	3	-	-9	0	-10	26	0
Apr.	99.1	-11	-26	12	4	-	-9	-1	-10	23	-3
May	99.5	-10	-23	11	4	-	-8	-1	-8	22	-2
June	99.3	-11	-25	12	4	-	-8	0	-8	22	-3
July	99.0	-11	-26	11	4	-	-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	-	-12	-2	-12	27	-7
Nov.	98.4	-11	-23	12	2	-	-14	-4	-15	30	-7
Dec.	98.5	-9	-22	10	4	-	-16	-4	-19	33	-9

## 2. Construction industry, retail trade and services surveys

(percentage balances, seasonally adjusted)

	Construction confidence indicator			Retail trade confidence indicator				Services confidence indicator <sup>1)</sup>			
	Total <sup>4)</sup>	Order books	Employment expectations	Total <sup>4)</sup>	Present business situation	Volume of stocks	Expected business situation	Total <sup>4)</sup>	Business climate	Demand in recent months	Demand in the months ahead
	12	13	14	15	16	17	18	19	20	21	22
1999	-7	-14	1	-5	-5	15	4	27	25	26	31
2000	1	-6	8	-1	4	16	9	30	36	23	33
<i>Euro area enlargement</i>											
2001	-11	-16	-4	-7	-7	17	2	15	16	8	20
2002	-20	-28	-12	-16	-23	18	-9	1	-4	-6	13
2001 Q4	-15	-20	-8	-11	-14	16	-3	-5	-5	-8	-2
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	17	-8	-4	-13	-4	4
2001 Dec.	-15	-22	-7	-12	-15	18	-3	-6	-5	-11	-1
2002 Jan.	-17	-25	-9	-13	-17	16	-6	1	0	-15	17
Feb.	-15	-22	-8	-18	-28	20	-5	2	1	-15	20
Mar.	-17	-23	-10	-17	-22	23	-7	7	7	-11	26
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	17	-7	-5	-13	-5	2

Source: European Commission Business and Consumer Surveys.

1) Data for all periods refer to the Euro 12.

2) 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.

3) Data on capacity utilisation are collected in January, April, July and October. Annual data are averages of the four quarterly surveys.

4) 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**
**1. Employment and unemployment in the whole economy <sup>1)</sup>**
*(annual percentage changes, seasonally adjusted, unless otherwise indicated)*

	Employment						Unemployment			
	Total		By employment status		By selected sector		Total		Adult <sup>2)</sup>	Youth <sup>2)</sup>
	Millions		Employees	Self-employed	Industry excluding construction	Services	Millions	% of labour force	% of labour force	% of labour force
	1	2	3	4	5	6	7	8	9	10
1997	119.902	0.8	1.0	0.2	-0.2	1.4	13.946	10.9	9.4	21.9
1998	122.017	1.8	1.9	0.8	1.0	2.4	13.268	10.2	8.9	20.0
1999	124.230	1.8	2.2	-0.5	-0.2	2.7	12.256	9.3	8.2	18.0
2000	126.917	2.2	2.4	0.6	0.7	2.9	11.107	8.4	7.3	16.2
2000 Q3	127.296	2.2	2.5	0.7	0.9	3.0	10.975	8.3	7.2	16.1
Q4	127.964	2.3	2.4	1.6	1.1	2.9	10.741	8.1	7.1	15.6
<i>Euro area enlargement</i>										
2001	132.640	1.4	1.6	0.2	0.3	1.9	11.043	8.0	7.0	15.7
2001 Q1	132.228	2.0	2.2	1.0	1.2	2.5	11.052	8.0	7.0	15.7
Q2	132.527	1.5	1.7	0.5	0.7	2.0	10.983	8.0	7.0	15.6
Q3	132.784	1.2	1.4	-0.1	0.0	1.8	11.013	8.0	7.0	15.6
Q4	133.019	0.8	1.1	-0.6	-0.6	1.5	11.124	8.0	7.0	15.7
2002 Q1	133.189	0.7	1.0	-0.7	-1.1	1.6	11.276	8.1	7.1	15.8
Q2	133.255	0.5	0.8	-0.8	-1.1	1.4	11.433	8.2	7.2	16.1
Q3	133.156	0.3	0.6	-1.2	-1.2	1.1	11.567	8.3	7.3	16.1
2001 Nov.	-	-	-	-	-	-	11.119	8.0	7.0	15.7
Dec.	-	-	-	-	-	-	11.160	8.1	7.0	15.8
2002 Jan.	-	-	-	-	-	-	11.220	8.1	7.1	15.8
Feb.	-	-	-	-	-	-	11.281	8.1	7.1	15.8
Mar.	-	-	-	-	-	-	11.326	8.2	7.1	15.9
Apr.	-	-	-	-	-	-	11.348	8.2	7.1	15.9
May	-	-	-	-	-	-	11.437	8.2	7.2	16.0
June	-	-	-	-	-	-	11.516	8.3	7.2	16.2
July	-	-	-	-	-	-	11.543	8.3	7.3	16.1
Aug.	-	-	-	-	-	-	11.568	8.3	7.3	16.1
Sep.	-	-	-	-	-	-	11.589	8.3	7.3	16.1
Oct.	-	-	-	-	-	-	11.645	8.4	7.4	16.1
Nov.	-	-	-	-	-	-	11.708	8.4	7.4	16.2

**2. Labour costs and productivity**
*(annual percentage changes)*

	Unit labour cost in the whole economy, and components (s.a.)			Labour cost indices <sup>3)</sup>					Earnings per employee in manufacturing	
	Unit labour cost	Compensation per employee	Labour productivity	Total	By component		By selected sector			
					Wages and salaries	Employers' social contributions and other costs	Industry excluding construction	Services		
	11	12	13	14	15	16	17	18	19	
1997	0.4	1.9	1.5	2.6	2.6	2.7	2.2	2.7	2.3	
1998	0.1	1.2	1.1	1.6	1.9	0.8	1.6	1.4	2.3	
1999	1.0	2.0	1.0	2.3	2.6	1.4	2.4	1.9	2.5	
2000	1.2	2.5	1.3	3.3	3.4	2.5	3.2	2.9	2.7	
2000 Q4	2.0	2.5	0.4	3.0	3.2	2.1	2.8	2.9	2.5	
<i>Euro area enlargement</i>										
2001	2.6	2.7	0.1	3.4	3.6	2.6	3.2	3.2	3.1	
2001 Q1	2.1	2.5	0.4	3.4	3.7	2.2	3.1	3.3	3.4	
Q2	2.7	2.8	0.0	3.0	3.2	2.3	3.1	2.2	3.1	
Q3	2.5	2.6	0.2	3.7	3.9	3.1	3.6	3.7	3.3	
Q4	3.2	2.8	-0.4	3.4	3.5	2.9	3.0	3.6	2.8	
2002 Q1	3.1	2.7	-0.4	4.0	4.2	3.6	3.7	4.2	2.5	
Q2	2.4	2.5	0.1	3.6	3.6	3.6	3.0	3.9	3.0	
Q3	2.3	2.8	0.6	3.7	3.7	3.5	3.3	3.8	3.2	

Sources: ECB calculations based on Eurostat data (columns 1 to 6, 11 to 13 and 18), Eurostat (columns 7 to 10 and 14 to 17) and ECB calculations based on national data (column 19).

1) Data for employment are based on the ESA 95. Data for unemployment follow ILO recommendations.

2) Adult: 25 years and over; youth: below 25 years; expressed as a percentage of the labour force for the relevant age group.

3) Hourly labour costs for the whole economy, excluding the agriculture, public administration, education and health sectors. 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 Q3	4,677.4	311.8	4,074.2	1,184.2	1,451.1	1,341.4	97.4	156.4	135.0	237.6
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	4,816.4	1,690.3	1,613.0	1,396.3	116.7	139.0	167.6	297.7
2002 Q1	5,364.9	254.3	4,775.4	1,637.6	1,605.0	1,413.0	119.8	157.5	177.8	300.6
Q2	5,449.1	285.8	4,828.0	1,703.9	1,593.9	1,412.5	117.6	155.0	180.3	277.2
Q3	.	306.7	4,825.9	1,699.2	1,585.6	1,423.2	117.8	148.4	.	.

	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
	11	12	13	14	15	16	17	18	19	20
1998 Q3	1,546.6	156.7	1,389.9	3,366.3	1,929.8	1,436.5	187.9	2,520.6	2,248.9	271.7
Q4	1,539.8	155.7	1,384.1	3,825.5	2,307.8	1,517.7	172.7	2,622.8	2,351.0	271.8
1999 Q1	1,587.2	136.5	1,450.7	4,129.3	2,502.4	1,626.9	194.8	2,679.5	2,401.8	277.6
Q2	1,505.0	126.7	1,378.2	4,251.7	2,525.3	1,726.4	211.6	2,750.1	2,468.2	282.0
Q3	1,514.0	114.2	1,399.8	4,185.1	2,451.2	1,733.9	210.8	2,793.9	2,507.3	286.6
Q4	1,593.1	166.7	1,426.5	4,924.7	3,094.1	1,830.6	203.9	2,937.1	2,648.6	288.5
2000 Q1	1,598.5	186.9	1,411.6	5,053.4	3,124.6	1,928.7	215.9	3,054.1	2,759.4	294.7
Q2	1,636.2	191.8	1,444.4	4,971.4	3,069.3	1,902.2	206.4	3,100.9	2,802.2	298.6
Q3	1,712.7	210.5	1,502.2	5,047.1	3,130.2	1,916.8	204.7	3,155.8	2,853.2	302.7
Q4	1,800.7	228.3	1,572.5	5,094.7	3,226.0	1,868.7	200.4	3,186.6	2,884.9	301.7
<i>Euro area enlargement</i>										
2001 Q1	1,928.4	315.8	1,612.6	4,778.3	2,945.9	1,832.4	225.3	3,236.8	2,929.4	307.4
Q2	1,914.0	268.8	1,645.3	4,750.9	2,895.3	1,855.5	232.2	3,295.9	2,986.2	309.6
Q3	1,942.0	264.0	1,678.0	4,243.9	2,509.0	1,735.0	252.8	3,271.3	2,957.9	313.4
Q4	1,954.6	252.4	1,702.1	4,607.2	2,783.4	1,823.8	260.0	3,366.3	3,048.7	317.6
2002 Q1	2,014.8	294.0	1,720.8	4,699.2	2,838.2	1,861.0	290.3	3,450.6	3,124.0	326.7
Q2	2,044.3	256.2	1,788.1	4,286.7	2,522.6	1,764.1	293.3	3,442.4	3,112.3	330.1
Q3	.	.	.	.	.	.	.	.	.	.

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, 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 Q3	6,081.8	5,524.1	903.5	33.3	870.2	2,528.7	866.2	1,662.5	2,649.6	233.8	2,415.9	147.4
Q4	6,227.5	5,663.5	911.2	36.0	875.1	2,600.7	902.9	1,697.8	2,715.6	240.8	2,474.8	151.3
1999 Q1	6,259.4	5,682.7	902.1	36.3	865.8	2,595.9	921.3	1,674.6	2,761.3	251.8	2,509.6	156.8
Q2	6,423.4	5,817.5	899.5	39.0	860.6	2,688.1	964.2	1,724.0	2,835.7	255.6	2,580.1	183.3
Q3	6,491.4	5,886.6	884.7	37.9	846.8	2,703.0	943.7	1,759.3	2,903.6	255.4	2,648.3	191.4
Q4	6,665.1	6,039.5	900.1	42.1	858.0	2,795.4	979.8	1,815.6	2,969.5	264.1	2,705.4	201.4
2000 Q1	6,809.9	6,156.4	890.4	41.1	849.3	2,894.2	1,038.0	1,856.2	3,025.2	265.6	2,759.7	221.1
Q2	6,958.8	6,262.2	886.0	42.0	844.0	2,994.4	1,090.7	1,903.7	3,078.3	274.4	2,804.0	219.7
Q3	7,103.4	6,379.6	866.2	39.9	826.3	3,102.3	1,152.4	1,949.9	3,134.9	275.9	2,859.0	252.3
Q4	7,265.6	6,500.5	881.4	42.0	839.4	3,199.5	1,167.3	2,032.2	3,184.6	281.0	2,903.6	245.2
<i>Euro area enlargement</i>												
2001 Q1	7,452.3	6,671.7	895.8	41.8	854.0	3,320.7	1,243.9	2,076.8	3,235.8	279.3	2,956.5	257.3
Q2	7,557.6	6,762.2	879.8	42.1	837.6	3,392.5	1,266.5	2,126.1	3,285.3	285.3	3,000.1	279.2
Q3	7,629.5	6,805.2	873.3	45.1	828.2	3,433.1	1,244.6	2,188.5	3,323.2	280.7	3,042.4	249.7
Q4	7,741.2	6,897.5	897.2	50.6	846.6	3,471.5	1,226.3	2,245.2	3,372.6	282.9	3,089.6	268.6
2002 Q1	7,815.7	6,960.9	901.5	53.3	848.2	3,508.4	1,224.4	2,283.9	3,405.8	278.3	3,127.5	285.5
Q2	7,900.7	7,020.7	874.3	53.5	820.8	3,555.8	1,211.0	2,344.7	3,470.6	285.5	3,185.1	251.8
Q3		7,058.4										
<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 Q3	3,925.8	3,592.3	498.6	3,093.7	333.5	55.3	278.2	2,446.1	133.8	215.3		
Q4	3,928.3	3,593.2	468.2	3,125.0	335.1	55.0	280.1	2,815.2	140.3	217.2		
1999 Q1	3,972.4	3,636.1	466.9	3,169.2	336.3	65.7	270.6	2,964.9	146.9	219.6		
Q2	3,955.4	3,613.2	459.3	3,153.9	342.2	66.4	275.8	3,087.2	136.6	221.9		
Q3	3,934.3	3,578.9	449.6	3,129.2	355.4	74.8	280.6	3,012.8	137.6	224.2		
Q4	3,897.2	3,529.8	421.1	3,108.7	367.3	78.2	289.1	4,193.3	149.8	226.5		
2000 Q1	3,954.1	3,584.9	425.3	3,159.6	369.2	78.7	290.5	4,533.4	147.6	228.4		
Q2	3,986.3	3,605.6	425.8	3,179.8	380.6	88.7	291.9	4,378.8	147.6	230.2		
Q3	4,022.5	3,621.4	421.8	3,199.6	401.1	95.6	305.5	4,220.7	147.2	232.1		
Q4	4,067.5	3,648.9	400.8	3,248.1	418.6	100.6	318.0	4,068.3	153.7	233.9		
<i>Euro area enlargement</i>												
2001 Q1	4,247.9	3,790.6	429.3	3,361.3	457.3	111.5	345.8	3,713.5	154.7	236.1		
Q2	4,294.5	3,812.9	440.7	3,372.2	481.7	122.2	359.4	3,672.5	155.2	238.3		
Q3	4,377.9	3,879.6	449.9	3,429.7	498.3	135.9	362.4	3,031.5	155.4	240.5		
Q4	4,391.7	3,874.5	434.3	3,440.2	517.2	134.8	382.3	3,524.1	165.5	240.0		
2002 Q1	4,451.5	3,928.4	446.8	3,481.6	523.1	141.0	382.1	3,548.2	174.8	242.4		
Q2	4,541.0	4,024.9	481.8	3,543.1	516.2	125.5	390.7	3,035.1	176.1	244.8		
Q3								2,292.3				

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, 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 Q3	-14.0	-3.7	-18.5	-17.7	2.7	-0.2	-3.3	9.0	-0.7	2.8
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	138.3	-69.9	209.7	142.4	10.3	62.5	-5.4	-8.8	7.4	12.2
2002 Q1	4.5	14.6	-39.3	-53.3	-3.9	14.9	3.0	19.0	10.2	2.0
Q2	104.2	31.5	72.5	72.4	0.9	1.7	-2.4	-2.5	2.5	-9.9
Q3	.	20.9	-2.3	-5.1	-8.0	10.6	0.2	-10.3	.	.

	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 Q3	-12.2	-11.2	-1.1	102.6	17.1	85.6	1.0	43.0	40.3	2.7
Q4	-13.8	-2.2	-11.5	81.9	62.8	19.1	-16.1	49.7	47.6	2.1
1999 Q1	31.2	-13.1	44.2	102.9	2.6	100.4	2.9	64.2	58.2	6.0
Q2	-41.0	-11.9	-29.0	148.3	64.9	83.4	16.8	54.1	49.6	4.5
Q3	-3.3	-13.0	9.7	94.7	55.2	39.4	-0.4	57.2	52.5	4.8
Q4	90.1	50.4	39.7	-14.6	19.0	-33.6	-6.8	70.4	68.2	2.1
2000 Q1	2.5	26.8	-24.2	-11.1	-58.4	47.3	12.9	78.7	72.6	6.2
Q2	49.2	4.4	44.8	62.9	44.1	18.8	-9.7	55.9	51.9	4.0
Q3	84.3	19.5	64.7	148.7	140.2	8.4	-2.0	56.0	52.0	4.1
Q4	24.1	7.2	16.9	219.2	181.6	37.6	-4.3	60.9	61.9	-1.0
<i>Euro area enlargement</i>										
2001 Q1	126.6	89.5	37.2	66.0	27.9	38.1	24.7	60.2	54.5	5.7
Q2	-8.6	-41.7	33.1	47.2	41.2	6.0	6.3	56.9	54.5	2.4
Q3	36.7	-4.9	41.6	75.4	49.4	25.9	20.0	51.0	47.3	3.7
Q4	-3.8	-16.7	12.9	0.5	-22.2	22.7	6.7	66.8	62.8	4.0
2002 Q1	90.4	44.3	46.1	50.2	5.5	44.8	30.1	70.0	61.5	8.4
Q2	6.0	-39.3	45.3	26.1	12.0	14.1	2.6	51.9	49.1	2.9
Q3	.	.	.	.	.	.	.	.	.	.

