



EUROPEAN CENTRAL BANK

EUROSYSTEM

MONTHLY BULLETIN  
OCTOBER

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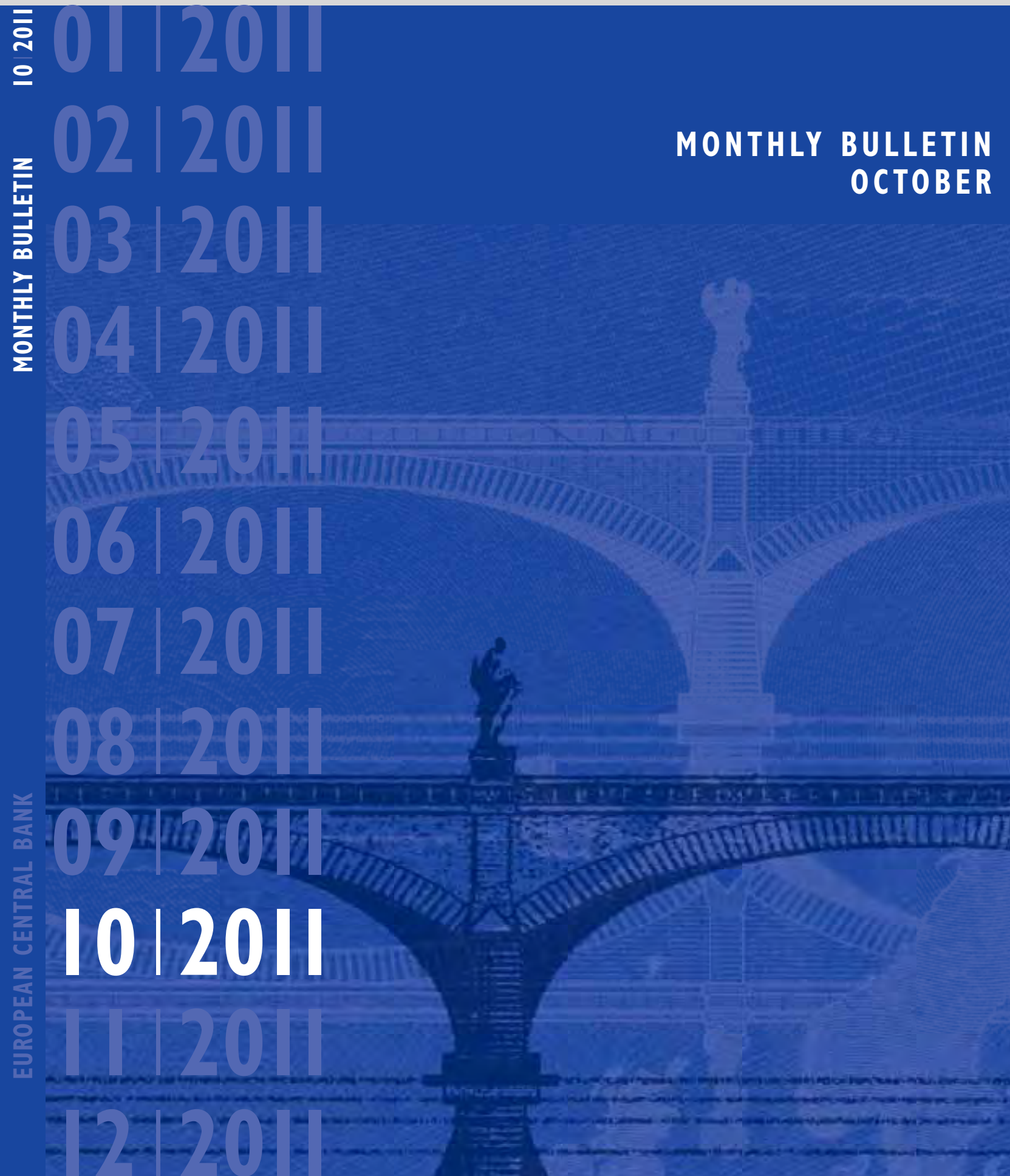
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## ABBREVIATIONS

### COUNTRIES

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

### OTHERS

BIS	Bank for International Settlements
b.o.p.	balance of payments
BPM5	IMF Balance of Payments Manual (5th edition)
CD	certificate of deposit
c.i.f.	cost, insurance and freight at the importer's border
CPI	Consumer Price Index
ECB	European Central Bank
EER	effective exchange rate
EMI	European Monetary Institute
EMU	Economic and Monetary Union
ESA 95	European System of Accounts 1995
ESCB	European System of Central Banks
EU	European Union
EUR	euro
f.o.b.	free on board at the exporter's border
GDP	gross domestic product
HICP	Harmonised Index of Consumer Prices
HWWI	Hamburg Institute of International Economics
ILO	International Labour Organization
IMF	International Monetary Fund
MFI	monetary financial institution
NACE	statistical classification of economic activities in the European Union
NCB	national central bank
OECD	Organisation for Economic Co-operation and Development
PPI	Producer Price Index
SITC Rev. 4	Standard International Trade Classification (revision 4)
ULCM	unit labour costs in manufacturing
ULCT	unit labour costs in the total economy

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



## EDITORIAL

Based on its regular economic and monetary analyses, the Governing Council decided at its meeting on 6 October 2011 to keep the key ECB interest rates unchanged. Inflation has remained elevated and incoming information has confirmed that inflation is likely to stay above 2% over the months ahead, but to decline thereafter. At the same time, the underlying pace of monetary expansion continues to be moderate. Ongoing tensions in financial markets and unfavourable effects on financing conditions are likely to dampen the pace of economic growth in the euro area in the second half of this year. The economic outlook remains subject to particularly high uncertainty and intensified downside risks. At the same time, short-term interest rates remain low. It remains essential for monetary policy to maintain price stability over the medium term, thereby ensuring a firm anchoring of inflation expectations in the euro area in line with the Governing Council's aim of maintaining inflation rates below, but close to, 2% over the medium term. Such anchoring is a prerequisite for monetary policy to make its contribution towards supporting economic growth and job creation in the euro area. A very thorough analysis of all incoming data and developments over the period ahead is warranted.

The Governing Council also decided on the details of the refinancing operations from October 2011 to 10 July 2012, notably to conduct two longer-term refinancing operations – one with a maturity of approximately 12 months in October 2011 and another with a maturity of approximately 13 months in December 2011 – and to continue to apply the fixed rate tender procedure with full allotment in all refinancing operations. In addition, the Governing Council decided to launch a new covered bond purchase programme in November 2011.<sup>1</sup> The provision of liquidity and the allotment modes for refinancing operations will continue to ensure that euro area banks are not constrained on the liquidity side. All the non-standard measures taken during the period of acute financial market tensions are, by construction, temporary in nature.

As regards the economic analysis, real GDP growth in the euro area, after slowing in the second quarter of 2011 to 0.2% quarter on quarter, is now expected to be very moderate in the second half of this year. In particular, a number of factors seem to be dampening the underlying growth momentum in the euro area, including a moderation in the pace of global demand, falling consumer and business confidence, and unfavourable effects on financing conditions resulting from ongoing tensions in a number of euro area sovereign debt markets. At the same time, the Governing Council continues to expect euro area economic activity to benefit from continued positive growth in the emerging market economies, as well as from the low short-term interest rates and the various measures taken to support the functioning of the financial sector.

In the Governing Council's assessment, the risks to the economic outlook for the euro area remain on the downside in an environment of particularly high uncertainty. Downside risks notably relate to the ongoing tensions in some segments of the financial markets in the euro area and at the global level, as well as to the potential for these pressures to further spill over into the euro area real economy. They also relate to the still high energy prices, protectionist pressures and the possibility of a disorderly correction of global imbalances.

With regard to price developments, euro area annual HICP inflation was 3.0% in September 2011, according to Eurostat's flash estimate, after 2.5% in August. Inflation rates have been at elevated levels since the end of last year, mainly driven by higher energy and other commodity prices. Looking ahead, inflation rates are likely to stay clearly above 2% over the coming months, but to decline thereafter. This pattern reflects the expectation of relatively stable wage growth developments in the context of moderate economic growth.

<sup>1</sup> For further details, see the press releases of 6 October 2011 "ECB announces details of refinancing operations from October 2011 to 10 July 2012" and "ECB announces new covered bond purchase programme".



The Governing Council continues to view the risks to the medium-term outlook for price developments as broadly balanced. On the upside, the main risks relate to the possibility of increases in indirect taxes and administered prices, owing to the need for fiscal consolidation in the coming years. The main downside risks relate to the impact of weaker than expected growth in the euro area and globally.

Turning to the monetary analysis, the annual growth rate of M3 was 2.8% in August 2011, up from 2.1% in July. The annual growth rate of loans to the private sector, adjusted for loan sales and securitisation, was 2.8% in August, after 2.6% in July. A number of factors, possibly related to the intensification of tensions in some financial markets, could have had an upward effect on the components of M3. In particular, sizeable inflows into overnight deposits and money market fund shares/units, as well as a substantial inflow into repurchase agreements, appear to have driven monetary developments in August. The inflow into repurchase agreements mainly reflected secured lending in the interbank market, which was increasingly settled via central counterparties that are allocated to the money-holding sector. Overall, M3 growth was driven in particular by the increase in the annual growth rate of M1 from 1.0% in July to 1.7% in August and the increase in the annual growth rate of marketable instruments.

On the counterpart side, the annual growth rate of loans to non-financial corporations and to households in August, both adjusted for loan sales and securitisation, remained unchanged from July, at 2.2% and 2.7% respectively. Taking the appropriate medium-term perspective, trends in broad money and loan growth have broadly stabilised over recent months. Overall, the underlying pace of monetary expansion thus remains moderate.

The situation of the banking sector calls for particular attention, taking into account the interplay between sovereign risk issues and banks' funding needs. As it has done in the past, the Governing Council urges banks to do

all that is necessary to reinforce their balance sheets, to retain earnings, to ensure moderation in remuneration, and to turn to the market to strengthen further their capital bases. Where necessary, they should take full advantage of government support measures, which should be made totally operational, including the possibility in future for the European Financial Stability Facility (EFSF) to lend to governments in order to recapitalise banks.

To sum up, based on its regular economic and monetary analyses, the Governing Council decided to keep the key ECB interest rates unchanged. Inflation has remained elevated and incoming information has confirmed that inflation is likely to stay above 2% over the months ahead, but to decline thereafter. A cross-check with the information from the monetary analysis confirms that the underlying pace of monetary expansion continues to be moderate. Ongoing tensions in financial markets and unfavourable effects on financing conditions are likely to dampen the pace of economic growth in the euro area in the second half of this year. The economic outlook remains subject to particularly high uncertainty and intensified downside risks. At the same time, short-term interest rates remain low. It remains essential for monetary policy to maintain price stability over the medium term, thereby ensuring a firm anchoring of inflation expectations in the euro area in line with the Governing Council's aim of maintaining inflation rates below, but close to, 2% over the medium term. Such anchoring is a prerequisite for monetary policy to make its contribution towards supporting economic growth and job creation in the euro area. A very thorough analysis of all incoming data and developments over the period ahead is warranted.

Turning to fiscal policies, with financial market uncertainty remaining high, all governments need to take decisive and frontloaded action to bolster public confidence in the sustainability of government finances. All euro area governments need to show their inflexible determination to fully honour their own individual sovereign

signature as a key element in ensuring financial stability in the euro area as a whole. Countries under joint EU-IMF adjustment programmes, as well as those particularly vulnerable to financial market conditions, need to unambiguously implement all announced measures for fiscal consolidation and the strengthening of domestic fiscal frameworks, and they need to stand ready to take any additional measures that may become necessary owing to the evolution of their situation.

Fiscal consolidation and structural reforms must go hand in hand to strengthen confidence, growth prospects and job creation. The Governing Council therefore urges all euro area governments to decisively and swiftly implement substantial and comprehensive structural reforms. This will help these countries to strengthen competitiveness, increase the flexibility of their economies and enhance their longer-term growth potential. In this respect, labour market reforms are key, with a focus on the removal of rigidities and the implementation of measures which enhance wage flexibility, in particular the elimination of automatic wage indexation clauses and a strengthening of firm-level agreements. More generally, in these demanding times, moderation is of the essence in terms of both profit margins and wages. These measures should be accompanied by structural reforms that increase competition in product markets, particularly in services – including the liberalisation of closed professions – and, where appropriate, the privatisation of services currently provided by the public sector, thereby facilitating productivity growth and supporting competitiveness. At the same time, the Governing Council urges all euro area governments to fully implement all aspects of the decisions they took on 21 July 2011.

This issue of the Monthly Bulletin contains three articles. The first article shows how information stemming from the analysis of money and credit developments can help to identify the impact of banks' behaviour and intermediation activity on the economy. The second article

considers structural features of the distributive trade sectors and their impact on euro area price developments, and it suggests that there is ample scope for further reforms to improve the Single Market. The third article examines the evolution of the financial crisis from a flow-of-funds perspective.





# ECONOMIC AND MONETARY DEVELOPMENTS

## I THE EXTERNAL ENVIRONMENT OF THE EURO AREA

*Global economic growth has decelerated in recent months. This is partly a result of temporary factors. The waning of these factors in the second half of the year should, however, provide some impetus to economic growth, although renewed global financial market tensions as well as persistent structural headwinds are restraining the pace of the recovery, particularly in advanced economies. In emerging markets, by contrast, the moderation in growth has been more contained and may help mitigate the prevailing overheating pressures in some of these countries. Overall, inflationary pressures continue to be more pronounced in emerging economies than in advanced economies.*

### I.1 DEVELOPMENTS IN THE WORLD ECONOMY

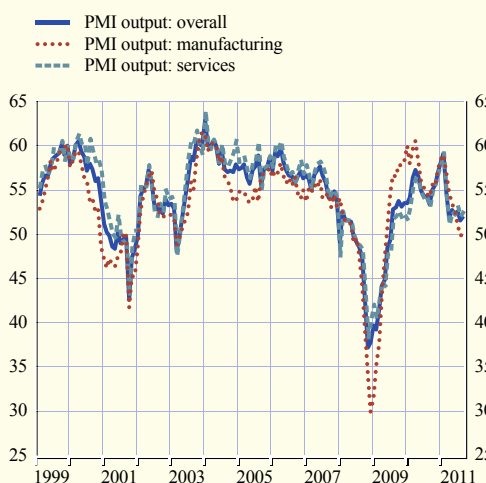
Global economic growth has decelerated in recent months. This slowdown is partly a result of some temporary factors, such as the impact of the natural disasters in Japan on global supply chains, as well as the dampening effect of high commodity prices on disposable incomes. While the waning of the supply-chain disruptions has provided some impetus to economic growth in the second half of the year, the renewed global financial market tensions – as reflected in rising volatility in global financial markets and falling equity valuations – as well as structural headwinds are restraining the pace of the recovery. These headwinds mainly relate to the continued need to repair public and private balance sheets as well as the persistent weakness in housing and labour markets in some of the main advanced countries. Regional differences with respect to cyclical positions also persist. While the pace of the recovery remains rather sluggish in advanced economies, the moderation in growth in emerging economies seems to be more contained and may help mitigate the prevailing overheating pressures in some of these countries.

The slowdown in global economic activity has been reflected in survey data. The Purchasing Managers' Index (PMI) for global all-industry output rose slightly to 52.0 in September, from 51.5 in the previous month (see Chart 1). Accordingly, the index remains above the theoretical expansion/contraction threshold of 50, but stands below its average level since 2000. Across sectors, the PMI for global manufacturing output stood at 50.0 in September and the global PMI for the services sector, at 52.6, also suggested rather subdued dynamics in economic activity in this sector. Growth in new business also seems to have eased further in the manufacturing sector, while it accelerated somewhat in the services sector. Consistent with these developments in global manufacturing activity, the latest data for global trade and the PMI for new export orders also suggest slow growth in global trade. On a three-month-on-three-month basis, growth in global trade in goods (excluding the euro area) moderated to 0.3% in July, from around 3% in the first quarter of the year.

Cost pressures in the global economy seem to have eased somewhat. In September the PMI for all-industry input prices declined slightly to 57.3,

Chart 1 Global PMI output

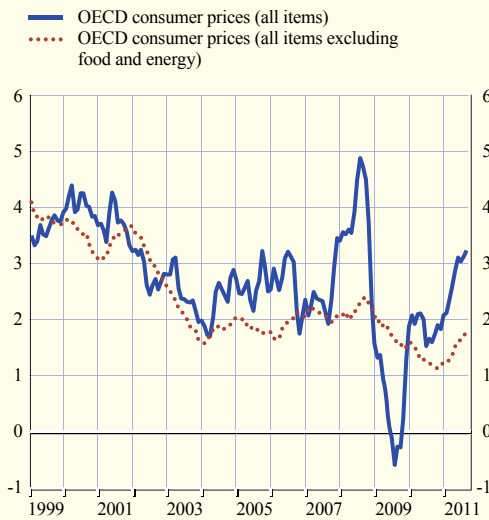
(diffusion index; seasonally adjusted; monthly data)



Source: Markit.

**Chart 2 International price developments**

(monthly data; annual percentage changes)



Source: OECD.

from 58.0 in the previous month. Accordingly, the index is well below the peak levels reached in the first quarter of the year. Overall, annual headline inflation has stabilised in advanced economies, while inflationary pressures continue to be more pronounced in emerging economies. In the OECD area, annual headline consumer price inflation stood at 3.2% in August 2011, compared with 3.1% in July (see Chart 2). Strong increases in food and energy prices boosted the rate of inflation. Excluding food and energy, the annual inflation rate stood at 1.8% in August, compared with 1.7% in July. In emerging markets, inflation rates remain elevated on account of capacity constraints as well as the higher weight of commodities in these countries' consumption baskets.

#### UNITED STATES

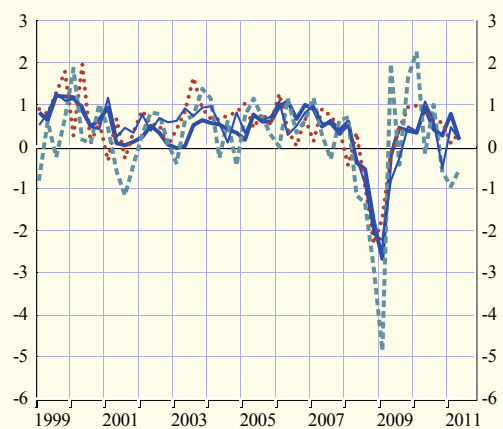
In the United States, the economic recovery remained slow in the second quarter of 2011. According to the third estimate by the Bureau of Economic Analysis, US real GDP increased at an annual rate of 1.3% in the second quarter of 2011 (0.3% on a quarter-on-quarter basis). This was higher than previously estimated and followed annualised growth of 0.4% in the first quarter of the year (see Chart 3). Subdued growth in the

**Chart 3 Main developments in major industrialised economies**

Legend:  
— euro area  
..... Japan  
..... United States  
— United Kingdom

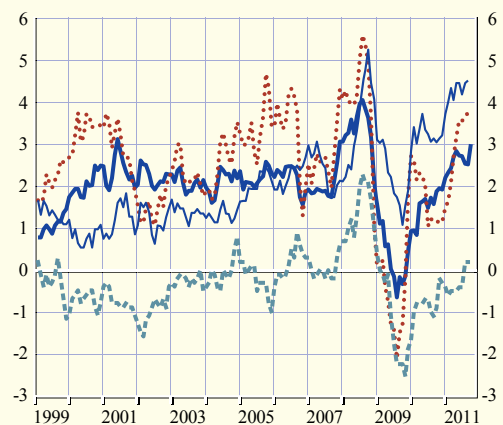
#### Output growth<sup>1)</sup>

(quarter-on-quarter percentage changes; quarterly data)



#### Inflation rates<sup>2)</sup>

(consumer prices; annual percentage changes; monthly data)



Sources: National data, BIS, Eurostat and ECB calculations.

1) Eurostat data are used for the euro area and the United Kingdom; national data are used for the United States and Japan. GDP figures have been seasonally adjusted.

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

second quarter continued to reflect both a slowdown in personal consumption expenditure as higher energy prices dented disposable income, as well as the effects of disruptions to supplies resulting from the Great East Japan Earthquake, which were particularly felt by the automotive industry. Business investment continued to expand, while residential investment rebounded from a decline in the previous quarter. Compared with the previous estimate, the upward revision of real GDP growth in the second quarter was mainly a result of stronger contributions from consumer spending, exports and, to a lesser extent, private fixed investment, which were only partly offset by a more negative contribution from inventories.

As regards price developments, annual CPI inflation increased from 3.6% in July to 3.8% in August 2011, reaching its highest level since September 2008. The increase in headline inflation in the course of 2011 continues to reflect a marked annual rise in energy prices, which, despite some moderation in recent months, stood 18.4% higher in August 2011 compared with a year earlier. In addition, food price inflation advanced further to reach 4.6%. Excluding food and energy, annual inflation continued to increase to 2.0% in August, from 1.8% in July. In part, the upturn in core inflation from the low levels in 2010 stems from a gradual, but steady, rise in housing costs from very low levels.

On 21 September 2011 the US Federal Open Market Committee (FOMC) decided to maintain its target range for the federal funds rate at 0.00% to 0.25% and continued to anticipate that economic conditions are likely to warrant exceptionally low levels for the federal funds rate at least until mid-2013. At the same time, the FOMC announced new measures to stimulate the slow economic recovery and to help support conditions in mortgage markets, including an extension of the average maturity of its securities holdings.

## JAPAN

In Japan, the second release of national accounts data for the second quarter of this year confirmed the negative impact of the March 2011 earthquake and tsunami, showing that the Japanese economy contracted by 0.5% quarter on quarter, a downward revision compared with the previous estimate. Nevertheless, according to recent monthly indicators, the recovery of the Japanese economy is underway, with a gradual easing of the supply-side constraints triggered by the earthquake. In spite of a modest gain in July and August, industrial production has almost recovered to its level prior to the natural disaster (it currently stands at about 96% of the February level). Similarly, real exports of goods, measured by the Bank of Japan's real export index, also grew marginally in August (by 0.1% month on month), but the index currently stands at only about 2% below February levels, following robust gains in May and June. At the same time, real imports of goods continued to grow, albeit modestly.

In terms of consumer price developments, annual CPI inflation stood at 0.2% in August, the same level as in the previous month. Annual CPI inflation excluding fresh food increased from 0.1% to 0.2% in August, while annual CPI inflation excluding fresh food and energy remained in negative territory (-0.5% in August). The Bank of Japan decided at its meeting on 7 September 2011 to maintain its target range for the uncollateralised overnight call rate at 0.0% to 0.1%.



## UNITED KINGDOM

In the United Kingdom, economic activity remained weak during the third quarter of 2011, according to monthly indicators. Most business survey as well as household consumption indicators remained relatively subdued in August and September. Hence, the rebound in growth in the short term is likely to remain limited, even though monetary stimuli should support economic activity. Growth in domestic demand is still expected to remain constrained by tight credit conditions, household balance sheet adjustment and substantial fiscal tightening.

Annual CPI inflation has remained elevated in recent months. Inflation increased to 4.5% in August, from 4.4% in July. By contrast, core inflation (measured by CPI inflation excluding unprocessed food and energy) decreased from 3.8% to 3.7%. In the short term, inflation is likely to move higher, but looking further ahead, the gradual waning of certain temporary factors (including higher commodity prices, the lagged effects of the depreciation of the pound sterling, and the increase in the rate of VAT in January 2011), as well as the existence of spare capacity, will contribute to dampening inflationary pressures. In recent quarters the Bank of England's Monetary Policy Committee has maintained the official Bank Rate paid on commercial bank reserves at 0.5%. On 6 October the Committee decided on a further GBP 75 billion of asset purchases financed by the issuance of central bank reserves, in addition to the stock of GBP 200 billion remaining from previous purchases.

## CHINA

In China, economic growth continued to moderate in August. The PMI indicates a weakening of economic activity in both manufacturing and services, mainly on account of worsening external demand conditions and domestic policy tightening. While external trade has lost momentum compared with the beginning of the year, imports picked up strongly in August, indicating the fading impact of the temporary supply-chain disruptions caused by the fallout following the Japanese earthquake and tsunami. Fixed asset investment remained robust, mainly on account of continued policy stimuli in the housing sector.

In August annual CPI inflation declined to 6.3%, down from 6.5% in July, mainly driven by a moderation in food prices. The recent stabilisation of commodity and food prices is expected to ease inflationary pressures in the coming months and bring inflation closer to the authorities' target of 4%. Domestic new lending and M2 growth decelerated further in August, driven by monetary policy tightening in the first half of the year. The People's Bank of China has left its policy rates and reserve requirement ratio unchanged since July, signalling a halt in its policy of tightening amid growing concerns over the global economic outlook.

## 1.2 COMMODITY MARKETS

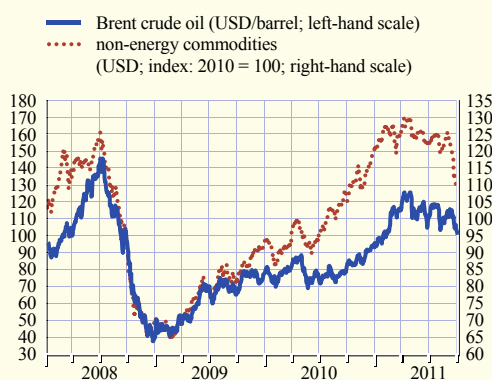
Oil prices decreased in September and early October. Brent crude oil prices stood at USD 100.7 per barrel on 5 October, which is still 8.1% higher than at the beginning of the year, but 12% lower than at the beginning of September (see Chart 4). Looking ahead, market participants expect lower oil prices in the medium term, with futures contracts for December 2012 trading at around USD 96.1 per barrel.

The decrease in prices came against the background of the intensification of the turbulence in financial markets and the associated concerns about the global economic outlook. Although

this has not yet affected current demand readings, especially in emerging economies, the International Energy Agency has cut back its demand projections for 2011 and 2012.

The prices of non-energy commodities decreased in the course of September. Both food and metal prices were negatively affected by concerns about the global economic outlook and its potential impact on commodity demand. In aggregate terms, the price index for non-energy commodities (denominated in US dollars) was 10.3% lower at the end of September than at the beginning of the year. Box 1 reviews developments in correlations between commodity and financial returns.

Chart 4 Main developments in commodity prices



Sources: Bloomberg and HWWI.

## Box 1

### FINANCIALISATION OF COMMODITIES AND CROSS-MARKET RETURNS

Since the mid-2000s trading activity in commodity futures has intensified, a phenomenon often referred to as the “financialisation of commodities”. One of the key drivers of this process is the increasing appetite of investors for holding commodities – or investment instruments linked to commodities – as part of their portfolio diversification strategy, based on the historically low correlation between commodity and financial returns.

In the last few years, more intense trading activity may also have originated from the behaviour of banks, which have set up and marketed mutual funds aimed at tracking specific commodity price indices (referred to as index funds), thus providing their holders with an easy way to gain exposure to commodity price fluctuations. Index funds replicating a given commodity index – thus following passive investment strategies involving mainly the purchase of futures contracts<sup>1</sup> – might have contributed to a constant pressure on futures prices of various commodities, thereby making their developments more similar.