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, 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 Q3	81.1	82.2	2.8	1.4	1.4	27.6	-15.0	42.6	50.7	1.2	49.4	-0.7
Q4	160.2	151.0	8.3	2.8	5.5	75.8	37.3	38.5	76.0	7.1	68.9	3.5
1999 Q1	89.6	75.6	-7.7	0.3	-7.9	21.1	23.3	-2.2	76.2	9.2	67.0	1.7
Q2	162.7	133.2	-4.1	2.7	-6.7	89.6	41.2	48.4	77.2	3.9	73.3	23.9
Q3	70.6	71.5	-14.7	-1.1	-13.6	17.3	-16.7	34.0	67.9	-0.3	68.2	8.4
Q4	170.4	146.6	15.1	4.2	10.9	86.4	34.0	52.4	68.8	8.8	60.0	-7.0
2000 Q1	141.6	108.8	-8.3	-0.9	-7.4	91.9	54.7	37.2	58.0	1.6	56.4	15.1
Q2	164.6	118.4	-4.7	0.9	-5.6	113.4	62.2	51.3	55.9	9.8	46.1	-0.8
Q3	132.1	91.6	-16.2	-2.1	-14.1	96.6	53.4	43.2	51.8	0.0	51.8	23.2
Q4	185.2	140.1	15.6	2.1	13.5	116.3	19.6	96.7	53.2	5.3	47.9	1.9
<i>Euro area enlargement</i>												
2001 Q1	95.8	78.5	-3.7	-0.5	-3.3	62.4	39.6	22.8	37.1	-5.1	42.2	9.2
Q2	105.5	88.0	-16.4	0.3	-16.7	64.7	20.9	43.7	57.2	6.0	51.2	16.8
Q3	83.6	57.9	-6.0	2.9	-8.9	50.6	-15.8	66.4	38.9	-4.2	43.1	-21.4
Q4	108.7	92.3	23.0	5.5	17.5	36.3	-17.0	53.2	49.5	2.2	47.3	4.1
2002 Q1	73.6	62.6	4.2	2.7	1.5	30.6	-3.8	34.4	38.8	-5.2	44.0	15.8
Q2	111.4	85.6	-26.1	0.2	-26.3	73.8	-5.3	79.0	63.7	7.5	56.2	-18.4
Q3	.	37.0	.	.	.	.	.	.	.	.	.	.

	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 Q3	61.3	54.0	2.1	52.0	7.3	1.6	5.7	9.4	-0.4	2.2	
Q4	-10.5	-15.4	-31.0	15.6	4.8	0.5	4.4	39.0	6.4	1.9	
1999 Q1	73.9	60.5	1.1	59.4	13.4	10.5	2.9	9.4	6.6	2.3	
Q2	37.9	29.3	-7.4	36.7	8.5	0.6	7.9	32.7	-10.3	2.3	
Q3	55.7	37.8	-10.8	48.6	17.9	8.3	9.6	34.3	1.0	2.3	
Q4	-12.0	-19.7	-27.7	8.0	7.7	3.3	4.3	41.6	12.1	2.3	
2000 Q1	60.7	58.9	10.0	48.9	1.8	0.5	1.3	19.6	-2.2	1.9	
Q2	37.2	23.1	-1.0	24.1	14.1	10.2	3.9	27.8	0.0	1.9	
Q3	48.8	25.5	-2.7	28.2	23.3	7.2	16.1	68.1	-0.4	1.9	
Q4	-0.5	-17.9	-27.0	9.1	17.4	5.2	12.2	53.9	6.4	1.8	
<i>Euro area enlargement</i>											
2001 Q1	74.2	37.5	32.3	5.2	36.6	11.0	25.6	51.4	1.1	2.2	
Q2	83.8	58.7	10.7	48.0	25.1	11.0	14.1	44.3	0.4	2.2	
Q3	47.6	29.6	8.7	20.8	18.0	14.1	3.9	9.6	0.2	2.2	
Q4	9.0	-8.0	-22.2	14.2	17.0	-1.9	18.8	6.8	10.1	-0.5	
2002 Q1	103.0	93.2	21.8	71.4	9.8	6.8	3.0	9.4	9.3	2.4	
Q2	59.0	62.4	33.9	28.5	-3.3	-15.8	12.4	5.3	1.3	2.4	
Q3	.	.	.	.	.	.	.	.	.	.	

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, 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**
**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	367.6	1,092.6	-751.6	26.5	0.1	1,538.7	0.7	489.7	222.7	422.3	164.6	201.1	37.4
1996	340.4	1,122.0	-783.6	1.7	0.4	1,727.1	-3.0	395.1	397.7	383.8	312.5	193.6	47.4
1997	352.5	1,138.5	-796.8	10.8	0.1	1,913.8	-0.2	393.2	332.4	449.7	483.5	222.0	33.1
1998	412.4	1,202.5	-823.0	32.6	0.2	2,375.5	11.0	430.2	361.6	519.7	813.4	210.3	29.4
1999	450.6	1,292.4	-861.6	19.8	0.1	3,039.6	1.3	554.3	435.2	879.9	897.8	253.5	17.6
2000	489.0	1,388.2	-912.1	29.4	-16.4	2,781.0	1.3	351.4	248.5	807.5	1,116.5	254.5	1.4
<i>Euro area enlargement</i>													
2001	459.2	1,433.4	-969.6	-5.1	0.5	2,481.4	-0.5	587.3	451.8	699.0	550.1	241.9	-48.1

	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	412.2	1,158.7	-751.6	5.0	1,494.2	486.7	277.7	384.2	140.0	205.5
1996	410.2	1,189.1	-783.6	4.6	1,657.3	472.2	378.0	335.1	275.8	196.3
1997	455.9	1,241.2	-796.8	11.5	1,810.5	510.3	319.1	378.0	373.2	229.9
1998	486.8	1,298.8	-823.0	11.1	2,301.0	646.0	322.5	481.2	632.0	219.4
1999	500.0	1,351.5	-861.6	10.1	2,990.3	926.6	493.9	755.8	551.2	262.7
2000	516.3	1,420.0	-912.1	8.4	2,753.7	534.6	410.5	833.5	721.7	253.3
<i>Euro area enlargement</i>										
2001	487.4	1,449.2	-969.6	7.9	2,453.2	675.8	474.1	570.5	489.0	243.7

**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	156.0	570.1	-438.3	254.0	33.4	10.1	39.9	64.6	270.1	530.7	139.9	-87.3	126.0	90.5
1996	137.4	589.9	-454.4	262.2	54.4	-13.9	55.1	86.0	124.3	536.3	275.4	6.8	143.8	117.1
1997	158.7	615.9	-468.9	240.1	24.4	-13.3	46.3	94.8	111.4	544.2	287.5	12.1	154.5	111.4
1998	203.7	661.4	-487.4	429.0	55.0	-8.7	96.7	200.0	149.4	590.6	483.4	25.8	252.6	196.3
1999	222.2	708.6	-508.2	602.6	28.3	58.6	169.9	303.8	110.4	570.6	714.4	47.5	422.0	230.2
2000	322.2	776.5	-541.6	812.1	69.6	62.3	168.0	420.6	97.4	593.2	1,036.9	56.5	551.7	424.5
<i>Euro area enlargement</i>														
2001	219.5	798.9	-575.7	538.5	83.1	45.0	138.0	183.7	71.2	596.6	686.8	96.7	316.8	266.5

**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	160.3	350.6	-192.6	395.9	185.2	82.1	1.2	178.7	419.2	606.5	136.9	135.8	3,604.8	16.8
1996	158.2	360.6	-203.8	436.2	145.6	24.5	93.6	189.0	433.1	621.0	161.3	160.1	3,764.5	16.5
1997	153.9	351.7	-199.1	426.4	69.1	-17.8	194.3	215.8	411.8	590.9	168.5	167.1	3,791.9	15.6
1998	161.9	361.3	-203.2	446.9	95.5	-117.3	288.8	205.1	396.1	568.2	212.7	211.4	3,900.2	14.6
1999	174.2	392.2	-215.9	478.5	115.3	8.0	196.4	241.0	384.4	556.1	268.2	266.7	4,063.4	13.7
2000	177.6	409.2	-225.5	416.0	53.0	82.5	132.1	247.8	371.5	556.0	222.1	220.4	4,230.1	13.1
<i>Euro area enlargement</i>														
2001	174.5	416.3	-241.4	399.0	179.3	97.2	67.6	228.3	404.4	601.0	169.1	167.3	4,520.9	13.3

*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					Indirect taxes		Social contributions		Sales	Capital revenue	Capital taxes	Memo: fiscal burden <sup>2)</sup>
	1	2	Direct taxes	Households	Corporations	6	Received by EU institutions	8	Employers	Employees		12	13	
1992	47.4	46.7	11.9	9.8	2.0	13.0	0.9	17.1	8.7	5.4	2.4	0.7	0.6	42.6
1993	48.0	47.6	12.1	10.0	2.0	13.2	0.8	17.5	8.7	5.5	2.5	0.5	0.3	43.1
1994	47.6	47.1	11.6	9.6	2.0	13.5	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	2.6	13.5	0.7	17.6	8.8	5.5	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	4.9	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	4.9	2.5	0.6	0.3	43.8
2000	47.9	47.4	13.0	10.2	2.7	14.2	0.6	16.2	8.4	4.9	2.4	0.5	0.3	43.7
<i>Euro area enlargement</i>														
2001	47.3	46.8	12.7	10.0	2.6	13.9	0.6	16.0	8.4	4.8	2.3	0.6	0.3	42.9

### 2. Euro area – expenditure

	Total	Current expenditure							Capital expenditure	Investment	Capital transfers	Paid by EU institutions	Memo: primary expenditure <sup>4)</sup>	
	1	Total	Compensation of employees	Intermediate consumption	Interest	Current transfers	Social payments <sup>3)</sup>	Subsidies	Paid by EU institutions	10	11	12		13
1992	52.3	47.6	11.4	5.0	5.7	25.6	21.9	2.4	0.5	4.7	3.2	1.5	0.0	46.7
1993	53.8	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	22.9	2.4	0.6	4.3	2.9	1.5	0.0	47.1
1995	52.2	47.7	11.2	4.8	5.7	26.1	22.8	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	23.2	2.2	0.6	4.0	2.6	1.4	0.0	46.6
1997	50.9	47.2	11.0	4.8	5.1	26.3	23.1	2.1	0.6	3.7	2.4	1.3	0.1	45.8
1998	50.0	46.1	10.7	4.6	4.7	26.0	22.6	2.1	0.5	3.9	2.4	1.5	0.1	45.2
1999	49.5	45.4	10.7	4.7	4.2	25.8	22.6	2.0	0.5	4.1	2.5	1.6	0.1	45.3
2000	48.8	44.8	10.5	4.7	4.0	25.5	22.2	1.9	0.5	4.0	2.5	1.5	0.0	44.8
<i>Euro area enlargement</i>														
2001	48.8	44.5	10.5	4.8	3.9	25.3	22.2	1.9	0.5	4.3	2.6	1.7	0.0	44.9

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

	Deficit (-) / surplus (+)					Primary deficit (-) / surplus (+)	Government consumption <sup>5)</sup>							Government individual consumption
	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	
1992	-4.9	-4.3	-0.3	-0.2	0.0	0.8	20.8	11.4	5.0	5.0	1.8	-2.4	8.8	12.0
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	8.9	12.3
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	8.6	12.2
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	8.5	12.1
1996	-4.3	-3.6	-0.4	-0.1	-0.2	1.4	20.6	11.2	4.8	5.2	1.8	-2.5	8.5	12.1
1997	-2.7	-2.3	-0.4	0.1	0.0	2.5	20.4	11.0	4.8	5.1	1.8	-2.5	8.4	12.0
1998	-2.3	-2.2	-0.2	0.1	0.1	2.5	20.0	10.7	4.6	5.1	1.7	-2.5	8.1	11.9
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	8.1	11.9
2000	-0.9	-1.3	-0.2	0.1	0.4	3.1	20.0	10.5	4.7	5.1	1.7	-2.4	8.1	11.8
<i>Euro area enlargement</i>														
2001	-1.5	-1.6	-0.4	0.1	0.3	2.4	20.0	10.5	4.8	5.1	1.7	-2.3	8.1	11.8

### 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>
1998	-0.7	-2.2	-2.5	-2.7	-2.7	2.4	-2.8	3.1	-0.8	-2.4	-2.6	1.3
1999	-0.5	-1.5	-1.9	-1.1	-1.6	2.2	-1.8	3.6	0.7	-2.3	-2.4	1.9
2000	0.1	1.1	-1.8	-0.6	-1.3	4.4	-0.5	5.6	2.2	-1.5	-2.9	7.0
2001	0.4	-2.8	-1.2	-0.1	-1.4	1.5	-2.2	6.1	0.1	0.2	-4.1	4.9

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 0.2). Data before 1995 are partially estimated. 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	
1992	61.0	2.6	16.2	10.1	32.0	50.3	26.4	7.6	16.3	10.7
1993	67.3	2.7	17.0	10.0	37.6	52.5	27.6	8.7	16.2	14.8
1994	70.0	2.9	16.1	10.3	40.6	55.8	29.8	9.9	16.0	14.2
1995	74.2	2.9	17.7	9.9	43.8	58.3	30.5	11.0	16.9	15.9
1996	75.5	2.9	17.2	9.9	45.5	58.9	30.3	13.2	15.5	16.5
1997	74.9	2.8	16.3	8.9	46.8	56.9	29.0	14.4	13.4	17.9
1998	73.1	2.8	15.1	7.9	47.3	53.3	27.0	16.2	10.2	19.8
1999	71.9	2.9	14.1	6.9	48.0	49.7	25.3	14.8	9.6	22.3
2000	69.4	2.7	13.0	6.2	47.5	45.9	22.8	13.3	9.8	23.6
<i>Euro area enlargement</i>										
2001	69.2	2.6	12.6	6.3	47.7	44.9	22.2	12.2	10.4	24.4

**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
1992	61.0	49.8	4.7	6.1	0.4	12.3	48.7	6.4	17.8	21.1	22.1	59.7	2.2	1.3
1993	67.3	55.3	5.2	6.3	0.6	12.0	55.3	6.7	18.5	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	16.6	26.7	26.7	68.1	3.0	1.9
1995	74.2	61.7	5.7	6.0	0.8	10.6	63.6	6.9	17.6	26.4	30.2	72.3	2.9	1.9
1996	75.5	63.0	6.1	5.9	0.5	10.2	65.2	6.3	19.3	25.4	30.8	73.5	2.7	1.9
1997	74.9	62.4	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	73.1	61.1	6.3	5.4	0.4	7.7	65.5	5.5	16.4	26.1	30.7	71.4	3.2	1.7
1999	71.9	60.0	6.2	5.3	0.3	6.3	65.6	5.1	14.5	26.8	30.6	70.0	-	1.9
2000	69.4	57.9	6.1	5.1	0.3	5.5	63.9	4.5	14.4	27.4	27.6	67.6	-	1.8
<i>Euro area enlargement</i>														
2001	69.2	57.7	6.2	5.0	0.3	5.8	63.4	3.2	.	.	.	67.5	-	1.7

**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
1998	119.2	60.9	105.8	64.6	59.5	55.2	116.3	6.3	66.8	63.9	55.0	48.8
1999	114.9	61.2	105.1	63.1	58.5	49.7	114.5	6.0	63.1	64.9	54.4	46.8
2000	109.2	60.2	106.2	60.5	57.3	39.1	110.5	5.6	55.8	63.6	53.3	44.0
2001	107.6	59.5	107.0	57.1	57.3	36.4	109.8	5.6	52.8	63.2	55.5	43.4

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>	MFIs	Other financial corporations	Other creditors <sup>7)</sup>
	1	2	3	4	5	6	7	8	9	10	11	12	13
1992	6.7	5.6	0.4	0.7	0.1	0.1	1.1	1.0	4.5	4.8	3.1	0.6	1.9
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	0.3	-0.1	1.8	2.0
1998	1.6	1.9	-0.2	0.0	0.0	0.1	-0.4	-0.6	2.6	-1.0	-0.8	2.4	2.7
1999	1.6	1.3	0.3	0.0	0.0	0.2	-0.4	-0.7	2.5	-1.6	-0.7	-0.7	3.2
2000	0.8	0.8	0.1	-0.1	0.0	0.0	-0.5	-0.3	1.7	-1.5	-1.3	-0.9	2.4
<i>Euro area enlargement</i>													
2001	1.7	1.7	0.0	0.1	0.0	0.0	-0.1	0.4	1.3	0.4	-0.1	-0.3	1.3

**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
1992	6.7	-4.9	1.8	0.7	0.1	0.1	0.3	0.2	-0.1	0.2	0.4	0.3	0.7	0.0
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	-5.0	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	-0.1	-0.1	0.0	0.0	-0.1	-0.3	0.2	-0.2	-0.2	0.1	-0.2
1997	2.3	-2.7	-0.4	-0.5	0.2	-0.1	-0.1	-0.5	-0.8	0.3	0.2	0.2	-0.2	0.2
1998	1.6	-2.3	-0.6	-0.5	0.2	0.0	0.0	-0.7	-0.8	0.3	-0.2	0.0	0.0	0.1
1999	1.6	-1.3	0.3	-0.2	0.3	0.1	0.1	-0.7	-0.9	0.2	0.3	0.2	0.0	0.2
2000	0.8	0.2	1.0	1.0	0.7	0.2	0.2	-0.2	-0.4	0.2	0.1	0.0	-0.1	0.0
<i>Euro area enlargement</i>														
2001	1.7	-1.5	0.3	-0.3	-0.5	0.1	0.1	0.0	-0.3	0.2	0.0	0.0	0.1	0.5