Policy-makers have been devoting attention to the reported evidence of increasing correlations between commodity and financial returns – i.e. above what may be justified by developments in fundamental determinants of the commodity prices – since such a development may have a number of adverse consequences for monetary policy and financial stability. If commodity prices have become more closely related to financial prices and more weakly linked to their specific

<sup>1</sup> Index funds typically take long positions in the futures markets and roll over these contracts to the subsequent maturity as the delivery date approaches, as they are not interested in the physical delivery of the commodity. These long positions do not, therefore, reflect any stance or expectation of subsequent price developments. It is only in the rollover period, i.e. when a futures contract is approaching expiration, that these funds intervene by selling the contract about to expire and replacing it with one that has a longer maturity. It has to be acknowledged, however, that some index funds do physically store precious metals and, in some cases, also copper.



fundamentals, inflation could turn out to be excessively volatile and business cycles could be dampened or boosted by more volatile swings in commodity prices than experienced up to now. In addition, higher correlations between commodity and financial returns may affect the risk exposure of global portfolios.

Against this background, the aim of this box is to examine developments in such correlations over the last decade and provide some evidence about whether changes in trading activity for selected commodities may have had the potential to affect them.

### Correlation between commodity and financial returns

Empirical evidence clearly suggests that the correlations between commodity and financial returns have increased since the early 2000s. As shown in Chart A, commodity prices and world stock markets have become increasingly synchronised since around 2003 and have followed largely the same pattern since 2008.

Analysing time-varying correlations between selected commodity returns and the world equity index return (expressed in US dollars) at a weekly frequency since 30 September 1997 confirms this picture (see Chart B). While the three selected correlations oscillated in a rather narrow interval between 1997 and 2008, they jointly spiked upwards amid the turbulence ignited by the bankruptcy of Lehman Brothers (to around 0.5) and remained heightened relative to the average of the previous decade.

**Chart A Developments in commodity and equity prices**

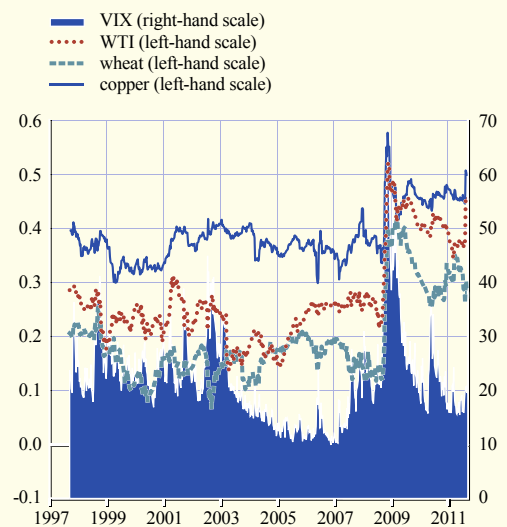
(index: 29 December 1998 = 100; weekly data)



Source: Thomson Reuters.  
 Note: Latest observation refers to 13 September 2011.

**Chart B Correlations between commodity and equity returns**

(left-hand scale: correlation; right-hand scale: volatility; weekly data)



Sources: Bloomberg, Thomson Reuters and ECB staff calculations.

Notes: The equity index is the world stock index expressed in US dollars. VIX is the implied volatility of the US stock market index. WTI is West Texas Intermediate crude oil. Latest observation refers to 13 September 2011.

The theoretical rationale for a higher correlation between commodity and equity returns is that financial investors may be more sensitive to the release of macroeconomic news than to the fundamentals prevailing for the various commodities, meaning that developments in key macroeconomic indicators may represent joint drivers for commodities and financial assets, thereby raising their correlation.

### Correlation across commodity returns

Chart C reports summary information from the correlation matrix of the returns on 12 selected commodity futures,<sup>2</sup> i.e. the median correlation and its 10th and 90th percentiles. Similar to the link between commodity and equity prices, correlations across commodity returns remained rather stable between 1997 and mid-2008, to subsequently record a sudden spike with some persistence at heightened levels.

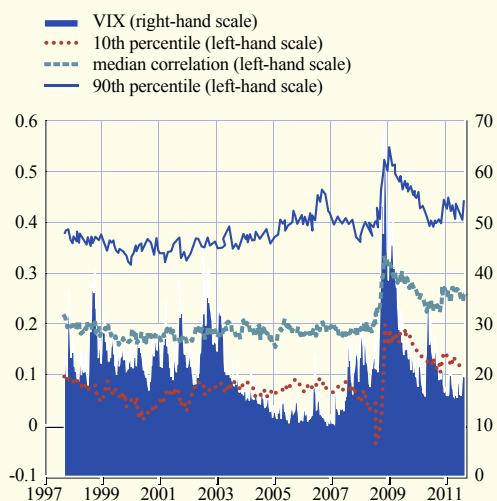
The behaviour of index funds that simultaneously allocate the inflows of funds from investors to the commodities composing the tracked index could have contributed to this development. However, recent research<sup>3</sup> remains rather inconclusive on this issue and the majority of results available so far suggest the absence of any significant effects.

In sum, both the correlations between commodity returns and equity returns and the correlations across commodity returns rose in the aftermath of the financial turmoil in September 2008. However, such correlations did not reach values comparable to those seen for the correlations between equity markets worldwide.<sup>4</sup> Therefore, the reported argument that commodities could have lost their usefulness as a method of diversification in international portfolios does not seem to be well grounded.

Furthermore, Charts B and C also report the VIX index of US equity market volatility along with correlations and show that the joint spike in correlations occurs exactly when the global perception of risk, as captured by the VIX, reached a historical peak. This development is in line with the well-established finding that correlation-based tests of contagion are biased upwards by the swings in the volatility level. Furthermore, as risk perceptions do not seem to have increased

Chart C Correlations across commodity returns

(left-hand scale: correlation; right-hand scale: volatility; weekly data)



Sources: Bloomberg, Thomson Reuters and ECB staff calculations.

Notes: VIX is the implied volatility of the US stock market index. The median correlation is the median of the 66 correlations among the 12 commodity returns (see footnote 2). The percentiles also refer to these 66 bilateral correlations. Latest observation refers to 13 September 2011.

2 Coffee, copper, cotton, gas, gold, heating oil, maize, silver, soybean, platinum, wheat, WTI crude oil.

3 Irwin, S.H. and Sanders, D.R., "The impact of index and swap funds on commodity futures markets", *OECD Food, Agriculture and Fisheries Working Papers*, No 27, 2010.

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Tang, K. and Xiong, W., "Index investing and the financialization of commodities", *Working Paper*, Princeton University, 2011.

4 For example, correlations between US and euro area equity market returns are normally estimated to be in the range of 0.8 to 0.9.

permanently, correlations are expected to recede from recent peaks as global risk perceptions ease. Indeed, some declines in correlations have already been observed as volatility has scaled back from the recent highs.

### Trading activity and cross-commodity return correlations

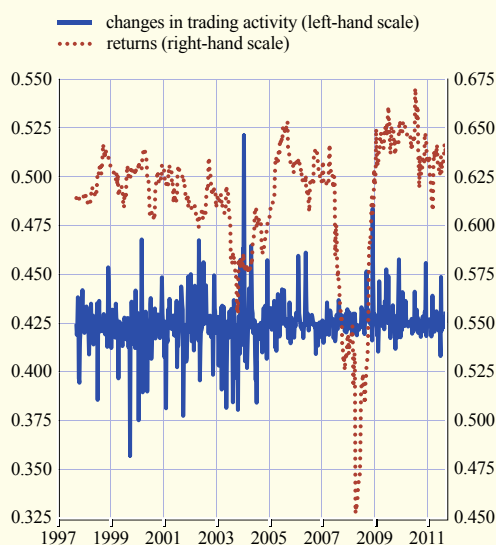
Analysing the linkage between trading activity and cross-commodity correlations is another way of assessing the impact of index funds. If index funds affect correlations through their joint purchase of the commodities in a given index, the returns of a given commodity pair should be more highly correlated precisely when the corresponding developments in trading activity are more closely correlated. The trading activity measure employed is the rate of change in the open interest, i.e. the number of outstanding futures contract for the selected commodities.<sup>5</sup>

Chart D reports results for a pair of commodities that normally exhibit a high structural correlation owing to the common influence of weather-related factors: maize and wheat.<sup>6</sup> First of all, the correlations in trading activity appear to be quite low and erratic, whereas return correlations are much higher and less volatile. Moreover, most of the spikes in correlation between the two measures of trading activity occur at times of low return correlations, pointing to the absence of a strong effect of activity on the co-movement of commodity returns.<sup>7</sup>

In a nutshell, since mid-2008 correlations among commodity returns as well as between commodity and equity returns have spiked, albeit not to levels that could alter the diversification role of commodities in international portfolios. In addition, the analysis presented here does not provide any strong justification for the often reported conclusion that trading activity has played a role in raising cross-commodity return correlations. Instead, the observed increase in correlations is more likely to be due to other factors, such as common drivers of the global macroeconomic cycle.

**Chart D Dynamic correlations between trading activity for maize and wheat and the corresponding correlation between their returns**

(correlations; weekly data)



Sources: Bloomberg, CFTC and ECB staff calculations.  
Note: Latest observation refers to 13 September 2011.

5 Trading activity is measured through the open interest in futures contracts held at US stock exchanges. Such data are collected by the U.S. Commodity Futures Trading Commission (CFTC) at weekly frequency.  
6 The same analysis has been performed for the remaining 65 commodity pairs of those commodities listed in footnote 2 in this box, with even weaker results.  
7 The sample correlation between the two correlation measures is around 0.05.

### I.3 EXCHANGE RATES

From the end of June to early October the nominal effective exchange rate of the euro, as measured against the currencies of 20 of the euro area's most important trading partners, depreciated amid rather high volatility. On 5 October the nominal effective exchange rate of the euro was 3.7% below its level at the end of June 2011 and 1.9% below its average level for 2010 (see Chart 5).

In bilateral terms, over the past three months the euro has depreciated against most major currencies. Between 30 June and 5 October the euro declined against the Japanese yen by 12.0%, the Chinese renminbi by 9.0%, the US dollar by 7.7% and the pound sterling by 4.4%. The Swiss franc, after having appreciated markedly until early September, now trades above the minimum exchange rate of CHF 1.20 per euro set by the Swiss National Bank, and on 5 October stood 1.6% lower than in late June (see Box 2). The single currency appreciated strongly vis-à-vis some other European currencies, most notably the Polish zloty and the Hungarian forint, by 10.1% and 12.3% respectively (see Table 1). Market volatility, as measured on the basis of foreign exchange option prices, increased significantly in the course of the period under review in all currency pairs and currently stands well above long-term average levels.

Between 30 June and 5 October 2011 the currencies participating in ERM II remained broadly stable against the euro, trading at, or close to, their respective central rates. The Latvian lats traded close to the weak side of the unilaterally set fluctuation band of +/-1%.

Chart 5 Euro effective exchange rate (EER-20) and its decomposition <sup>1)</sup>

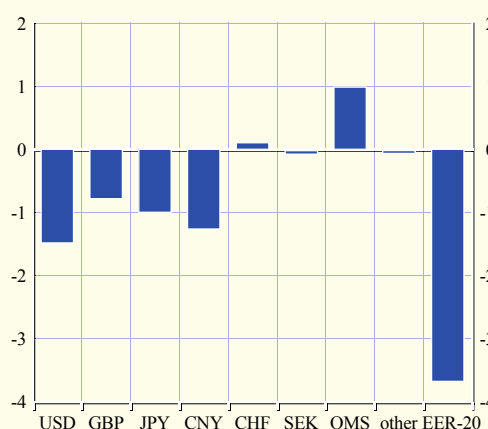
(daily data)

Index: Q1 1999 = 100



Contributions to EER-20 changes<sup>2)</sup>

From 30 June 2011 to 5 October 2011 (percentage points)



Source: ECB.

1) An upward movement of the index represents an appreciation of the euro against the currencies of 20 of the most important trading partners of the euro area (including all non-euro area EU Member States).

2) Contributions to EER-20 changes are displayed individually for the currencies of the six main trading partners of the euro area. The category "other Member States" (OMS) refers to the aggregate contribution of the currencies of the non-euro area Member States (except the pound sterling and the Swedish krona). The category "other" refers to the aggregate contribution of the currencies of the remaining six trading partners of the euro area in the EER-20 index. Changes are calculated using the corresponding overall trade weights in the EER-20 index.

**Table 1 Euro exchange rate developments<sup>1)</sup>**

(daily data; units of national currency per euro; percentage changes)

	Weight in EER-20	Level on 5 October 2011	Appreciation (+)/depreciation(-) of the euro as at 5 October 2011			
			since:		compared with: average for 2010	
			30 June 2011	1 January 2010		
US dollar	19.4	1.334	-7.7	-7.3	0.6	
Pound sterling	17.8	0.863	-4.4	-3.2	0.6	
Chinese renminbi	13.6	8.504	-9.0	-13.4	-5.2	
Japanese yen	8.3	102.3	-12.0	-23.5	-12.0	
Swiss franc	6.4	1.227	1.6	-17.5	-11.1	
Polish zloty	4.9	4.395	10.1	7.1	10.0	
Swedish krona	4.9	9.119	-0.6	-10.5	-4.4	
Czech koruna	4.1	24.81	1.9	-5.6	-1.9	
Korean won	3.9	1,586	2.8	-4.6	3.5	
Hungarian forint	3.1	298.8	12.3	10.7	8.5	
NEER <sup>2)</sup>		102.7	-3.7	-8.2	-1.9	

Source: ECB.

1) Bilateral exchange rates in descending order based on the corresponding currencies' trade weights in the EER-20 index.

2) Euro nominal effective exchange rate against the currencies of 20 of the most important trading partners of the euro area (EER-20).

## Box 2

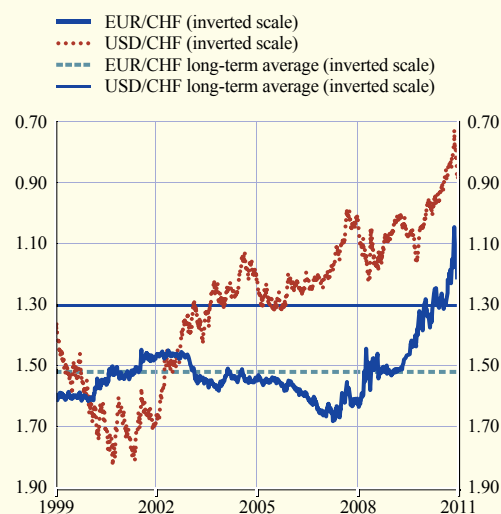
### RECENT DEVELOPMENTS IN THE EXCHANGE RATE OF THE SWISS FRANC AGAINST THE EURO

Since the beginning of the year the Swiss currency has appreciated significantly against the euro as well as other major currencies. Following the peak reached in August, the Swiss franc is currently trading above a minimum exchange rate of CHF 1.20 per euro set by the Swiss National Bank under its own responsibility on 6 September 2011. In early August the exchange rate of the Swiss currency had reached a historical high of about CHF 1.05 per euro and CHF 0.73 per US dollar. This amounted to an appreciation of around 20% against the euro and around 25% against the US dollar since the beginning of the year. Looking at longer-term developments, the exchange rate of the Swiss franc against the euro stood about 35% above its average since 1999.

The sustained appreciation of the Swiss franc during the global financial crisis seems to reflect, to a large extent, its perceived role as a safe-haven currency, amid an environment of elevated risk aversion. Moreover, the relative resilience of the Swiss economy during the crisis, a comparatively benign growth outlook and sound public finances constitute additional

#### Swiss franc exchange rate against the euro and the US dollar

(Swiss franc per currency unit)



Source: ECB.

Note: Latest observation refers to 5 October.

factors potentially accounting for the increased capital inflows observed and the strengthening of the franc. These developments were seemingly further intensified through the narrowing interest rate differential with respect to other major economies as well as expectations of continued currency appreciation.

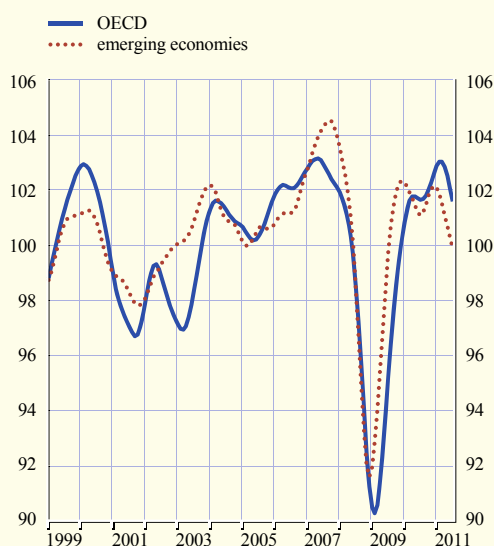
Since mid-August the Swiss currency has retreated somewhat from its all-time highs. Following the announcement of the Swiss National Bank on 6 September that it would no longer tolerate an exchange rate below CHF 1.20 per euro and that it was prepared to buy foreign currency in unlimited quantities, the Swiss franc depreciated by 8% that day and since then has remained above, but close to, the unilaterally set minimum rate. Prior to that, in early August, the Swiss National Bank had reduced the target range for the three-month Libor interest rate to between 0.00 and 0.25 percentage points, aiming for a rate as close to zero as possible, as it considered exchange rate developments to be threatening the economy and to be increasing the downside risks to price stability. Furthermore, the Swiss National Bank had repeatedly increased the supply of liquidity to the Swiss franc money market by progressively expanding sight deposits of the banking sector with the central bank from CHF 80 billion to CHF 200 billion in mid-August. To this end, reverse repo transactions and central bank bills that fell due were no longer renewed. In addition, outstanding central bank bills were repurchased, and foreign exchange swap transactions as well as repo transactions with negative interest rates were conducted. As a result of these measures, short-term interest rates fell temporarily into negative territory.

#### 1.4 OUTLOOK FOR THE EXTERNAL ENVIRONMENT

Looking ahead, while the gradual retreat of some adverse transitory factors should support world economic activity in the second half of the year, structural headwinds continue to afflict major advanced economies, constraining their growth dynamics. The renewed financial market tensions are further amplifying the adverse effects on confidence, wealth and growth. Recent stock market developments have also been characterised by heightened uncertainty and this may further delay consumption decisions as well as investment plans. Low consumer and business confidence seem to corroborate this. Accordingly, the medium-term pace of recovery could remain particularly sluggish in some major advanced economies. This is in line with the OECD's composite leading indicator – designed to anticipate turning points in economic activity relative to trend – for July, which continues to point to a slowdown in activity in most OECD countries and major non-member economies.

Chart 6 OECD composite leading indicators

(monthly data; amplitude-adjusted)



Source: OECD.  
Note: The emerging market indicator is a weighted average of the composite leading indicators for Brazil, Russia and China.



In an environment of particularly high uncertainty, risks to activity remain on the downside. These risks mainly relate to the ongoing tensions in some segments of the financial markets, as well as to continued high energy prices, protectionist pressures and the possibility of a disorderly correction of global imbalances.

## 2 MONETARY AND FINANCIAL DEVELOPMENTS

### 2.1 MONEY AND MFI CREDIT

The annual growth rate of M3 increased strongly in August 2011, while that of loans to the private sector rose modestly. To a significant extent, these developments were driven by transactions conducted through central counterparties, thereby supporting the view that the intensification of the financial and sovereign debt crisis in August has had an identifiable impact on developments in money and credit. This impact was also visible in increased holdings of overnight deposits and money market fund shares/units. Looking beyond the flows resulting from portfolio reallocation triggered by heightened financial market uncertainty, the dynamics of money and credit seem to have levelled off in the euro area, suggesting that the underlying pace of monetary expansion has stabilised at a moderate level overall.

#### THE BROAD MONETARY AGGREGATE M3

The annual growth rate of M3 increased to 2.8% in August, up from 2.1% in July (see Chart 7). This reflected a month-on-month growth rate of 1.2%, an exceptionally large increase which resulted from the third largest monthly inflow since the start of Stage Three of EMU. The particularly high levels of uncertainty seen in financial markets in August are likely to have contributed to this strong inflow in two ways: first, banks' increasing unease regarding the perceived financial soundness of their counterparties may have been mitigated by strong inter-MFI lending conducted by means of repurchase agreements, with such instruments being traded via central counterparties classified as part of the money-holding sector; and second, developments in the components of M3 point to some portfolio adjustment by the money-holding sector, with shifts out of riskier assets and into M3.

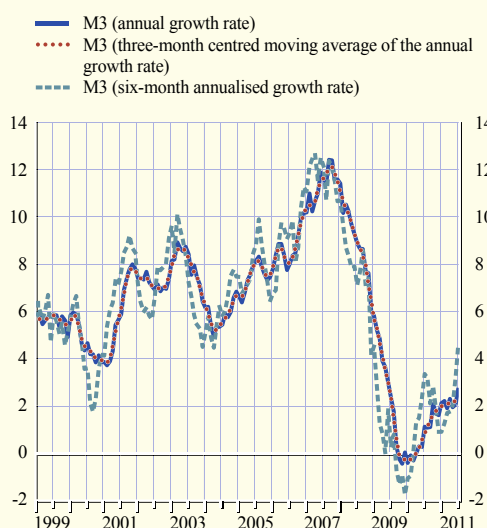
On the component side, the annual growth rate of M1 increased in August as a result of strong inflows for overnight deposits held by households, while that of other short-term deposits (i.e. M2 minus M1) declined somewhat. The annual growth rate of marketable instruments (i.e. M3 minus M2) increased strongly, with exceptionally strong inflows for repurchase agreements and, to a lesser extent, money market fund shares/units.

On the counterpart side, the annual growth rate of MFI loans to the private sector (adjusted for the impact of loan sales and securitisation activity) increased slightly to stand at 2.8% in August, up from 2.6% in the previous month. The annual growth rates of loans to households and loans to non-financial corporations remained unchanged, while that of loans to insurance corporations and pension funds increased markedly.

The main assets held by euro area MFIs (excluding the Eurosystem) increased in August, the second monthly increase in a row. This increase was fairly broadly based, with particularly strong contributions made by loans to MFIs (excluding the Eurosystem), loans to the private sector and external asset holdings.

Chart 7 M3 growth

(percentage changes; adjusted for seasonal and calendar effects)



Source: ECB.

Looking at the three-month period from June to August, the main assets of MFIs (excluding the Eurosystem) increased more strongly than over the three months to July.

### **MAIN COMPONENTS OF M3**

The annual growth rate of the narrow monetary aggregate M1 increased markedly in August, while that of other short-term deposits declined somewhat and that of marketable instruments increased strongly. Short-term deposits other than overnight deposits remained the principal contributor to the annual growth rate of M3.

The annual growth rate of M1 increased to 1.7% in August, up from 1.0% in July, reflecting the strong inflow for overnight deposits. This inflow was accounted for mainly by households. There was also a sizeable increase in currency in circulation in August.

The annual growth rate of short-term deposits other than overnight deposits declined somewhat to stand at 3.3% in August, down from 3.7% in the previous month. This reflected declines in the annual growth rates of both sub-components, but masked positive monthly flows. Inflows for such deposits were accounted for mainly by households, insurance corporations and pension funds. Developments in deposits in August are consistent with the decline observed in expectations regarding money market interest rates, which has resulted in a narrowing of the spread between the remuneration of overnight deposits and that of other short-term deposits (particularly short-term time deposits – i.e. deposits with an agreed maturity of up to two years).

The annual growth rate of marketable instruments increased strongly to stand at 5.4% in August, up from 1.2% in July. The exceptionally strong inflow seen in August was driven by repurchase agreements and money market fund shares/units. To a large extent, the trading in repurchase agreements was conducted via electronic platforms classified as non-monetary financial intermediaries other than pension funds and insurance corporations (OFIs). These transactions are, in part, likely to reflect a preference for secured interbank lending conducted through central counterparties on account of heightened uncertainty regarding the perceived financial soundness of counterparties. In addition, money market fund shares/units recorded their first significant inflow in eight months. In the current environment, these flows are likely to reflect temporary portfolio adjustments. Such transitory use of these instruments was observed during the period of exceptional portfolio shifts between 2001 and mid-2003.

The annual growth rate of M3 deposits – which comprise short-term deposits and repurchase agreements and represent the broadest monetary aggregate for which a timely sectoral breakdown is available – increased to 3.6% in August, up from 2.8% in the previous month. Significant monthly increases were observed for the M3 deposits of non-monetary financial intermediaries and households, while those of non-financial corporations remained broadly unchanged.

### **MAIN COUNTERPARTS OF M3**

As regards the counterparts of M3, the annual growth rate of MFI credit to euro area residents stood at 2.5% in August, unchanged from the previous month (see Table 2). This masks a strengthening in the growth of credit to general government and a moderation in the growth of credit to the private sector.

The strengthening in the growth of credit to general government was driven by purchases of government debt securities, which were partly offset by a decline in the annual growth rate of

Table 2 Summary table of monetary variables

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

	Outstanding amounts as a percentage of M3 <sup>1)</sup>	Annual growth rates					
		2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 July	2011 Aug.
<b>M1</b>	<b>48.8</b>	<b>7.9</b>	<b>4.9</b>	<b>3.2</b>	<b>1.7</b>	<b>1.0</b>	<b>1.7</b>
Currency in circulation	8.4	6.5	5.6	4.9	4.2	4.3	4.5
Overnight deposits	40.3	8.2	4.8	2.9	1.2	0.3	1.1
<b>M2-M1 (=other short-term deposits)</b>	<b>38.8</b>	<b>-5.1</b>	<b>-1.1</b>	<b>1.3</b>	<b>3.4</b>	<b>3.7</b>	<b>3.3</b>
Deposits with an agreed maturity of up to two years	18.9	-16.2	-8.7	-2.7	2.3	3.5	3.0
Deposits redeemable at notice of up to three months	19.9	8.4	7.2	5.4	4.5	3.9	3.5
<b>M2</b>	<b>87.6</b>	<b>1.8</b>	<b>2.2</b>	<b>2.4</b>	<b>2.4</b>	<b>2.2</b>	<b>2.4</b>
<b>M3-M2 (=marketable instruments)</b>	<b>12.4</b>	<b>-6.5</b>	<b>-3.0</b>	<b>-1.7</b>	<b>-0.4</b>	<b>1.2</b>	<b>5.4</b>
<b>M3</b>	<b>100.0</b>	<b>0.7</b>	<b>1.5</b>	<b>1.9</b>	<b>2.1</b>	<b>2.1</b>	<b>2.8</b>
<b>Credit to euro area residents</b>		<b>2.1</b>	<b>3.4</b>	<b>3.7</b>	<b>3.1</b>	<b>2.5</b>	<b>2.5</b>
Credit to general government		7.8	11.8	10.9	6.5	4.9	5.3
Loans to general government		6.5	15.5	17.7	10.7	8.3	6.3
Credit to the private sector		0.8	1.5	2.1	2.4	2.0	1.8
Loans to the private sector		1.0	1.7	2.4	2.6	2.4	2.6
Loans to the private sector adjusted for sales and securitisation <sup>2)</sup>		1.2	2.2	2.8	2.9	2.6	2.8
<b>Longer-term financial liabilities (excluding capital and reserves)</b>		<b>2.6</b>	<b>2.7</b>	<b>2.8</b>	<b>3.4</b>	<b>3.6</b>	<b>3.7</b>

Source: ECB.

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

2) Adjusted for the derecognition of loans from the MFI statistical balance sheet owing to their sale or securitisation.