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**

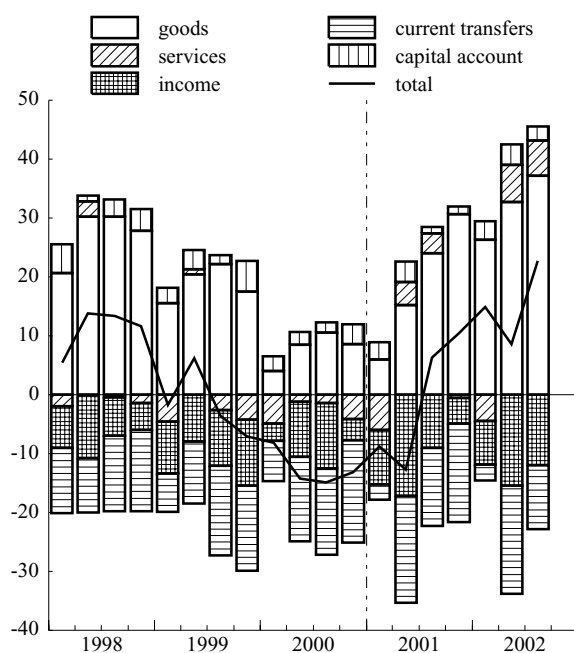
**Summary balance of payments <sup>1) 2)</sup>**

(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	62.1	116.4	3.1	-15.2	-42.2	13.0	.	-44.5	-24.3	.	.	.	.
1998	31.9	109.0	-1.1	-28.8	-47.2	12.4	-68.4	-81.3	-110.0	-8.2	123.0	8.2	24.1
1999	-19.0	75.7	-10.7	-37.3	-46.7	12.8	11.7	-120.1	-43.0	3.8	160.8	10.1	-5.4
2000	-60.4	31.6	-11.5	-27.0	-53.4	9.8	70.0	-12.3	-115.2	-2.2	182.0	17.6	-19.4
<i>Euro area enlargement</i>													
2001	-13.8	75.8	0.9	-39.7	-50.8	8.9	-40.5	-101.5	38.1	-3.7	8.8	17.8	45.4
2001 Q3	5.2	24.0	3.5	-9.0	-13.3	1.1	-53.1	-24.3	52.7	-10.4	-73.5	2.5	46.8
Q4	9.1	30.7	-0.5	-4.4	-16.7	1.4	-32.1	16.5	5.3	-6.9	-50.3	3.3	21.6
2002 Q1	11.7	26.3	-4.5	-7.4	-2.7	3.1	-26.5	-15.0	-51.8	1.6	41.8	-3.1	11.6
Q2	5.2	32.7	6.3	-15.4	-18.5	3.5	-22.3	-4.4	67.1	-2.8	-89.0	6.7	13.7
Q3	20.3	37.2	6.1	-12.0	-10.9	2.4	-43.2	-5.3	34.5	-8.0	-59.9	-4.5	20.5
2001 Aug.	5.3	7.4	1.0	0.0	-3.1	0.6	-6.1	-5.9	3.7	-3.5	-4.5	4.1	0.3
Sep.	0.7	6.0	0.4	-1.1	-4.6	0.1	-21.3	-15.6	47.2	-0.6	-50.7	-1.6	20.5
Oct.	4.1	11.4	0.5	-2.4	-5.4	0.4	-22.0	4.0	1.4	-2.9	-21.8	-2.7	17.5
Nov.	2.7	8.8	-0.9	-0.1	-5.2	0.2	-6.8	11.7	19.9	-2.8	-35.7	0.1	3.9
Dec.	2.3	10.4	-0.1	-1.9	-6.1	0.7	-3.2	0.8	-16.0	-1.1	7.2	5.9	0.2
2002 Jan.	-0.1	3.1	-2.4	-6.4	5.6	2.6	-49.5	0.0	-41.5	3.0	-5.8	-5.3	47.1
Feb.	4.4	10.0	-1.7	0.0	-3.9	0.2	6.7	-8.9	-12.9	1.7	24.4	2.5	-11.4
Mar.	7.4	13.2	-0.4	-0.9	-4.5	0.3	16.3	-6.1	2.6	-3.2	23.2	-0.2	-24.1
Apr.	-4.6	8.4	0.6	-7.7	-5.8	1.3	16.8	8.0	17.8	1.5	-18.9	8.4	-13.6
May	2.4	10.7	2.8	-6.0	-5.2	1.0	2.1	3.7	32.2	-2.3	-33.3	1.8	-5.5
June	7.3	13.6	2.9	-1.7	-7.5	1.1	-41.3	-16.1	17.1	-1.9	-36.8	-3.4	32.8
July	2.6	14.2	0.9	-9.3	-3.2	0.5	-11.2	-3.6	14.2	-7.0	-12.3	-2.5	8.1
Aug.	9.7	11.7	1.3	-0.1	-3.2	0.7	-11.8	1.7	4.5	-1.9	-17.8	1.8	1.4
Sep.	8.0	11.3	3.9	-2.6	-4.5	1.2	-20.3	-3.4	15.8	0.9	-29.8	-3.8	11.1
Oct.	3.7	11.7	1.4	-3.1	-6.3	1.5	-21.5	-5.0	19.4	0.0	-38.0	2.1	16.3

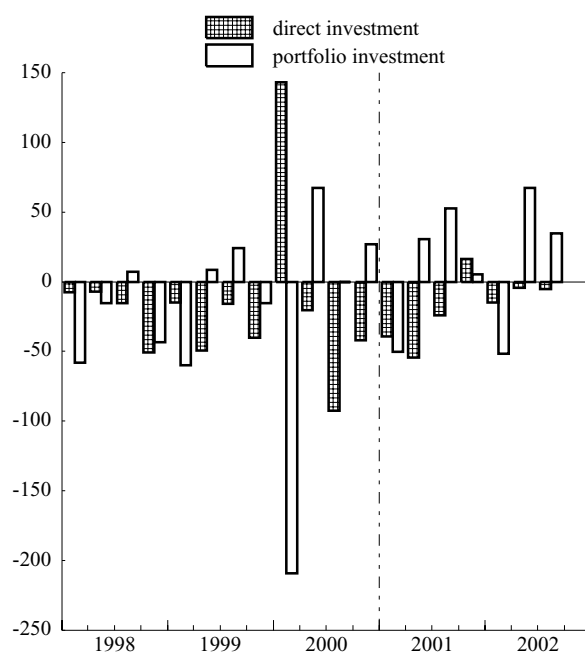
**Current and capital accounts**

(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 <sub>12</sub>	Debit <sub>13</sub>
	Credit <sub>1</sub>	Debit <sub>2</sub>	Net <sub>3</sub>	Credit <sub>4</sub>	Debit <sub>5</sub>	Credit <sub>6</sub>	Debit <sub>7</sub>	Credit <sub>8</sub>	Debit <sub>9</sub>	Credit <sub>10</sub>	Debit <sub>11</sub>		
1997	1,218.5	1,156.3	62.1	754.6	638.3	214.2	211.0	189.5	204.7	60.1	102.3	18.9	5.9
1998	1,277.7	1,245.8	31.9	784.4	675.4	231.9	233.0	198.5	227.3	63.0	110.1	17.7	5.3
1999	1,337.5	1,356.5	-19.0	818.3	742.5	247.4	258.1	207.0	244.3	64.8	111.5	19.1	6.3
2000	1,612.4	1,672.8	-60.4	989.8	958.2	287.0	298.5	267.9	295.0	67.6	121.0	18.3	8.5
<i>Euro area enlargement</i>													
2001	1,712.2	1,726.0	-13.8	1,033.0	957.1	321.6	320.6	282.0	321.7	75.7	126.5	17.0	8.1
2001 Q3	420.5	415.3	5.2	252.7	228.7	86.7	83.2	65.9	74.9	15.2	28.4	2.7	1.7
2001 Q4	432.6	423.5	9.1	264.6	233.9	81.4	81.9	70.2	74.6	16.3	33.0	4.4	3.0
2002 Q1	415.2	403.5	11.7	254.3	228.0	71.6	76.1	58.3	65.7	31.0	33.8	4.6	1.5
2002 Q2	429.7	424.6	5.2	267.6	234.9	83.8	77.5	62.9	78.3	15.4	33.8	4.9	1.5
2002 Q3	421.0	400.6	20.3	262.2	225.1	87.5	81.4	54.6	66.6	16.6	27.5	4.0	1.7
2001 Aug.	135.0	129.7	5.3	80.9	73.5	29.2	28.2	20.3	20.4	4.5	7.7	1.1	0.5
2001 Sep.	134.1	133.3	0.7	81.1	75.1	26.2	25.8	21.3	22.4	5.4	10.0	0.6	0.5
2001 Oct.	148.8	144.7	4.1	94.5	83.1	28.0	27.5	21.4	23.8	4.8	10.3	1.1	0.7
2001 Nov.	138.3	135.7	2.7	89.1	80.3	24.7	25.6	19.4	19.4	5.2	10.4	0.9	0.6
2001 Dec.	145.4	143.1	2.3	81.0	70.5	28.8	28.9	29.4	31.3	6.3	12.4	2.4	1.7
2002 Jan.	141.5	141.6	-0.1	79.5	76.4	24.0	26.4	20.4	26.8	17.5	11.9	3.0	0.5
2002 Feb.	132.3	127.9	4.4	83.2	73.2	22.7	24.4	19.2	19.2	7.2	11.0	0.8	0.6
2002 Mar.	141.5	134.0	7.4	91.5	78.3	24.9	25.3	18.7	19.6	6.3	10.8	0.8	0.5
2002 Apr.	141.2	145.7	-4.6	88.5	80.2	27.1	26.5	20.2	27.9	5.4	11.2	1.9	0.6
2002 May	143.4	141.1	2.4	89.0	78.3	28.3	25.4	20.7	26.7	5.4	10.6	1.4	0.4
2002 June	145.1	137.8	7.3	90.1	76.4	28.5	25.6	22.0	23.7	4.5	12.0	1.6	0.5
2002 July	148.6	146.0	2.6	93.0	78.8	29.7	28.8	20.1	29.4	5.8	9.0	1.1	0.6
2002 Aug.	132.8	123.1	9.7	80.8	69.1	28.4	27.1	18.1	18.2	5.5	8.7	1.3	0.7
2002 Sep.	139.5	131.5	8.0	88.4	77.1	29.4	25.5	16.4	19.0	5.3	9.9	1.6	0.4
2002 Oct.	150.2	146.5	3.7	97.6	85.9	28.7	27.3	18.7	21.8	5.1	11.4	2.1	0.6

**2. Main current account items (seasonally adjusted)**

	Current account										
	Total			Goods		Services		Income		Current transfers	
	Credit <sub>1</sub>	Debit <sub>2</sub>	Net <sub>3</sub>	Credit <sub>4</sub>	Debit <sub>5</sub>	Credit <sub>6</sub>	Debit <sub>7</sub>	Credit <sub>8</sub>	Debit <sub>9</sub>	Credit <sub>10</sub>	Debit <sub>11</sub>
2000 Q3	410.5	426.4	-16.0	252.9	245.0	71.6	74.2	70.2	79.0	15.8	28.2
2000 Q4	431.7	449.5	-17.8	264.8	259.8	75.5	80.9	73.8	76.8	17.5	32.1
<i>Euro area enlargement</i>											
2001 Q1	431.4	439.4	-8.0	261.1	246.2	78.4	79.5	73.0	84.2	18.9	29.5
2001 Q2	429.8	440.3	-10.4	260.7	243.5	80.8	80.4	69.8	82.6	18.5	33.8
2001 Q3	428.3	426.2	2.1	258.0	237.8	81.1	80.6	70.0	77.0	19.2	30.8
2001 Q4	422.5	418.4	4.1	253.7	229.4	80.7	79.8	68.8	76.6	19.3	32.6
2002 Q1	424.1	410.3	13.9	264.2	229.5	80.3	79.6	60.1	69.3	19.5	31.8
2002 Q2	426.1	414.8	11.3	266.0	231.5	81.7	79.1	59.1	70.4	19.3	33.9
2002 Q3	426.0	407.3	18.7	265.6	230.9	81.6	78.4	57.9	67.7	21.0	30.3
2001 Aug.	144.0	140.3	3.7	87.5	79.0	27.1	27.0	23.2	25.7	6.1	8.6
2001 Sep.	139.9	139.5	0.4	84.2	78.1	26.6	26.4	22.3	24.6	6.8	10.5
2001 Oct.	141.5	140.6	0.9	85.3	77.0	26.7	26.2	22.7	26.5	6.7	10.8
2001 Nov.	138.6	137.0	1.7	84.4	76.6	26.2	26.5	21.6	23.1	6.4	10.8
2001 Dec.	142.4	140.9	1.6	84.0	75.8	27.8	27.1	24.5	27.0	6.2	11.0
2002 Jan.	142.3	136.1	6.2	86.7	75.5	27.0	26.8	21.7	25.0	6.9	8.9
2002 Feb.	141.5	138.0	3.5	88.2	76.7	26.5	26.7	20.7	23.3	6.1	11.3
2002 Mar.	140.3	136.1	4.2	89.3	77.4	26.8	26.1	17.7	21.0	6.5	11.6
2002 Apr.	141.6	140.7	0.9	87.8	77.0	27.4	26.9	20.1	25.4	6.4	11.4
2002 May	141.5	136.2	5.4	88.4	75.8	27.0	25.9	19.6	23.3	6.5	11.2
2002 June	142.9	138.0	5.0	89.8	78.6	27.3	26.4	19.4	21.6	6.4	11.4
2002 July	139.4	136.7	2.7	86.8	76.6	25.5	26.3	20.2	24.0	6.9	9.9
2002 Aug.	144.2	136.2	8.0	89.4	76.7	27.0	26.6	20.5	22.8	7.4	10.0
2002 Sep.	142.5	134.5	8.0	89.5	77.6	29.1	25.5	17.1	20.9	6.7	10.4
2002 Oct.	142.3	142.2	0.0	88.0	79.7	27.3	26.1	19.8	24.4	7.1	12.1

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	207.0	244.3	12.7	5.0	194.4	239.4	42.7	51.2	63.9	102.3	87.8	85.8
2000	267.9	295.0	13.2	5.4	254.8	289.5	60.1	64.3	76.4	107.5	118.3	117.7
<i>Euro area enlargement</i>												
2001	282.0	321.7	14.2	6.4	267.8	315.3	68.8	67.4	81.9	117.7	117.1	130.2
2001 Q2	74.7	91.9	3.6	1.8	71.2	90.1	19.4	16.5	21.5	40.7	30.3	32.9
Q3	65.9	74.9	3.5	1.8	62.4	73.1	15.0	15.0	19.9	27.4	27.5	30.7
Q4	70.2	74.6	3.7	1.5	66.6	73.1	19.0	20.8	21.9	22.3	25.7	30.0
2002 Q1	58.3	65.7	3.5	1.2	54.8	64.5	11.6	12.7	20.1	26.6	23.0	25.2
Q2	62.9	78.3	3.6	1.6	59.4	76.8	17.0	15.5	22.6	38.9	19.8	22.3

	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	4.5	9.5	34.0	54.4	68.4
2000	49.2	56.6	10.9	7.7	14.2	30.6	62.1	76.9
<i>Euro area enlargement</i>								
2001	58.7	58.7	10.2	8.7	17.3	43.8	64.5	73.9
2001 Q2	16.9	14.0	2.5	2.5	5.6	22.6	15.8	18.1
Q3	12.9	13.2	2.1	1.8	3.8	8.6	16.1	18.8
Q4	15.9	18.9	3.1	1.9	4.8	6.3	17.1	16.0
2002 Q1	9.5	11.4	2.1	1.3	4.5	8.4	15.7	18.2
Q2	15.1	14.4	1.9	1.2	6.3	23.5	16.3	15.4

*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	-93.1	.	.	.	.	.	.	48.6	.	.	.	.	.	.
1998	-172.8	.	.	.	.	.	.	91.5	.	.	.	.	.	.
1999	-320.5	-239.2	-25.0	-214.2	-81.3	-0.6	-80.7	200.4	146.6	3.5	143.0	53.8	0.2	53.6
2000	-436.3	-344.8	-35.8	-309.0	-91.5	-0.3	-91.2	424.0	298.1	12.2	285.9	125.9	0.1	125.8
<i>Euro area enlargement</i>														
2001	-255.8	-164.1	-13.2	-150.9	-91.7	-0.7	-91.0	154.3	103.1	5.3	97.8	51.2	0.7	50.5
2001 Q3	-55.6	-36.2	-1.0	-35.2	-19.5	-0.3	-19.1	31.3	24.7	-0.7	25.4	6.6	0.1	6.6
Q4	-28.2	-26.9	-3.1	-23.7	-1.3	-0.1	-1.3	44.7	16.6	8.4	8.2	28.1	0.1	28.0
2002 Q1	-56.0	-42.2	-2.2	-40.0	-13.8	0.0	-13.8	41.0	26.1	1.1	24.9	15.0	0.0	15.0
Q2	-41.2	-27.3	-6.4	-20.9	-13.9	-0.3	-13.6	36.8	22.4	2.6	19.8	14.4	0.1	14.4
Q3	-23.0	-28.2	-5.4	-22.8	5.2	-0.1	5.3	17.7	10.8	-0.7	11.5	6.9	0.8	6.1
2001 Aug.	-18.6	-14.9	-1.1	-13.9	-3.6	-0.1	-3.5	12.7	7.0	-0.8	7.8	5.7	0.0	5.6
Sep.	-20.4	-5.5	0.3	-5.8	-14.9	-0.2	-14.7	4.8	6.9	-0.1	7.0	-2.1	0.1	-2.2
Oct.	7.3	-8.2	-0.6	-7.6	15.5	0.0	15.6	-3.3	-9.6	0.2	-9.8	6.2	0.1	6.2
Nov.	-17.8	-7.8	0.3	-8.1	-9.9	0.0	-9.9	29.5	14.2	1.9	12.3	15.3	0.0	15.2
Dec.	-17.8	-10.8	-2.8	-8.0	-6.9	0.0	-6.9	18.6	12.0	6.3	5.7	6.6	0.0	6.6
2002 Jan.	-8.5	-9.4	-0.5	-8.9	1.0	0.0	0.9	8.5	3.0	0.2	2.8	5.5	0.1	5.5
Feb.	-20.1	-5.0	-0.3	-4.7	-15.1	0.0	-15.1	11.2	3.3	1.1	2.2	7.8	0.0	7.8
Mar.	-27.5	-27.8	-1.4	-26.3	0.3	-0.1	0.4	21.4	19.7	-0.2	19.9	1.6	0.0	1.7
Apr.	-8.4	-4.2	-4.2	0.0	-4.2	0.0	-4.1	16.4	9.1	2.0	7.2	7.2	0.0	7.3
May	-16.6	-9.3	-1.1	-8.2	-7.2	0.0	-7.2	20.3	10.2	0.7	9.5	10.1	0.0	10.2
June	-16.3	-13.8	-1.1	-12.7	-2.5	-0.3	-2.2	0.1	3.0	0.0	3.1	-2.9	0.1	-3.1
July	-9.3	-12.2	-3.4	-8.8	2.9	0.0	2.9	5.7	2.2	0.8	1.4	3.5	0.1	3.4
Aug.	-0.2	-5.7	-0.4	-5.3	5.5	-0.1	5.5	1.9	2.1	-0.9	3.0	-0.3	0.8	-1.1
Sep.	-13.5	-10.4	-1.6	-8.8	-3.1	0.0	-3.1	10.1	6.4	-0.6	7.1	3.7	0.0	3.7
Oct.	-11.4	-6.4	-0.8	-5.7	-5.0	0.0	-4.9	6.4	5.4	0.1	5.3	1.0	-0.3	1.3