Table 3 MFI loans to the private sector

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

	Outstanding amount as a percentage of the total <sup>1)</sup>	Annual growth rates					
		2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 July	2011 Aug.
<b>Non-financial corporations</b>	<b>42.1</b>	<b>-1.2</b>	<b>-0.3</b>	<b>0.6</b>	<b>1.1</b>	<b>1.6</b>	<b>1.6</b>
Adjusted for sales and securitisation <sup>2)</sup>	-	-0.7	0.6	1.5	1.9	2.2	2.2
Up to one year	24.7	-7.9	-4.6	-1.2	1.6	4.1	4.0
Over one and up to five years	18.3	-3.9	-2.6	-2.4	-2.9	-3.5	-3.1
Over five years	57.0	3.1	2.6	2.4	2.2	2.2	2.2
<b>Households<sup>3)</sup></b>	<b>46.7</b>	<b>2.8</b>	<b>2.8</b>	<b>3.1</b>	<b>3.4</b>	<b>3.0</b>	<b>3.0</b>
Adjusted for sales and securitisation <sup>2)</sup>	-	2.9	3.0	3.1	3.0	2.7	2.7
Consumer credit <sup>4)</sup>	12.0	-0.7	-0.9	-0.9	-0.9	-2.0	-1.6
Lending for house purchase <sup>4)</sup>	72.1	3.4	3.6	4.0	4.4	3.9	3.9
Other lending	15.9	2.9	2.6	2.4	2.1	2.6	2.6
<b>Insurance corporations and pension funds</b>	<b>0.9</b>	<b>-1.0</b>	<b>7.7</b>	<b>7.6</b>	<b>3.2</b>	<b>3.8</b>	<b>9.8</b>
<b>Other non-monetary financial intermediaries</b>	<b>10.3</b>	<b>2.5</b>	<b>4.7</b>	<b>7.0</b>	<b>6.0</b>	<b>3.6</b>	<b>4.6</b>

Source: ECB.

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

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

2) Adjusted for the derecognition of loans from the MFI statistical balance sheet owing to their sale or securitisation.

3) As defined in the ESA 95.

4) Definitions of consumer credit and lending for house purchase are not fully consistent across the euro area.

loans to general government. The annual growth rate of credit to general government remained high, largely reflecting the impact of the financing of earlier asset transfers to “bad bank” schemes classified as part of the government sector.

The annual growth rate of credit to the private sector declined to 1.8% in August, down from 2.0% in the previous month. This reflects MFIs’ shedding of significant holdings of both equity and debt securities and masks a strong increase in MFI loans. The monthly flow of MFI loans to the private sector (adjusted for sales and securitisation) was similar to that of loans held on MFIs’ balance sheets, suggesting that loan sales and securitisation were subdued in August. The positive monthly flow for loans to the private sector was broadly based, with a particularly large contribution by the OFI sector, reflecting interbank lending operations conducted through central counterparties.

The annual growth rate of MFI loans to non-financial corporations (adjusted for sales and securitisation) remained unchanged at 2.2% in August. Loan sales and securitisation were negligible, as in the previous month. At the same time, the gap between the annual growth rate of loans granted and that of loans remaining on MFIs’ balance sheets remained significant, reflecting the transfer of considerable amounts of loans to “bad banks” in the second half of 2010. A breakdown of loans by maturity indicates that inflows were observed for all maturities, with larger inflows for loans with maturities of more than one year. A significant share of the monthly developments in loans to non-financial corporations was accounted for by revolving loans and overdrafts. The annual growth rate of short-term loans (i.e. loans with a maturity of up to one year) has edged upwards in recent months and stood at 4.0% in August, while loans with maturities of between one and five years continued to contract. Cross-country heterogeneity in loan developments remained significant, in line with the uneven recovery in economic activity, differences in the external financing needs of the various industrial sectors and differences in the level of indebtedness of non-financial corporations in the various euro area countries.

The annual growth rates of (i) MFI loans to households adjusted for sales and securitisation and (ii) loans to that sector retained on MFIs’ balance sheets remained unchanged from the previous month at 2.7% and 3.0% respectively. Turning to the main components of household borrowing, the annual growth rate of loans for house purchase remained unchanged, while the annual growth rate of consumer credit increased somewhat (albeit remaining negative). To some extent, the weakness of consumer credit reflects a lack of willingness to embark on purchases of “big-ticket” items as a result of further muted growth in disposable income and high levels of household indebtedness. Overall, the data for August confirm the assessment that the recovery in loans to households has levelled off.

For details of developments in demand for loans on the part of euro area non-financial corporations and households, see the box entitled “The results of the euro area bank lending survey for the third quarter of 2011”.

## Box 3

## THE RESULTS OF THE EURO AREA BANK LENDING SURVEY FOR THE THIRD QUARTER OF 2011

This box summarises the main results of the euro area bank lending survey for the third quarter of 2011, which was conducted by the Eurosystem between 15 September and 27 September 2011.<sup>1</sup> Overall, euro area banks reported a considerable increase in the net tightening of credit standards in comparison with the second quarter of 2011. The increase was stronger than expected by survey participants three months earlier. This held true for both loans to non-financial corporations and loans to households for house purchase, while credit standards on consumer credit and other lending to households increased only modestly. As regards demand for loans, survey participants reported a significant decline in net demand from enterprises and an even stronger decrease in demand for loans to households for house purchase. The deterioration in both credit standards and loan demand largely reflects respondents' perceptions of increased risks to the outlook for the economy, as well as renewed strains on banks' access to funding. While expectations by survey participants point to a further deterioration in credit standards and net demand for loans to enterprises in the fourth quarter of 2011, participants in the survey do not expect any further deterioration in the case of loans to households.

## Loans and credit lines to enterprises

**Credit standards:** In the third quarter of 2011 the net percentage<sup>2</sup> of banks reporting a tightening of credit standards on loans and credit lines to enterprises rebounded markedly to 16% (compared with 2% in the previous quarter; see Chart A). The observed net tightening was stronger than expected by survey participants three months earlier (6%). At the same time, when comparing the change in the degree of net tightening with the third quarter of 2008, the period in which Lehman Brothers collapsed (64%, from 43% in the second quarter of 2008), the degree of net tightening appears more moderate, both in terms of level and in terms of change. Across maturities, credit standards on both short-term loans (11%, up from -3% in the previous quarter) and long-term loans (20%, from 8%) were tightened in net terms. In addition, the increase in the net tightening of credit standards applied both to loans to small and medium-sized enterprises (SMEs; 14%, from 3%) and to loans to large firms (19%, from 3%).

Looking at the factors underlying the overall net tightening in credit standards, factors related to the perception of risks, in particular regarding the general economic outlook and the industry or firm-specific outlook, were reported to have contributed significantly to the tightening of credit standards (16% and 22% respectively, from 11% and 10% in the second quarter). This mainly reflects the moderation in the pace of economic growth and business confidence observed in the third quarter of 2011. In addition, reflecting renewed strains on banks' access to funding, banks' cost of funds and balance sheet constraints contributed more strongly to the net tightening of credit standards than in the second quarter. This held true for all three components of this factor, namely banks' costs related to their capital position (12%, from 6%), banks' ability to access market financing (20%, after 9%) and banks' liquidity positions (14%, from 9%). By contrast,

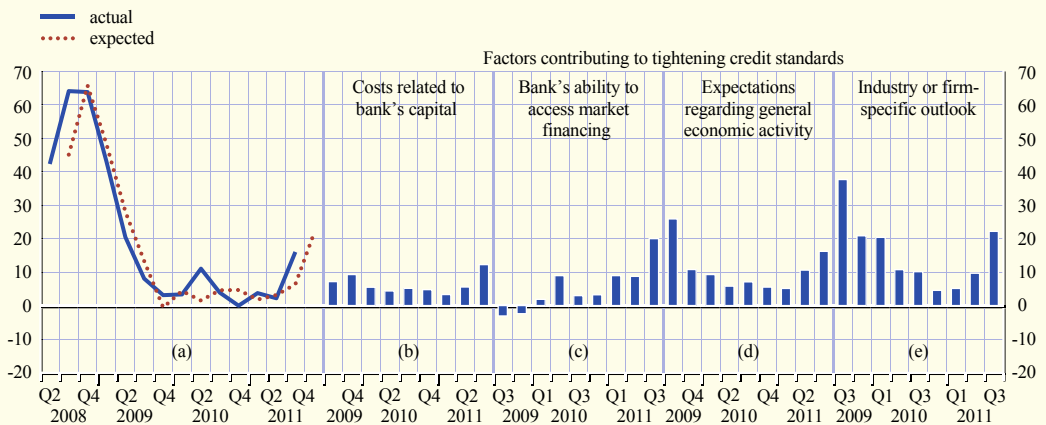
1 The cut-off date of the survey was 27 September 2011. A comprehensive assessment of its results was published on the ECB's website on 6 October 2011.

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



**Chart A Changes in credit standards applied to the approval of loans or credit lines to enterprises**

(net percentages)



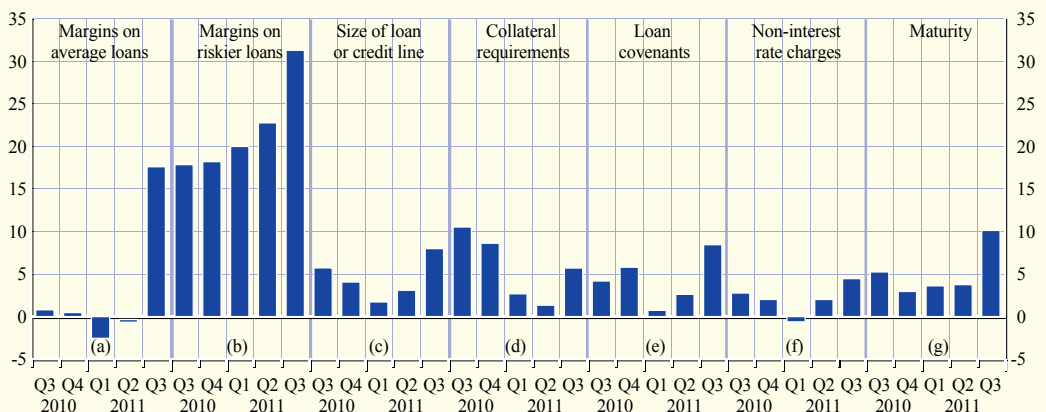
Notes: In panel (a), the net percentages refer to the difference between the sum of the percentages for “tightened considerably” and “tightened somewhat” and the sum of the percentages for “eased somewhat” and “eased considerably”. The net percentages for the questions related to the factors are the difference between the percentage of banks reporting that the given factor contributed to tightening and the percentage reporting that it contributed to easing. “Actual” values refer to the period in which the survey was conducted. “Expected” values refer to the expected changes over the next three months.

as counterbalancing factors, competitive pressures from other banks and non-banks were reported to have had an easing effect and a broadly unchanged impact respectively (-3% and 1% respectively, after -9% and -1%).

The developments in lending terms and conditions reported by euro area banks generally reflect the net tightening of credit standards in the third quarter of 2011 (see Chart B). The widening of margins visibly affected average (18%, from 0%) but also riskier loans (31%, from 23%), whereas only the margins on riskier loans had been widened in the second quarter. Other terms and conditions (e.g. non-interest charges, size and maturity, and collateral requirements) were also tightened in the third quarter of 2011, but to a smaller extent than margins.

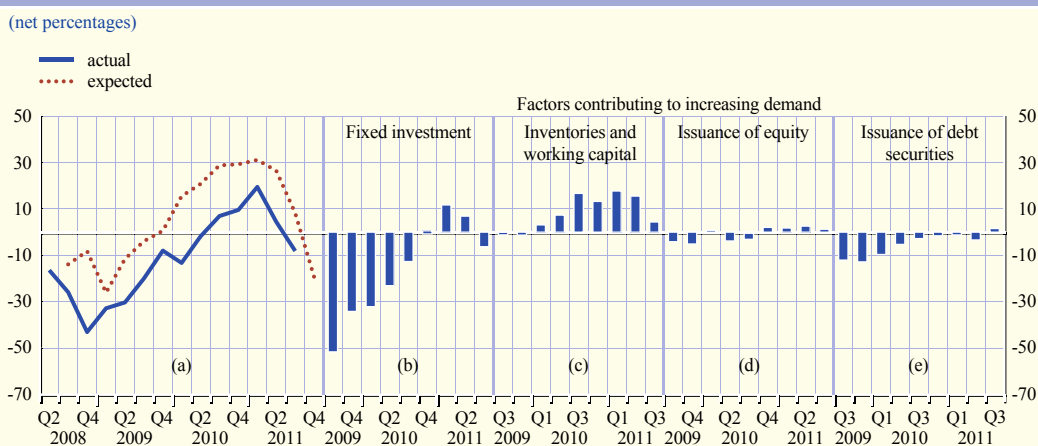
**Chart B Changes in terms and conditions for approving loans or credit lines to enterprises**

(net percentages of banks reporting tightening terms and conditions)



Note: The net percentages refer to the difference between the sum of the percentages for “tightened considerably” and “tightened somewhat” and the sum of the percentages for “eased somewhat” and “eased considerably”.

Chart C Changes in demand for loans or credit lines to enterprises



Notes: In panel (a), the net percentages refer to the difference between the sum of the percentages for “increased considerably” and “increased somewhat” and the sum of the percentages for “decreased somewhat” and “decreased considerably”. The net percentages for the questions related to the factors are the difference between the percentage of banks reporting that the given factor contributed to an increase in demand and the percentage reporting that it contributed to a decline. “Actual” values refer to the period in which the survey was conducted. “Expected” values refer to the expected changes over the next three months.

Looking forward, on balance, euro area banks expect a further increase in the net tightening of credit standards for loans to enterprises in the fourth quarter of 2011 (to 22%). This is expected to affect primarily loans to large firms, as well as long-term loans.

**Loan demand:** In the third quarter of 2011 enterprises’ net demand for loans declined for the first time since the second quarter of 2010. The decline in net demand was significant (-8%, from 4% in previous quarter; see Chart C) and largely reflected the moderation in the pace of economic growth in the euro area and perceptions of increased risks to the overall and sector-specific situation. Moreover, it appeared to be balanced across firm size (-3% for both SMEs and large firms), whereas net demand from SMEs had been stronger than that from large firms in the second quarter (6% and 0% respectively). The decline in net demand for loans was broad-based across loan maturities (-4% for short-term and long-term loans) according to reporting banks.

According to survey participants, the decline in net demand appeared to be driven mainly by lower financing needs for fixed investment (-6%, down from 7% in the previous quarter), as well as for mergers and acquisitions (-4%, from 5%), and was thus in line with generally more modest economic growth prospects. Financing needs for inventories and working capital were also lower (4%, from 16%), but continued to contribute to an increase in demand for loans.

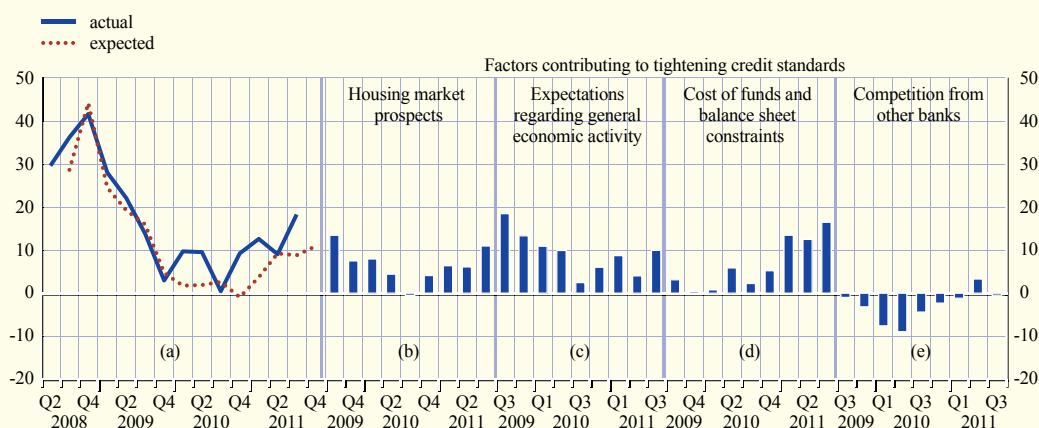
Looking forward, banks expect demand for corporate loans to decline further in the fourth quarter of 2011 (-19% in net terms). That would apply to both SMEs and large firms. As regards maturities, it is expected that this decline would affect long-term loans (-22%) more markedly than short-term loans (-11%).

#### Loans to households for house purchase

**Credit standards:** In the third quarter of 2011 the net percentage of banks reporting a tightening of credit standards for loans to households for house purchase increased significantly, to 18%,

**Chart D Changes in credit standards applied to the approval of loans to households for house purchase**

(net percentages)



Note: See notes to Chart A.

from 9% in the previous quarter (see Chart D), and by more than expected at that time (9%). According to survey participants, the increase in the degree of net tightening in the third quarter was again driven largely by banks' cost of funds and balance sheet constraints (a net percentage of 17% of the survey participants reported a contribution to the tightening of credit standards that stemmed from this factor, up from 13% in the previous quarter). In addition, banks' risk perceptions regarding the outlook for general economic activity (10%, from 4%) and for housing market prospects (11%, from 6%) contributed considerably to the net tightening of credit standards on housing loans.

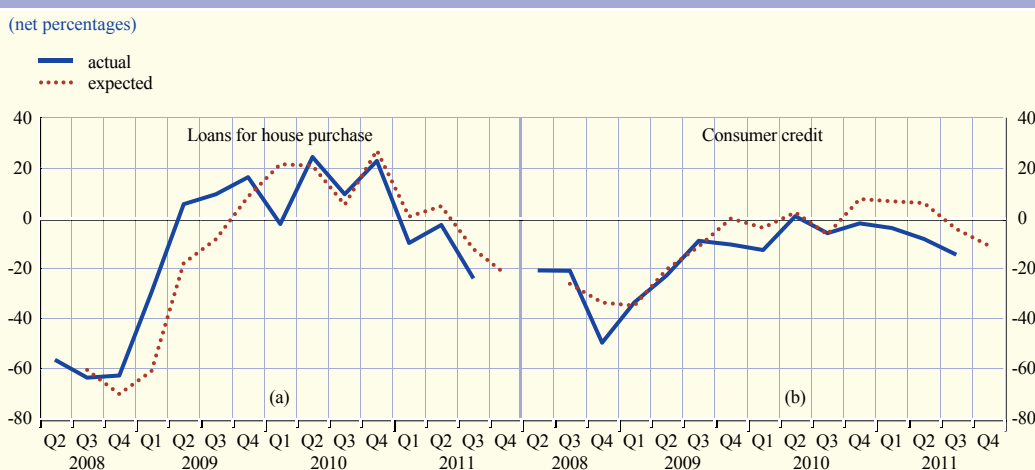
The significant increase in the degree of net tightening of credit standards on housing loans is only partly reflected in the reported factors underlying this development. The net percentage of banks reporting an increase in margins on average loans declined to 10% (from 13% in the second quarter). Similarly, the net percentage of euro area banks reporting an increase in margins on riskier loans decreased to 14% (from 18%). At the same time, non-price terms and conditions, notably the maturity of the loans (7%, up from 1% in the second quarter), appear to have contributed to the further tightening of credit standards.

Looking ahead, banks expect a somewhat lower degree of net tightening of credit standards on loans for house purchase in the fourth quarter of 2011 (11%).

**Loan demand:** In parallel to the decline in net loan demand by firms and reflecting the moderation in economic growth, participating banks reported a substantial decline in the net demand for housing loans (-24%, from -3%; see Chart E). This decline appeared to be driven mainly by a deterioration of both housing market prospects (-23%, from -5%) and consumer confidence (-24%, from -4%).

Looking forward, banks expect demand for housing loans to continue to decrease on a similar scale in the fourth quarter (-22% in net terms).

Chart E Changes in demand for loans to households for house purchase and consumer credit

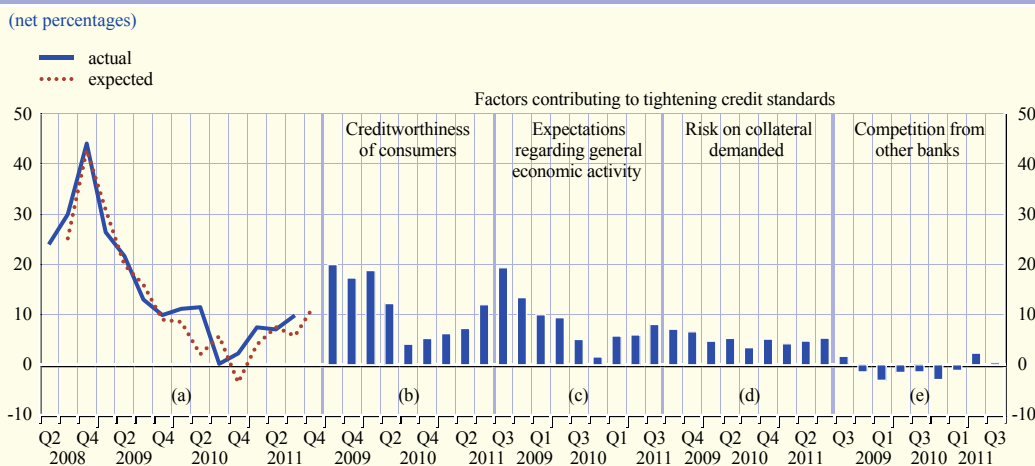


Notes: The net percentages refer to the difference between the sum of the percentages for “increased considerably” and “increased somewhat” and the sum of the percentages for “decreased somewhat” and “decreased considerably”. “Actual” values refer to the period in which the survey was conducted. “Expected” values refer to the expected changes over the next three months.

### Consumer credit and other lending to households

**Credit standards:** For the third quarter of 2011, euro area banks reported a moderate increase in the degree of net tightening of credit standards (10%, from 7%; see Chart F). Factors driving this net tightening were a combination of supply-side factors (i.e. cost of funding and balance sheet constraints) and risk perceptions (related to the economic outlook and consumers’ creditworthiness). As for housing loans, the increase in the net tightening did not translate into an increase in price terms and conditions. The net percentage of banks reporting an increase in their margins actually decreased slightly in the third quarter, while the contribution of non-price terms and conditions has hardly changed in comparison with the previous survey round.

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



Note: See notes to Chart A.

Looking forward, in net terms, 12% of the banks expect credit standards on consumer credit and other lending to households to tighten somewhat further in the fourth quarter of 2011.

**Loan demand:** In the third quarter of 2011 net demand for consumer credit was reported to have declined further (-15% in net terms, from -8% in the previous quarter; see Chart E). This was mainly due to lower consumer confidence and spending on durable consumer goods.

Looking ahead, banks expect the decline in demand for consumer credit to continue in the fourth quarter of 2011 (at -11% in net terms).

### Ad hoc questions on the impact of the financial turmoil

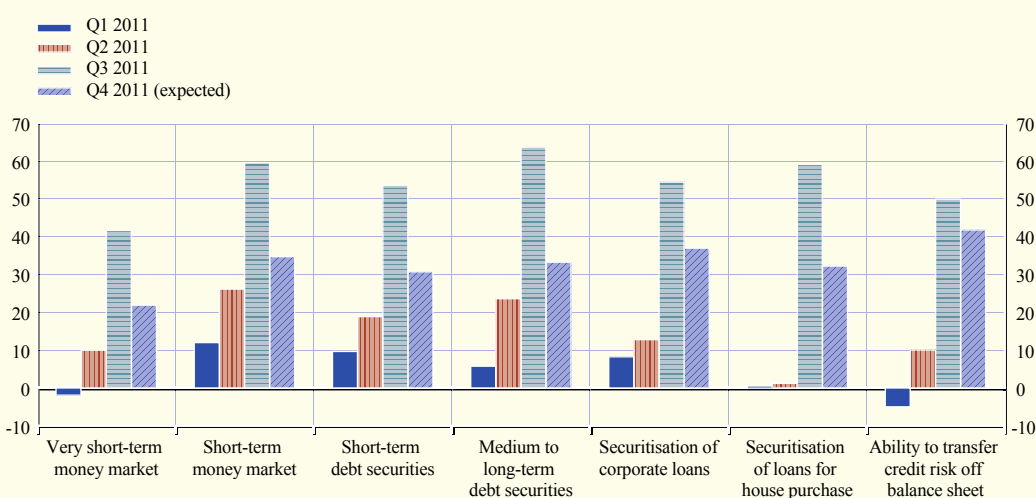
As in previous survey rounds, the October 2011 survey contained an ad hoc question aimed at assessing the extent to which the financial market tensions affected banks' access to the wholesale funding market in the third quarter of 2011, and the extent to which they might still have an effect in the fourth quarter.

On balance, euro area banks reported a substantial deterioration of their access to money markets, both for very short maturities<sup>3</sup> and for maturities of more than one week, as well as in their issuance of debt securities across all maturities (see Chart G). In addition, conditions for securitisation appeared to have deteriorated considerably in the third quarter of 2011, both for true-sale securitisation and for banks' ability to transfer risks off their balance sheets (synthetic securitisation). At the same time, looking forward, euro area banks expect their access to wholesale funding to deteriorate less markedly in the fourth quarter of the year.

3 Maturities of less than one week.

**Chart G Change in the access to wholesale funding over the past three months**

(net percentages of banks reporting deteriorated market access)



Note: The net percentages are defined as the difference between the sum of the percentages for "deteriorated considerably" and "deteriorated somewhat" and the sum of the percentages for "eased somewhat" and "eased considerably".

Turning to the other counterparts of M3, the annual growth rate of MFIs' longer-term financial liabilities (excluding capital and reserves) remained broadly unchanged, standing at 3.7% in August, up from 3.6% in July. This masked further strengthening in the annual growth rate of longer-term MFI debt securities, which was offset by a slight decline in the annual growth rate of longer-term time deposits. The positive monthly flow for longer-term MFI debt securities resulted from MFIs selling their holdings of MFI debt securities to the money-holding sector. August saw the 11th consecutive monthly inflow for capital and reserves, bringing the total increase in this position over the last 12 months to €151 billion.

The annual inflow for MFIs' net external asset position increased to €190 billion in August, up from €166 billion in July (see Chart 8). This was the result of a monthly inflow of €17 billion, which would be consistent with non-residents acquiring euro area assets from the euro area money-holding sector. From an overall balance sheet perspective, these monthly developments were driven by expansionary (rather than contractionary) developments, as banks mainly granted more loans and incurred more deposit liabilities vis-à-vis non-residents.

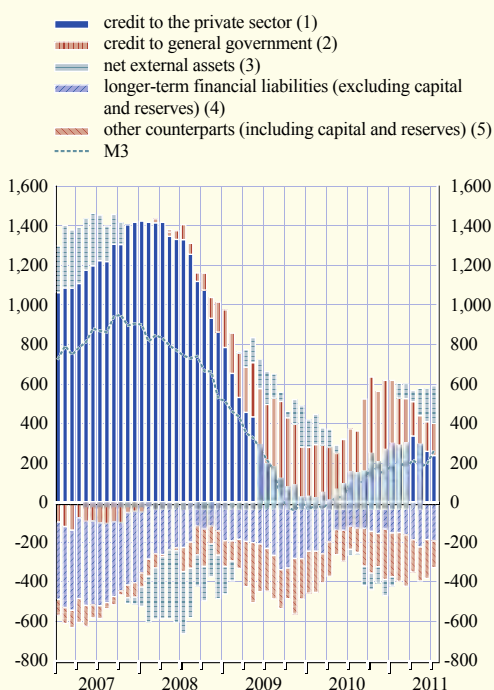
Overall, looking beyond the flows resulting from portfolio reallocation triggered by heightened financial market uncertainty, the latest data point to the dynamics of underlying money and credit stabilising in recent months at moderate rates of growth. At the same time, it should be recognised that the intensification of the financial and sovereign debt crisis in August has had an identifiable impact on developments in money and credit. However, monetary data for August are also consistent with further increases in the provision of credit to the non-financial private sector by euro area MFIs.

## 2.2 SECURITIES ISSUANCE

*The annual growth of debt securities issuance by euro area residents decreased slightly to 3.8% in July 2011, amid widespread efforts to improve countries' fiscal positions and a continued consolidation of MFIs' balance sheets, which offset a pick-up of debt securities issuance by non-financial corporations. At the same time, the annual growth rate of quoted share issuance increased slightly to 1.8%. The period under review with respect to issuance activity does not cover the most recent financial tensions since August, which are likely to have significantly affected market-based funding in some sectors.*

Chart 8 Counterparts of M3

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



Source: ECB.

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



## DEBT SECURITIES

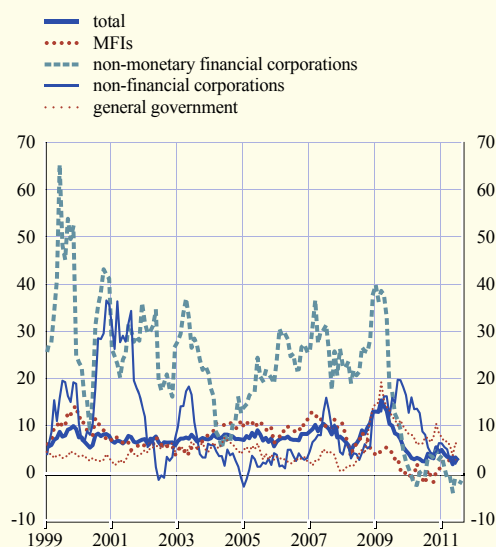
In July 2011 the annualised rate of growth in debt securities issued by euro area residents decreased slightly to 3.8%, from 3.9% in the previous month (see Table 4). This overall development was driven mainly by issuance of long-term fixed rate debt securities, while issuance of short-term securities continued to decline, as did issuance of long-term floating rate securities. Looking at short-term trends, in July 2011 the seasonally adjusted annualised six-month growth rate of debt securities issuance fell to 2.6%, from 3.3% in June (see Chart 9). This decline was mainly due to a slowdown in the rate of growth in debt issuance by MFIs and the government sector.

Since the beginning of 2010, the contraction in the issuance of short-term securities has been more than compensated for by growth in the issuance of debt securities with fixed long-term rates. This trend continued in July 2011. The long-term floating rate segment of the market showed signs of a moderate recovery at the end of 2010 and at the beginning of 2011. However, this development was not sustained. In July 2011 issuance of long-term debt securities with floating rates declined slightly, continuing a trend of very weak readings that started in March this year.

The overall growth rate of debt securities issuance in July conceals diverging developments across sectors. The annual growth rate of debt securities issued by the general government sector edged

Chart 9 Sectoral breakdown of debt securities issued by euro area residents

(six-month annualised growth rates; seasonally adjusted)



Source: ECB.

Table 4 Securities issued by euro area residents

Issuing sector	Amount outstanding (EUR billions) 2011 July	Annual growth rates <sup>1)</sup>					
		2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 June	2011 July
<b>Debt securities</b>	<b>16,240</b>	<b>3.4</b>	<b>3.6</b>	<b>3.7</b>	<b>3.5</b>	<b>3.9</b>	<b>3.8</b>
MFIs	5,371	-0.6	-0.1	0.6	1.1	1.7	1.8
Non-monetary financial corporations	3,270	0.9	1.3	1.8	0.8	0.7	0.9
Non-financial corporations	850	10.6	8.5	6.3	3.9	4.1	4.7
General government	6,749	7.6	7.5	7.3	6.9	7.3	6.8
<i>of which:</i>							
Central government	6,161	7.3	7.1	6.7	6.1	6.5	6.2
Other general government	588	11.0	12.4	13.0	15.8	16.1	13.3
<b>Quoted shares</b>	<b>4,523</b>	<b>1.8</b>	<b>1.7</b>	<b>1.3</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>
MFIs	459	5.2	6.6	6.4	7.5	10.2	12.2
Non-monetary financial corporations	326	4.3	3.3	1.8	2.6	3.0	3.3
Non-financial corporations	3,739	0.9	0.8	0.6	0.5	0.4	0.4

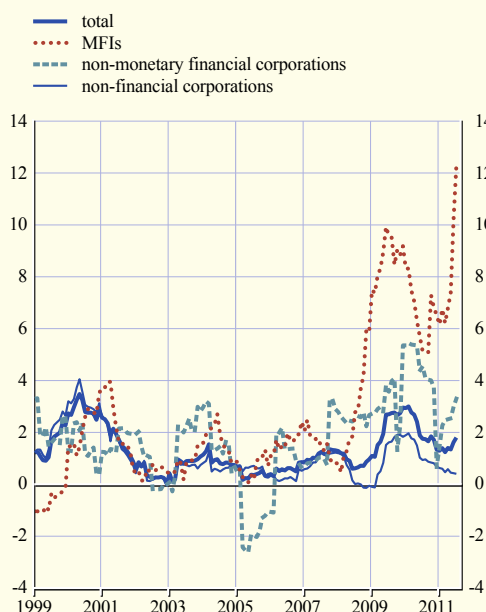
Source: ECB.

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

down to 6.8% in July 2011, compared with 7.3% in June. By contrast, the annual growth rate of debt securities issued by non-financial corporations rose to 4.7% in July, from 4.1% in June. This increase in the growth of debt securities issuance by the corporate sector may partly be explained by relatively tight bank lending standards at a time when financial conditions in the debt markets were still favourable. However, issuance activity by the corporate sector still remains far below the peaks reached in 2009 and 2010, and may have been affected by the recent intensification of financial market stress. The annual growth rate of debt securities issued by MFIs remained broadly unchanged at 1.8% in July. This figure is high in comparison with the extremely weak readings observed during most of 2010 and early 2011. More recently, constraints on banks' access to funding in connection with the intensification of tensions in sovereign bond markets are likely to have brought this gradual recovery to a halt. Issuance activity by financial corporations other than MFIs increased slightly, to 0.9% in July 2011, compared with 0.7% in June.

**Chart 10 Sectoral breakdown of quoted shares issued by euro area residents**

(annual growth rates)



Source: ECB.  
Note: Growth rates are calculated on the basis of financial transactions.

### QUOTED SHARES

The annual growth rate of quoted share issuance by euro area residents increased somewhat, to 1.8% in July 2011, mainly driven by increased issuance on the part of MFIs and financial corporations other than MFIs. The annual rate of growth in equity issuance by MFIs rose to 12.2% in July 2011, from 10.2% in June (see Chart 10). Such equity issuance by euro area MFIs supported the ongoing efforts to strengthen balance sheets and replenish capital bases. At the same time, the annual growth rate of quoted shares issued by financial corporations other than MFIs continued to increase in July, to 3.3%. The annual growth of quoted shares issued by non-financial corporations remained broadly unchanged at 0.4% in July 2011.

### 2.3 MONEY MARKET INTEREST RATES

*Money market interest rates remained broadly unchanged between early September and early October 2011. In the ninth maintenance period of 2011, which began on 14 September, the EONIA stood at a relatively low level for the first two days, before increasing to stand slightly closer to the main refinancing rate than it had during the previous maintenance period.*

Unsecured money market interest rates remained broadly unchanged between early September and early October 2011. On 5 October the one-month, three-month, six-month and twelve-month EURIBOR stood at 1.35%, 1.56%, 1.76% and 2.08% respectively – i.e. 1, 3, 3 and 2 basis points higher than the levels observed on 7 September. Consequently, the spread between the

twelve-month and one-month EURIBOR – an indicator of the slope of the money market yield curve – also remained broadly unchanged, standing at 73 basis points on 5 October (see Chart 11).

The three-month EONIA swap rate stood at 0.73% on 5 October, 3 basis points lower than on 7 September. The corresponding unsecured rate increased by 3 basis points to stand at 1.56% on 5 October. As a result, the spread between the unsecured three-month EURIBOR and the three-month EONIA swap rate increased by 5 basis points to stand at 82 basis points on 5 October.

The interest rates implied by the prices of three-month EURIBOR futures maturing in December 2011 and March, June and September 2012 stood at 1.24%, 1.11%, 1.06% and 1.05% respectively on 5 October, representing increases of 2 and 1 basis points and decreases of 1 and 3 basis points respectively by comparison with the levels observed on 7 September.

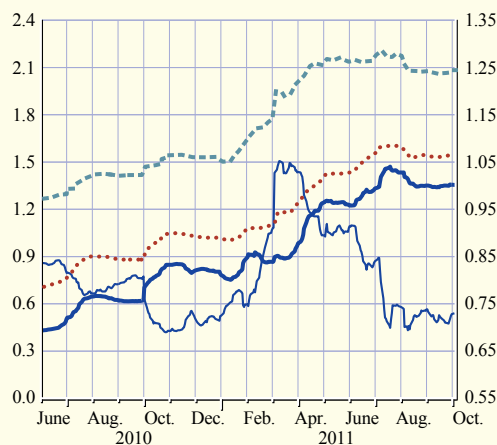
Between 7 September and the end of the eighth maintenance period of the year on 13 September, the EONIA remained stable at around 0.85% amid continued excess liquidity, before spiking to stand at 1.21% on the last day of the maintenance period. The EONIA was somewhat volatile during the remainder of September, continuing the pattern observed since the beginning of the year. On 14 September the EONIA fell sharply to stand at 0.93%, but as of 16 September it fluctuated between 1.05% and 1.10%, closer to the main refinancing rate than in the previous maintenance period. Overall, the EONIA reflected a combination of banks' desire to fulfil their reserve requirements early in the maintenance period and the overall amount of excess liquidity. On 5 October the EONIA stood at 0.97%.

The Eurosystem conducted a number of refinancing operations between 7 September and 5 October. On 13 September it conducted a fine-tuning operation in which €167.7 billion was absorbed in order

**Chart 11 Money market interest rates**

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

- one-month EURIBOR (left-hand scale)
- ... three-month EURIBOR (left-hand scale)
- - - twelve-month EURIBOR (left-hand scale)
- spread between twelve-month and one-month EURIBOR (right-hand scale)

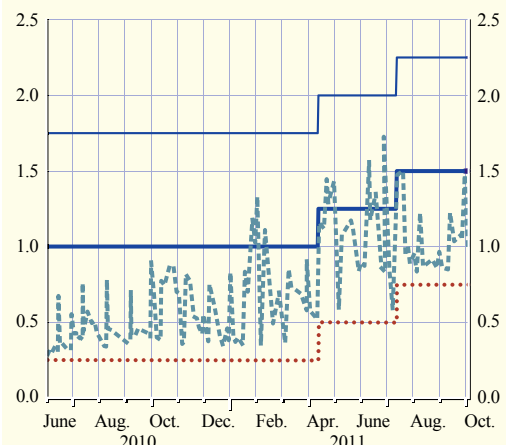


Sources: ECB and Thomson Reuters.

**Chart 12 ECB interest rates and the overnight interest rate**

(percentages per annum; daily data)

- fixed rate in the main refinancing operations
- ... interest rate on the deposit facility
- - - overnight interest rate (EONIA)
- interest rate on the marginal lending facility



Sources: ECB and Thomson Reuters.

to counter a liquidity surplus that emerged at the end of the eighth maintenance period of the year. In the main refinancing operations of the ninth maintenance period, which were conducted on 13, 20 and 27 September and 4 October, the Eurosystem allotted €163.8 billion, €201.2 billion, €208.3 billion and €198.8 billion respectively. The Eurosystem also conducted two longer-term refinancing operations in September, both as fixed rate tender procedures with full allotment: a special-term refinancing operation on 13 September with a maturity of one maintenance period (in which €54.2 billion was allotted); and a three-month longer-term refinancing operation on 28 September (in which €140.6 billion was allotted). The Eurosystem also conducted four one-week liquidity-absorbing operations on 13, 20 and 27 September and 4 October as variable rate tender procedures with a maximum bid rate of 1.50%. Moreover, with these operations, the Eurosystem also absorbed in full the liquidity provided by means of purchases carried out under the Securities Markets Programme.

The ninth maintenance period of the year, which began on 14 September, was characterised by high levels of excess liquidity, with average daily recourse to the deposit facility standing at €154 billion on 5 October.

The decentralised distribution of central bank liquidity within the Eurosystem in the context of tensions in the interbank money market is reflected in the balances of euro area NCBs vis-à-vis the ECB in the payment system TARGET2. Box 4 addresses this issue in more detail.

#### Box 4

#### TARGET2 BALANCES OF NATIONAL CENTRAL BANKS IN THE EURO AREA

Large cross-border payment flows between banks in the euro area are a normal feature of Monetary Union, and a system such as TARGET2<sup>1</sup> is essential for the smooth processing of those payments. The settlement of cross-border payment flows in central bank money creates balances for each NCB that is connected to TARGET2.<sup>2</sup> The cross-border payment flows reflect transactions which are initiated by private entities (i.e. credit institutions, corporates or individuals) in most cases. The TARGET2 balances of euro area NCBs vis-à-vis the ECB that emerge from such cross-border interbank payment flows also reflect the decentralised distribution of central bank liquidity within the Eurosystem.<sup>3</sup> Indeed, banking communities in some countries that face net payment outflows need more central bank liquidity than those in other countries where commercial bank money is flowing in. The uneven distribution of central bank liquidity

1 TARGET2 (like its predecessor TARGET prior to November 2007, which was phased out by May 2008) is the Eurosystem's real-time gross settlement system. It stands for "Trans-European Automated Real-time Gross settlement Express Transfer system". Via TARGET2, NCBs provide payment and settlement services for participants in the European Economic Area (typically credit institutions and other market infrastructures). This box focuses on the euro area.

2 All NCBs in the euro area are connected to TARGET2. There are no constraints on the size of their TARGET2 balances vis-à-vis the ECB, and those balances can be either positive or negative. The NCBs of non-euro area EU countries can also elect to connect to TARGET2. Given that they are not part of the currency area, these NCBs have to maintain a positive balance vis-à-vis the ECB. The sum of all balances (i.e. those of the euro area NCBs, the non-euro area NCBs and the ECB) is zero. See the quarterly annex to the Monthly Bulletin (last published in September 2011) and the ECB's Annual Reports for more information on TARGET2.

3 See also the press release on "Bundesbank TARGET2 balances" issued by the Deutsche Bundesbank on 22 February 2011; the box entitled "The dynamics of the Bundesbank's TARGET2 balance", *Monthly Report*, Deutsche Bundesbank, March 2011; Bindseil, U. and König, P.J. "The economics of TARGET2 balances", *SFB 649 Discussion Papers*, No 2011-35, Humboldt University Berlin, 2011; and Bindseil, U., Cour-Thimann, P. and König, P.J., "Target2 and cross-border interbank payments during the financial crisis", *CEifo Forum*, special issue, Ifo Institute for Economic Research, Munich, forthcoming.

within the Eurosystem provides stability, as it allows financially sound banks – even those in countries under financial stress – to cover their liquidity needs, thereby contributing to the effective transmission of the ECB’s interest rate decisions to the wider euro area economy, with a view to maintaining price stability in the euro area over the medium term.<sup>4</sup>

This box briefly presents the TARGET2 balances of NCBs in the euro area, explains why some balances increased during the financial crisis and looks at how this relates to the pattern of central bank liquidity provision across the countries of the euro area.

### TARGET2 balances increased during the financial crisis

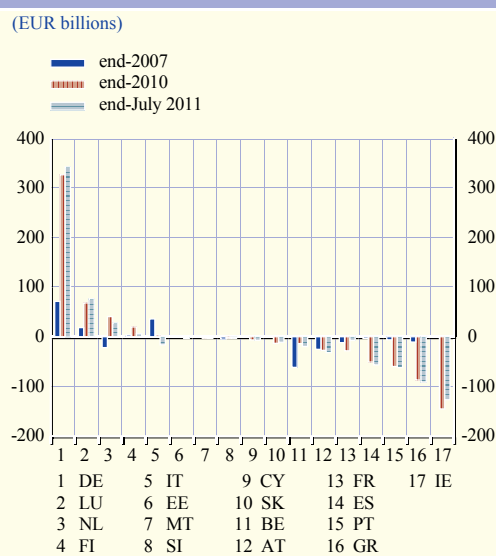
The settlement of cross-border payment flows between banks in the euro area results in intra-Eurosystem obligations, which are aggregated and netted out at the end of each business day. This results in each NCB having either a claim (i.e. a positive TARGET2 balance) or a liability (i.e. a negative TARGET2 balance) vis-à-vis the ECB, which is the central counterparty (see Chart A).

NCBs have usually displayed non-zero TARGET2 balances vis-à-vis the ECB. This can be seen from the NCBs’ balance sheets, which are published regularly. The sum of all the positive balances of euro area NCBs (or, alternatively, the sum of all the negative balances) stood at around €100 billion prior to mid-2007.<sup>5</sup> TARGET2 balances have generally increased during the financial crisis (see Chart A).

The increase seen in the TARGET2 liabilities of some countries’ NCBs vis-à-vis the ECB during the financial crisis is a consequence of funding tensions in those countries’ banking communities and the ECB’s accommodation of the ensuing liquidity needs.

Before the financial crisis, banks in these countries had relatively easy access to private funds. Notably, they received funds from abroad (e.g. in the form of cross-border interbank loans, direct investment or deposits) that broadly compensated for the payment outflows associated with net imports of goods and services or the acquisition of assets abroad. The fact that such countries had broadly

Chart A TARGET2 balances of NCBs



Source: NCBs.

4 See also the box entitled “The Eurosystem’s balance sheet in times of financial market tension”, *Monthly Bulletin*, ECB, September 2011.

5 See the NCBs’ Annual Reports and balance sheet statistics. For instance, the TARGET2 balance of the Deutsche Bundesbank is published in the monthly series “EU8148”. There is no single database grouping together the TARGET2 balances of all NCBs, but an imperfect proxy can be calculated on the basis of the IMF’s International Financial Statistics as the sum of the monthly series “net claims on the Eurosystem” minus the difference between “currency issued” (which represents an NCB’s share in banknote issuance based on its share in the ECB’s capital) and “currency put in circulation” (which is the actual amount of banknotes issued by an NCB). For instance, this difference is structurally negative for Germany and positive for France.

balanced cross-border payment flows settled in central bank money meant that their respective NCBs maintained non-zero but, all in all, neutral TARGET2 balances.

As a result of the financial crisis, private money is no longer flowing into the banking communities of those countries in quantities sufficient to compensate for their payment outflows. Access to the interbank money market is impaired and cross-border loans to these countries have dried up, while previously received loans need to be repaid. In addition, banks' funding tensions are being exacerbated by capital withdrawals of the private sector. The ensuing net payment flows out of those banking communities settled in central bank money result in their respective NCBs displaying, in cumulative terms, liabilities in TARGET2. At the same time, the NCBs of countries which are net recipients of those payment flows display claims in TARGET2.

### Link between TARGET2 balances and the provision of central bank liquidity

The financial crisis has led to shifts both in the pattern of private payment flows across the euro area,<sup>6</sup> and, simultaneously, in the pattern of liquidity provision by NCBs.

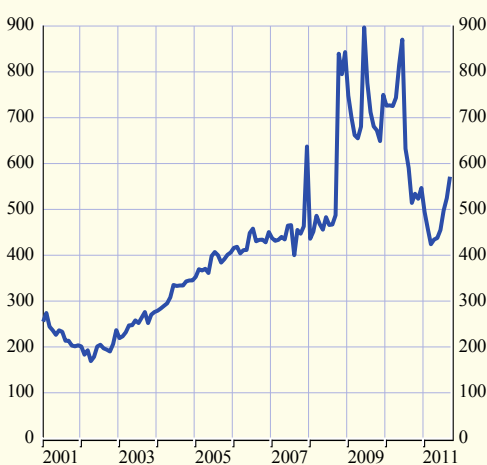
Banking communities that face net payment outflows settled in central bank money need more central bank liquidity than usual. Their NCBs provide liquidity (either in the form of lending operations or in the form of asset purchases) in amounts larger than those normally needed to cover the banks' liquidity needs. Those NCBs' balance sheets display increased liquidity provision through Eurosystem lending operations on the asset side and liabilities vis-à-vis the ECB in TARGET2 (see Chart C, left-hand panel). The overall size of the Eurosystem lending operations has increased during the financial crisis (see Chart B), and banks with larger liquidity needs have increased their participation in such operations. The distribution of liquidity within the Eurosystem provides stability, as it allows financially sound banks – even those in countries under financial stress – to cover their liquidity needs, thereby contributing to the effective transmission of the ECB's interest rate decisions to the wider euro area economy, with a view to maintaining price stability in the euro area over the medium term.

### A positive TARGET2 balance does not imply constraints in the supply of credit to the respective economy, but is a sign of the availability of ample bank liquidity

Although there is a link between TARGET2 balances and the distribution of central bank liquidity across euro area NCBs, this has no adverse implications for the provision of credit to households and firms in specific countries.

Chart B Liquidity provision in the Eurosystem monetary policy operations to euro area counterparties

(EUR billions; end-of-month data)



Source: ECB.  
Note: Last observation: end-September 2011.

<sup>6</sup> This shift has essentially occurred within the euro area; the euro area's current account and financial account balances have remained broadly unchanged. See also Box 6, entitled "Developments in the euro area balance of payments to March 2011", *Monthly Bulletin*, ECB, June 2011, and Chapter 7 of the "Euro area statistics" section in the *Monthly Bulletin*.



Chart C Stylised balance sheets of NCBs with negative, positive and neutral TARGET2 balances

NCB with a negative TARGET2 balance		NCB with a positive TARGET2 balance		NCB with a neutral TARGET2 balance	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Lending operations	Banknotes	Lending operations	Banknotes	Lending operations	Banknotes
	CA and deposits	TARGET2 claim	CA and deposits		CA and deposits
Other (including financial assets)	TARGET2 liability		Other (including financial assets)	Other	Other (including financial assets)
	Other				

Source: ECB.

Notes: These are stylised representations of the balance sheets of NCBs and do not reflect actual data.

On the asset side, the "Other" category includes, in particular, financial assets, gold reserves and potential intra-Eurosystem claims that relate to proportionately lower issuance of banknotes relative to the NCBs' shares in the ECB's capital.

On the liability side, "Banknotes" include banknotes in circulation (proportionate to the NCBs' shares in the ECB's capital). The category "CA and deposits" corresponds to the banks' liquidity holdings at their respective NCB to essentially comply with the minimum reserve requirements, as well as the banks' deposits at the deposit facility and liquidity held in the form of fixed-term deposits. The "Other" category includes: capital and reserves; provisions and revaluation accounts; other liabilities (including those to euro area residents such as government deposits, and intra-Eurosystem liabilities that are related to proportionately larger issuance of banknotes relative to the NCBs' share in the ECB's capital, which is sizeable only in the middle panel).

It would be wrong to believe that TARGET2 liabilities that result from the provision of relatively large amounts of liquidity to banks in some countries have a negative impact on bank lending in other countries. Rather, banks in countries where the NCB displays a positive TARGET2 balance (see Chart C, middle panel) tend to be recipients of cross-border payment flows from other countries. Banks in such countries need less central bank liquidity than would otherwise be the case in order to continue lending to households and firms in their economies.<sup>7</sup> Further evidence that the reduction in some NCBs' provision of central bank liquidity does not, in itself, constrain bank lending stems from the fact that banks throughout the euro area currently have unlimited access to central bank liquidity, against adequate collateral, under favourable conditions. And indeed, banks have surplus liquidity, as can be seen from their recourse to the ECB's deposit facility.

### The link between TARGET2 balances and banks' funding needs in individual countries is imperfect

As with the distribution of central bank liquidity and the issuance of banknotes across euro area NCBs, the TARGET2 balances of NCBs do not necessarily reflect the economic reality of banks' funding needs in individual countries. The distribution of central bank liquidity by NCBs in the individual euro area countries is related to the domestic liquidity needs of their banking communities, but in a loose way. This is a result of financial innovation and EMU, which both mean that the distinction between national and cross-border transactions is disappearing. Similarly, there are three main reasons why the TARGET2 balances of NCBs do not necessarily reflect the national economic reality associated with net cross-border payments in the euro area.

First, the geographical location of a payer/payee bank sometimes has more to do with the bank's internal organisation than with economic realities. In particular, multi-country banking groups can raise funds in a decentralised manner, and have at the same time increasingly

<sup>7</sup> In fact, banks in those countries needed relatively more central bank liquidity than implied by the respective NCB's share in the ECB's capital before the financial crisis, because these countries had an above-proportionate need for banknotes at that time, part of which subsequently flowed to other countries in the euro area, or abroad. This implied intra-Eurosystem liabilities (which were actually not compensated for by TARGET2 balances).



centralised their liquidity management. For instance, a banking group can refinance itself at an NCB in another euro area country through a subsidiary. This generates a TARGET2 claim for the NCB in the country in which the parent bank is resident and a TARGET2 liability for the NCB in the country in which the subsidiary is resident. At the same time, a payment from, say, a French bank (holding a TARGET2 account with the Banque de France) to its German subsidiary (holding a TARGET2 account with the Deutsche Bundesbank) that needs to execute a domestic transaction in Germany will be accounted for in the TARGET2 balances of the NCBs in the two countries as a payment flow from France to Germany. Second, some cross-border payment flows are not settled in central bank money, and are thus not accounted for in TARGET2 balances.<sup>8</sup> This is the case with: (i) flows related to correspondent banking (where the payment is booked in the account that a commercial bank holds with another commercial bank); or (ii) systems which may settle part of or all their transactions in commercial bank money, such as securities or retail settlement systems (e.g. for retail payments conducted with some credit card schemes). Third, euro transactions involving banks in non-euro area countries (e.g. the United Kingdom) whose NCBs are not connected to TARGET2 can still be settled in this payment system via accounts at banks holding TARGET2 accounts in different euro area NCBs (e.g. the Bundesbank and the Nederlandsche Bank), thus affecting the TARGET2 balances of the respective euro area NCBs.

This notwithstanding, there remains a general – albeit imperfect – link between the loss of market access, increases in the need for central bank financing and increased TARGET2 liabilities in countries under financial stress.

### TARGET2 balances are a normal feature of EMU

The TARGET2 balances of euro area NCBs reflect the uneven distribution of central bank liquidity within the Eurosystem. As there can be no upper limit on the value of payment flows within a single currency area, there can be no upper limit on the TARGET2 balances of NCBs. Limiting the size of TARGET2 balances would be inconsistent with the concept of a currency union. Similarly, in the United States, there are no limits on payment flows within the currency area formed by the 12 Federal Reserve districts. Interdistrict balances emerge from such payment flows, which are not more constraining than the TARGET2 balances are in the Eurosystem. The mechanism used in the United States to readjust interdistrict balances once a year has no influence on cross-border payment flows and essentially leads to the adjustment of the key used for the allocation of profits and losses of the US Federal Reserve System to the 12 district Reserve Banks.<sup>9</sup>

In EMU, a claim in TARGET2 does not, in itself, reflect the relevant NCB's exposure to financial risk. The risk exposure of the central banks forming the Eurosystem (i.e. the NCBs and the ECB) relates to the monetary policy operations themselves, not to the associated TARGET2

<sup>8</sup> The size of flows settled in commercial bank (rather than central bank) money can be expected to have diminished during the financial crisis, given the decline in confidence in financial agents. Settlement in commercial money relies on confidence that the financial agent will ultimately be able to repay its debt in central bank money.