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
1998	-363.3	253.3	-116.2	104.0	-247.1	-238.9	-8.2	149.3	121.6	27.7
1999	-311.3	268.3	-156.5	92.3	-154.8	-155.0	0.1	176.0	117.0	59.0
2000	-411.3	296.1	-287.9	50.8	-123.4	-114.6	-8.8	245.4	232.2	13.2
<i>Euro area enlargement</i>										
2001	-288.0	326.1	-108.6	231.1	-179.4	-158.7	-20.7	95.0	90.4	4.5
2001 Q3	-26.3	79.1	-1.1	52.0	-25.2	-15.6	-9.6	27.1	34.5	-7.4
Q4	-87.0	92.3	-24.8	60.5	-62.2	-51.3	-10.9	31.8	28.6	3.1
2002 Q1	-73.0	21.2	-33.6	30.4	-39.4	-20.8	-18.6	-9.2	1.0	-10.2
Q2	-49.5	116.6	-12.9	34.2	-36.5	-22.9	-13.6	82.4	55.2	27.2
Q3	-17.6	52.1	9.6	1.6	-27.2	-15.5	-11.7	50.5	29.9	20.6
2001 Aug.	-22.9	26.7	-4.7	12.6	-18.3	-16.0	-2.3	14.1	21.2	-7.2
Sep.	14.8	32.4	13.9	24.2	1.0	8.9	-8.0	8.2	10.8	-2.6
Oct.	-32.7	34.1	-8.0	23.1	-24.7	-17.8	-6.9	11.0	9.1	2.0
Nov.	-40.8	60.7	-10.2	24.8	-30.6	-17.1	-13.6	35.9	37.8	-1.9
Dec.	-13.5	-2.5	-6.6	12.6	-6.8	-16.4	9.5	-15.1	-18.2	3.1
2002 Jan.	-26.9	-14.6	-14.9	12.9	-12.0	-2.4	-9.6	-27.5	-15.5	-12.0
Feb.	-17.8	4.9	-8.8	8.0	-8.9	-5.4	-3.6	-3.1	0.0	-3.0
Mar.	-28.3	30.9	-9.8	9.5	-18.5	-13.0	-5.4	21.4	16.5	4.9
Apr.	-11.0	28.8	-1.9	6.4	-9.1	-9.3	0.2	22.4	12.9	9.5
May	-29.3	61.5	-5.6	28.9	-23.6	-14.2	-9.5	32.5	17.4	15.1
June	-9.2	26.3	-5.4	-1.2	-3.8	0.6	-4.4	27.5	24.9	2.6
July	-15.9	30.1	-7.2	3.0	-8.7	-3.0	-5.7	27.1	17.8	9.3
Aug.	-3.4	7.9	4.0	-0.7	-7.5	-9.2	1.7	8.6	1.1	7.6
Sep.	1.8	14.0	12.8	-0.7	-10.9	-3.3	-7.6	14.7	11.0	3.7
Oct.	-2.4	21.8	0.6	-4.2	-3.0	-6.7	3.7	26.0	12.1	13.9

## 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	-139.7	-1.7	-138.0	0.9	-8.1	7.3	-0.1	7.5
2000	-0.1	-4.3	-283.5	-2.6	-280.9	-1.9	-46.3	-66.4	-1.5	-64.9	2.2	-15.5	4.5	-1.0	5.5
<i>Euro area enlargement</i>															
2001	-0.4	3.8	-112.0	-2.0	-110.0	1.9	-71.7	-88.9	-1.2	-87.7	-2.3	-34.3	16.0	-0.1	16.1
2001 Q3	-0.1	3.5	-4.6	-0.4	-4.1	1.0	5.6	-22.2	-0.1	-22.0	0.1	-13.9	4.3	-0.5	4.8
Q4	-0.1	4.7	-29.4	-0.5	-28.9	-0.7	-38.1	-12.4	-0.3	-12.2	-0.3	-3.8	-6.8	1.9	-8.8
2002 Q1	0.0	-4.9	-28.7	-1.4	-27.3	0.4	-4.5	-16.7	-0.5	-16.2	0.8	-13.6	-5.8	-1.2	-4.6
Q2	-0.1	-3.6	-9.3	-2.0	-7.3	2.4	-2.1	-23.2	0.2	-23.5	-0.1	-2.4	-11.1	-0.1	-11.0
Q3	0.0	2.6	7.0	.	.	-0.8	-3.5	-11.2	.	.	0.8	-12.1	-0.4	.	.
2002 May	0.0	-4.5	-1.2	.	.	1.0	-6.2	-9.0	.	.	-1.0	-2.4	-6.1	.	.
June	0.0	-0.5	-4.8	.	.	-0.7	2.4	-1.2	.	.	0.4	1.1	-5.9	.	.
July	0.0	0.2	-7.3	.	.	0.5	3.5	-7.0	.	.	0.5	-6.2	0.0	.	.
Aug.	0.1	2.3	1.6	.	.	-0.8	-4.8	-3.6	.	.	-0.1	0.2	1.6	.	.
Sep.	-0.1	0.1	12.7	.	.	-0.5	-2.2	-0.6	.	.	0.4	-6.1	-2.0	.	.
Oct.	-0.2	-0.6	1.5	.	.	-0.5	3.2	-9.5	.	.	0.4	2.8	0.6	.	.

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	-81.9	204.9	-0.7	3.5	-1.0	-6.1	-22.6	192.4	-37.6	40.4	15.0	152.0	-57.6	15.2
1999	-31.9	192.7	-2.0	6.6	3.3	-13.0	16.3	161.2	-47.2	53.8	63.5	107.4	-49.4	37.8
2000	-178.9	361.0	-1.1	0.9	-2.2	0.9	-130.3	289.4	-50.0	53.0	-80.4	236.3	-45.3	69.8
<i>Euro area enlargement</i>														
2001	-240.9	249.6	0.6	4.4	2.9	-1.1	-227.2	234.1	-44.4	20.1	-182.9	214.0	-17.2	12.2
2001 Q3	-57.0	-16.5	1.0	-1.0	-1.0	0.1	-55.0	-27.2	-8.7	12.0	-46.3	-39.2	-2.0	11.6
2001 Q4	-61.3	11.0	-0.4	3.7	1.9	4.2	-45.9	4.7	-17.6	-8.7	-28.3	13.4	-16.9	-1.7
2002 Q1	19.1	22.8	-0.4	1.2	-0.7	-8.4	18.4	25.8	-2.1	10.2	20.4	15.6	1.8	4.1
2002 Q2	-80.8	-8.2	-0.6	-3.5	-0.1	3.7	-63.0	-10.6	-7.5	21.8	-55.5	-32.3	-17.2	2.2
2002 Q3	-58.8	-1.1	0.3	-0.1	0.5	-3.1	-38.2	16.0	-6.8	8.7	-31.5	7.3	-21.3	-13.8
2001 Aug.	-30.3	25.8	0.1	-2.4	1.4	-2.6	-31.3	26.6	-4.9	3.8	-26.4	22.8	-0.5	4.2
2001 Sep.	-71.7	21.0	0.1	1.9	-0.4	1.7	-67.7	13.3	-1.7	6.3	-66.0	7.0	-3.8	4.2
2001 Oct.	-35.4	13.5	-0.5	4.5	-0.6	2.1	-23.2	6.6	-3.7	1.9	-19.5	4.7	-11.1	0.3
2001 Nov.	-61.4	25.7	0.0	2.0	2.5	2.5	-53.3	22.4	-9.6	-13.3	-43.6	35.7	-10.6	-1.2
2001 Dec.	35.5	-28.3	0.1	-2.8	0.1	-0.4	30.5	-24.3	-4.3	2.7	34.8	-27.0	4.8	-0.8
2002 Jan.	1.3	-7.0	-0.7	2.6	-1.4	-8.8	14.3	0.5	-1.5	5.5	15.9	-5.0	-10.9	-1.3
2002 Feb.	26.2	-1.8	-0.1	-3.8	1.0	-1.6	5.3	12.3	-6.6	1.2	11.9	11.1	20.1	-8.8
2002 Mar.	-8.5	31.6	0.4	2.4	-0.2	2.1	-1.3	13.0	6.0	3.5	-7.3	9.5	-7.3	14.2
2002 Apr.	-43.5	24.6	-0.4	-4.3	1.7	5.6	-30.1	23.4	-4.2	8.2	-25.9	15.2	-14.6	-0.1
2002 May	-66.3	33.0	-0.1	-0.5	-1.0	-0.4	-56.6	35.3	-5.2	8.7	-51.4	26.6	-8.6	-1.5
2002 June	28.9	-65.8	-0.1	1.3	-0.7	-1.6	23.7	-69.2	1.9	4.9	21.8	-74.1	6.0	3.8
2002 July	-3.5	-8.7	0.4	2.7	-0.4	-1.2	11.1	-3.8	4.6	5.4	6.5	-9.2	-14.6	-6.4
2002 Aug.	12.2	-30.0	0.1	-5.0	0.5	-2.3	12.9	-16.9	-3.2	2.8	16.2	-19.7	-1.3	-5.8
2002 Sep.	-67.5	37.6	-0.2	2.1	0.3	0.4	-62.3	36.7	-8.2	0.5	-54.1	36.2	-5.3	-1.6
2002 Oct.	-69.6	31.6	-0.1	-0.3	-0.4	1.4	-53.9	22.0	-4.4	7.4	-49.5	14.6	-15.2	8.5

**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	-1.2	6.7	5.5	-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
2001 Q2	-0.8	4.3	3.5	0.0	0.0	0.0
2001 Q3	1.0	-1.0	0.0	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
2002 Q2	-0.6	-3.5	-4.1	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	0.8	-0.5	-0.9	0.1	-0.8
<i>Euro area enlargement</i>									
2001	-0.1	0.0	-0.1	4.4	-1.1	3.3	-1.4	0.1	-1.3
2001 Q2	0.0	0.0	0.0	0.7	2.8	3.5	-0.4	0.1	-0.3
Q3	0.0	0.0	0.0	-0.7	0.2	-0.6	-0.3	0.0	-0.3
Q4	0.0	0.0	0.0	2.1	4.1	6.2	-0.1	0.1	-0.1
2002 Q1	0.0	0.0	0.0	-0.4	-8.1	-8.5	-0.3	-0.3	-0.6
Q2	1.4	0.0	1.4	-1.2	3.5	2.3	-0.3	0.2	-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	284.0	157.8	-4.1	5.3	1.3
<i>Euro area enlargement</i>						
2001	-213.3	224.3	10.9	-13.9	9.8	-4.1
2001 Q2	13.3	-10.6	2.7	-3.6	2.8	-0.8
Q3	-53.9	-29.1	-82.9	-1.1	1.8	0.7
Q4	-41.2	3.4	-37.8	-4.7	1.3	-3.4
2002 Q1	23.9	19.8	43.7	-5.5	6.0	0.5
Q2	-62.1	-9.3	-71.4	-0.9	-1.3	-2.2

## 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	2.8	-23.0	11.3	-11.7
2000	-14.5	10.4	-4.1	-25.2	64.4	39.2	-5.7	-5.0	-10.7
<i>Euro area enlargement</i>									
2001	-0.6	0.7	0.1	-16.2	10.9	-5.3	-0.3	0.6	0.3
2001 Q2	-2.0	0.5	-1.4	-0.1	7.1	7.1	2.5	-1.0	1.5
Q3	0.8	-0.9	-0.1	-0.9	11.1	10.2	-1.9	1.4	-0.5
Q4	2.6	-1.2	1.3	-19.4	-1.0	-20.4	-0.1	0.6	0.5
2002 Q1	-0.6	-0.5	-1.1	3.9	3.4	7.3	-1.5	1.2	-0.3
Q2	-5.0	-0.7	-5.7	-12.1	2.0	-10.1	-0.1	0.9	0.8

## 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
2001 Q2	2.5	-0.1	-0.6	-0.7	4.0	0.2	-1.8	0.0	5.5	0.0	0.0	0.0
Q3	2.5	0.2	0.1	-4.5	6.7	-0.9	3.1	0.0	4.9	-0.4	0.0	0.0
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

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	102.6	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

	Eurosystem						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 Eurosystem)						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 Eurosystem 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>Eurosystem <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 Aug.	373.0	127.3	400.278	5.0	26.4	214.2	10.0	34.2	169.7	-	-	-	0.4	0.0	17.4	
Sep.	380.9	131.4	400.278	4.9	26.3	218.3	13.1	36.5	168.4	-	-	-	0.4	0.0	18.5	
Oct.	375.5	128.5	400.114	4.9	25.9	216.1	10.4	40.9	164.4	-	-	-	0.5	0.0	20.8	
Nov.	374.5	128.5	399.951	5.0	25.4	215.6	10.0	39.0	166.4	-	-	-	0.2	0.0	19.9	
<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 Aug.	45.9	7.8	24.656	0.2	0.0	37.9	1.4	6.8	29.7	-	-	-	0.0	0.0	2.8	
Sep.	46.5	8.1	24.656	0.2	0.0	38.2	1.1	7.9	29.2	-	-	-	0.0	0.0	2.7	
Oct.	45.8	7.9	24.656	0.2	0.0	37.7	1.1	9.4	27.2	-	-	-	0.0	0.0	3.0	
Nov.	45.1	7.9	24.656	0.2	0.0	37.0	1.4	9.4	26.2	-	-	-	0.0	0.0	3.3	

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 Eurosystem 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 Eurosystem'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 (ECU billions to end-1998); 2000=100 for columns 12 and 13)													
1998	797.1	369.9	179.9	214.0	697.8	711.4	393.5	123.0	175.9	540.3	41.6	79.2	71.1
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	1,060.0	491.3	235.7	286.7	930.3	1,010.6	574.8	178.3	225.8	737.7	107.4	106.2	98.9
2001 Q3	258.2	119.1	56.5	71.5	226.7	239.4	135.9	39.3	56.7	173.1	28.0	106.4	98.4
2001 Q4	272.3	122.1	63.2	74.9	238.6	247.2	136.7	45.0	57.1	181.5	23.1	104.6	94.0
2002 Q1	258.3	118.7	53.9	72.7	225.8	239.3	134.5	39.6	55.7	175.7	22.7	107.4	94.2
2002 Q2	272.1	126.6	57.7	74.6	237.7	247.8	141.2	40.5	56.9	180.1	25.7	107.6	95.5
2002 Q3	265.3	119.6	55.3	75.3	231.5	232.4	128.9	37.5	55.7	169.0	.	107.9	94.3
2002 May	91.1	42.9	19.3	24.4	79.4	82.3	47.0	13.6	18.6	59.7	8.8	109.5	95.9
2002 June	90.6	41.8	19.4	24.8	79.5	79.7	45.4	12.5	18.8	58.3	8.1	105.8	94.0
2002 July	94.5	42.5	19.4	27.0	82.6	80.6	44.5	12.5	19.6	58.6	8.5	105.1	93.3
2002 Aug.	81.1	36.6	17.5	22.5	70.7	71.1	39.1	11.4	17.4	51.4	8.3	109.5	94.9
2002 Sep.	89.7	40.5	18.4	25.8	78.2	80.7	45.3	13.5	18.7	58.9	.	109.2	94.8
2002 Oct.	98.0	44.1	20.4	28.5	85.5	89.3	50.3	14.0	21.0	64.3	.	106.4	96.0
Volumes (annual percentage changes; 2000=100 for columns 12 and 13)													
1998	3.6	4.2	6.0	3.8	4.0	11.4	8.2	21.8	7.7	13.4	-4.5	87.1	89.0
1999	2.2	2.8	-0.8	3.3	1.4	6.1	3.5	12.9	7.7	7.1	6.0	88.8	94.4
2000	12.4	12.5	12.7	12.7	13.6	5.9	6.8	11.7	4.5	8.9	4.7	100.0	100.0
<i>Euro area enlargement</i>													
2001	4.9	1.7	8.5	7.6	5.7	-1.2	-1.0	-3.9	-0.2	-1.7	-1.3	103.8	100.1
2001 Q3	2.6	-2.2	6.5	8.7	3.5	-4.0	-4.4	-9.7	0.3	-4.9	-2.9	103.4	98.3
2001 Q4	-0.6	-3.9	0.9	2.9	-0.6	-5.8	-5.0	-13.0	-2.0	-8.1	-0.3	102.3	98.6
2002 Q1	-2.3	-4.0	-7.1	1.8	-3.0	-6.3	-6.4	-17.9	-1.1	-8.9	.	103.7	96.5
2002 Q2	2.4	2.1	-1.7	4.5	2.2	-1.7	-2.0	-9.5	2.3	-2.9	.	105.8	99.0
2002 Q3	.	.	.	.	.	.	.	.	.	.	.	.	.
2002 May	-0.6	0.5	-1.8	-0.9	-0.4	-4.9	-5.2	-10.2	-0.7	-6.0	.	105.5	98.3
2002 June	-0.3	-0.9	-3.7	0.6	-0.6	-3.7	-3.1	-13.7	0.3	-4.7	.	103.6	96.0
2002 July	3.9	1.4	-2.8	7.2	3.0	0.4	-2.3	-4.0	3.5	0.1	.	108.7	100.0
2002 Aug.	0.8	-0.6	-3.2	4.0	0.6	-3.0	-5.5	1.3	-2.9	-2.4	.	108.1	98.3
2002 Sep.	.	.	.	.	.	.	.	.	.	.	.	.	.
2002 Oct.	.	.	.	.	.	.	.	.	.	.	.	.	.
Unit values (annual percentage changes; 2000=100 for columns 12 and 13)													
1998	0.9	-0.7	0.8	2.0	1.5	-5.4	-6.5	-3.6	1.2	-1.1	-30.4	90.5	79.4
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	82.1
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	0.2	2.0	1.0	0.2	-1.3	1.6	2.8	1.6	-11.5	101.0	100.2
2001 Q3	0.9	1.1	-0.1	1.4	1.0	-0.8	-2.6	1.0	2.5	1.0	-12.7	101.1	100.6
2001 Q4	-1.6	-3.1	-0.3	0.3	-1.0	-7.5	-11.5	-2.7	-0.9	-2.6	-34.0	101.0	97.6
2002 Q1	0.9	-0.5	1.4	2.9	0.9	-3.3	-5.4	-0.6	1.1	-0.7	.	101.3	97.7
2002 Q2	-0.7	-1.5	-0.5	0.5	-0.7	-3.1	-4.1	-1.8	-1.2	-1.8	.	100.8	98.3
2002 Q3	.	.	.	.	.	.	.	.	.	.	.	.	.
2002 May	-0.2	-1.5	0.9	1.3	-0.2	-2.8	-3.8	-2.0	-0.8	-1.8	.	101.0	98.3
2002 June	-1.9	-2.6	-0.9	-0.9	-1.7	-5.2	-7.0	-2.8	-2.4	-2.9	.	100.2	97.0
2002 July	-2.4	-3.2	-1.5	-1.7	-2.5	-5.4	-5.9	-5.3	-3.8	-3.9	.	99.1	96.8
2002 Aug.	-1.6	-2.1	-2.4	-0.1	-1.4	-4.0	-3.6	-4.5	-3.3	-3.6	.	99.3	96.7
2002 Sep.	.	.	.	.	.	.	.	.	.	.	.	.	.
2002 Oct.	.	.	.	.	.	.	.	.	.	.	.	.	.