<sup>9</sup> As a result of payment flows between the Federal Reserve districts, surpluses or deficits naturally emerge in interdistrict balances. These balances enter the Interdistrict Settlement Accounts, which are settled once a year, in April (the data series are available at: <http://alfred.stlouisfed.org>). The annual settlement is based on each Reserve Bank's average interdistrict balance during the preceding 12 months (April to March), so that it does not generally bring the balances back to zero. The settlement mainly consists in adjusting the relative shares of the 12 Reserve Banks in the securities holdings in the System Open Market Account of the Federal Reserve System. See also Board of Governors of the Federal Reserve System, *Financial Accounting Manual for Federal Reserve Banks*, Section 40.40 SOMA Participation, Revision Set 50, December 2010.

balances. As always, a central bank faces counterparty risk when implementing monetary policy. The risk associated with the provision of central bank liquidity as part of the implementation of monetary policy is mitigated by a risk management framework.<sup>10</sup> The Eurosystem's collateral framework is based on a public list of securities fulfilling the relevant eligibility criteria, together with risk control measures. In particular, securities pledged as collateral are valued on a daily basis, at market prices (where available) or using conservative valuation methods, with haircuts also being applied. The residual risk associated with the provision of central bank liquidity that may emerge despite the risk mitigation measures, is, as a rule, shared among the NCBs of the Eurosystem in accordance with their respective shares in the ECB's capital and is not related to the TARGET2 positions of individual central banks.

<sup>10</sup> See Chapter 6 of *The implementation of monetary policy in the euro area – general documentation on Eurosystem monetary policy instruments and procedures*, ECB, February 2011. Any amendments to this documentation are published on the ECB's website.

## 2.4 BOND MARKETS

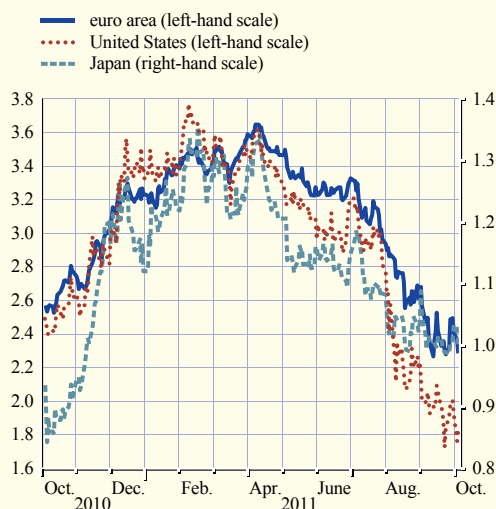
*In the course of September and early October, yields on AAA-rated long-term euro area government bonds declined, as did yields on US government bonds. Tensions in euro area sovereign debt markets, as well as continuing negative surprises from worsening economic indicators in many countries, weighed further on market sentiment. In the United States, the announcement that the Federal Open Market Committee would extend the average maturity of its holdings of Treasury securities led to downward pressure on long-term yields. Uncertainty about future bond market developments, as measured by implied bond market volatility, increased slightly. Intra-euro area sovereign bond yield spreads widened further for most countries. At the same time, long-term break-even inflation rates declined considerably amid flight-to-safety portfolio shifts in nominal bond markets. The decline in inflation swap rates, in turn, mainly reflects a reduction of inflation risk premia. Overall, market-based indicators suggest that market participants' inflation expectations remain firmly anchored.*

Between the end of August and 5 October, AAA-rated long-term euro area government bond yields declined by 27 basis points to stand at 2.4% at the end of the period under review. In the United States, long-term bond yields declined slightly more, namely by 34 basis points, and stood at 1.9% on 5 October (see Chart 13). Consequently, the nominal interest rate differential between ten-year government bond yields in the United States and those in the euro area increased slightly over the period under review. In Japan, ten-year government bond yields declined by 6 basis points over the period under review, to stand at 1.0% on 5 October.

Investors' uncertainty about near-term bond market developments in the euro area and

Chart 13 Long-term government bond yields

(percentages per annum; daily data)



Sources: Bloomberg and Thomson Reuters.  
Note: Long-term government bond yields refer to ten-year bonds or to the closest available bond maturity.

in the United States, as measured by option-implied volatility, increased slightly over the period under review, reflecting ongoing strains in several euro area sovereign bond markets. In the euro area, implied bond market volatility stood at a level exceeding that observed in May 2010, although uncertainty in the bond markets has declined somewhat since the peak observed in mid-August 2011. The level of implied bond market volatility in the United States was significantly lower than in the euro area.

Developments in AAA-rated long-term euro area and US bond yields reflected both concerns about the sovereign debt crisis and continuing negative surprises from worsening economic indicators in many countries, resulting in downward revisions to the economic outlook. In addition, the expectation and, subsequently, the announcement that the Federal Open Market Committee would extend the average maturity of its holdings of Treasury securities led to downward pressure on long-term yields in the United States. Following this announcement, long-term US government bond yields fell temporarily to around 1.7%. Throughout the period, tensions related to the euro area sovereign debt crisis continued to be severe, and investors' risk aversion remained high (see also the box entitled "Private sector involvement and financial stability implications"). Moreover, the demand for highly rated and liquid government bonds caused by safe-haven flows was still at a high level and the liquidity premia paid by investors for liquid government bonds remained elevated. Overall, the sovereign debt crisis and negative surprises from economic indicators weighed heavily on market sentiment in sovereign bond markets and were, to some extent, also reflected in equity and corporate bond prices.

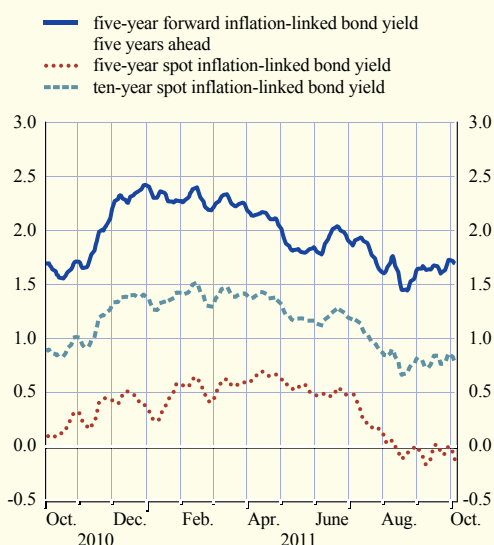
During the period under review, euro area sovereign yield spreads vis-à-vis German sovereign bond yields widened further for most countries. At the same time, demand for highly rated and liquid government bonds continued to depress German sovereign bond yields. These developments

were primarily driven by the complexity of the programme negotiations with Greece, as well as by uncertainties about the form and timing of further support. In addition, Italy was downgraded by two rating agencies and fears of the crisis spreading to other euro area countries continued to weigh on market sentiment. In fact, on some days during the period under review, sovereign bond spreads for Italy were again close to the levels observed in August before the ECB decided to reactivate the Securities Markets Programme.

Yields on five and ten-year inflation-linked euro area government bonds declined slightly over the period under review (see Chart 14). On 5 October, five and ten-year spot real yields stood at -0.1% and 0.8% respectively. Over the same period, implied forward break-even inflation rates (five-year forward five years ahead) in the euro area decreased, by 41 basis points, to stand at 1.7% on 5 October (see Chart 15). The corresponding inflation swap rates decreased as well, falling by 25 basis points to stand at 1.9% on the same date.

**Chart 14 Euro area zero coupon inflation-linked bond yields**

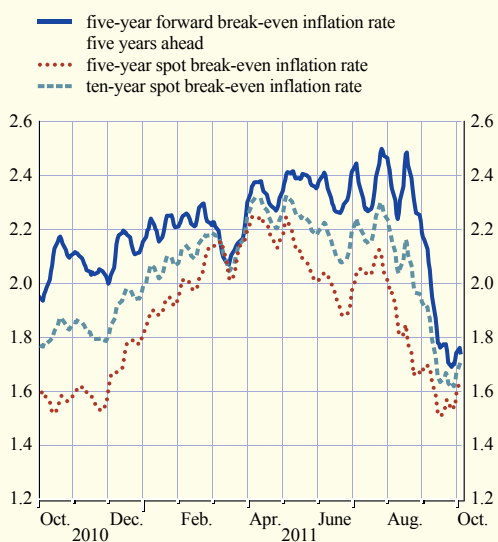
(percentages per annum; five-day moving averages of daily data; seasonally adjusted)



Sources: Thomson Reuters and ECB calculations.

**Chart 15 Euro area zero coupon break-even inflation rates**

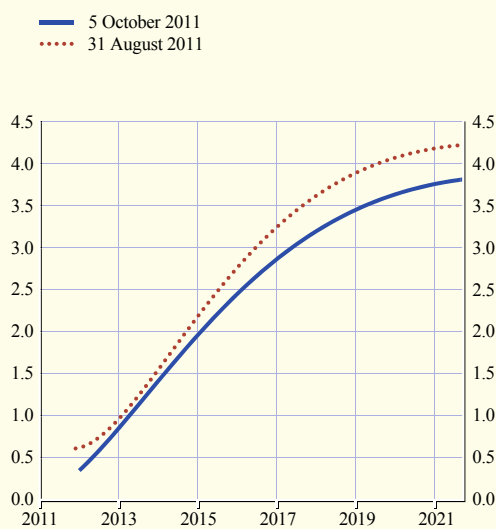
(percentages per annum; five-day moving averages of daily data; seasonally adjusted)



Sources: Thomson Reuters and ECB calculations.

**Chart 16 Implied forward euro area overnight interest rates**

(percentages per annum; daily data)



Sources: ECB, EuroMTS (underlying data) and Fitch Ratings (ratings).

Notes: The implied forward yield curve, which is derived from the term structure of interest rates observed in the market, reflects market expectations of future levels for short-term interest rates. The method used to calculate these implied forward yield curves is outlined in the “Euro area yield curve” section of the ECB’s website. The data used in the estimate are AAA-rated euro area government bond yields.

Break-even inflation rates have been volatile over the past month, reflecting high volatility in nominal and real bond yields amid market tensions and safe-haven flows. Inflation expectations inferred from bond markets have thus been more volatile than those based on signals received from the inflation swap markets. The recent decline in forward break-even inflation rates can be attributed mainly to the fact that high investor demand depressed the yields on nominal bonds and to declining inflation risk premia. In turn, the decline in inflation swap rates mainly reflects a reduction of inflation risk premia. Overall, market-based indicators suggest that market participants’ inflation expectations remain firmly anchored.

The general pattern of AAA-rated long-term euro area bond yields can be decomposed into changes in interest rate expectations (and related risk premia) at different horizons (see Chart 16). Compared with the end of August, the term structure of short-term forward rates shifted downwards for all maturity horizons. Beyond six years’ maturity horizons, short-term forward rates shifted downwards by around 40 basis points. These developments reflected adjustments to yield expectations and risk premia amid the deterioration in, and uncertainty surrounding, the outlook for global economic activity, as well as the effect of a downward revision of the expected path of short-term interest rates.

The spreads on investment-grade corporate bonds issued by non-financial corporations remained broadly unchanged in the period under review, except for the lowest rating classes, which increased further. Spreads on lower-rated investment-grade corporate bonds issued by financial corporations

increased sharply, while those for the highest rating classes remained broadly unchanged. These developments reflected the greater sensitivity of some parts of the banking sector to the current turbulences, as well as investors' risk aversion. However, across all rating classes, the yields on corporate bonds issued by financial corporations continued to be significantly lower than during the period after the collapse of Lehman Brothers.

**Box 5****PRIVATE SECTOR INVOLVEMENT AND ITS FINANCIAL STABILITY IMPLICATIONS**

Private sector involvement (PSI)<sup>1</sup> has occasionally been used in the past in the resolution of sovereign debt crises. It was intended to help sovereign borrowers to regain fiscal sustainability more rapidly than would otherwise have been the case, and it was generally considered as a measure to ensure burden-sharing between the public and private sectors. Lenders who have financed fiscally irresponsible countries thus bear the consequences of their decisions. In addition, the need for official financial assistance may be reduced.

However, this box argues that past experiences with PSI applied to countries that were not part of a monetary union are not comparable and thus do not provide reliable guidance. Within a monetary union, financial markets are very closely integrated, and the negative economic impact of PSI is therefore much more extensive. The application of PSI to one member country may put at risk the financial stability of the currency area as a whole.

First, PSI can be expected to have direct negative effects on the banking sector across the euro area. While PSI is certain to place significant stress on the solvency of banks and other private financial institutions in the country concerned, it will also have an impact on the balance sheets of banks in other euro area countries through cross-border sovereign bond holdings, cross-shareholdings, funding or branch channels. This could trigger a need for large-scale bank recapitalisation.

Second, contagion across the euro area can occur via confidence effects. If the application of PSI in one member country leads to a sudden increase in risk aversion among financial market participants, the market access of other countries may be hampered. This may occur even if the economic fundamentals of the other countries remain unchanged as compared with the situation prevailing before the application of PSI.

These two channels of contagion are likely to be mutually reinforcing. Bank recapitalisation may have to be borne in part by the public sector, weighing on the sustainability of public finances. Additional strain on the public finances of already vulnerable euro area countries could lead to a deterioration in the credit ratings of those countries, which, in turn, would increase funding stress also for banks. This would further weaken the prospects of the banking system and increase the recapitalisation requirements of financial institutions.

<sup>1</sup> The term "private sector involvement" is generally understood to refer to measures to "bail in" private creditors in the context of the resolution of a sovereign debt crisis. Measures may include rescheduling/reprofiling and restructuring. It is generally of a voluntary nature and the result of a collaborative approach between borrowers and lenders. For details, see *The IMF and the Private Sector*, Factsheet, IMF, Washington, D.C., August 2001.

PSI could also damage the reputation of the single currency internationally, possibly adding to volatility in foreign exchange markets. In particular, public and private international investors may be cautious about investing large portions of their wealth in assets denominated in a currency of sovereigns that may not fully honour their obligations and may be willing ex ante to rely on PSI in some circumstances.

Furthermore, the longer-term implications of PSI, particularly for the prevention of sovereign crises inside a monetary union, are not clear-cut. On the one hand, PSI is meant to exert a beneficial long-run effect by strengthening market discipline.<sup>2</sup> Creditors will have an incentive to closely monitor the sustainability of a sovereign's public finances and are likely to charge commensurate risk premia. This is an important mechanism through which to exert a disciplining effect on a sovereign. On the other hand, PSI may aggravate moral hazard with regard to the borrower. If a sovereign knows that it does not have to fully honour its contractual obligations and could instead restructure its debt, it may be tempted to accumulate excess levels of debt. Strengthened market discipline through higher risk premia is likely to be insufficient to counteract the sovereign's weakened incentives.

Against this background, the ECB has strongly advised against all concepts that are not purely voluntary or that have elements of compulsion, and has called for the avoidance of any credit events and selective default or default.<sup>3</sup> All euro area governments need to demonstrate their inflexible determination to fully honour their own individual sovereign signature, which is a decisive element in ensuring financial stability in the euro area as a whole. The risks of PSI underline the importance of strong governance in a monetary union to ensure sound fiscal positions in all member countries at all times. They also emphasise the need to have an effective crisis resolution mechanism at the European level – the European Financial Stability Facility and, from mid-2013, the European Stability Mechanism – to ensure that financial assistance can be provided effectively and under strict conditionality should a euro area country experience problems in the future with obtaining refinancing in the markets.

2 This beneficial impact prevails unless PSI requires financial participation incentives for creditors exceeding the cost of financial assistance in the absence of PSI.

3 See, for example, the introductory statement by Jean-Claude Trichet, President of the ECB, at a hearing before the Economic and Monetary Affairs Committee of the European Parliament on 30 June 2011.

## 2.5 INTEREST RATES ON LOANS AND DEPOSITS

*In August 2011 MFI interest rates developed along mixed lines across various categories. By historical standards, however, MFI lending rates for loans to both households and non-financial corporations remain low across all maturities.*

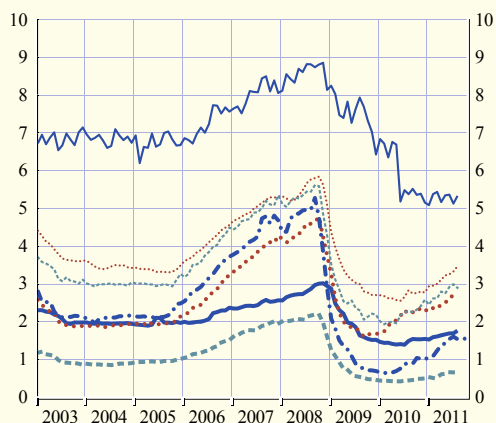
In August 2011 short-term MFI interest rates developed along mixed lines across various categories. Short-term interest rates on deposits from households rose slightly, by about 3 basis points, on average, in comparison with the previous month, whereas rates on deposits from non-financial corporations remained broadly unchanged (see Chart 17). By contrast, MFI interest rates on short-term loans to households increased more markedly than in the previous month, namely by 14 basis points in the case of loans for house purchase and by 20 basis points in that of consumer credit. Interest rates on overdrafts rose by 7 basis points for non-financial corporations and by 4 basis points for households. MFI lending rates for small corporate loans (i.e. loans of up to



**Chart 17 Short-term MFI interest rates and a short-term market rate**

(percentages per annum; rates on new business)

- deposits from households redeemable at notice of up to three months
- ..... deposits from households with an agreed maturity of up to one year
- - - overnight deposits from non-financial corporations
- loans to households for consumption with a floating rate and an initial rate fixation period of up to one year
- ..... loans to households for house purchase with a floating rate and an initial rate fixation period of up to one year
- - - loans to non-financial corporations of over €1 million with a floating rate and an initial rate fixation period of up to one year
- three-month money market rate



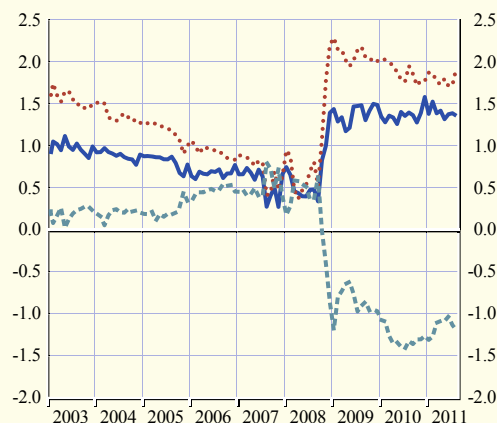
Source: ECB.

Note: Data as of June 2010 may not be fully comparable with those prior to that date owing to methodological changes arising from the implementation of Regulations ECB/2008/32 and ECB/2009/7 (amending Regulation ECB/2001/18).

**Chart 18 Spreads of short-term MFI interest rates vis-à-vis the three-month money market rate**

(percentage points; rates on new business)

- loans to non-financial corporations of over €1 million with a floating rate and an initial rate fixation period of up to one year
- ..... loans to households for house purchase with a floating rate and an initial rate fixation period of up to one year
- - - deposits from households with an agreed maturity of up to one year



Source: ECB.

Notes: For the loans, the spreads are calculated as the lending rate minus the three-month money market rate. For the deposits, the spread is calculated as the three-month money market rate minus the deposit rate. Data as of June 2010 may not be fully comparable with those prior to that date owing to methodological changes arising from the implementation of Regulations ECB/2008/32 and ECB/2009/7 (amending Regulation ECB/2001/18).

€1 million) remained unchanged in August 2011, while bank lending rates on large loans (i.e. loans of more than €1 million) with a rate fixation period of up to one year decreased by 10 basis points. With the EURIBOR contracting somewhat, namely by 7 basis points in August, the spread vis-à-vis short-term MFI lending rates on loans to households increased, while that vis-à-vis interest rates on large-sized loans to non-financial corporations contracted slightly (see Chart 18).

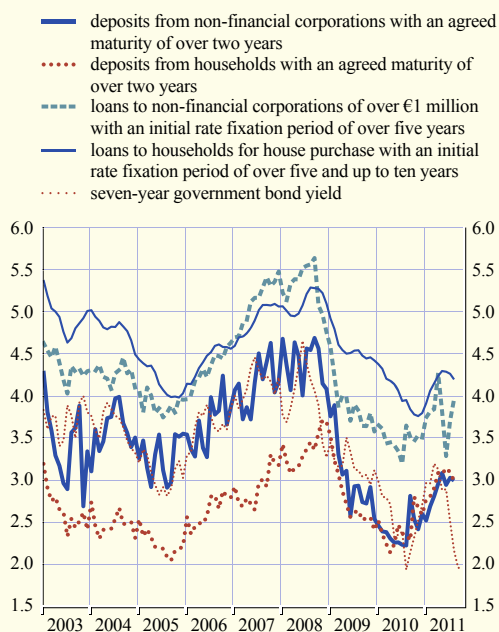
Taking a longer-term perspective, a significant pass-through of changes in market rates to bank lending rates took place during the latest cycle of monetary policy easing (between October 2008 and March 2010). The subsequent increase in the three-month EURIBOR in the period from April 2010 to July 2011 was partly reflected in short-term bank lending rates on both loans to non-financial corporations and loans to households for house purchase, while the rate on loans to households for consumption remained broadly stable (once the statistical reclassification of June 2010 is disregarded).

In the case of longer-term maturities, the direction of developments in MFI interest rates on loans to households differed from that on loans to non-financial corporations (see Chart 19). More specifically, the rates on loans to households for house purchase with an initial rate fixation period



**Chart 19 Long-term MFI interest rates and a long-term market rate**

(percentages per annum; rates on new business)



Source: ECB.  
 Note: Data as of June 2010 may not be fully comparable with those prior to that date owing to methodological changes arising from the implementation of Regulations ECB/2008/32 and ECB/2009/7 (amending Regulation ECB/2001/18).

of over five and up to ten years decreased by 7 basis points in August, while those on loans for consumption with an initial rates fixation period of over five years remained broadly unchanged. Corporate lending rates on small-sized loans with an initial rate fixation period of over five years fell by 14 basis points, to 4.3%. At the same time, however, interest rates on large loans with similar maturity increased by 25 basis points, to slightly below 4%.

In August 2011 spreads vis-à-vis AAA-rated seven-year government bond yields increased for all categories of loans. In particular, the spread between long-term rates on loans to households for house purchase and the yield on such bonds increased by 42 basis points, to slightly below 200 basis points, driven mainly by a sharp decrease in bond yields, while lending rates fell only moderately. For non-financial corporations, the spread vis-à-vis large-sized loans increased significantly, standing at 170 basis points, while that vis-à-vis small-sized loans rose more moderately, namely by 35 basis points to stand at 156 basis points.

Viewed from a longer-term perspective, lending rates to households and rates on small-sized corporate long-term loans have generally shown a somewhat incomplete and sluggish pass-through, whereas lending rates on large corporate long-term loans have evolved broadly in line with AAA-rated long-term government bond yields. However, in the context of the acute ongoing financial tensions and the fragmentation of sovereign markets, the historical regularities between bank lending rates and AAA-rated long-term government bond yields may have weakened somewhat. Indeed, lending rates on large long-term loans to non-financial corporations increased in July and August, at the same time that yields on AAA-rated long-term government bonds declined substantially.

## 2.6 EQUITY MARKETS

*In the course of September and early October, stock prices declined in both the euro area and the United States. These developments were driven by tensions related to the euro area sovereign debt crisis, a substantial factor of uncertainty, in particular with respect to the financial sector. In addition, continuing weak economic indicators in many countries that resulted in downward revisions to the economic outlook weighed further on market sentiment, also putting upward pressure on risk premia. Stock market uncertainty, as measured by implied volatility, increased on both sides of the Atlantic, standing at levels comparable to, or slightly higher than, those observed in May 2010.*

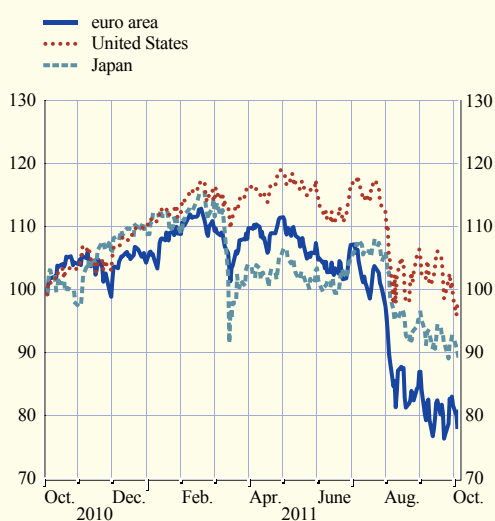
Euro area and US stock prices declined in the period under review. Overall, euro area stock prices, as measured by the broad-based Dow Jones EURO STOXX index, declined by 6.9% between the end of August and 5 October. The Standard and Poor's 500 index in the United States decreased by 6.1% (see Chart 20). Over the same period, stock prices in Japan, as measured by the Nikkei 225 index, fell by 6.4%.

The decline in stock prices mainly reflected tensions related to the euro area sovereign debt crisis, which were a substantial factor of uncertainty, in particular with respect to the financial sector. In addition, continuing weak economic indicators in many countries that resulted in downward revisions to the economic outlook weighed further on market sentiment, also putting upward pressure on risk premia. In particular, most economic data releases, especially those in the euro area, continued to disappoint the markets. The data on corporate earnings showed that the growth of actual annual earnings per share of the euro area corporations that are included in the Dow Jones EURO STOXX index decreased to 11% in September, after 19% in August, while the earnings-per-share growth 12 months ahead expected by market participants remained broadly unchanged at 10%.

In both the euro area and the United States, stock market uncertainty, as measured by implied volatility, increased during the period under review (see Chart 21). This development was driven by an increase in investors' risk aversion, significant tensions in a number of market segments and high uncertainty about the global economic outlook. The level of implied stock market volatility in the broad euro area stock index is currently close to that observed in May 2010, but still lower than the historical peak observed in late October 2008.

Chart 20 Stock price indices

(index: 1 October 2010 = 100; daily data)

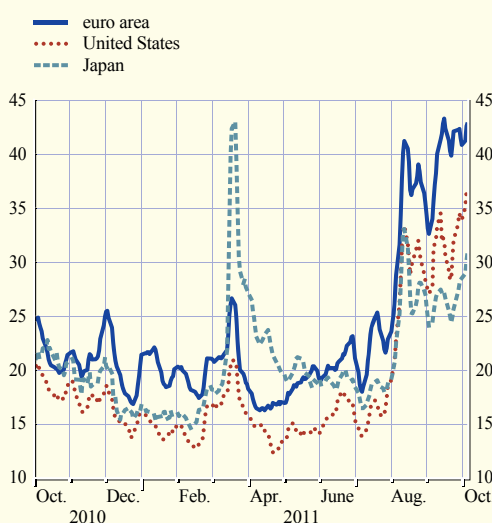


Source: Thomson Reuters.

Notes: The indices used are the Dow Jones EURO STOXX broad index for the euro area, the Standard & Poor's 500 index for the United States and the Nikkei 225 index for Japan.

Chart 21 Implied stock market volatility

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



Source: Bloomberg.

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

Overall, stock price indices in the euro area decreased across most sectors in the course of September and early October. Euro area financial stock prices fell sharply against the background of the developments in euro area sovereign debt markets and tensions in funding markets. After the announcement by the ECB that it had decided, in coordination with the Federal Reserve, the Bank of England, the Bank of Japan and the Swiss National Bank, to offer three-month US dollar liquidity until the end of the year, financial stocks temporarily recovered strongly. On 5 October, however, financial stocks stood 8.5% below the level observed at the end of August. Stocks in the basic materials, consumer goods, and industrial sectors also performed less well than those of other sectors. In the United States, basic material, oil and gas, financial and industrial stocks were among the underperforming sectoral stocks.

## 3 PRICES AND COSTS

According to Eurostat's flash estimate, euro area annual HICP inflation was 3.0% in September 2011, after 2.5% in August. Inflation rates have been at elevated levels since the end of last year, mainly driven by higher energy and other commodity prices. Looking ahead, inflation rates are likely to stay clearly above 2% over the coming months, but to decline thereafter. This pattern reflects the expectation of relatively stable wage growth developments in the context of moderate economic growth. Risks to the medium-term outlook for price developments continue to be seen as broadly balanced.

### 3.1 CONSUMER PRICES

According to Eurostat's flash estimate, euro area annual HICP inflation was 3.0% in September 2011, after 2.5% in July and August (see Table 5). The annual rate of change was much higher than expected. A detailed breakdown of HICP inflation into its main components is not yet available. However, data from the European Commission's weekly Oil Bulletin, which gives an indication of developments in approximately half of the energy component of the HICP, show that consumer prices for transport fuels and heating oil increased somewhat in September compared with the previous month. Further details on the implications of external price pressures for inflation in the euro area are provided in Box 6.

In August, the last month for which an official breakdown is available, the annual rate of growth in the energy component of the HICP remained unchanged from the previous month at 11.8%, with the annual rates of change in the main sub-components also remaining broadly stable. This was attributable to an upward base effect dropping out of the annual comparison and a small month-on-month decline in energy prices on the back of a decrease in oil prices (in euro terms) between July and August.

The annual rate of change in the prices of unprocessed food diminished for the third month in a row, to 1.1% in August, driven by lower prices in annual terms for vegetables and fruit. At the same time meat prices accelerated compared with July. However, the annual rate of change in the prices of processed food increased further to 3.6%. This was the highest since November 2008 and reflected

Table 5 Price developments

(annual percentage changes, unless otherwise indicated)

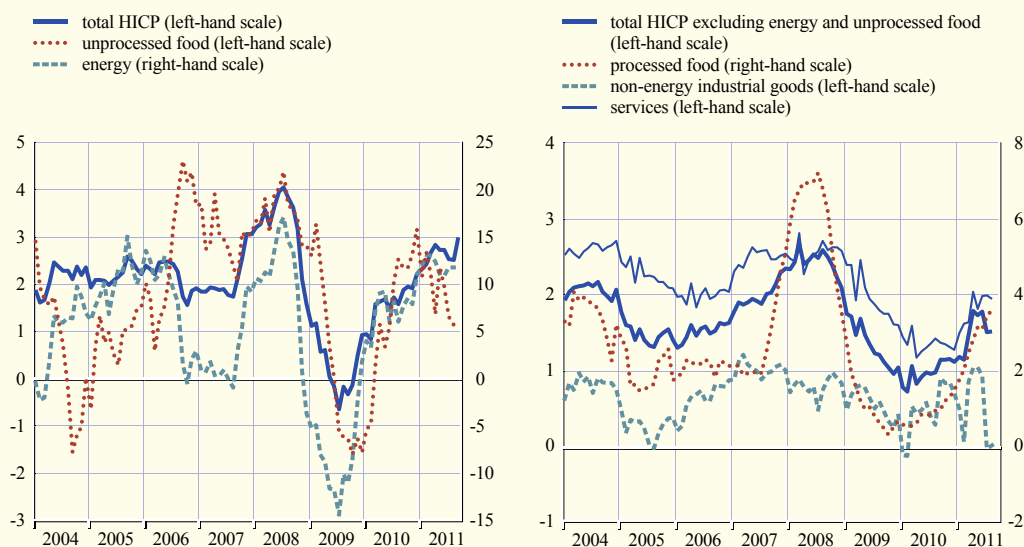
	2009	2010	2011 Apr.	2011 May	2011 June	2011 July	2011 Aug.	2011 Sep.
<b>HICP and its components</b>								
Overall index <sup>1)</sup>	0.3	1.6	2.8	2.7	2.7	2.5	2.5	3.0
Energy	-8.1	7.4	12.5	11.1	10.9	11.8	11.8	.
Unprocessed food	0.2	1.3	1.4	2.4	2.0	1.3	1.1	.
Processed food	1.1	0.9	2.8	3.2	3.1	3.4	3.6	.
Non-energy industrial goods	0.6	0.5	1.0	1.0	0.9	0.0	0.0	.
Services	2.0	1.4	2.0	1.8	2.0	2.0	1.9	.
<b>Other price indicators</b>								
Industrial producer prices	-5.1	2.9	6.8	6.2	5.9	6.1	5.9	.
Oil prices (EUR per barrel)	44.6	60.7	85.1	79.8	79.1	81.7	76.7	79.8
Non-energy commodity prices	-18.5	44.7	15.1	11.1	8.7	7.6	2.5	0.1

Sources: Eurostat, ECB and ECB calculations based on Thomson Reuters data.

1) HICP inflation in September 2011 refers to Eurostat's flash estimate.

**Chart 22 Breakdown of HICP inflation: main components**

(annual percentage changes; monthly data)



Source: Eurostat.

higher annual rates of change in the prices of several sub-components, such as bread and cereals, and oils and fats. The annual rate of change in tobacco prices increased for a second consecutive month, having been on a downward trend in the first half of the year.

**Box 6**

**THE IMPLICATIONS OF EXTERNAL PRICE PRESSURES FOR EURO AREA HICP INFLATION**

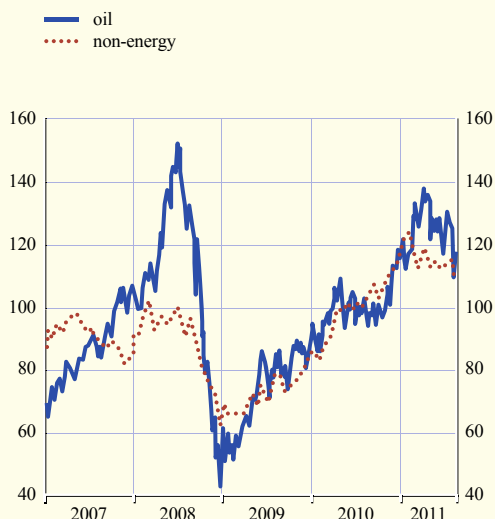
Up to the beginning of 2011 rising oil and non-oil commodity prices led to increasing inflationary pressures in both advanced and emerging economies. In a number of emerging economies, this added to the domestic price pressures being generated in the context of strong economic growth. Against this background, this box examines how the rise in external price pressures spilled over to inflation in the euro area.

**Developments in global inflation**

Between early 2009 and early 2011 there was a broad-based surge in the prices of oil and other commodities, such as food. Measured in euro, commodity prices returned to, and in some cases exceeded, the high levels seen during the inflation peak of 2008 (see Chart A). This pushed up headline inflation in both advanced and emerging economies (see Chart B). However, the rise was stronger in emerging economies, owing to the fact that commodity-related items, in particular food items, account for a larger share of their consumption expenditure. In turn, the robust activity growth in emerging economies in the past three years drove up commodity prices, as these economies are major commodity consumers.

**Chart A Oil and non-energy commodity prices**

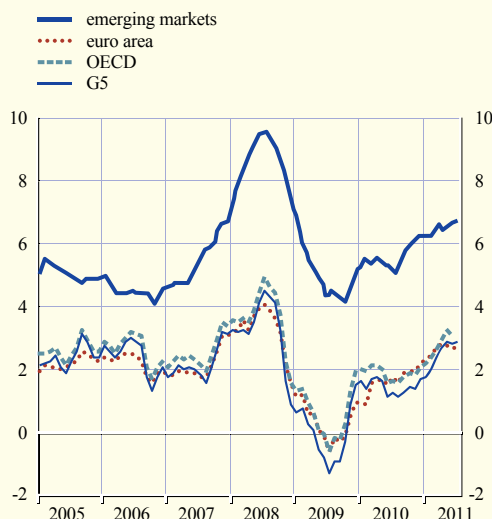
(daily data in euro; index 2010 = 100)



Source: HWWI.  
Note: Last observation refers to 19 August 2011.

**Chart B Headline inflation rates**

(monthly data; annual percentage changes)



Sources: OECD, Haver Analytics and ECB staff calculations.  
Note: the G5 aggregate is a weighted average of the inflation rates in the euro area, the United States, the United Kingdom, Japan and Canada, using GDP at PPP weights. The emerging economies aggregate includes Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela, China, Hong Kong, India, Indonesia, South Korea, Malaysia, Pakistan, Philippines, Singapore, Taiwan, Thailand, Vietnam, Ukraine, Russia, Egypt, Israel, Nigeria South Africa, Turkey and Saudi Arabia. Weights are based on nominal GDP weights (from the IMF World Economic Outlook database).

### Transmission to euro area HICP inflation

There are different channels through which rising external price pressures can spill over to euro area inflation. First, they can be channelled through global commodity prices, which have a direct bearing on specific components of consumer prices, such as energy and food. Global commodity prices tend to rise on the back of greater demand for commodities in an environment of strong global activity and ample liquidity.

Second, they may be passed on through import prices, as dearer manufactured goods in an exporting country lead to higher import prices in the receiving country. In this respect, extra-euro area import prices of manufactured goods (measured in euro) rose sharply from the beginning of 2010 (see Chart C). The fact that they increased more strongly than during the inflation peak of 2008 partly reflects the dampening impact of the appreciation of the euro at the time. Price hikes in exporting countries are usually due to higher global commodity prices or domestic inflationary pressures stemming, for example, from wages. In theory, floating exchange rates should prevent inflationary shocks from spreading across countries, but in practice this adjustment mechanism may not function properly. Third, there may be more indirect spillovers if, in globally integrated markets, inflation in the rest of the world influences domestic price and wage setting through second-round effects.

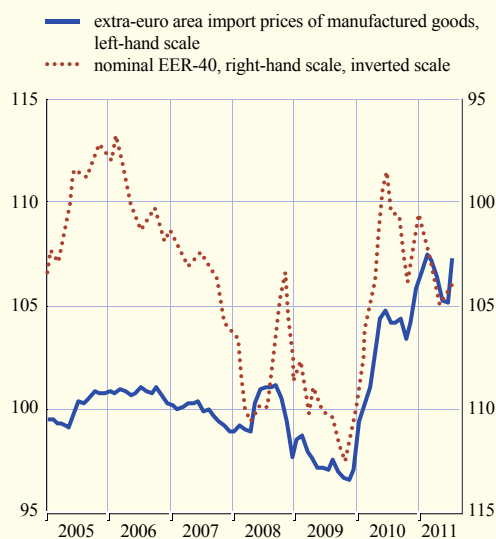
## A model-based decomposition of spillover effects

The extent to which euro area inflation may be affected by global inflation developments through the channels mentioned above is an empirical question.<sup>1</sup> In this box, a time series model of the vector autoregression (VAR) type is applied to gauge the relative importance of the shocks responsible for the spillover effects via the various channels. In particular, the model allows for euro area inflation to be affected by oil and non-oil commodity prices, import prices and global consumer prices more generally. Control variables such as output, interest rates and exchange rates are included to capture domestic and global factors that – like euro area activity and interest rates – can have a direct influence on euro area inflation, or – like exchange rates and global activity – work through the various global price developments. Each variable is treated as endogenous in the VAR.<sup>2</sup>

Chart D shows the contributions made by the various shocks to the deviation of HICP inflation from the model's estimated mean of approximately 2%.<sup>3</sup> The results indicate that oil and non-oil commodity price shocks played a relatively prominent role in driving inflation away from its mean. By contrast, import prices and global inflation shocks, which capture the more indirect spillovers from external price pressures, contributed only mildly to the dynamics of HICP inflation during the period. Looking at the recent pick-up in inflation, the upward impact of oil price shocks was comparable to that in 2008. As the size of the oil price shocks was comparable in the two episodes, this is not surprising. By contrast, non-oil commodity price shocks had very little impact, although – as in the case of oil

**Chart C Euro area import prices of manufactured goods and nominal effective exchange rate**

(monthly data; index level, 2005 = 100)



Source: Eurostat.

Note: The latest observations refer to July 2011 for import prices and August 2011 for the EER. An increase in the nominal EER amounts to an appreciation of the euro in nominal effective terms.

1 See, for instance, Ciccarelli, M. and Mojon, B., "Global Inflation", *Review of Economics and Statistics*, Vol. 92, No 3, 2010, pp. 524-535; Ball, L. "Has Globalization Changed Inflation?", *NBER Working Paper*, No 12687, November 2006; and Calza, A., "Globalisation, domestic inflation and global output gaps: Evidence from the euro area", *International Finance*, Vol. 12, No 3, 2008, pp. 301-320. Ciccarelli and Mojon find strong evidence that inflation is a global phenomenon, whereas Ball and Calza find that domestic factors dominate.

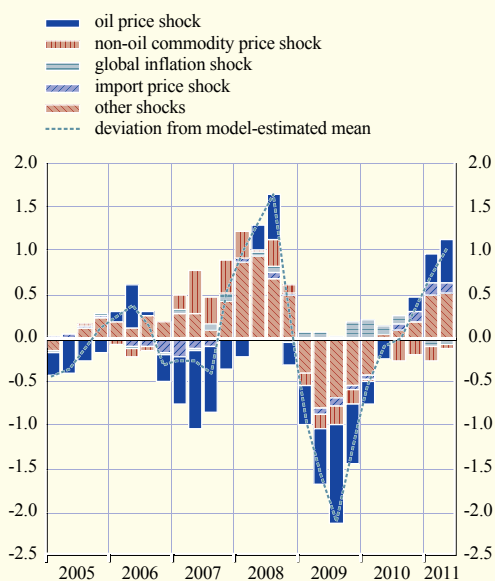
2 Formally, the model is an extension of that used by Ciccarelli and Mojon, namely a VAR model with a constant, four lags and the following variables: a measure of global prices, oil prices in US dollars, non-oil commodity prices in US dollars, an index of extra-euro area import prices of manufactured goods in euro, a measure of global activity, euro area real GDP, euro area HICP, the term spread between the yield of a ten-year government bond and that of a three-month bond, and the bilateral exchange rate between the euro area and the United States. In the model, global prices are measured by the OECD index reported in Chart B. Global activity is measured by the OECD indicator of world trade in goods and services. The VAR is estimated using quarterly data for the period from the first quarter of 1989 to the second quarter of 2011. Activity and price variables enter the model in the form of annual growth rates.

3 The identification of the shocks is based on a standard Cholesky decomposition and the ordering assumes that external variables are exogenous with regard to domestic factors. Within domestic factors, real variables are assumed not to be contemporaneously affected by any other factor; nominal factors are assumed to be contemporaneously affected only by real factors; and financial factors are assumed to be contemporaneously affected by both real and nominal factors. Results are robust to a change in the ordering of the various factors. The decomposition of shocks in each quarter is technically performed by using the estimated VAR to project the inflation rate over the period from the first quarter of 2005 to the second quarter of 2011, and decomposing the difference between the realised value and the projection into the sum of the shocks to all variables. By construction, all shocks are orthogonal, so each component measures what the inflation rate would have been if all the other shocks had been zero, rather than what was actually observed.



**Chart D Shock decomposition of the deviation of euro area annual HICP inflation from a model-estimated mean**

(quarterly data; percentage point contribution)



Source: ECB calculations.

the pass-through of import prices to the final selling prices is weakened by domestic factors such as marketing and distribution costs, or the use of domestically produced goods in refining or complementing the imported goods. Furthermore, upward import price pressures have to be seen against the backdrop of the continued downward pressures on manufacturing import prices resulting from the rising share over time of euro area imports of manufactured goods from low-cost countries, such as China and the new EU Member States.<sup>4</sup> Compared with the 2008 pick-up in inflation, the upward impact of import prices and global consumer prices during the recent pick-up was somewhat stronger, albeit remaining small overall.

Overall, the results of the simulation confirm that oil price shocks play a crucial role in euro area inflation, while the impact of other global price developments on euro area inflation has generally been small. The prominent role played by oil price shocks also highlights the importance of accurately determining the nature of oil price movements, in particular whether they are driven by temporary supply shortages, such as those due to geopolitical tensions or natural disasters, or by changes in demand, notably in emerging economies, that occur more slowly but are more persistent. The appropriate monetary policy response to the inflationary consequences of a temporary rise in the oil price that does not lead to higher longer-term inflation expectations might be different from the response to a more persistent increase that contributes to inflation over the longer run and even threatens to generate second-round effects.

<sup>4</sup> See the box entitled "Recent developments in extra-euro area trade prices and price competitiveness", *Monthly Bulletin*, ECB, May 2009; and the box entitled "Are recent wage increases in China putting upward pressures on euro area import prices?", *Monthly Bulletin*, ECB, July 2011. See also the article entitled "Globalisation, trade and the euro area macroeconomy", *Monthly Bulletin*, ECB, January 2008. The finding is also in line with the empirical literature. See, for example, *World Economic Outlook*, IMF, April 2006, Chapter 3 and the references therein.

prices – the size of the shocks was also equivalent to that during the previous inflation peak. One reason the recent increase in inflation was less pronounced than during the 2008 peak is that relatively contained growth in other input costs – such as wages – and competition-related pressures to absorb commodity price increases by decreasing margins helped to dampen the pass-through. Moreover, the recent rise in commodity prices was driven by price increases in a more limited number of commodities, as opposed to the broad-based rises in prices that were observed three years ago. Notably, within food commodity prices, dairy commodity prices rose by significantly less than three years ago, and these prices typically have a stronger pass-through to food consumer prices than other food commodity prices.

Shocks to manufacturing import prices and global consumer prices explain only a small part of the deviation of euro area inflation from its mean. In part, this reflects the fact that

Excluding all food and energy items, which represent around 30% of the HICP basket, annual HICP inflation stood at 1.2% in August 2011, unchanged from July. HICP inflation excluding total food and energy is determined predominantly by domestic factors, such as wages, profit mark-ups and indirect taxes. It consists of two main components, namely non-energy industrial goods and services.

The annual rate of change in the non-energy industrial goods component remained unchanged in August, after dropping to 0.0% in July from 0.9% in June. The decrease recorded between June and July was due almost entirely to the new regulation on the treatment of seasonal products,<sup>1</sup> which also affected the annual rate of change in this component in August. The most affected items were garments and footwear, whose annual rates of change both stood at -3.1%, after similarly negative rates in July. The impact of this regulation is expected to disappear in September and bring about a rebound in non-energy industrial goods inflation.

Services price inflation declined marginally to 1.9% in August, from 2.0% in July, reflecting lower annual rates of change in the transport and communication services sub-components.

### 3.2 INDUSTRIAL PRODUCER PRICES

Industrial producer price inflation (excluding construction) declined to 5.9% in August 2011, from 6.1% in July. This fall was due mainly to declines in the annual rates of change of the intermediate goods and energy components, reflecting the moderation in commodity prices (see Table 5 and Chart 23). Excluding construction and energy, industrial producer price inflation fell from 4.1% to 3.9%.

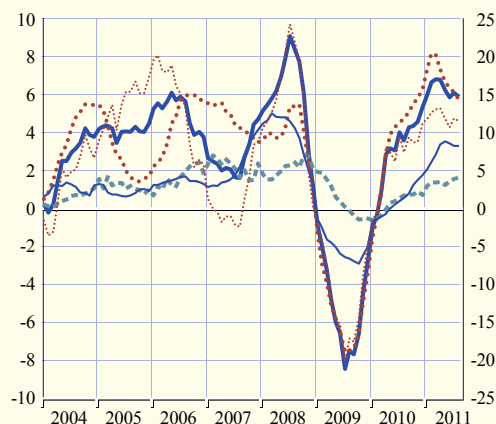
At later stages of the production chain, the rate of inflation in producer prices for consumer goods was unchanged at 3.3% in August. In the same month, the annual rate of change in consumer food prices stood at 5.0%, continuing its gradual downward trend from its peak of 5.4% in May. This reflects an easing in the inflationary pressures stemming from EU food commodity prices and suggests further declines in the next months. By contrast, the annual rate of change in the non-food consumer goods component rose from 1.4% in July to 1.6% in August, its highest reading since 2001. The steady increase in producer prices for non-food consumer goods, particularly since the start of 2011, signals continuing pipeline pressures for underlying consumer price inflation.

Survey information on producer prices in September suggests that price pressures have continued to ease and are now below their historical averages. Compared with August,

**Chart 23 Breakdown of industrial producer prices**

(annual percentage changes; monthly data)

- total industry excluding construction (left-hand scale)
- ... intermediate goods (left-hand scale)
- capital goods (left-hand scale)
- consumer goods (left-hand scale)
- ... energy (right-hand scale)



Sources: Eurostat and ECB calculations.

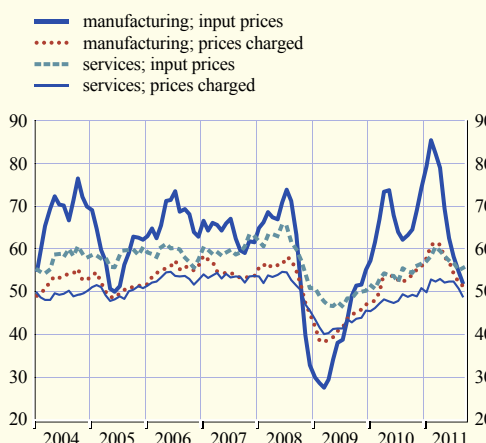
<sup>1</sup> For more details, see the box entitled “Methodological changes in the compilation of the HICP and their impact on recent data”, *Monthly Bulletin*, ECB, April 2011.

almost all indicators decreased further, reportedly owing to the recent moderation in input costs, as well as to firms making increasing use of discounts to combat sluggish demand. In the manufacturing sector, the input price index dropped markedly from 54.6 in August to 51.8, its lowest level since November 2009, and the selling price index declined from 52.1 to 51.3. In the services sector, the input price index registered a slight increase after a decline in August, while the selling price index fell to 48.7 in September 2011.

Overall, the declining trend in the overall annual rate of change in producer prices over recent months reflects a general moderation in commodity price developments. The elevated levels of producer price inflation remain in line with expectations of ongoing pipeline pressures.

**Chart 24 Producer input and output price surveys**

(diffusion indices; monthly data)



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

### 3.3 LABOUR COST INDICATORS

According to the latest data releases, labour cost indicators in the euro area have increased markedly, while labour markets have tended to stabilise, albeit with a considerable degree of heterogeneity across countries. Preliminary information on negotiated wages for July shows some acceleration in annual growth rates compared with the first half of the year, pointing to some upward risks stemming from domestic cost pressures.

Euro area negotiated wages grew at 1.9% year on year in the second quarter of 2011, after 1.7% in the previous quarter (see Table 6 and Chart 25). The annual rate of growth in hourly labour costs rose markedly to 3.6% in the second quarter. At the same time, the growth rate in the first quarter was revised upwards to 2.7%, back to around the average rate of growth observed in 2009. This acceleration in the second quarter was broadly based across sectors (see Chart 26), but particularly strong in the industrial sector. At the country level, hourly labour cost growth

**Table 6 Labour cost indicators**

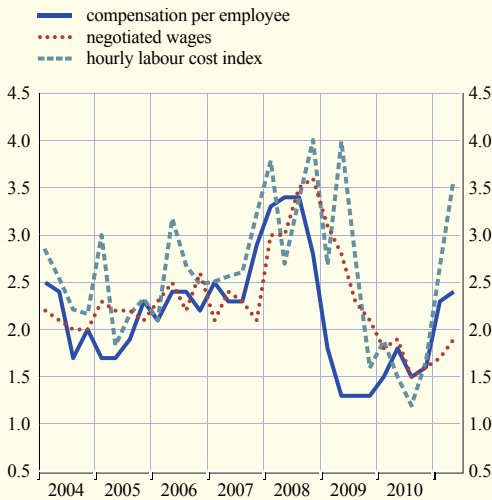
(annual percentage changes, unless otherwise indicated)

	2009	2010	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2
Negotiated wages	2.6	1.7	1.9	1.5	1.6	1.7	1.9
Hourly labour cost index	2.8	1.6	1.5	1.2	1.7	2.7	3.6
Compensation per employee	1.4	1.6	1.8	1.5	1.6	2.3	2.4
<i>Memo items:</i>							
Labour productivity	-2.4	2.3	2.7	2.2	1.7	2.1	1.1
Unit labour costs	3.9	-0.7	-0.8	-0.7	-0.1	0.2	1.3

Sources: Eurostat, national data and ECB calculations.

**Chart 25 Selected labour cost indicators**

(annual percentage changes; quarterly data)



Sources: Eurostat, national data and ECB calculations.

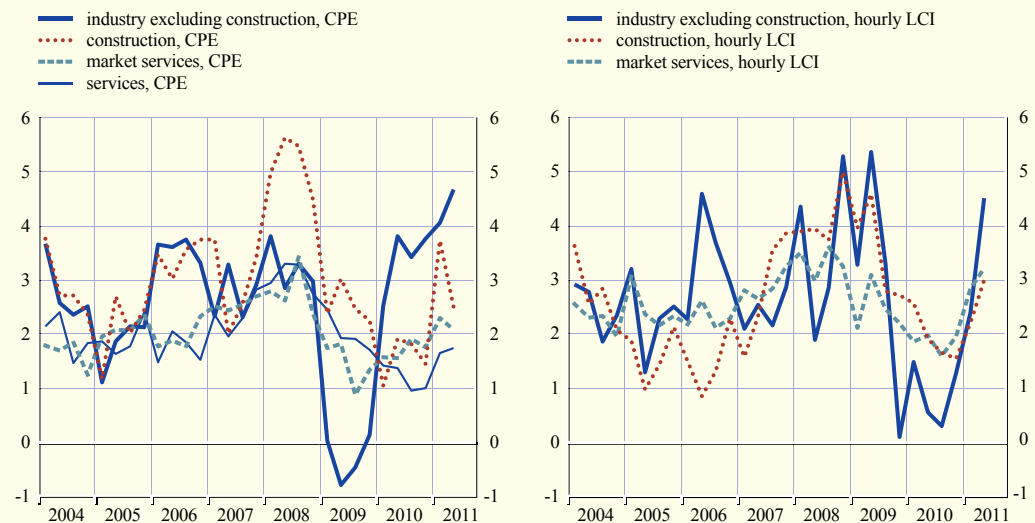
accelerated in more or less half of the euro area countries, but moderated in a few, while Greece, Ireland and Portugal reported a further year-on-year fall in hourly labour costs in the second quarter. Germany in particular appears to be the main driving force behind the acceleration in hourly labour costs, owing both to increasing bonus payments and the further phasing-out of short-time work schemes. Overall, non-wage costs continued to grow at a faster rate than the wages and salaries component of euro area hourly labour costs.

Against the background of a slowdown in real GDP in the second quarter of 2011, annual labour productivity growth declined sharply to 1.1%, from 2.1% in the first quarter, while the rate of change in compensation per employee increased marginally to 2.4% after a strong upward revision of the data in the first quarter. Consequently, unit labour cost growth increased to 1.3% year on year in the second quarter

of 2011, after 0.2% in the previous quarter. Euro area unit labour cost growth turned positive in the first quarter of 2011 after remaining in negative territory throughout 2010. Looking ahead, the latest surveys point to a further moderation in productivity growth in the coming quarters, suggesting higher unit labour cost growth, which would also fuel domestic price pressures in the euro area.

**Chart 26 Sectoral labour cost developments**

(annual percentage changes; quarterly data)



Sources: Eurostat and ECB calculations.

Note: CPE stands for "compensation per employee" and LCI stands for "labour cost index".

### 3.4 THE OUTLOOK FOR INFLATION

Looking ahead, inflation rates are likely to stay clearly above 2% over the coming months, but to decline thereafter. This pattern reflects the expectation of relatively stable wage growth developments in the context of moderate economic growth.

Risks to the medium-term outlook for price developments continue to be seen as broadly balanced. On the upside, the main risks relate to the possibility of increases in indirect taxes and administrative prices, owing to the need for fiscal consolidation in the coming years. The main downside risks relate to the impact of weaker than expected growth in the euro area and globally.