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 (ECU billions to end-1998); not seasonally adjusted, unless otherwise indicated)

	Total 1	Total (s.a.) 2	United Kingdom 3	Sweden 4	Denmark 5	Candidate 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.)													
1998	797.1	-	150.5	31.6	20.6	101.5	51.1	120.3	23.9	114.9	49.7	42.4	90.5
1999	832.8	-	161.4	33.1	21.1	102.9	56.1	135.1	26.8	119.2	48.4	39.1	89.6
2000	1,013.7	-	189.7	38.8	23.2	131.0	63.4	171.4	34.2	151.6	56.1	46.7	107.8
<i>Euro area enlargement</i>													
2001	1,060.0	-	201.0	36.9	24.3	137.1	66.3	180.0	34.5	165.3	60.3	49.8	104.4
2001 Q3	258.2	266.3	49.6	8.3	5.9	32.9	16.1	43.9	8.2	40.4	14.5	12.1	26.2
Q4	272.3	261.3	50.4	9.6	6.3	36.0	16.2	44.9	8.8	43.3	15.9	12.6	28.4
2002 Q1	258.3	268.5	51.6	9.2	6.0	33.9	15.9	44.6	7.9	39.4	14.0	10.2	25.6
Q2	272.1	269.3	50.5	9.3	6.2	38.4	16.2	45.7	7.8	42.9	15.6	11.3	28.1
Q3	265.3	270.3	48.1	8.3	5.9	36.4	15.6	44.0	8.2	42.7	14.8	10.5	.
2002 May	91.1	91.3	17.0	2.9	2.0	13.1	5.1	15.6	2.6	14.3	5.4	3.7	9.4
June	90.6	88.4	16.4	3.0	2.2	12.9	5.6	14.8	2.6	14.5	5.1	3.9	9.6
July	94.5	88.0	17.7	2.5	2.0	13.0	5.4	15.7	2.9	15.3	5.3	4.0	10.8
Aug.	81.1	91.4	14.8	2.7	1.8	10.8	4.7	14.0	2.5	13.3	4.8	3.3	.
Sep.	89.7	90.9	15.6	3.0	2.1	12.6	5.4	14.3	2.8	14.2	4.6	3.2	.
Oct.	98.0	.	.	.	.	.	.	.	.	.	.	.	.
% change versus previous year													
2002 Oct.	0.1	-	.	.	.	.	.	.	.	.	.	.	.
Imports (c.i.f.)													
1998	711.4	-	122.6	30.9	17.4	71.6	40.9	104.8	48.5	132.0	45.8	29.3	67.6
1999	781.2	-	131.0	33.2	18.6	80.4	43.2	113.2	53.9	151.8	49.0	30.4	76.5
2000	1,008.4	-	156.6	38.0	21.8	101.2	49.8	140.7	65.5	211.6	72.2	39.7	111.5
<i>Euro area enlargement</i>													
2001	1,010.6	-	153.5	34.3	21.3	117.3	52.9	138.0	58.7	207.8	74.0	40.9	112.0
2001 Q3	239.4	252.0	35.7	7.8	5.1	28.4	12.1	31.1	13.1	50.9	18.1	10.2	26.9
Q4	247.2	240.7	38.8	8.7	5.7	30.0	13.9	32.7	13.5	50.4	16.9	9.4	27.1
2002 Q1	239.3	241.0	35.8	8.2	5.1	29.3	12.7	32.9	12.8	49.2	17.8	9.3	26.1
Q2	247.8	244.4	36.8	8.9	5.2	31.3	13.6	32.9	13.5	48.7	17.1	10.6	29.2
Q3	232.4	240.1	31.6	7.8	5.1	30.2	12.4	27.9	12.3	50.9	16.1	9.8	.
2002 May	82.3	81.7	12.5	2.8	1.7	10.1	4.4	10.8	4.4	16.6	5.9	3.4	9.5
June	79.7	80.0	11.7	3.0	1.7	10.6	4.4	10.2	4.3	15.6	5.2	3.5	9.5
July	80.6	79.1	11.5	2.5	1.7	10.9	4.4	9.8	4.3	17.1	5.7	3.6	9.2
Aug.	71.1	80.9	9.8	2.3	1.7	8.9	3.6	9.3	3.7	16.0	4.6	3.0	.
Sep.	80.7	80.1	10.3	2.9	1.7	10.5	4.4	8.8	4.2	17.8	5.8	3.3	.
Oct.	89.3	.	.	.	.	.	.	.	.	.	.	.	.
% change versus previous year													
2002 Oct.	1.7	-	.	.	.	.	.	.	.	.	.	.	.
Balance													
1998	85.7	-	28.0	0.7	3.2	29.9	10.2	15.5	-24.6	-17.1	3.9	13.1	22.9
1999	51.6	-	30.4	-0.1	2.6	22.5	12.9	21.9	-27.1	-32.6	-0.6	8.7	13.1
2000	5.3	-	33.1	0.8	1.4	29.8	13.6	30.7	-31.3	-60.0	-16.1	7.0	-3.7
<i>Euro area enlargement</i>													
2001	49.3	-	47.5	2.6	3.0	19.8	13.4	42.0	-24.2	-42.5	-13.7	8.9	-7.6
2001 Q3	18.7	14.3	13.9	0.5	0.8	4.5	4.0	12.8	-4.8	-10.5	-3.6	1.9	-0.7
Q4	25.1	20.6	11.6	0.9	0.5	5.9	2.3	12.3	-4.7	-7.1	-1.1	3.1	1.3
2002 Q1	19.0	27.4	15.7	1.0	0.9	4.6	3.2	11.7	-4.9	-9.8	-3.8	1.0	-0.5
Q2	24.2	24.9	13.7	0.4	1.0	7.1	2.7	12.9	-5.7	-5.8	-1.5	0.7	-1.1
Q3	32.9	30.3	16.6	0.4	0.8	6.2	3.2	16.1	-4.0	-8.2	-1.4	0.7	.
2002 May	8.8	9.6	4.5	0.1	0.3	2.9	0.7	4.8	-1.9	-2.2	-0.5	0.3	-0.2
June	10.9	8.3	4.7	0.0	0.4	2.3	1.2	4.6	-1.7	-1.1	-0.1	0.4	0.1
July	13.9	8.9	6.2	0.0	0.3	2.1	1.0	5.9	-1.4	-1.9	-0.4	0.4	1.6
Aug.	10.0	10.5	5.0	0.4	0.1	2.0	1.2	4.6	-1.2	-2.7	0.2	0.3	.
Sep.	9.0	10.9	5.4	0.1	0.4	2.2	1.0	5.5	-1.4	-3.6	-1.2	0.0	.
Oct.	8.7	.	.	.	.	.	.	.	.	.	.	.	.

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	99.4	100.5	90.4	96.6	1.134	137.1	1.644	0.692
1998	101.5	101.3	101.6	99.8	96.6	99.1	1.121	146.4	1.622	0.676
1999	95.7	95.7	95.7	96.2	96.6	95.8	1.066	121.3	1.600	0.659
2000	85.7	86.5	87.1	86.9	88.2	86.3	0.924	99.5	1.558	0.609
<i>Euro area enlargement</i>										
2001	87.3	88.9	89.3	88.1	91.0	88.1	0.896	108.7	1.511	0.622
2002	90.0	92.8	92.8	90.6	95.6	92.0	0.946	118.1	1.467	0.629
2001 Q1	88.6	89.8	90.6	89.4	91.4	88.7	0.923	109.1	1.533	0.633
Q2	86.0	87.7	87.9	87.1	89.5	86.8	0.873	106.9	1.528	0.614
Q3	87.0	88.7	88.9	87.5	91.2	88.0	0.890	108.3	1.507	0.619
Q4	87.5	89.6	89.9	88.5	92.0	88.7	0.896	110.5	1.473	0.621
2002 Q1	87.1	89.7	89.9	87.9	91.3	88.1	0.877	116.1	1.473	0.615
Q2	88.8	91.7	91.6	90.3	93.9	90.5	0.919	116.5	1.465	0.629
Q3	91.3	94.3	94.4	93.5	97.9	94.1	0.984	117.2	1.464	0.635
Q4	92.5	95.6	95.3	-	99.4	95.1	0.999	122.4	1.467	0.636
2001 Jan.	89.2	90.2	90.9	-	91.7	89.0	0.938	109.6	1.529	0.635
Feb.	88.3	89.4	90.3	-	91.0	88.3	0.922	107.1	1.536	0.634
Mar.	88.4	89.8	90.5	-	91.4	88.9	0.910	110.3	1.535	0.629
Apr.	87.6	89.1	89.6	-	91.0	88.4	0.892	110.4	1.529	0.622
May	85.9	87.6	87.7	-	89.3	86.7	0.874	106.5	1.533	0.613
June	84.7	86.3	86.4	-	88.1	85.3	0.853	104.3	1.522	0.609
July	85.4	87.1	87.2	-	89.1	86.2	0.861	107.2	1.514	0.609
Aug.	87.7	89.3	89.6	-	91.8	88.6	0.900	109.3	1.514	0.627
Sep.	88.0	89.7	90.0	-	92.6	89.3	0.911	108.2	1.491	0.623
Oct.	88.0	90.0	90.1	-	92.8	89.5	0.906	109.9	1.479	0.624
Nov.	86.8	88.8	89.2	-	91.3	88.0	0.888	108.7	1.466	0.618
Dec.	87.7	89.9	90.3	-	91.9	88.6	0.892	113.4	1.475	0.620
2002 Jan.	87.6	90.3	90.5	-	91.6	88.4	0.883	117.1	1.475	0.617
Feb.	86.8	89.3	89.6	-	91.1	87.8	0.870	116.2	1.477	0.612
Mar.	86.8	89.6	89.6	-	91.2	88.2	0.876	114.7	1.468	0.616
Apr.	87.2	90.1	90.0	-	91.7	88.5	0.886	115.8	1.466	0.614
May	88.6	91.5	91.4	-	93.7	90.4	0.917	115.9	1.457	0.628
June	90.6	93.5	93.4	-	96.4	92.8	0.955	117.8	1.472	0.644
July	91.7	94.7	94.7	-	98.2	94.4	0.992	117.1	1.462	0.639
Aug.	91.1	94.0	94.1	-	97.7	93.8	0.978	116.3	1.464	0.636
Sep.	91.2	94.2	94.4	-	98.0	94.1	0.981	118.4	1.465	0.631
Oct.	91.7	94.8	94.5	-	98.5	94.6	0.981	121.6	1.465	0.630
Nov.	92.5	95.5	95.3	-	99.3	95.0	1.001	121.7	1.467	0.637
Dec.	93.6	96.6	96.1	-	100.4	95.9	1.018	124.2	1.468	0.642
% ch. vs. <sup>4)</sup> prev. month										
2002 Dec.	1.1	1.2	0.9	-	1.1	1.0	1.7	2.1	0.0	0.8
% ch. vs. <sup>4)</sup> prev. year										
2002 Dec.	6.7	7.4	6.4	-	9.3	8.3	14.1	9.5	-0.5	3.6

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
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.
0.2	0.0	-0.3	0.9	1.3	1.7	1.5	1.1	% ch. vs. <sup>4)</sup> prev. month 2002 Dec.
-3.6	-0.2	-8.7	12.8	4.2	14.1	7.0	9.0	% ch. vs. <sup>4)</sup> prev. year 2002 Dec.

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 1	General government deficit (-)/ surplus (+) as a % of GDP 2	General government gross debt as a % of GDP 3	Long-term government bond yield <sup>1)</sup> as a % per annum 4	Exchange rate <sup>2)</sup> as national currency per ECU or euro 5	Current and new capital account as a % of GDP 6	Unit labour costs <sup>3)</sup> 7	Real GDP 8	Industrial production index <sup>4)</sup> 9	Standard- ised unemploy- ment rate as a % of labour force (s.a.) 10	Broad money <sup>5)</sup> 11	3-month interest rate <sup>1)</sup> as a % per annum 12
Denmark												
1999	2.1	3.1	52.7	4.91	7.44	1.8	2.2	2.6	1.8	4.8	-0.2	3.44
2000	2.7	2.5	46.8	5.64	7.45	1.4	1.5	2.8	6.2	4.4	1.1	5.00
2001	2.3	2.8	44.7	5.08	7.45	3.0	3.7	1.4	1.7	4.3	5.7	4.70
2002	2.4	.	.	5.06	7.43	.	.	.	.	.	.	3.54
2001 Q3	2.3	-	-	5.18	7.44	4.1	4.0	1.7	2.0	4.3	8.0	4.73
Q4	2.0	-	-	4.83	7.44	0.6	3.7	1.0	-1.3	4.3	9.6	3.77
2002 Q1	2.5	-	-	5.21	7.43	2.5	2.9	1.2	-3.2	4.3	2.3	3.63
Q2	2.1	-	-	5.36	7.43	2.4	0.2	3.0	3.9	4.4	2.8	3.71
Q3	2.4	-	-	4.92	7.43	3.4	1.7	1.1	-1.2	4.6	2.6	3.57
Q4	2.7	-	-	4.74	7.43	.	.	.	.	.	.	3.27
2002 July	2.2	-	-	5.13	7.43	-	-	-	-2.0	4.5	3.9	3.68
Aug.	2.4	-	-	4.88	7.43	-	-	-	-2.0	4.5	1.7	3.58
Sep.	2.5	-	-	4.74	7.43	-	-	-	0.3	4.7	2.2	3.45
Oct.	2.7	-	-	4.81	7.43	-	-	-	3.0	4.7	3.1	3.44
Nov.	2.8	-	-	4.79	7.43	-	-	-	-0.8	4.7	4.7	3.31
Dec.	2.6	-	-	4.61	7.43	-	-	-	.	.	.	3.07
Sweden												
1999	0.6	1.5	65.0	4.98	8.81	2.6	-1.2	4.6	2.2	6.7	6.8	3.32
2000	1.3	3.7	55.3	5.37	8.45	3.3	5.0	4.4	6.3	5.6	6.2	4.07
2001	2.7	4.8	56.6	5.11	9.26	3.1	6.1	0.8	-0.3	4.9	3.4	4.11
2002	.	.	.	5.31	9.16	-	.	.	.	.	.	4.24
2001 Q3	3.1	-	-	5.28	9.41	3.9	7.2	-0.4	-1.9	4.7	3.9	4.34
Q4	3.0	-	-	5.12	9.48	3.6	5.9	0.5	-2.3	4.9	6.2	3.85
2002 Q1	2.9	-	-	5.42	9.16	4.9	4.8	0.5	-1.1	5.0	7.0	4.00
Q2	1.9	-	-	5.64	9.16	4.2	0.9	2.8	0.5	4.9	5.3	4.43
Q3	1.5	-	-	5.16	9.23	2.5	1.3	2.3	-0.9	4.8	5.8	4.41
Q4	.	-	-	5.00	9.09	.	.	.	.	.	.	4.09
2002 July	1.8	-	-	5.37	9.27	-	-	-	2.2	4.8	6.1	4.45
Aug.	1.7	-	-	5.14	9.25	-	-	-	-2.4	4.7	6.7	4.41
Sep.	1.2	-	-	4.97	9.17	-	-	-	-1.8	4.9	4.8	4.38
Oct.	1.7	-	-	5.07	9.11	-	-	-	-2.8	4.9	.	4.30
Nov.	1.4	-	-	5.05	9.08	-	-	-	.	5.0	.	4.12
Dec.	.	-	-	4.89	9.10	-	-	-	.	.	.	3.85
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	39.1	5.01	0.622	-2.0	4.2	2.0	-2.1	5.0	8.0	5.04
2002	.	.	.	4.91	0.629	.	.	.	.	.	.	4.06
2001 Q3	1.5	1.2	38.7	5.13	0.619	-1.5	4.0	1.8	-2.7	5.0	7.8	5.00
Q4	1.0	-2.1	38.7	4.82	0.621	-2.5	3.8	1.6	-5.6	5.1	7.7	4.16
2002 Q1	1.5	2.4	37.8	5.13	0.615	-1.0	3.4	1.1	-5.7	5.1	6.1	4.08
Q2	0.9	-3.3	38.2	5.28	0.629	-2.2	3.0	1.5	-4.3	5.1	5.8	4.17
Q3	1.1	-1.0	37.9	4.71	0.635	.	.	2.1	-2.3	5.2	5.6	4.01
Q4	.	.	.	4.52	0.636	.	.	.	.	.	.	3.98
2002 July	1.1	4.8	37.8	5.02	0.639	-	-	-	-1.6	5.2	5.7	4.06
Aug.	1.0	-2.4	37.2	4.67	0.636	-	-	-	-3.5	5.2	5.7	3.99
Sep.	1.0	-5.3	37.9	4.45	0.631	-	-	-	-1.8	5.2	5.5	3.99
Oct.	1.4	1.4	37.8	4.53	0.630	-	-	-	-0.2	.	5.4	3.96
Nov.	1.6	-8.2	37.8	4.55	0.637	-	-	-	-1.2	.	5.8	3.97
Dec.	.	.	.	4.49	0.642	-	-	-	.	.	.	4.02