## 4 OUTPUT, DEMAND AND THE LABOUR MARKET

Real GDP growth in the euro area, after slowing in the second quarter of 2011 to 0.2% quarter on quarter, is now expected to be very moderate in the second half of this year. In particular, a number of factors seem to be dampening the underlying growth momentum in the euro area, including a moderation in the pace of global demand, falling consumer and business confidence, and unfavourable effects on financing conditions resulting from ongoing tensions in a number of euro area sovereign debt markets. At the same time, euro area economic activity is expected to benefit from continued positive growth in the emerging market economies as well as from the low short-term interest rates and the various measures taken to support the functioning of the financial sector. The risks to the economic outlook remain on the downside in an environment of particularly high uncertainty.

### 4.1 REAL GDP AND DEMAND COMPONENTS

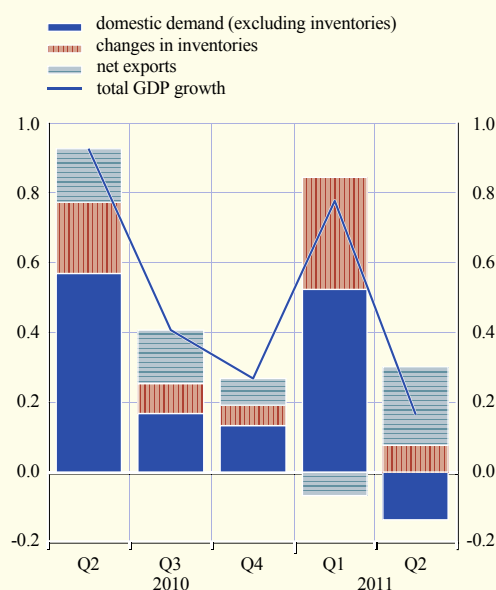
Real GDP in the euro area rose by 0.2%, quarter on quarter, in the second quarter of 2011, following growth of 0.8% in the previous quarter (see Chart 27). This slowdown, which was expected, was mainly due to weaker developments in domestic demand, in part reflecting special factors. Although GDP has grown on a quarterly basis for eight consecutive quarters during the recovery phase, the level of output in the second quarter was still almost 2% below its peak in the first quarter of 2008.

Following six quarters of positive but weak growth, private consumption declined by 0.2%, quarter on quarter, in the second quarter of 2011. Developments in both retail trade and car purchases contributed to this negative outcome, with the former contracting by 0.3% quarter on quarter, and car registrations declining by 4.0%.

As regards the third quarter of 2011, information on private consumption points towards continued weak developments in consumer spending. Retail sales declined by 0.3% in August and stood on average during the first two months of the third quarter at the same level as in the second quarter. At the same time, new passenger car registrations stood during the same months 1.2% below their average level in the second quarter of 2011. Retail sector survey data, which are available for the full third quarter, point towards continued weakness in consumption of retail goods (see Chart 28). The Purchasing Managers' Index (PMI) for retail trade has been recorded at levels below 50 throughout the third quarter, thereby pointing towards shrinking sales. Moreover, according to the European Commission's consumer survey, the indicator on consumer confidence declined further in September, following its sharp fall in the previous month. Meanwhile, the indicator on expected major purchases continues to be recorded at historically low levels, suggesting that consumers are still cautious when deciding whether to purchase durable goods.

Chart 27 Real GDP growth and contributions

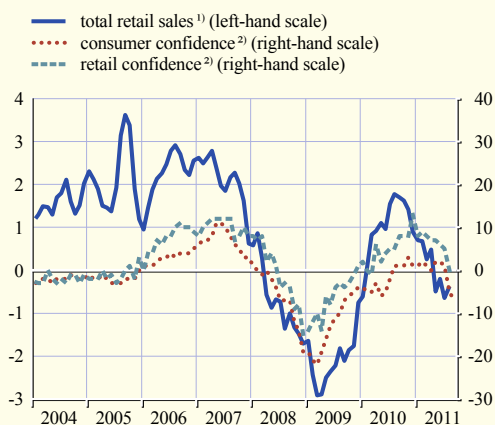
(quarter-on-quarter growth rate and quarterly percentage point contributions; seasonally adjusted)



Sources: Eurostat and ECB calculations.

**Chart 28 Retail sales and confidence in the retail trade and household sectors**

(monthly data)



Sources: European Commission Business and Consumer Surveys and Eurostat.

1) Annual percentage changes; three-month moving averages; working day-adjusted. Excludes fuel.

2) Percentage balances; seasonally and mean-adjusted.

Gross fixed capital formation increased quarter on quarter by 0.1% in the second quarter of 2011, following growth of 1.8% in the previous quarter. The recovery of investment has been more sluggish than the recovery of overall activity. Quarter-on-quarter growth has also been more volatile as investment has been affected by various special factors, e.g. adverse weather conditions hampering construction investment. With regard to the breakdown of investment in the second quarter, non-construction investment rose quarter on quarter by 0.9%, while construction investment contracted by 0.5%. The decline in construction investment was partly expected following high volatility in previous quarters, which was related to unusual weather conditions in some countries.

Looking ahead, industrial production of capital goods (an indicator of future non-construction investment) rose swiftly by 3.3% in July, thereby

providing a strong start to the third quarter. However, survey results for the non-construction industrial sector – both the PMI and the European Commission’s industrial confidence indicator – point towards a slowdown in activity throughout the third quarter. The industrial confidence indicator is close to its historical average, while the PMI currently stands below the theoretical no-growth threshold of 50.

In July 2011 construction production increased by 1.6%, month on month, following a decline of 1.1% in the previous month. Meanwhile, the indicator on construction confidence published by the European Commission remained at levels below its historical average throughout the third quarter. At the same time, the PMI for construction in the euro area was, on average, well below 50 during the first two months of the third quarter, pointing towards continued negative growth in that quarter, following the weak second quarter.

Turning to trade flows, both import and export growth rates decelerated in the second quarter of 2011, in line with the overall slowdown in global trade. In July the growth rates of extra-euro area import and export values of goods continued to decline (in three-month-on-three-month terms) compared with the second quarter of 2011 and turned slightly negative. Trade in services also slightly contracted in July (in three-month-on-three-month terms). Looking ahead, the PMI for new export orders in the euro area manufacturing sector, available until September 2011, points towards weak euro area export growth in the short term.

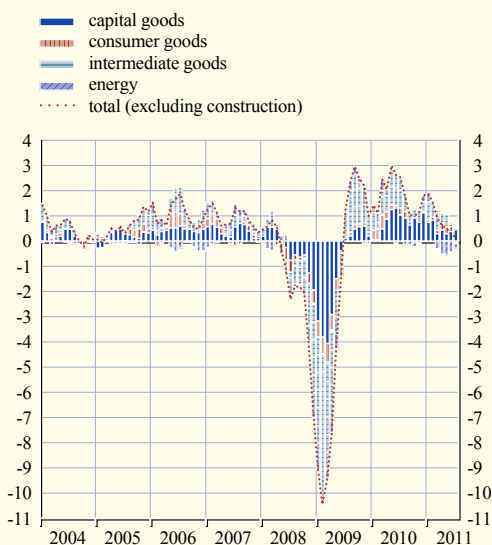
## 4.2 OUTPUT, SUPPLY AND LABOUR MARKET DEVELOPMENTS

Real value added increased by 0.2%, quarter on quarter, in the second quarter of 2011. Activity in industry (excluding construction) grew by 0.4%, while services activity increased by 0.2%. At the same time, value added in construction rose quarter on quarter by 0.1%.



**Chart 29 Industrial production growth and contributions**

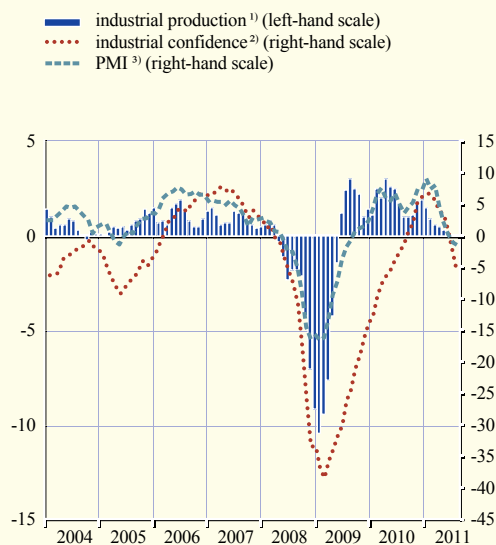
(growth rate and percentage point contributions; monthly data; seasonally adjusted)



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

**Chart 30 Industrial production, industrial confidence and the PMI**

(monthly data; seasonally adjusted)



Sources: Eurostat, European Commission Business and Consumer Surveys, Markit and ECB calculations.  
Note: Survey data refer to manufacturing.  
1) Three-month-on-three-month percentage changes.  
2) Percentage balances.  
3) Purchasing Managers' Index; deviations from an index value of 50.

With regard to developments in the third quarter of 2011, industrial production (excluding construction) increased, month on month, by 0.9% in July, following a decline of 0.7% in the previous month. The three-month-on-three-month growth rate moderated nonetheless further from 0.3% in June to 0.2% in July (see Chart 29). Meanwhile, euro area industrial new orders (excluding heavy transport equipment) increased, month on month, by 1.3% in July, following a strong decline of 3.3% in June. The three-month-on-three-month growth rate of industrial new orders increased from 0.4% in June to 0.6% in July, slightly below its long-term average. Despite a strong start to the third quarter in the industrial sector, survey data, which are more up to date, paint a weaker picture for the quarter as a whole (see Chart 30). For example, the PMI manufacturing output index has declined throughout the quarter and stood on average in the third quarter at 49.6, down from 56.0 in the second quarter. This is below 50 and is therefore pointing towards negative growth. The services business activity index has also declined, from 55.5 in the second quarter to 50.6 in the third quarter. Other business surveys, such as those of the European Commission, are broadly in line with developments in the PMI.

### LABOUR MARKET

Conditions in the euro area labour markets are stabilising. Employment rose in the first half of the year, while the unemployment rate remained stable, which suggests that the work force has been increasing.

Employment increased, quarter on quarter, by 0.3% in the second quarter of 2011, following a rise of 0.1% in the two previous quarters (see Table 7). Hours worked, however, declined by 0.2% in

Table 7 Employment growth

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

	Annual rates		Persons			Annual rates		Hours		
	2009	2010	Quarterly rates			2009	2010	Quarterly rates		
			2010 Q4	2011 Q1	2011 Q2			2010 Q4	2011 Q1	2011 Q2
Whole economy	-1.9	-0.5	0.1	0.1	0.3	-3.5	0.4	0.0	0.3	-0.2
<i>of which:</i>										
Agriculture and fishing	-2.4	-0.6	0.1	-1.3	-0.7	-2.3	-1.2	-0.2	-0.3	-1.7
Industry	-5.7	-3.3	-0.3	-0.1	0.1	-9.0	-1.3	-0.5	0.6	-0.4
Excluding construction	-5.2	-3.1	0.1	0.3	0.1	-9.2	-0.3	0.1	0.6	-0.3
Construction	-6.7	-3.7	-1.0	-0.9	0.1	-8.6	-3.4	-1.8	0.5	-0.4
Services	-0.5	0.5	0.2	0.2	0.4	-1.6	1.0	0.2	0.3	0.0
Trade and transport	-1.8	-0.6	0.2	0.1	0.5	-3.0	0.3	0.0	0.0	0.0
Finance and business	-2.2	1.1	0.3	1.1	1.0	-3.5	1.7	0.6	1.2	-0.5
Public administration <sup>1)</sup>	1.5	1.1	0.2	-0.2	0.1	0.9	1.4	0.1	0.1	0.2

Sources: Eurostat and ECB calculations.

1) Also includes education, health and other services.

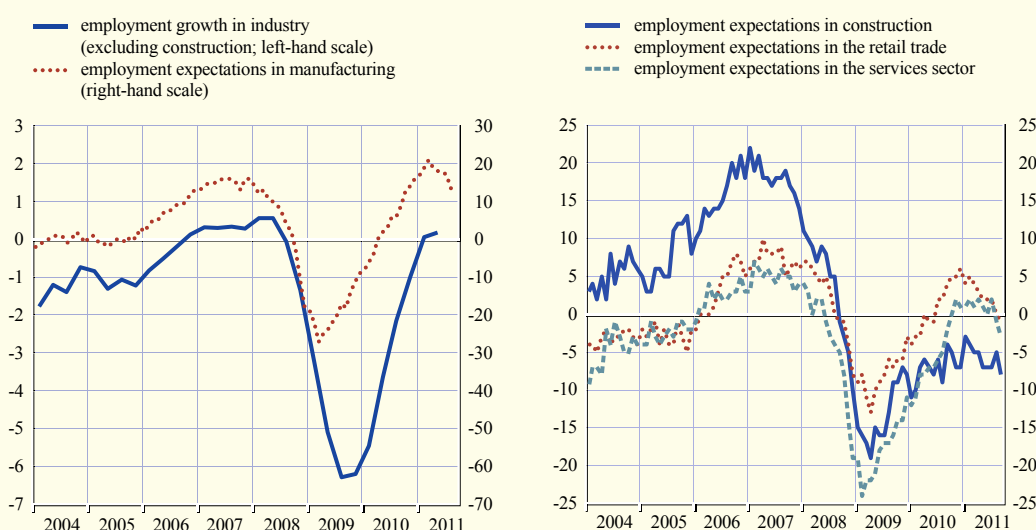
the second quarter. This contrasts with most recent developments, as hours worked have grown more quickly than headcount employment during the recovery.

At the sectoral level, on a quarter-on-quarter basis, the latest employment figure reflects growth in industry (excluding construction) of 0.1% and in the services sector of 0.4%. Employment growth in construction in the second quarter stood at 0.1%.

As employment growth exceeded growth in GDP in the second quarter, productivity decelerated, led by developments in industry and construction and, to a lesser extent, trade and transport services. The annual growth rates of labour productivity per person employed and hourly labour

Chart 31 Employment growth and employment expectations

(annual percentage changes; percentage balances; seasonally adjusted)

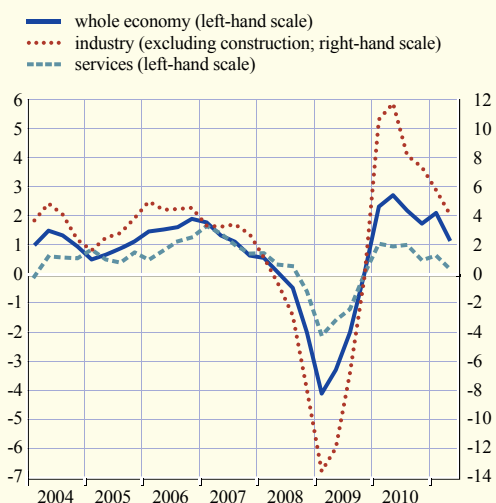


Sources: Eurostat and European Commission Business and Consumer Surveys.

Note: Percentage balances are mean-adjusted.

**Chart 32 Labour productivity**

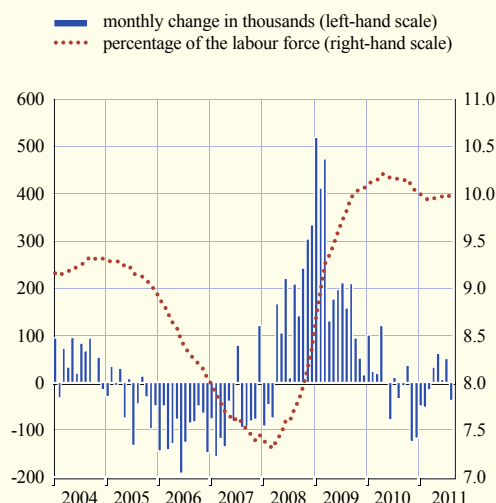
(annual percentage changes)



Sources: Eurostat and ECB calculations.

**Chart 33 Unemployment**

(monthly data; seasonally adjusted)



Source: Eurostat.

productivity decreased by one full percentage point and by 0.1 percentage point, respectively, in the second quarter of 2011, compared with the previous quarter, reaching 1.1% and 1.5% respectively (see Chart 32). Looking ahead, the latest readings of the PMI productivity index suggest further declines in productivity growth in the third quarter.

The unemployment rate remained stable in August at 10.0% for the fourth consecutive month (see Chart 33) and with substantial heterogeneity across euro area economies. However, this masks a slight increase in the number of persons unemployed in recent months. Survey indicators point towards ongoing, albeit decelerating, employment growth in both industry and services in the third quarter of 2011 (see Chart 31).

### 4.3 THE OUTLOOK FOR ECONOMIC ACTIVITY

Real GDP growth in the euro area, after slowing in the second quarter of 2011 to 0.2% quarter on quarter, is now expected to be very moderate in the second half of this year. In particular, a number of factors seem to be dampening the underlying growth momentum in the euro area, including a moderation in the pace of global demand, falling consumer and business confidence, and unfavourable effects on financing conditions resulting from ongoing tensions in a number of euro area sovereign debt markets. At the same time, euro area economic activity is expected to benefit from continued positive growth in the emerging market economies as well as from the low short-term interest rates and the various measures taken to support the functioning of the financial sector.

The risks to the economic outlook for the euro area remain on the downside in an environment of particularly high uncertainty. Downside risks notably relate to the ongoing tensions in some segments of the financial markets in the euro area and at the global level, as well as to the potential for these pressures to further spill over into the euro area real economy. They also relate to the still high energy prices, protectionist pressures and the possibility of a disorderly correction of global imbalances.

## ARTICLES

# THE SUPPLY OF MONEY – BANK BEHAVIOUR AND THE IMPLICATIONS FOR MONETARY ANALYSIS



*The ECB's monetary policy strategy assigns a prominent role to monetary analysis as one element of the two-pillar framework for the assessment of risks to price stability in the euro area. Monetary analysis ensures that the important information stemming from money and credit is considered in the monetary policy decision-making process and provides a cross-check from a medium to long-term perspective of the assessment of risks to price stability based on the economic analysis.*

*Through an analysis of money and credit developments, this article looks at the impact of banks' intermediation activity on the macroeconomy with respect to both conjunctural developments and the assessment of nominal trends. Persistent changes in banks' behaviour are likely to affect the economy in an enduring and significant manner. The analysis of money and credit growth is thus crucial for conducting an appropriate monetary policy.*

### I INTRODUCTION

The role of monetary analysis in the ECB's monetary policy strategy is founded on the robust positive relationship between longer-term movements in broad money growth and inflation, whereby money growth leads inflationary developments. This relationship is found to hold true across countries and monetary policy regimes.<sup>1</sup> Accordingly, when trying to identify the contributions to monetary growth that are associated with risks to price stability, it is necessary to look for changes of a persistent nature or that are driven by factors beyond the normal needs of the economic cycle. In this respect, the supply of money and credit may be affected by persistent advances in banks' intermediation capacity, thus contributing to longer-term price developments in asset and goods markets, and in the short-term by market perception of the financial soundness of banks. Thus, from a monetary analysis perspective, understanding developments in banks' behaviour is an important element in deriving the signals for risks to price stability.

Section 2 of the article develops a framework for understanding why advancements in the bank intermediation process may have led to persistent developments in money and credit growth, ultimately affecting macroeconomic developments relevant for monetary policy. Section 3 discusses selected examples, which illustrate how banking operations in the euro area have undergone significant changes in the

past decade. On the liability side of the balance sheet, the internationalisation of interbank funding is a significant development while, on the asset side, the growing use of loan sales and securitisation activity stands out. Section 4 concludes.

### 2 WHAT ROLE FOR BANK BEHAVIOUR IN MONETARY ANALYSIS?

Bank behaviour is one important determinant of money and credit developments, both of a cyclical and of a more persistent nature. Neglecting this role is akin to assigning financial intermediaries only a passive role in the economy. In recent years, against the background of the financial crisis, it has become increasingly evident that such a passive view of banks is unwarranted.

#### 2.1 MONEY DEMAND VERSUS MONEY SUPPLY

The volume of broad money in the economy is the result of the interaction of the banking sector (including the central bank) with the money-holding sector, consisting of households, non-financial corporations, the general government other than central government, as well as non-monetary financial intermediaries. Broad money comprises currency in circulation and

<sup>1</sup> See Papademos, L. and Stark, J. (eds.), *Enhancing Monetary Analysis*, ECB Frankfurt am Main, 2010, Chapter 1 and the references cited therein.

close substitutes, such as bank deposits, and is informative for aggregate spending and inflation. It thus goes beyond those assets that are generally accepted means of payment to include instruments that function mainly as a store of value.

Empirical models for money holdings are applied for two purposes. First, they are used to guide the analysis of monetary developments, as a means of quantifying the contribution of various economic determinants to money growth in order to provide a deeper understanding of the causes of money growth. This is necessary in order to develop a view of underlying monetary expansion. Second, the models provide a normative framework to assess whether the stock of money in the economy is consistent with price stability and to interpret the nature of deviations from this norm. An understanding of why the money stock deviates from an equilibrium level, defined on the basis of empirical regularities, is therefore essential from a monetary policy perspective.<sup>2</sup>

Identifying whether monetary developments are driven by money demand or money supply is of prime relevance when assessing the relationship between money, asset price developments and wealth. Indeed, the holdings of broad money, as one element in the portfolio of economic agents, are determined by the size of agents' wealth. At the same time, asset prices, and thus the overall wealth position of agents, may be influenced by money supply. The assessment of monetary developments is therefore closely linked to an assessment of the sustainability of wealth and asset price developments.<sup>3</sup>

If the observed level of money is assessed as being consistent with the level of prices, income and interest rates, then money growth reflects the economic situation. Risks to price stability resulting, for example, from strong economic growth would be visible in money.<sup>4</sup> If, however, observed monetary developments do not evolve in line with expectations based on the historical relationship with prices, income and interest rates, then the appropriate monetary policy

response will depend on the underlying forces leading to this deviation.

If the inconsistency is the result of demand considerations, resulting, for instance, from heightened financial uncertainty, monetary policy should not necessarily react to monetary developments. For example, the increase in M3 holdings in the period from 2001 to mid-2003 that was identified as resulting from a shift in preference towards holding safe and liquid assets owing to heightened uncertainty was not linked to the emergence of risks to price stability (see Chart 1, which shows the difference between the broad monetary aggregate M3 and M3 corrected for the estimated impact of

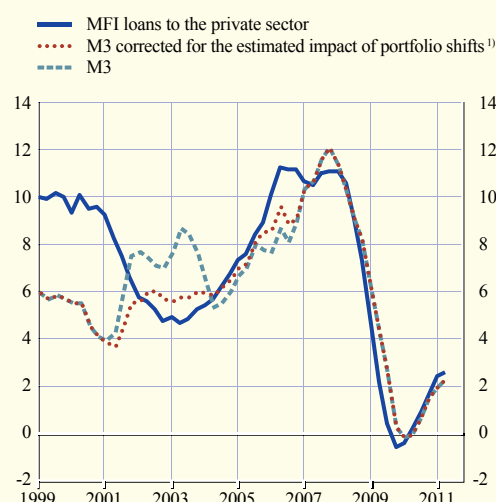
2 See Papademos, L. and Stark, J. (eds.), *Enhancing Monetary Analysis*, ECB Frankfurt am Main, 2010, Chapter 3.

3 See the article entitled "Asset price bubbles and monetary policy revisited", *Monthly Bulletin*, ECB, November 2010.

4 However, even in this case, money can play an important informative role owing to errors or revisions in the measurement of other macroeconomic variables such as output. See Coenen, G., Levin, A. and Wieland, V., "Data uncertainty and the role of money as an information variable for monetary policy", *European Economic Review*, Vol. 49, No 4, May 2005, pp. 975-1006.

**Chart 1 Broad money and loan growth**

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



Source: ECB.

1) Estimates of the magnitude of portfolio shifts into M3 are constructed using the approach discussed in Section 4 of the article entitled "Monetary analysis in real time" in the October 2004 issue of the *Monthly Bulletin*.

portfolio shifts). By contrast, if monetary developments deviate from the economic determinants as a result of a shift in money supply that is caused either by a structural change or a shift in the perception of risks, this would call for an adjustment of monetary policy to the extent that the deviation is likely to affect inflation. Explanations relating to money supply are often linked to the intermediation and the money creation processes, and highlight the interdependence between the credit and the money markets.<sup>5</sup>

In principle, it is possible to distinguish between money supply and money demand at a conceptual level in a static setting. However, in a dynamic context, it is difficult to assess which of these forces is mainly driving actual developments, as the determinants of money growth often affect both sides, and demand and supply interact.

## 2.2 MONEY SUPPLY AND MONETARY POLICY

Money supply originates in the behaviour of the central bank and banks. A common distinction made in this respect is the supply of “outside money” provided by the central bank – consisting of banknotes and banks’ reserves with the central bank – and “inside money” created by banks, consisting mainly of deposits.

Pedagogical accounts of how monetary policy exerts an influence on the supply of broad or inside money in the economy traditionally rely on the money multiplier approach. According to this approach, the money supply process is essentially driven by the actions of the central bank, which conducts monetary policy by adjusting the level of outside money. The volume of broad money supplied to the economy is then simply determined as a multiple of the monetary base, depending on the size of the money multiplier. The concept of the money multiplier derives from the basic feature of deposit banking that, under normal conditions and when there is confidence in the banking system, banks only need to maintain a fraction of the deposits they have accepted in the form of highly liquid, cash-equivalent assets (such as central bank reserves). The rest of the deposits can be used to acquire higher yielding, less liquid assets, in particular loans. According to this framework, therefore, when the central bank increases the volume of reserves it makes available to banks, the latter can create additional deposits equal to a multiple of this increase (see Box 1 entitled “Multiplier analysis of the effect of monetary policy on money supply”).

5 See Brunner, K. and Meltzer, A., “Money Supply”, in Friedman, B. and Hahn, F.H. (eds.), *Handbook of Monetary Economics*, Vol. I, North-Holland, Amsterdam, 1990, p. 396.

### Box 1

#### MULTIPLIER ANALYSIS OF THE EFFECT OF MONETARY POLICY ON MONEY SUPPLY

The money multiplier framework has a long and distinguished pedigree in the literature.<sup>1</sup> Multiplier analysis is based on the assumption that the central bank unilaterally sets the level of the monetary base, i.e. the monetary base is the instrument of monetary policy. The money multiplier then determines the supply of broad money, while short-term interest rates adjust in order to establish equilibrium between money demand and money supply. Clearly, this account contrasts with the way in which monetary policy is, in general, implemented in practice. In fact, as noted in the main text of this article, central banks set an official interest rate and then supply the volume of reserves necessary in order to steer short-term market interest rates close to the official interest rate.<sup>2</sup>

1 See, for instance, Keynes, J.M., *A Treatise on Money*, Macmillan, London, 1930 and St. Martin’s Press, New York, 1971; and Friedman, M. and Schwartz, A., *A Monetary History of the United States, 1867-1960*, Princeton University Press, Princeton, 1963.

2 For reasons why central banks predominantly choose to implement monetary policy through steering interest rates rather than manipulating the monetary base, see Goodhart, C.A.E., “Money, Credit and Bank Behaviour: Need for a New Approach”, *National Institute Economic Review*, No 214, October, 2010, pp. F1-F10.

However, in a situation where nominal interest rates are at, or close to, their zero lower bound, it might be argued that the central bank could provide additional stimulus to the economy by engaging in large-scale provision of central bank reserves in order to engineer an increase in the supply of money in the economy through the money multiplier. While such policies can indeed have a stimulating impact on the economy, this does not arise from a mechanical link to the supply of broad money implied by the multiplier approach. This points to what is perhaps a more fundamental drawback of the money multiplier framework: the money multiplier approach assumes that both banks and the money-holding sector respond in a predictable way to an adjustment of the monetary base by the central bank. Portfolio behaviour in the multiplier framework lacks behavioural content, as banks always exhibit the same preference between central bank reserves and other assets, while the money holding sector is assumed also to have a fixed preference between currency and deposits.<sup>3</sup> Actual portfolio behaviour is, however, affected by the prevailing rates of return and evolving perceptions of risk, as well as a host of other factors.