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**

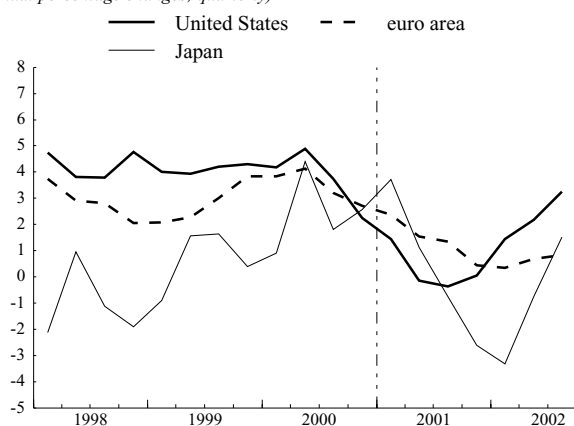
### Economic and financial developments

(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 ECU or 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	4.9	4.2	7.6	5.42	5.64	1.066	0.7	50.4
2000	3.4	3.2	3.8	5.0	4.0	6.1	6.53	6.03	0.924	1.4	45.2
2001	2.8	0.6	0.3	-4.1	4.8	8.7	3.78	5.01	0.896	-0.5	44.8
2002	.	.	.	.	5.8	.	1.80	4.60	0.946	.	.
2001 Q3	2.7	0.1	-0.4	-5.3	4.8	9.4	3.46	4.98	0.890	-1.7	44.1
Q4	1.9	0.9	0.1	-6.1	5.6	10.3	2.15	4.74	0.896	-1.0	44.8
2002 Q1	1.3	-1.3	1.4	-4.0	5.6	9.1	1.90	5.06	0.877	-3.0	45.2
Q2	1.3	-2.2	2.2	-1.6	5.9	7.5	1.92	5.08	0.919	-3.2	45.4
Q3	1.6	-2.0	3.3	0.4	5.7	7.3	1.81	4.25	0.984	-3.2	46.0
Q4	.	.	.	.	5.9	.	1.55	3.99	0.999	.	.
2002 July	1.5	-	-	-0.2	5.9	7.8	1.85	4.62	0.992	-	-
Aug.	1.8	-	-	0.4	5.7	7.9	1.78	4.24	0.978	-	-
Sep.	1.5	-	-	0.9	5.6	6.1	1.80	3.88	0.981	-	-
Oct.	2.0	-	-	1.0	5.7	7.1	1.78	3.91	0.981	-	-
Nov.	2.2	-	-	1.5	6.0	7.2	1.46	4.04	1.001	-	-
Dec.	.	-	-	.	6.0	.	1.41	4.03	1.018	-	-
Japan											
1999	-0.3	-2.4	0.7	0.8	4.7	3.7	0.22	1.75	121.3	-7.2	118.2
2000	-0.7	-6.3	2.4	5.9	4.7	2.1	0.28	1.76	99.5	-7.4	126.1
2001	-0.7	5.8	0.3	-7.8	5.0	2.8	0.15	1.34	108.7	-6.1	134.6
2002	.	.	.	.	.	3.3	0.08	1.27	118.1	.	.
2001 Q3	-0.8	9.2	-0.7	-10.8	5.1	3.1	0.07	1.36	108.3	.	.
Q4	-1.0	11.1	-2.6	-13.5	5.4	3.2	0.08	1.35	110.5	.	.
2002 Q1	-1.4	6.6	-3.3	-10.9	5.3	3.6	0.10	1.46	116.1	.	.
Q2	-0.9	-1.7	-0.7	-3.6	5.3	3.5	0.08	1.37	116.5	.	.
Q3	-0.8	-7.6	1.5	3.7	5.4	3.3	0.07	1.24	117.2	.	.
Q4	.	.	.	.	.	2.9	0.07	1.01	122.4	.	.
2002 July	-0.8	-8.1	-	3.8	5.4	3.3	0.07	1.30	117.1	-	-
Aug.	-0.9	-6.1	-	1.9	5.5	3.4	0.07	1.26	116.3	-	-
Sep.	-0.7	-8.6	-	5.3	5.4	3.2	0.07	1.16	118.4	-	-
Oct.	-0.9	-8.8	-	5.4	5.5	3.3	0.07	1.09	121.6	-	-
Nov.	-0.4	.	-	4.5	.	3.2	0.07	0.99	121.7	-	-
Dec.	.	.	-	.	.	2.2	0.06	0.97	124.2	-	-

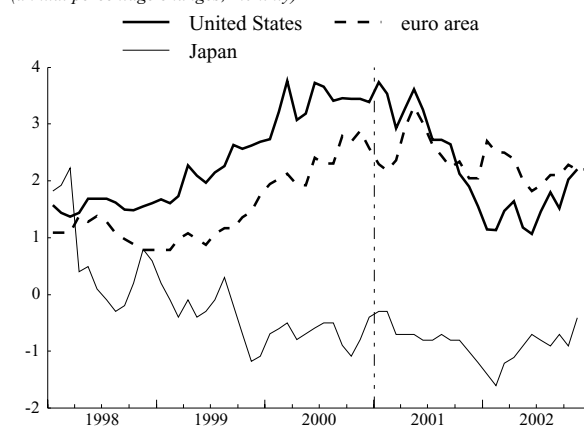
#### Real gross domestic product

(annual percentage changes; quarterly)



#### Consumer price indices

(annual percentage changes; monthly)



Sources: National data (columns 1, 2 (United States), 3, 4, 5, 6, 8 (to December 1998), 9 and 10); OECD (column 2 (Japan)); Eurostat (euro area chart data); Reuters (column 7 and 8 (from January 1999)); 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) Japan: the 1998 deficit includes a large debt assumption; 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)

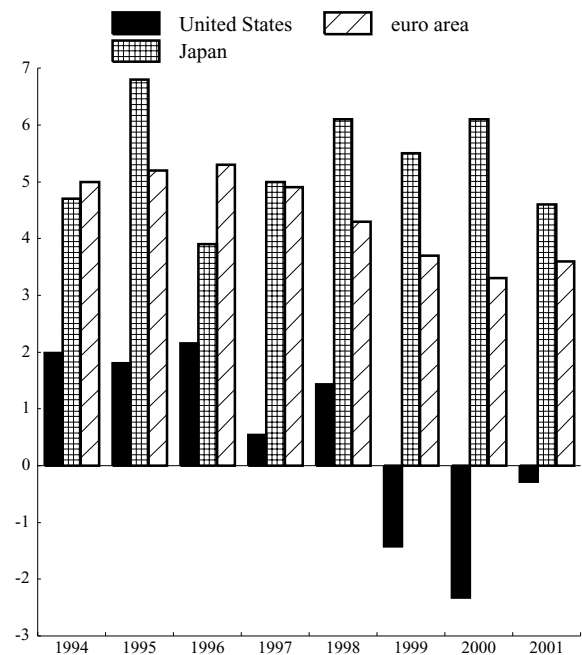
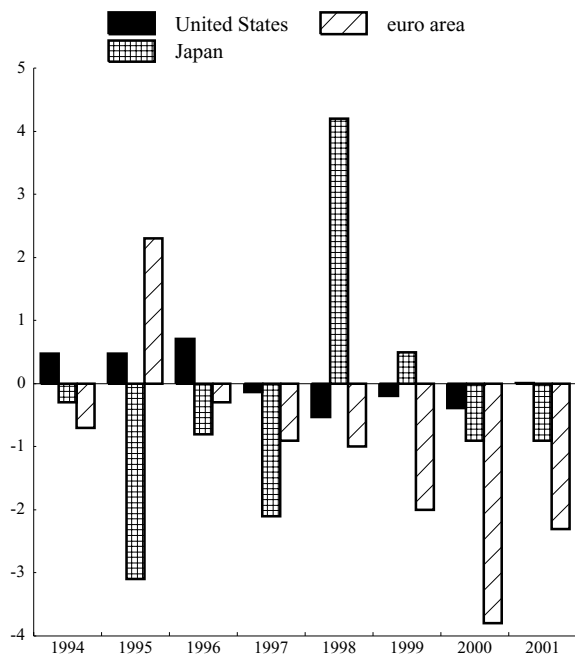
	National saving and investment			Investment and financing of non-financial corporations						Investment and financing of households <sup>1)</sup>			
	Gross saving	Gross capital formation	Net lending to the rest of the world	Gross capital formation	Gross fixed capital formation	Net acquisition of financial 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													
1998	18.8	20.7	-2.3	9.4	8.6	6.5	8.2	7.0	1.4	12.3	6.9	12.8	5.5
1999	18.4	20.9	-3.0	9.5	8.9	10.5	8.2	10.6	2.7	12.4	4.8	11.2	6.2
2000	18.4	21.1	-4.0	9.7	9.1	7.7	7.5	8.1	2.4	12.5	3.3	11.5	5.7
2001	16.5	19.1	-3.7	7.9	8.5	2.9	7.7	2.8	1.8	13.0	5.4	11.6	5.7
2000 Q4	17.8	20.9	-4.3	9.5	9.0	5.2	7.3	5.5	0.1	12.3	0.1	11.4	3.8
2001 Q1	16.9	20.0	-4.1	8.6	8.9	3.3	7.1	4.4	2.1	12.9	4.5	11.4	3.5
Q2	16.6	19.3	-3.8	8.1	8.6	1.9	7.4	2.3	2.4	12.9	6.3	11.2	6.5
Q3	16.5	18.8	-3.5	7.7	8.3	3.3	7.8	2.9	0.6	12.9	9.0	12.8	9.1
Q4	15.9	18.2	-3.6	7.1	8.0	2.9	8.5	1.9	2.1	13.4	2.0	10.9	3.8
2002 Q1	15.6	18.6	-4.1	7.5	7.8	2.2	7.9	2.3	0.0	12.8	6.7	12.3	6.7
Q2	15.5	18.7	-4.8	7.7	7.6	2.0	7.7	2.4	1.1	12.7	7.0	12.7	5.8
Q3	15.0	18.5	-4.7	7.7	7.6	0.8	7.5	1.3	-1.2	12.9	4.6	12.7	6.6
Japan													
1998	29.0	26.8	2.6	15.4	15.4	-5.9	13.3	-8.3	-0.4	5.3	6.2	11.6	-0.9
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
2000 Q4	27.0	27.7	1.7	.	.	6.9	.	12.6	2.7	.	7.4	.	0.5
2001 Q1	33.4	26.4	2.3	.	.	8.9	.	-2.4	2.2	.	-4.1	.	3.2
Q2	.	25.4	.	.	.	-26.7	.	-15.3	4.0	.	11.8	.	-4.5
Q3	.	25.3	.	.	.	6.3	.	-8.9	-1.1	.	-5.2	.	2.6
Q4	.	25.5	.	.	.	2.3	.	3.2	1.5	.	8.8	.	-1.5
2002 Q1	.	22.8	.	.	.	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	.	.	.	-0.7	.	-7.2	-1.8	.	-5.5	.	-0.1

**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 (version 0.2.2).<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, Version 0.2.2", December 1998, 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 (version 0.2.2) (see footnote 2 on the previous page). 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 (version 0.2.2) (see footnote 2 on the previous page). 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 the previous page.



# 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, and describes the provision of statistics as it stands today. The document covers money and banking and related statistics, balance of payments statistics, international investment position statistics and financial accounts statistics. The requirements of the ECB 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 in 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 direct download in compressed comma separated value (CSV) files.

Owing to the fact that the composition of the ECU does not coincide with the currencies of the Member States 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 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 as 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, it was 15 January 2003.

Recent data are often provisional and may be revised. Discrepancies between totals and their components may arise from rounding.

## Overview

Key developments in the euro area are summarised in an overview table.

## Monetary policy and financial 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 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) money market paper and debt securities issued with

<sup>1</sup> Money and banking statistics are the responsibility of the ECB 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).



a maturity up to two years by MFIs located in the euro area. Accordingly, these holdings are included in the item external liabilities 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 "Money and Banking Statistics Compilation Guide" (EMI, April 1998) 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).

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.

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 accordance with the ESA 95, in exceptional cases two years or less). Securities with a longer maturity, or with optional maturity dates, the latest of which is more than one year away, or with indefinite maturity dates, are classified as long-term. 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

2 The code numbers in the ESA 95 for the sectors shown in tables in the Monthly Bulletin are: MFIs (including the Eurosystem), which comprises the ECB and the national central banks of Member States in the euro area (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).

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).

### **Prices and real economy indicators**

The data presented in the ECB Monthly Bulletin 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 harmonised and comparable. However, the availability of

comparable data is, as a general rule, 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.

With regard to statistics on national accounts (Tables 4.2 and 5.1), the implementation of the ESA 95 during 1999 and thereafter 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 in Commission Regulation (EC) No. 586/2001 of 26 March 2001.

Opinion survey data (Table 5.3) draw on the Business and Consumer Surveys of the European Commission.

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.

### **Financial accounts statistics**

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 (not seasonally adjusted) cover levels outstanding and financial 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. While both levels and transactions may throw light on economic developments, the latter are more likely to be the focus of attention.

The quarterly data are based on euro area MFI statistics, quarterly national financial accounts, and BIS international banking statistics. While all euro area countries contribute to the euro area statistics, Ireland and Luxembourg, as yet, do not provide quarterly national financial accounts data.

Table 6.2 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 Table 6.1.

### **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 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 of the euro area (including reserves), trade in goods and exchange rates**

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.) is 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 detailed quarterly b.o.p. data. Earlier data are revised periodically.

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 States' positions vis-à-vis non-euro area residents (i.e. considering the euro area as a whole economy) from end-1999 positions onwards 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 revised on an ongoing basis. 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).

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. The 13 EU candidate countries are Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia and Turkey.

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).

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. On adopting the euro in January 2001, Greece 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, please see the ECB

Occasional Paper No. 2 ("The effective exchange rates of the euro", Luca Buldorini and Stelios Makrydakis and Christian Thimann, February 2002), which can be downloaded from the ECB's website.

#### **Other statistics**

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, 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.





# Documents published by the European Central Bank

This list is designed to inform readers about selected documents published by the European Central Bank. The publications are available to interested parties free of charge from the Press and Information Division. Please submit orders in writing to the postal address given on the back of the title page.

For a complete list of documents published by the European Monetary Institute, please visit the ECB's website (<http://www.ecb.int>).

## Annual Report

"Annual Report 1998", April 1999.

"Annual Report 1999", April 2000.

"Annual Report 2000", May 2001.

"Annual Report 2001", April 2002.

---

## Convergence Report

"Convergence Report 2000", May 2000.

"Convergence Report 2002", May 2002.

---

## Monthly Bulletin

Articles published from January 1999 onwards:

"The euro area at the start of Stage Three", January 1999.

"The stability-oriented monetary policy strategy of the Eurosystem", January 1999.

"Euro area monetary aggregates and their role in the Eurosystem's monetary policy strategy", February 1999.

"The role of short-term economic indicators in the analysis of price developments in the euro area", April 1999.

"Banking in the euro area: structural features and trends", April 1999.

"The operational framework of the Eurosystem: description and first assessment", May 1999.

"The implementation of the Stability and Growth Pact", May 1999.

"Longer-term developments and cyclical variations in key economic indicators across euro area countries", July 1999.

"The institutional framework of the European System of Central Banks", July 1999.

"The international role of the euro", August 1999.

"The balance sheets of the Monetary Financial Institutions of the euro area in early 1999", August 1999.

"Inflation differentials in a monetary union", October 1999.

"ESCB preparations for the year 2000", October 1999.

"Stability-oriented policies and developments in long-term real interest rates in the 1990s", November 1999.

"TARGET and payments in euro", November 1999.

"Legal instruments of the European Central Bank", November 1999.

"The euro area one year after the introduction of the euro: key characteristics and changes in the financial structure", January 2000.

"Foreign exchange reserves and operations of the Eurosystem", January 2000.

"The Eurosystem and the EU enlargement process", February 2000.

"Consolidation in the securities settlement industry", February 2000.

"The nominal and real effective exchange rates of the euro", April 2000.

“EMU and banking supervision”, April 2000.  
 “The information content of interest rates and their derivatives for monetary policy”, May 2000.  
 “Developments in and structural features of the euro area labour markets”, May 2000.  
 “The switch to variable rate tenders in the main refinancing operations”, July 2000.  
 “Monetary policy transmission in the euro area”, July 2000.  
 “Population ageing and fiscal policy in the euro area”, July 2000.  
 “Price and cost indicators for the euro area: an overview”, August 2000.  
 “The external trade of the euro area economy: stylised facts and recent trends”, August 2000.  
 “Potential output growth and output gaps: concept, uses and estimates”, October 2000.  
 “The ECB’s relations with institutions and bodies of the European Community”, October 2000.  
 “The two pillars of the ECB’s monetary policy strategy”, November 2000.  
 “Issues arising from the emergence of electronic money”, November 2000.  
 “The euro area after the entry of Greece”, January 2001.  
 “Monetary policy-making under uncertainty”, January 2001.  
 “The ECB’s relations with international organisations and fora”, January 2001.  
 “Characteristics of corporate finance in the euro area”, February 2001.  
 “Towards a uniform service level for retail payments in the euro area”, February 2001.  
 “The external communication of the European Central Bank”, February 2001.  
 “Assessment of general economic statistics for the euro area”, April 2001.  
 “The collateral framework of the Eurosystem”, April 2001.  
 “The introduction of euro banknotes and coins”, April 2001.  
 “Framework and tools of monetary analysis”, May 2001.  
 “The new capital adequacy regime – the ECB perspective”, May 2001.  
 “Financing and financial investment of the non-financial sectors in the euro area”, May 2001.  
 “New technologies and productivity in the euro area”, July 2001.  
 “Measures of underlying inflation in the euro area”, July 2001.  
 “Fiscal policies and economic growth”, August 2001.  
 “Product market reforms in the euro area”, August 2001.  
 “Consolidation in central counterparty clearing in the euro area”, August 2001.  
 “Issues related to monetary policy rules”, October 2001.  
 “Bidding behaviour of counterparties in the Eurosystem’s regular open market operations”, October 2001.  
 “The euro cash changeover in markets outside the euro area”, October 2001.  
 “The information content of composite indicators of the euro area business cycle”, November 2001.  
 “The economic policy framework in EMU”, November 2001.  
 “Economic fundamentals and the exchange rate of the euro”, January 2002.  
 “Euro banknote preparations: from cash changeover to post-launch activities”, January 2002.  
 “The stock market and monetary policy”, February 2002.  
 “Recent developments in international co-operation”, February 2002.  
 “The operation of automatic fiscal stabilisers in the euro area”, April 2002.  
 “The role of the Eurosystem in payment and clearing systems”, April 2002.  
 “Enhancements to MFI balance sheet and interest rate statistics”, April 2002.  
 “The liquidity management of the ECB, May 2002.  
 “International supervisory co-operation”, May 2002.  
 “Implications of the euro cash changeover on the development of banknotes and coins in circulation”, May 2002.  
 “Characteristics of the euro area business cycle in the 1990s”, July 2002.

- “The Eurosystem’s dialogue with EU accession countries”, July 2002.
- “Developments in the external direct and portfolio investment flows of the euro area”, July 2002.
- “Price level convergence and competition in the euro area”, August 2002.
- “Recent developments and risks in the euro area banking sector”, August 2002.
- “Saving, financing and investment in the euro area”, August 2002.
- “Recent findings on monetary policy transmission in the euro area”, October 2002.
- “Main features of the repo market in the euro area”, October 2002.
- “The accountability of the ECB”, November 2002.
- “Transparency in the monetary policy of the ECB”, November 2002.
- “The composition of employment growth in the euro area in recent years”, November 2002.
- “The demand for currency in the euro area and the impact of the euro cash changeover”, January 2003.
- “CLS – purpose, concept and implications”, January 2003.
- 

### **Occasional Paper Series**

- 1 “The impact of the euro on money and bond markets” by J. Santillán, M. Bayle and C. Thygesen, July 2000.
  - 2 “The effective exchange rates of the euro” by L. Buldorini, S. Makrydakis and C. Thimann, February 2002.
  - 3 “Estimating the trend of M3 income velocity underlying the reference value for monetary growth” by C. Brand, D. Gerdesmeier and B. Roffia, May 2002.
  - 4 “Labour force developments in the euro area since the 1980s” by V. Genre and R. Gómez-Salvador, July 2002.
  - 5 “The evolution of clearing and central counterparty services for exchange-traded derivatives in the United States and Europe: a comparison” by D. Russo, T. L. Hart and A. Schönenberger, September 2002.
  - 6 “Banking integration in the euro area” by I. Cabral, F. Dierick and J. Vesala, December 2002.
  - 7 “Economic relations with regions neighbouring the euro area in the ‘Euro Time Zone’” by F. Mazzaferro, A. Mehl, M. Sturm, C. Thimann and A. Winkler, December 2002.
- 

### **Working Paper Series**

- 1 “A global hazard index for the world foreign exchange markets” by V. Brousseau and F. Scacciavillani, May 1999.
- 2 “What does the single monetary policy do? A SVAR benchmark for the European Central Bank” by C. Monticelli and O. Tristani, May 1999.
- 3 “Fiscal policy effectiveness and neutrality results in a non-Ricardian world” by C. Detken, May 1999.
- 4 “From the ERM to the euro: new evidence on economic and policy convergence among EU countries” by I. Angeloni and L. Dedola, May 1999.
- 5 “Core inflation: a review of some conceptual issues” by M. Wynne, May 1999.
- 6 “The demand for M3 in the euro area” by G. Coenen and J.-L. Vega, September 1999.
- 7 “A cross-country comparison of market structures in European banking” by O. De Bandt and E. P. Davis, September 1999.
- 8 “Inflation zone targeting” by A. Orphanides and V. Wieland, October 1999.
- 9 “Asymptotic confidence bands for the estimated autocovariance and autocorrelation functions of vector autoregressive models”, by G. Coenen, January 2000.
- 10 “On the effectiveness of sterilized foreign exchange intervention”, by R. Fatum, February 2000.

- 11 "Is the yield curve a useful information variable for the Eurosystem?" by J. M. Berk and P. van Bergeijk, February 2000.
- 12 "Indicator variables for optimal policy" by L. E. O. Svensson and M. Woodford, February 2000.
- 13 "Monetary policy with uncertain parameters" by U. Söderström, February 2000.
- 14 "Assessing nominal income rules for monetary policy with model and data uncertainty" by G. D. Rudebusch, February 2000.
- 15 "The quest for prosperity without inflation" by A. Orphanides, March 2000.
- 16 "Estimating the implied distribution of the future short-term interest rate using the Longstaff-Schwartz model" by P. Hördahl, March 2000.
- 17 "Alternative measures of the NAIRU in the euro area: estimates and assessment" by S. Fabiani and R. Mestre, March 2000.
- 18 "House prices and the macroeconomy in Europe: results from a structural VAR analysis" by M. Iacoviello, April 2000.
- 19 "The euro and international capital markets" by C. Detken and P. Hartmann, April 2000.
- 20 "Convergence of fiscal policies in the euro area" by O. De Bandt and F. P. Mongelli, May 2000.
- 21 "Firm size and monetary policy transmission: evidence from German business survey data" by M. Ehrmann, May 2000.
- 22 "Regulating access to international large-value payment systems" by C. Holthausen and T. Rønde, June 2000.
- 23 "Escaping Nash inflation" by In-Koo Cho and T. J. Sargent, June 2000.
- 24 "What horizon for price stability" by F. Smets, July 2000.
- 25 "Caution and conservatism in the making of monetary policy" by P. Schellekens, July 2000.
- 26 "Which kind of transparency? On the need for clarity in monetary policy-making" by B. Winkler, August 2000.
- 27 "This is what the US leading indicators lead" by M. Camacho and G. Perez-Quiros, August 2000.
- 28 "Learning, uncertainty and central bank activism in an economy with strategic interactions" by M. Ellison and N. Valla, August 2000.
- 29 "The sources of unemployment fluctuations: an empirical application to the Italian case" by S. Fabiani, A. Locarno, G. Oneto and P. Sestito, September 2000.
- 30 "A small estimated euro area model with rational expectations and nominal rigidities" by G. Coenen and V. Wieland, September 2000.
- 31 "The disappearing tax base: Is foreign direct investment eroding corporate income taxes?" by R. Gropp and K. Kostial, September 2000.
- 32 "Can indeterminacy explain the short-run non-neutrality of money?" by F. De Fiore, September 2000.
- 33 "The information content of M3 for future inflation in the euro area" by C. Trecroci and J. L. Vega, October 2000.
- 34 "Capital market development, corporate governance and the credibility of exchange rate pegs" by O. Castrén and T. Takalo, October 2000.
- 35 "Systemic Risk: A survey" by O. De Bandt and P. Hartmann, November 2000.
- 36 "Measuring core inflation in the euro area" by C. Morana, November 2000.
- 37 "Business fixed investment: evidence of a financial accelerator in Europe" by P. Vermeulen, November 2000.
- 38 "The optimal inflation tax when taxes are costly to collect" by F. De Fiore, November 2000.
- 39 "A money demand system for euro area M3" by C. Brand and N. Cassola, November 2000.

- 40 “Financial structure and the interest rate channel of ECB monetary policy” by B. Mojon, November 2000.
- 41 “Why adopt transparency? The publication of central bank forecasts” by P. M. Geraats, January 2001.
- 42 “An area-wide model (AWM) for the euro area” by G. Fagan, J. Henry and R. Mestre, January 2001.
- 43 “Sources of economic renewal: from the traditional firm to the knowledge firm”, by D. Rodriguez Palenzuela, February 2001.
- 44 “The supply and demand for Eurosystem deposits – The first 18 months”, by U. Bindseil and F. Seitz, February 2001.
- 45 “Testing the rank of the Hankel Matrix: A statistical approach”, by G. Camba-Méndez and G. Kapetanios, March 2001.
- 46 “A two-factor model of the German term structure of interest rates” by N. Cassola and J. B. Luís, March 2001.
- 47 “Deposit insurance and moral hazard: does the counterfactual matter?” by R. Gropp and J. Vesala, March 2001.
- 48 “Financial market integration in Europe: on the effects of EMU on stock markets” by M. Fratzscher, March 2001.
- 49 “Business cycle and monetary policy analysis in a structural sticky-price model of the euro area” by M. Casares, March 2001.
- 50 “Employment and productivity growth in service and manufacturing sectors in France, Germany and the US” by T. von Wachter, March 2001.
- 51 “The functional form of the demand for euro area M1” by L. Stracca, March 2001.
- 52 “Are the effects of monetary policy in the euro area greater in recessions than in booms?” by G. Peersman and F. Smets, March 2001.
- 53 “An evaluation of some measures of core inflation for the euro area” by J.-L. Vega and M. A. Wynne, April 2001.
- 54 “Assessment criteria for output gap estimates” by G. Camba-Méndez and D. Rodriguez Palenzuela, April 2001.
- 55 “Modelling the demand for loans to the private sector in the euro area” by A. Calza, G. Gartner and J. Sousa, April 2001.
- 56 “Stabilization policy in a two country model and the role of financial frictions” by E. Faia, April 2001.
- 57 “Model-based indicators of labour market rigidity” by S. Fabiani and D. Rodriguez Palenzuela, April 2001.
- 58 “Business cycle asymmetries in stock returns: evidence from higher order moments and conditional densities” by G. Pérez-Quirós and A. Timmermann, April 2001.
- 59 “Uncertain potential output: implications for monetary policy” by M. Ehrmann and F. Smets, April 2001.
- 60 “A multi-country trend indicator for euro area inflation: computation and properties” by E. Angelini, J. Henry and R. Mestre, April 2001.
- 61 “Diffusion index-based inflation forecasts for the euro area” by E. Angelini, J. Henry and R. Mestre, April 2001.
- 62 “Spectral based methods to identify common trends and common cycles” by G. C. Mendez and G. Kapetanios, April 2001.
- 63 “Does money lead inflation in the euro area?” by S. Nicoletti Altimari, May 2001.
- 64 “Exchange rate volatility and euro area imports” by R. Anderton and F. Skudelny, May 2001.
- 65 “A system approach for measuring the euro area NAIRU” by S. Fabiani and R. Mestre, May 2001.

- 66 “Can short-term foreign exchange volatility be predicted by the Global Hazard Index?” by V. Brousseau and F. Scacciavillani, June 2001.
- 67 “The daily market for funds in Europe: Has something changed with the EMU?” by G. Pérez-Quirós and H. Rodríguez Mendizábal, June 2001.
- 68 “The performance of forecast-based monetary policy rules under model uncertainty” by A. Levin, V. Wieland and J. C. Williams, July 2001.
- 69 “The ECB monetary policy strategy and the money market” by V. Gaspar, G. Pérez-Quirós and J. Sicilia, July 2001.
- 70 “Central bank forecasts of liquidity factors: Quality, publication and the control of the overnight rate” by U. Bindseil, July 2001.
- 71 “Asset market linkages in crisis periods” by P. Hartmann, S. Straetmans and C. G. de Vries, July 2001.
- 72 “Bank concentration and retail interest rates” by S. Corvoisier and R. Gropp, July 2001.
- 73 “Interbank lending and monetary policy transmission – evidence for Germany” by M. Ehrmann and A. Worms, July 2001.
- 74 “Interbank market integration under asymmetric information” by X. Freixas and C. Holthausen, August 2001.
- 75 “Value at risk models in finance” by S. Manganelli and R. F. Engle, August 2001.
- 76 “Rating agency actions and the pricing of debt and equity of European banks: What can we infer about private sector monitoring of bank soundness?” by R. Gropp and A. J. Richards, August 2001.
- 77 “Cyclically adjusted budget balances: an alternative approach” by C. Bouthevillain, P. Cour-Thimann, G. van den Dool, P. Hernández de Cos, G. Langenus, M. Mohr, S. Momigliano and M. Tujula, September 2001.
- 78 “Investment and monetary policy in the euro area” by B. Mojon, F. Smets and P. Vermeulen, September 2001.
- 79 “Does liquidity matter? Properties of a synthetic divisia monetary aggregate in the euro area” by L. Stracca, October 2001.
- 80 “The microstructure of the euro money market” by P. Hartmann, M. Manna and A. Manzanares, October 2001.
- 81 “What can changes in structural factors tell us about unemployment in Europe?” by J. Morgan and A. Mourougane, October 2001.
- 82 “Economic forecasting: some lessons from recent research” by D. Hendry and M. P. Clements, October 2001.
- 83 “Chi-squared tests of interval and density forecasts, and the Bank of England’s fan charts” by K. F. Wallis, November 2001.
- 84 “Data uncertainty and the role of money as an information variable for monetary policy” by G. Coenen, A. Levin and V. Wieland, November 2001.
- 85 “Determinants of the euro real effective exchange rate: a BEER/PEER approach” by F. Maeso-Fernandez, C. Osbat and B. Schnatz, November 2001.
- 86 “Rational expectations and near rational alternatives: how best to form expectations” by M. Beeby, S. G. Hall and S. B. Henry, November 2001.
- 87 “Credit rationing, output gap and business cycles” by F. Boissay, November 2001.
- 88 “Why is it so difficult to beat the random walk forecast of exchange rates?” by L. Kilian and M. P. Taylor, November 2001.
- 89 “Monetary policy and fears of financial instability” by V. Brousseau and C. Detken, November 2001.
- 90 “Public pensions and growth” by S. Lambrecht, P. Michel and J.-P. Vidal, November 2001.
- 91 “The monetary transmission mechanism in the euro area: more evidence from VAR analysis” by G. Peersman and F. Smets, December 2001.

- 92 “A VAR description of the effects of the monetary policy in the individual countries of the euro area” by B. Mojon and G. Peersman, December 2001.
- 93 “The monetary transmission mechanism at the euro-area level: issues and results using structural macroeconomic models” by P. McAdam and J. Morgan, December 2001.
- 94 “Monetary policy transmission in the euro area: what do aggregate and national structural models tell us?” by P. van Els, A. Locarno, J. Morgan and J.-P. Villetelle, December 2001.
- 95 “Some stylised facts on the euro area business cycle” by A.-M. Agresti and B. Mojon, December 2001.
- 96 “The reaction of bank lending to monetary policy measures in Germany” by A. Worms, December 2001.
- 97 “Asymmetries in bank lending behaviour. Austria during the 1990s” by S. Kaufmann, December 2001.
- 98 “The credit channel in the Netherlands: evidence from bank balance sheets” by L. De Haan, December 2001.
- 99 “Is there a bank lending channel of monetary policy in Spain?” by I. Hernando and J. Martínez-Pagés, December 2001.
- 100 “Transmission of monetary policy shocks in Finland: evidence from bank level data on loans” by J. Topi and J. Vilmunen, December 2001.
- 101 “Monetary policy and bank lending in France: are there asymmetries?” by C. Loupias, F. Savignac and P. Sevestre, December 2001.
- 102 “The bank lending channel of monetary policy: identification and estimation using Portuguese micro bank data” by L. Farinha and C. Robalo Marques, December 2001.
- 103 “Bank-specific characteristics and monetary policy transmission: the case of Italy” by L. Gambacorta, December 2001.
- 104 “Is there a bank lending channel of monetary policy in Greece? Evidence from bank level data” by S. N. Brissimis, N. C. Kamberoglou and G. T. Simigiannis, December 2001.
- 105 “Financial systems and the role of banks in monetary policy transmission in the euro area” by M. Ehrmann, L. Gambacorta, J. Martínez-Pagés, P. Sevestre and A. Worms, December 2001.
- 106 “Investment, the cost of capital, and monetary policy in the nineties in France: a panel data investigation” by J.-B. Chatelain and A. Tiomo, December 2001.
- 107 “The interest rate and credit channel in Belgium: an investigation with micro-level firm data” by P. Butzen, C. Fuss and P. Vermeulen, December 2001.
- 108 “Credit channel and investment behaviour in Austria: a micro-econometric approach” by M. Valderrama, December 2001.
- 109 “Monetary transmission in Germany: new perspectives on financial constraints and investment spending” by U. von Kalckreuth, December 2001.
- 110 “Does monetary policy have asymmetric effects? A look at the investment decisions of Italian firms” by E. Gaiotti and A. Generale, December 2001.
- 111 “Monetary transmission: empirical evidence from Luxembourg firm level data” by P. Lünemann and T. Mathä, December 2001.
- 112 “Firm investment and monetary transmission in the euro area” by J.-B. Chatelain, A. Generale, I. Hernando, U. von Kalckreuth and P. Vermeulen, December 2001.
- 113 “Financial frictions and the monetary transmission mechanism: theory, evidence and policy implications”, by C. Bean, J. Larsen and K. Nikolov, January 2002.
- 114 “Monetary transmission in the euro area: where do we stand?” by I. Angeloni, A. Kashyap, B. Mojon and D. Terlizzese, January 2002.
- 115 “Monetary policy rules, macroeconomic stability and inflation: a view from the trenches” by A. Orphanides, December 2001.



- I 16 “Rent indices for housing in west Germany 1985 to 1998” by J. Hoffmann and C. Kurz, January 2002.
- I 17 “Hedonic house prices without characteristics: the case of new multiunit housing” by O. Bover and P. Velilla, January 2002.
- I 18 “Durable goods, price indexes and quality change: an application to automobile prices in Italy, 1988-1998” by G. M. Tomat, January 2002.
- I 19 “Monetary policy and the stock market in the euro area” by N. Cassola and C. Morana, January 2002.
- I 20 “Learning stability in economics with heterogenous agents” by S. Honkapohja and K. Mitra, January 2002.
- I 21 “Natural rate doubts” by A. Beyer and R. E. A. Farmer, February 2002.
- I 22 “New technologies and productivity growth in the euro area” by F. Vijselaar and R. Albers, February 2002.
- I 23 “Analysing and combining multiple credit assessments of financial institutions” by E. Tabakis and A. Vinci, February 2002.
- I 24 “Monetary policy, expectations and commitment” by G. W. Evans and S. Honkapohja, February 2002.
- I 25 “Duration, volume and volatility impact of trades” by S. Manganelli, February 2002.
- I 26 “Optimal contracts in a dynamic costly state verification model” by C. Monnet and E. Quintin, February 2002.
- I 27 “Performance of monetary policy with internal central bank forecasting” by S. Honkapohja and K. Mitra, February 2002.
- I 28 “Openness, imperfect exchange rate pass-through and monetary policy” by F. Smets and R. Wouters, March 2002.
- I 29 “Non-standard central bank loss functions, skewed risks, and certainty equivalence” by A. al-Nowaihi and L. Stracca, March 2002.
- I 30 “Harmonized indexes of consumer prices: their conceptual foundations” by E. Diewert, March 2002.
- I 31 “Measurement bias in the HICP: what do we know, and what do we need to know?” by M. A. Wynne and D. Rodríguez-Palenzuela, March 2002.
- I 32 “Inflation dynamics and dual inflation in accession countries: a ‘new Keynesian’ perspective” by O. Arratibel, D. Rodríguez-Palenzuela and C. Thimann, March 2002.
- I 33 “Can confidence indicators be useful to predict short term real GDP growth?” by A. Mourougane and M. Roma, March 2002.
- I 34 “The cost of private transportation in the Netherlands, 1992-1999” by B. Bode and J. Van Dalen, March 2002.
- I 35 “The optimal mix of taxes on money, consumption and income” by F. De Fiore and P. Teles, April 2002.
- I 36 “Retail bank interest rate pass-through: new evidence at the euro area level” by G. de Bondt, April 2002.
- I 37 “Equilibrium bidding in the Eurosystem’s open market operations” by U. Bindseil, April 2002.
- I 38 “‘New’ views on the optimum currency area theory: what is EMU telling us?” by F. P. Mongelli, April 2002.
- I 39 “On currency crises and contagion” by M. Fratzscher, April 2002.
- I 40 “Price setting and the steady-state effects of inflation” by M. Casares, May 2002.
- I 41 “Asset prices and fiscal balances” by F. Eschenbach and L. Schuknecht, May 2002.
- I 42 “Modelling the daily banknotes in circulation in the context of the liquidity management of the European Central Bank” by A. Cabrero, G. Camba-Mendez, A. Hirsch and F. Nieto, May 2002.
- I 43 “A non-parametric method for valuing new goods” by L. Blow and I. Crawford, May 2002.

- 144 “A failure in the measurement of inflation: results from a hedonic and matched experiment using scanner data” by M. Silver and S. Heravi, May 2002.
- 145 “Towards a new early warning system of financial crises” by M. Bussiere and M. Fratzscher, May 2002.
- 146 “Competition and stability – what’s special about banking?” by E. Carletti and P. Hartmann, May 2002.
- 147 “Time-to-build approach in a sticky price, stricky wage optimizing monetary model” by M. Casares, May 2002.
- 148 “The functional form of yield curves” by V. Brousseau, May 2002.
- 149 “The Spanish block of the ESCB-multi-country model” by A. Willman and A. Estrada, May 2002.
- 150 “Equity and bond market signals as leading indicators of bank fragility” by R. Gropp, J. Vesala and G. Vulpes, June 2002.
- 151 “G-7 inflation forecasts” by F. Canova, June 2002.
- 152 “Short-term monitoring of fiscal policy discipline” by G. Camba-Mendez and A. Lamo, June 2002.
- 153 “Euro area production function and potential output: a supply side system approach” by A. Willman, June 2002.
- 154 “The euro bloc, the dollar bloc and the yen bloc: how much monetary policy independence can exchange rate flexibility buy in an interdependent world?” by M. Fratzscher, June 2002.
- 155 “Youth unemployment in the OECD: demographic shifts, labour market institutions, and macroeconomic shocks” by J. F. Jimeno and D. Rodriguez-Palenzuela, June 2002.
- 156 “Identifying endogenous fiscal policy rules for macroeconomic model” by J. J. Perez and P. Hiebert, July 2002.
- 157 “Bidding and performance in repo auctions: evidence from ECB open market operations” by Kjell G. Nyborg, U. Bindseil and I. A. Strebulaev, July 2002.
- 158 “Quantifying embodied technological change” by P. Sakellars and D. J. Wilson, July 2002.
- 159 “Optimal public money” by C. Monnet, July 2002.
- 160 “Model uncertainty and the equilibrium value of the real effective euro exchange rate” by C. Detken, A. Dieppe, J. Henry, C. Marin and F. Smets, July 2002.
- 161 “The optimal allocation of risks under prospect theory” by L. Stracca, July 2002.
- 162 “Public debt asymmetries: the effect on taxes and spending in the European Union” by S. Krogstrup, August 2002.
- 163 “The rationality of consumers’ inflation expectations: survey-based evidence for the euro area” by M. Forsells and G. Kenny, August 2002.
- 164 “Euro area corporate debt securities market: first empirical evidence” by G. de Bondt, August 2002.
- 165 “The industry effects of monetary policy in the euro area” by G. Peersman and F. Smets, August 2002.
- 166 “Monetary and fiscal policy interactions in a micro-founded model of a monetary union” by R. M. W. J. Beetsma and H. Jensen, August 2002.
- 167 “Identifying the effects of monetary policy shocks on exchange rates using high frequency data” by J. Faust, J. H. Rogers, E. Swanson and J. H. Wright, August 2002.
- 168 “Estimating the effects of fiscal policy in OECD countries” by R. Perotti, August 2002.
- 169 “Modeling model uncertainty” by A. Onatski and N. Williams, August 2002.
- 170 “What measure of inflation should a central bank target?” by G. Mankiw and R. Reis, August 2002.
- 171 “An estimated stochastic dynamic general equilibrium model of the euro area” by F. Smets and R. Wouters, August 2002.
- 172 “Constructing quality-adjusted price indices: a comparison of hedonic and discrete choice models” by N. Jonker, September 2002.

- 173 “Openness and equilibrium determinacy under interest rate rules” by F. de Fiore and Z. Liu, September 2002.
- 174 “International monetary policy coordination and financial market integration” by A. Sutherland, September 2002.
- 175 “Monetary policy and the financial accelerator in a monetary union” by S. Gilchrist, J. O. Hairault and H. Kempf, September 2002.
- 176 “Macroeconomics of international price discrimination” by G. Corsetti and L. Dedola, September 2002.
- 177 “A theory of the currency denomination of international trade” by P. Bacchetta and E. van Wincoop, September 2002.
- 178 “Inflation persistence and optimal monetary policy in the euro area” by P. Benigno and J. D. López-Salido, September 2002.
- 179 “Optimal monetary policy with durable and non-durable goods” by C. J. Erceg and A. T. Levin, September 2002.
- 180 “Regional inflation in a currency union: fiscal policy vs. fundamentals” by M. Duarte and A. L. Wolman, September 2002.
- 181 “Inflation dynamics and international linkages: a model of the United States, the euro area and Japan” by G. Coenen and V. Wieland, September 2002.
- 182 “The information content of real-time output gap estimates, an application to the euro area” by G. Rünstler, September 2002.
- 183 “Monetary policy in a world with different financial systems” by E. Faia, October 2002.
- 184 “Efficient pricing of large value interbank payment systems” by C. Holthausen and J.-C. Rochet, October 2002.
- 185 “European integration: what lessons for other regions? The case of Latin America” by E. Dorrucchi, S. Firpo, M. Fratzscher and F. P. Mongelli, October 2002.
- 186 “Using money market rates to assess the alternatives of fixed vs. variable rate tenders: the lesson from 1989-1998 data for Germany” by M. Manna, October 2002.
- 187 “A fiscal theory of sovereign risk” by M. Uribe, October 2002.
- 188 “Should central banks really be flexible?” by H. P. Grüner, October 2002.
- 189 “Debt reduction and automatic stabilisation” by P. Hiebert, J. J. Pérez and M. Rostagno, October 2002.
- 190 “Monetary policy and the zero bound to interest rates: a review” by T. Yates, October 2002.
- 191 “The fiscal costs of financial instability revisited” by L. Schuknecht and F. Eschenbach, November 2002.
- 192 “Is the European Central Bank (and the United States Federal Reserve) predictable?” by G. Pérez-Quirós and J. Sicilia, November 2002.
- 193 “Sustainability of public finances and automatic stabilisation under a rule of budgetary discipline” by J. Marín, November 2002.
- 194 “Sensitivity analysis of volatility: a new tool for risk management” by S. Manganelli, V. Ceci and W. Vecchiato, November 2002.
- 195 “In-sample or out-of-sample tests of predictability: which one should we use?” by A. Inoue and L. Kilian, November 2002.
- 196 “Bootstrapping autoregressions with conditional heteroskedasticity of unknown form” by S. Gonçalves and L. Kilian, November 2002.
- 197 “A model of the Eurosystem’s operational framework for monetary policy implementation” by C. Ewerhart, November 2002.
- 198 “Extracting risk neutral probability densities by fitting implied volatility smiles: some methodological points and an application to the 3M Euribor futures option prices” by A. B. Andersen and T. Wagener, December 2002.
- 199 “Time variation in the tail behaviour of bund futures returns” by T. Werner and C. Upper, December 2002.

- 200 "Interdependence between the euro area and the US: what role for EMU?" by M. Ehrmann and M. Fratzscher, December 2002.
- 201 "Euro area inflation persistence" by N. Batini, December 2002.
- 202 "Aggregate loans to the euro area private sector" by A. Calza, M. Manrique and J. Sousa, January 2003.
- 203 "Myopic loss aversion, disappointment aversion, and the equity premium puzzle" by D. Fielding and L. Stracca, January 2003.
- 204 "Asymmetric dynamics in the correlations of global equity and bond returns" by L. Cappiello, R. F. Engle and K. Sheppard, January 2003.
- 205 "Real exchange rate in an inter-temporal n-country-model with incomplete markets" by B. Mercereau, January 2003.
- 206 "Empirical estimates of reaction functions for the euro area" by D. Gerdesmeier and B. Roffia, January 2003.
- 

### **Other publications**

- "The TARGET service level", July 1998.
- "Report on electronic money", August 1998.
- "Assessment of EU securities settlement systems against the standards for their use in ESCB credit operations", September 1998.
- "Money and banking statistics compilation guide", September 1998.
- "The single monetary policy in Stage Three: General documentation on ESCB monetary policy instruments and procedures", September 1998.
- "Third progress report on the TARGET project", November 1998.
- "Correspondent central banking model (CCBM)", December 1998.
- "Payment systems in the European Union: Addendum incorporating 1997 figures", January 1999.
- "Possible effects of EMU on the EU banking systems in the medium to long term", February 1999.
- "Euro area monetary aggregates: conceptual reconciliation exercise", July 1999.
- "The effects of technology on the EU banking systems", July 1999.
- "Payment systems in countries that have applied for membership of the European Union", August 1999.
- "Improving cross-border retail payment services: the Eurosystem's view", September 1999.
- "Compendium: Collection of legal instruments, June 1998 – May 1999", October 1999.
- "European Union balance of payments/international investment position statistical methods", November 1999.
- "Money and banking statistics compilation guide, addendum I: money market paper", November 1999.
- "Money and banking statistics sector manual", second edition, November 1999.
- "Report on the legal protection of banknotes in the European Union Member States", November 1999.
- "Correspondent central banking model (CCBM)", November 1999.
- "Cross-border payments in TARGET: A users' survey", November 1999.
- "Money and banking statistics: Series keys for the exchange of balance sheet items time series", November 1999.
- "Money and banking statistics: Handbook for the compilation of flow statistics", December 1999.
- "Payment systems in the European Union: Addendum incorporating 1998 figures", February 2000.
- "Interlinking: Data dictionary", Version 2.02, March 2000.

“Asset prices and banking stability”, April 2000.  
 “EU banks’ income structure”, April 2000.  
 “Statistical information collected and compiled by the ESCB”, May 2000.  
 “Correspondent central banking model (CCBM)”, July 2000.  
 “Statistical requirements of the European Central Bank in the field of general economic statistics”, August 2000.  
 “Seasonal adjustment of monetary aggregates and HICP for the euro area”, August 2000.  
 “Improving cross-border retail payment services”, September 2000.  
 “Statistical treatment of the Eurosystem’s international reserves”, October 2000.  
 “European Union balance of payments/international investment position statistical methods”, November 2000.  
 “Information guide for credit institutions using TARGET”, November 2000.  
 “The single monetary policy in Stage Three: General documentation on Eurosystem monetary policy instruments and procedures”, November 2000.  
 “EU banks’ margins and credit standards”, December 2000.  
 “Mergers and acquisitions involving the EU banking industry: facts and implications”, December 2000.  
 “Annual report on the activities of the Anti-Fraud Committee of the European Central Bank”, January 2001.  
 “Cross-border use of collateral: A user’s survey”, February 2001.  
 “Price effects of regulatory reform in selected network industries”, March 2001.  
 “The role of central banks in prudential supervision”, March 2001.  
 “Money and banking statistics in the accession countries: Methodological manual”, April 2001.  
 “TARGET: Annual Report”, May 2001.  
 “A guide to Eurosystem staff macroeconomic projection exercises”, June 2001.  
 “Payment and securities settlement systems in the European Union”, June 2001.  
 “Why price stability?”, June 2001.  
 “The euro bond market”, July 2001.  
 “The euro money market”, July 2001.  
 “The euro equity markets”, August 2001.  
 “The monetary policy of the ECB”, August 2001.  
 “Monetary analysis: tools and applications”, August 2001.  
 “Review of the international role of the euro”, September 2001.  
 “The Eurosystem’s policy line with regard to consolidation in central counterparty clearing”, September 2001.  
 “Provisional list of MFIs of the accession countries (as at the end of December 2000)”, October 2001.  
 “TARGET: the Trans-European Automated Real-time Gross settlement Express Transfer system – update 2001”, November 2001.  
 “European Union balance of payments/international investment position statistical methods”, November 2001.  
 “Fair value accounting in the banking sector”, November 2001.  
 “Towards an integrated infrastructure for credit transfers in euro”, November 2001.  
 “Accession countries: Balance of payments/international investment position statistical methods”, February 2002.  
 “List of Monetary Financial Institutions and institutions subject to minimum reserves”, February 2002.  
 “Labour market mismatches in euro area countries”, March 2002.  
 “Compendium: Collection of legal instruments, June 1998 – December 2001”, March 2002.  
 “Evaluation of the 2002 cash changeover”, April 2002.  
 “TARGET Annual Report 2001, April 2002.

“The single monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures”, April 2002.

“Annual report on the activities of the Anti-Fraud Committee of the European Central Bank, covering the period from January 2001 to January 2002”, May 2002.

“Developments in banks’ liquidity profile and management”, May 2002.

“The Eurosystem’s terms of reference for the use of cash-recycling machines by credit institutions and other euro area institutions engaged in the sorting and distribution of banknotes to the public as a professional activity”, May 2002.

“Bond markets and long-term interest rates in European Union accession countries”, June 2002.

“TARGET minimum common performance features of RTGS systems within TARGET as at November 2001”, June 2002.

“TARGET Interlinking data dictionary as at November 2001”, June 2002.

“TARGET Interlinking specification as at November 2001”, June 2002.

“TARGET Interlinking user requirement as at November 2001”, June 2002.

“Task force on portfolio investment collection systems, Final Report”, June 2002.

“Measurement issues in European consumer price indices and the conceptual framework of the HICP”, July 2002.

“Payment and securities settlement systems in the European Union: Addendum incorporating 2000 figures”, July 2002.

“Financial sectors in EU accession countries”, August 2002.

“Payment and securities settlement systems in accession countries”, August 2002.

“TARGET Interlinking specification”, November 2002.

“TARGET Interlinking data dictionary”, November 2002.

“Guidance Notes to Regulation ECB/2001/13 on the MFI balance sheet statistics”, November 2002.

“Structural analysis of the EU banking sector”, November 2002

“European Union balance of payments/international investment position statistical methods”, November 2002.

“Review of the international role of the euro”, December 2002.

“Euro money market study 2001 (MOC)”, December 2002.

---

### **Information brochures**

“TARGET: facts, figures, future”, September 1999.

“The ECB payment mechanism”, August 2000.

“The euro: integrating financial services”, August 2000.

“TARGET”, August 2000.

“The European Central Bank”, April 2001.

“The euro banknotes and coins”, May 2001.

“TARGET – update 2001”, July 2001.

“The euro and the integration of financial services”, September 2001.

“The euro banknotes and coins”, August 2002.