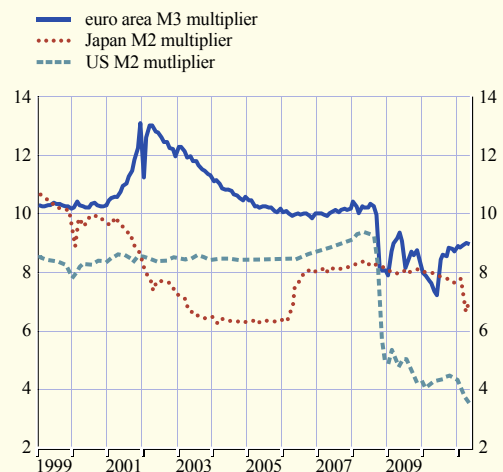
The significance of this shortcoming is borne out by recent experience, when the volume of reserves provided by central banks in a number of economies increased in an unprecedented manner in response to the financial crisis that followed the collapse of Lehman Brothers in the autumn of 2008. As shown in Chart A, this led to a large decline in the broad money multipliers, as the increase in central bank reserves did not trigger a proportionate reaction in broad money.<sup>4</sup> By contrast, in the context of increased uncertainty regarding the strength of the balance sheets of their counterparties in the interbank markets and in the face of concerns regarding their capacity to absorb liquidity shocks, banks decided to increase their holdings of central bank reserves. The increase in central bank reserves did not therefore initiate the predetermined portfolio allocation envisaged by the multiplier approach. To further illustrate this point, a decomposition of the change in the M3 money multiplier in the euro area can be calculated. The M3 money multiplier can be defined as follows:

$$MM = \frac{1 + \frac{C}{D}}{\frac{R}{D} + \frac{C}{D}}$$

where C denotes banknotes in circulation, D denotes deposits (strictly the instruments included in M3 other than currency) and R represents credit institutions' reserves with the Eurosystem (current accounts and use of the

**Chart A Broad money multipliers in the euro area, the United States and Japan**

(in multiples of the monetary base)



Sources: ECB, BIS and ECB calculations.

<sup>3</sup> There is, however, literature in the money multiplier tradition that provides behavioural content to this type of analysis, albeit in a stylised manner. See, for example, Brunner, K. and Meltzer, A.H., "Some Further Investigations of Demand and Supply Functions for Money", *Journal of Finance*, Vol. 19, 1964, pp. 240-283 and Rasche, J.H. and Johannes, J.M., *Controlling the Growth of Monetary Aggregates*, Kluwer Academic Publishers, Boston, 1987.

<sup>4</sup> In the case of Japan, the decline in the money multiplier occurred earlier, as the Bank of Japan started to implement a policy to expand its reserves in 2001.



deposit facility). Changes in the M3 money multiplier (MM) can therefore be decomposed into the contribution due to changes in the currency-to-deposits ratio (C/D) and that due to changes in the reserves-to-deposits ratio (R/D). Chart B documents how the decline in the M3 multiplier in late 2008 was mainly due to the large change in the reserves-to-deposits ratio, reflecting the sizeable accumulation of central bank reserves. By contrast, the episode around the euro cash changeover in 2002 was driven by changes in the currency-to-deposit ratio, as the euro cash changeover affected the public's currency-holding behaviour, in particular concerning a de-hoarding of currency in the run-up to the euro cash changeover and a gradual re-hoarding of currency in subsequent years.<sup>5</sup> Both Chart A and Chart B document how, during the period from 2005 to 2008, the M3 money multiplier in the euro area was rather stable at its pre-2001 level, and did not thus provide any indication of the changes in bank intermediation that were ongoing during this period (see Section 3). This reflects the fact that credit institutions' reserves with the Eurosystem during this period were developing in line with minimum reserve requirements.

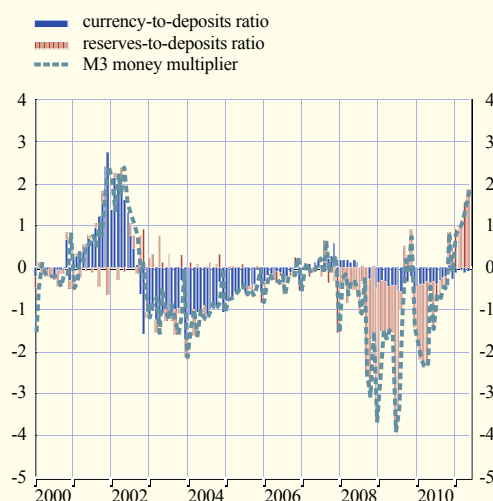
Overall, the mechanical link between monetary policy and the supply of money that is embedded in the money multiplier approach is not a particularly useful framework either for understanding changes in monetary aggregates or for designing appropriate monetary policy responses, even in an environment where the zero lower bound for nominal interest rates may become binding. Instead, the influence of monetary policy on money supply is exerted in a more nuanced manner, as outlined in the main text of this article.

<sup>5</sup> See the article entitled "The demand for currency in the euro area and the impact of the euro cash changeover", *Monthly Bulletin*, ECB, January 2003.

In contrast to the textbook account, the implementation of monetary policy is typically done by steering short-term money market interest rates and accommodating the demand for outside money. Changes in these interest rates alter the opportunity costs of money holdings and thereby affect the demand for broad money. However, monetary policy also has a distinct, albeit non-mechanical, impact on the supply of money to the economy. For instance, declines in monetary policy interest rates will also positively affect the net worth of banks, resulting in an easier funding environment for banks and thereby

**Chart B Decomposition of changes to the M3 multiplier in the euro area**

(annual percentage changes; percentage point contributions)



Sources: ECB and ECB calculations.

increasing their capacity to extend credit. At the limit, the adequacy of the bank's capital position may quantitatively determine its operation.

### 2.3 BANKS AS A SOURCE OF BROAD MONEY SUPPLY

Monetary policy influences the supply of money through the effects it has on banks' intermediation activity. However, the majority of the changes in money supply occurring in the economy result from developments in the way that banks conduct their business.

More specifically, a bank is an institution, the core operations of which consist of granting loans and supplying deposits to the public. Through the duality of lending and deposit issuance, banks fulfil a number of functions: they offer liquidity and payment services, undertake the screening and monitoring of borrowers' creditworthiness, redistribute risks and transform asset characteristics. These functions will often interact within a bank's intermediation process.

Banks may intermediate between savers and borrowers by issuing securities and lending the receipts onward. Such lending activity will require the processing of detailed and often proprietary information on borrowers and the monitoring of the projects that have been financed. Such credit is, however, also provided by a number of non-monetary financial intermediaries, such as insurance corporations, as well as pension and investment funds, and is not specific to banks.

Banks may also lend to borrowers, but thereby create deposits (initially held by the borrowers). The deposits constitute claims on the bank that are capital-certain and demandable, that is redeemable at a known nominal value.<sup>6</sup> These deposits have as a key feature the provision of liquidity services to their owner and, in some cases, such as overnight deposits, can also be used for payment services. As described by Diamond and Dybvig,<sup>7</sup> this transformation of illiquid claims (e.g. bank loans) into liquid claims (e.g. bank deposits) is a key defining element of a bank.<sup>8</sup> Non-monetary financial

intermediaries do not provide their customers with liquid deposits.

Banks' liquid deposit liabilities constitute the core of broad monetary aggregates, and banks thus play a leading role in the supply of broad money. Changes in banks' behaviour will alter the money supply.

A wide range of determinants affecting banks' intermediation activity has been identified in the literature, such as banks' risk aversion, borrowers' creditworthiness, the regulatory framework, the availability of capital buffers and the spread between lending rates and funding costs, known as the "intermediation spread". This spread represents the remuneration that banks can obtain for the service of intermediating between depositors and borrowers through their balance sheet. In a competitive equilibrium, it will equal the marginal cost of banks, which results from the costs of originating and servicing the loans, the provision of transaction services and the risk of default. Different explanations have been put forward in the literature for this spread (see Box 2 entitled "Bank behaviour and macroeconomic developments").

6 See Freixas, X. and Rochet, J.-C., *Microeconomics of Banking*, 2nd edition, MIT Press, Cambridge, Massachusetts, 2008.

7 Diamond, D.W. and Dybvig, P.H., "Bank runs, deposit insurance, and liquidity", *Journal of Political Economy*, Vol. 91 (3), 1983, pp. 401-419.

8 Liquidity is a complex and multi-faceted concept. For an exposition of the liquidity provision by the banking system, see, for instance, von Thadden, E., "Liquidity", *Cahiers de Recherches Économiques du Département d'Économétrie et d'Économie politique (DEEP)*, Université de Lausanne, Faculté des HEC, 2002.

## Box 2

### BANK BEHAVIOUR AND MACROECONOMIC DEVELOPMENTS

Triggered by the financial crisis, there is renewed interest in academic research on the role played by banks in macroeconomic developments. Banks' intermediation activity is explained on the basis of a variety of approaches, which emphasise different aspects of the banking sector's economic functions. This box describes some of the core mechanisms proposed in the recent literature to explain the spread between deposit and loan rates.

## Explaining the spread between deposit and loan rates

Traditional macroeconomic models without financial intermediation describe the transmission mechanism of monetary policy through a single (risk-free) interest rate. As indicated by Meltzer and Nelson<sup>1</sup>, the characterisation of the financial sector in such a simplified manner is likely to miss important elements in the macroeconomic adjustment mechanisms. A key aspect that is absent from the traditional framework is an account of how different interest rates embody time-varying risk premia. Developments in money and credit may be informative as regards the evolution of the (unobservable) risk premia, both for the bank and for the non-financial private sector.

One strand in the recent academic literature seeks to explain the existence of different bank interest rates on loans and deposits on the basis of monopolistic competition in the banking sector. In this case, banks earn a positive profit margin because they can set the level of bank interest rates such that deposit rates are below the interbank rate and loan rates are above it. In addition, the bank faces costs in adjusting its interest rates and will take the pricing decision of competitors into account in order to preserve long-term customer relationships. This shields borrowers from market rate fluctuations.<sup>2</sup> The adjustment costs imply a sluggish adjustment of retail interest rates to changes in the monetary policy rate, as actually observed in euro area data, and provide more scope for financial quantities to play a role in the propagation of monetary policy.

The explicit characterisation of the impact of asymmetric information on the relationship between borrowers and lenders is a further approach to describing banks. This strand of the literature focuses on the prevalence of superior information with regard to the success of investment projects on the side of the borrower vis-à-vis the bank. The approach thus distinguishes between borrowers that are able to repay their loans and those that are not. The spread between loan and deposit rates in part insures the bank against the costs resulting from defaulting borrowers.<sup>3</sup> A similar approach focuses on the depositor-bank relationship, and introduces superior information on the part of the bank with regard to the investments it funds with the deposits it receives. This agency problem leads to a restriction of the maximum leverage that the bank can undertake and thereby imposes a relationship between capital and loan supply. In this approach, the default risk of banks can disrupt the intermediation process and raises the cost of credit to the economy.<sup>4</sup>

Several approaches emphasise the use of resources in the context of financial intermediation. Banks can be seen as possessing several technological tools to provide the intermediation service and manage their assets and liabilities. As a result of the default risk of borrowers, in their lending business, banks may use resources to screen loan applicants and monitor the projects the banks finance or hedge their exposure.<sup>5</sup> The resources involve, for instance, a monitoring effort of its

1 See Meltzer, A., “Monetary, Credit and (Other) Transmission Processes: A Monetarist Perspective”, *Journal of Economic Perspectives*, Vol. 9(4), 1995, pp. 49-72; Nelson, E. “The future of monetary aggregates in monetary policy analysis”, *Journal of Monetary Economics*, Vol. 50, pp. 1029-1059.

2 See Gerali, A., Nerri, S., Sessa, L. and Signoretti, F., “Credit and Banking in a DGSE model of the euro area”, *Journal of Money, Credit and Banking*, Supplement to Vol. 42, September, 2010, pp. 107-141.

3 See Curdia, V. and Woodford, M., “Credit frictions and optimal monetary policy”, revised draft of paper prepared for the BIS annual conference on 26-27 June 2008, “Whither Monetary Policy?”, Lucerne, Switzerland, 2009.

4 See Gertler, M. and Karadi, P., “A model of unconventional monetary policy”, *Journal of Monetary Economics*, Vol. 58, 2011, pp. 17-24; Gertler, M., Kiyotaki, N., “Financial Intermediation and Credit Policy in Business Cycle Analysis”, in Friedman, B. and Woodford, M. (eds.), *Handbook of Monetary Economics*, Vol. 3, North-Holland, Amsterdam, 2010.

5 Goodfriend, M., and McCallum, B., “Banking and interest rates in monetary policy analysis: a quantitative exploration”, *Journal of Monetary Economics*, Vol. 54, 2007, pp. 1480-1507.

staff both on the borrower and on the value of collateral that the bank receives. For instance, a positive shock to the value of the collateral that is pledged to banks implies a lower risk for the bank and thus the bank can grant more loans for a given amount of monitoring effort. This increase leads to a higher supply of money. Chart A illustrates quantitatively the response of consumption and inflation to such a shock.

With regard to the management of its liabilities, a bank can devote resources in terms of staff and capital in order for its customers to have access to liquidity services.<sup>6</sup> For instance, electronic payment technologies, such as internet banking, and the use of debit cards on deposits allow the payer to make a transfer to the recipient's account without losing interest before the payment and without incurring transaction costs.

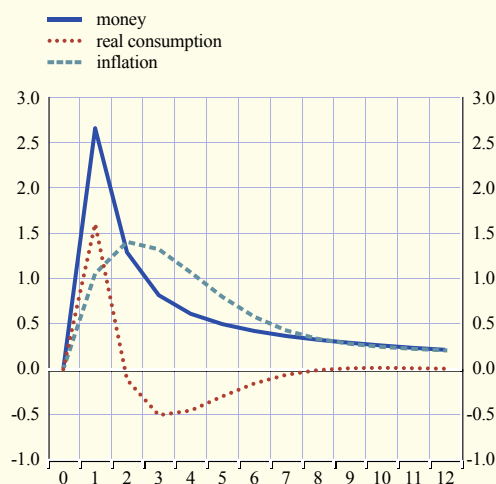
An increase in banks' perceived risk management capabilities, for instance, through the widespread use of credit scoring, may give the impression that there is less uncertainty about the borrowers' capacity to repay loans than there was in the past. A perceived improvement in their risk management leads banks to charge a lower premium to borrowers and to boost credit. On the funding side, the increase in loans is financed by trying to attract all sources of funds via offering higher rates. Therefore, loans and M3 tend to grow at a similar pace. The impact on economic activity is positive and upward pressure on inflation is observed (see Chart B).

### Outlook

Each of the mechanisms discussed above focuses on a specific element of banking. At the same time, the variety of approaches indicates that banking cannot be characterised by a single dominant mechanism. This has two implications for monetary policy analysis: first, the effects derived from individual

**Chart A Responses to an improvement in collateral value**

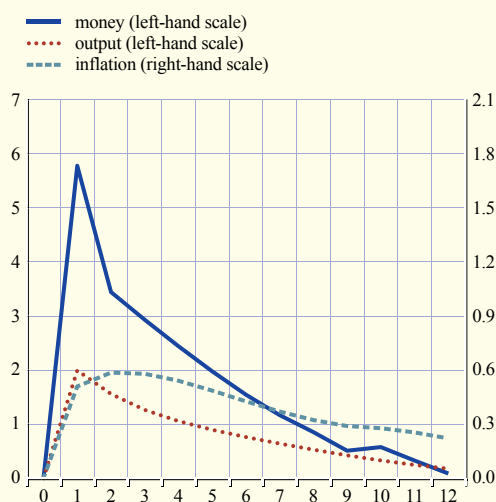
(quarterly percentage changes)



Source: ECB estimates.  
Notes: Based on a modified version of the model by Goodfriend, M. and McCallum, B., "Banking and interest rates in monetary policy analysis: a quantitative exploration", *Journal of Monetary Economics*, Vol. 54, 2007, pp. 1480-1507. The responses result from an unexpected 1% increase in the value of collateral.

**Chart B Responses to an improvement in the perceived riskiness of borrowers**

(quarterly percentage changes)



Source: ECB estimates.  
Notes: Based on a modified version of the model by Christiano, L., Motto, R. and Rostagno, M., "Financial factors in economic fluctuations", *Working Paper Series*, No 1192, ECB, Frankfurt am Main, May 2010. The responses result from an unexpected 1% decline in the riskiness of the lending activity.

6 Christiano, L., Motto, R. and Rostagno, M., "Financial factors in economic fluctuations", *Working Paper Series*, No 1192, ECB, Frankfurt am Main, May 2010.

mechanisms may only explain in part the role of banks in the intermediation process and the broader economy. Second, it is difficult to construct a model of a bank that fully integrates the different mechanisms, and no such model is currently available in the academic literature. For this, it would be necessary to know how the different mechanisms interact and which of the mechanisms were indeed the most relevant when confronted with reality.

The size of banks' balance sheets and the maturity structure of assets and liabilities is key to the generation of liquidity. Taking the view that banks manage their assets and liabilities independently of each other overlooks the structural interdependence between the asset side and the liability side of the balance sheet.

First, at the individual bank level, once granted to customers, credit lines have very similar implications in terms of liquidity risk to overnight deposits, as the customers can draw down the deposits and the credit lines at their discretion, thereby gaining access to liquidity on demand in order to accommodate unpredictable needs. The bank, however, will need to hold available a cash buffer in order to meet these demands. If the withdrawals are sufficiently uncorrelated, banks may be able to gain risk-reduction synergies by offering both products, while a non-bank financial intermediary would not be able to benefit from such synergies.<sup>9</sup> Ultimately, it is the provision of liquidity to the economy that has macroeconomic implications.

Second, the availability of deposits, the remuneration of which adjusts sluggishly to changes in the market rates – a feature typical of “core” deposits, such as time and savings deposits held by the non-financial private sector – allows banks to engage in contractual agreements with borrowers, which would not be possible if the intermediary were to fund these activities at market rates.<sup>10</sup> Deposits shield the bank's costs of funds from movements in market interest rates and thus allow banks to provide to borrowers the extra insurance services against adverse financial developments.

Lastly, lending to borrowers that necessitates a high monitoring effort on the part of banks, such as loans to small and medium-sized

enterprises, is most efficiently funded with core deposits, as these deposits are the least subject to withdrawal risk. Sluggishness in withdrawal can be related to the liquidity services provided by the bank, switching costs for depositors or deposit insurance.<sup>11</sup>

These considerations support the view that developments related to banks' access to liquid deposits have significant implications for the intermediation activity in addition to those resulting from bank credit developments. From the perspective of the bank, the structure of its financing is important for its value. In addition to the mix of debt and equity, it is also the maturity composition of the debt that matters.<sup>12</sup> Improvements in banks' management of liabilities that render their funding more flexible and thus the provision of liquid deposits easier should be seen as increasing the economy's money supply.

## 2.4 BROAD MONEY SUPPLY AND THE MACROECONOMY

In the short run, changes in the demand for money resulting from movements in output, interest rates or liquidity preferences will be satisfied by banks. However, over more protracted horizons,

9 See Kashyap, A., Rajan, R. and Stein, J., “Banks as Liquidity Providers: An Explanation for the Co-Existence of Lending and Deposit-Taking”, *NBER Working Paper*, No 6962, 1999.

10 See Berlin, M. and Mester, L., “Deposits and Relationship Lending”, *The Review of Financial Studies*, Vol. 12(3), 1999, pp. 579-607.

11 See Song, F. and Thakor, A., “Relationship Banking, Fragility, and the Asset-Liability Matching Problem”, *The Review of Financial Studies*, Vol. 20, No 5, 2007, pp. 2129-2177.

12 Only in a world in which the unrealistically strict assumptions of the Modigliani and Miller theorem hold, would the value of the bank not depend on the composition of liabilities. See DeYoung, R. and Yom, C., “On the independence of assets and liabilities: Evidence from U.S. commercial banks, 1990-2005”, *Journal of Financial Stability*, Vol. 4, 2008, pp. 275-303.

banks will adjust the supply of money and credit as well as bank interest rates in accordance with their business strategy.

Changes in the money supply can have an impact on the economy through two general transmission channels.<sup>13</sup> The first channel rests on the effect of the availability of credit in the economy and the second one on the effect of liquidity on the allocation of asset portfolios. These channels are not mutually exclusive, but rather complement each other. They are presented below in a stylised manner.

#### AVAILABILITY OF CREDIT

In the first channel, improvements to the intermediation process, for instance, owing to changes in banks' access to funding, will ease financing conditions for households and firms. This can be reflected in lower lending rates, more attractive non-price elements of loan contracts, such as higher loan-to-value ratios, and ultimately enhanced availability of credit. In an environment where some economic agents are constrained in their capacity to spend by their currently available income and liquid assets, an easier access to funds will increase real consumption and real investment expenditures, and ultimately lead to inflationary pressures. An example of this is where, owing to their ability to securitise loans, banks fund the demand for credit from households more easily and are prepared to provide mortgages to a wider group of households on easier terms, which has an impact on housing investment and consumption.<sup>14</sup>

An additional element that can give rise to changes in the availability of credit to households and firms arises from advances in bank risk management techniques, in particular, with regard to funding risk that comprises both the actual mismatch in the residual maturity of assets and liabilities, as well as the inability to liquidate assets quickly or to roll over existing sources of funding.<sup>15</sup> Enhanced risk mitigation for a given level of funding and bank capital allows banks to take on more credit exposure.<sup>16</sup> A further element that may affect banks' ability to provide intermediation relates to developments

in their capital position. Events giving rise to an improvement in banks' capital positions may increase their capacity to expand their asset holdings, thereby potentially inducing a leveraging process. As a result of this mechanism, what may appear to be small increases in the value of the banking firm from the perspective of the aggregate economy, may be amplified in terms of the effects they have on the broader economy through the easing of credit constraints.<sup>17</sup>

These mechanisms highlight the existence of binding credit constraints in the economy. To the extent, however, that the changes in the intermediation process give rise to lower costs for banks, this can be passed on to customers as higher deposit rates and/or lower lending rates. This impact on interest rates will affect the net present value of investment projects and the inter-temporal allocation of consumption. On aggregate, it will affect spending and ultimately inflation. In addition to the level of bank interest rates, the changes in the intermediation process may also affect other features of the pass-through, such as the speed of adjustment of bank interest rates to market rates.

#### LIQUIDITY EFFECT

Economic agents that borrow from banks generally do so in order to purchase goods and services, thereby transferring the newly-created deposits to other agents in the economy.

13 See also the article entitled "The role of banks in the monetary policy transmission", *Monthly Bulletin*, ECB, Frankfurt am Main, August 2008.

14 This process is highlighted in the literature on the bank lending channel, see Bernanke, B. and Blinder, A., "Credit, Money and Aggregate Demand", *American Economic Review*, Vol. 78, 1988, pp. 435-439.

15 Fender, I. and McGuire, P., "Bank structure, funding risk and the transmission of shocks across countries: concepts and measurement", *BIS quarterly review*, September 2010, pp. 63-79.

16 See Borio, C. and Zhu, H. "Capital regulation, risk-taking and monetary policy: a missing link in the transmission mechanism?", *Working Paper Series*, 268, BIS, December 2008; Maddaloni, A. and Peydro, J.-L. "Bank Risk-Taking, Securitization, Supervision, and Low Interest Rates: Evidence from the Euro Area and U.S. Lending Standards", *Review of Financial Studies*, Vol. 24(6), 2011, pp. 2121-2165.

17 Woodford, M. "Financial Intermediation and Macroeconomic Analysis", *Journal of Economic Perspectives*, Vol. 24(4), Fall 2010, pp. 21-44. See also Aghion, P., Hemous, D. and Kharroubi, E., "Credit constraints, cyclical fiscal policy and industry growth", *Working Paper Series*, No 340, BIS, February 2011.



This provides scope for a second channel through which improvements in intermediation and payment systems have macroeconomic implications by means of liquidity effects and portfolio adjustment. In the short term, these deposits can be held as a liquidity buffer, but over the medium term – unless the demand for money on the part of these agents has changed – economic agents will not be prepared to hold the “extra” deposits. In this situation, some agents may wish to repay their loans to the bank, thereby leading to a re-absorption of the deposits. Alternatively, agents will use the “extra” deposits to purchase additional goods and services, placing the sellers in a similar situation. Eventually, the circulation of deposits around the economy will lead to a higher demand for goods and services, contributing to inflationary pressures and thereby bringing real money holdings into balance with money demand.<sup>18</sup> Other agents in the economy may use these “extra” deposits to purchase assets in order to rebalance their portfolios given the different risk and return properties of money, bonds and equity. This adjustment will place upward pressure on the prices of the alternative asset categories, thereby reducing yields and increasing the net present value of real capital investment.<sup>19</sup>

Both the availability of credit and the liquidity effects induce a higher aggregate demand. However, some advances in banking that free resources from the intermediation process also alter the production capacity of the rest of the economy. This effect tends to mitigate the inflationary pressures. By contrast, other changes that do not free resources for the rest of the economy, for instance changes in the assessment of risks by banks, mainly affect aggregate demand and thus have a stronger inflationary effect. All three effects need to be considered in the conduct of monetary policy.

### 3 RECENT DEVELOPMENTS IN BANK FUNDING

In recent years changes have occurred to the way in which credit institutions conduct financial intermediation, which are likely

to have persistent effects on their asset and liability management practices. Concrete illustrations of changes in banks’ funding are provided below against the background of the discussion in Section 2.3 on the role of banks in broad money supply. Innovations in information processing, communication technology and financial markets, such as electronic trading platforms, credit scoring and asset securitisation or the internationalisation of bank funding, have all influenced banks’ resilience to funding risk. Improved management of funding risks allows banks to conduct more maturity transformation, using liquid deposit funding more abundantly, thereby contributing to a greater supply of money.

Euro area credit institutions gradually increased the size of their balance sheets between 1999 and September 2008, leading to a doubling of the main liabilities recognised. Since late 2008 balance sheet size has stagnated at around that level (see Chart 2). An important element for assessing the funding situation is the counterpart sector holding the claims. A deposit can have very different funding implications for the bank, depending on whether it is held by a household or by an investment fund owing to the different likelihood that it will be rolled over. It is thus important to distinguish between stable and volatile funding sources. Stable funding sources provide around half of the funding needed by banks, consisting mainly of the deposit holdings of the non-financial private sector and longer-term debt securities held by non-MFIs (see Section 3.1). Volatile funding sources comprise mainly short-term debt securities and short-term deposits provided by financial intermediaries. Cross-border deposits obtained from other banks have been an important component in this respect. Overall, deposits are the main liability of credit institutions in the

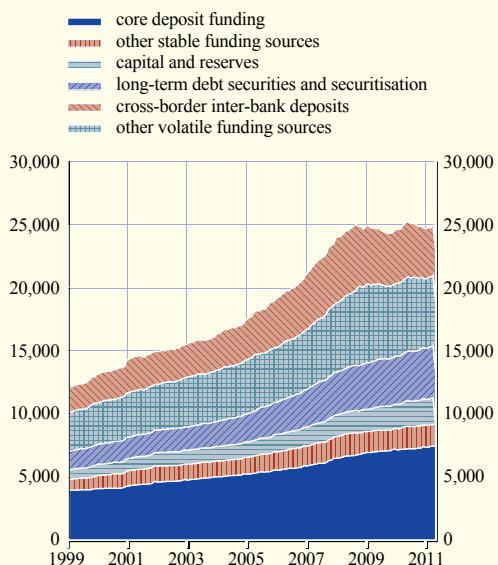
18 See, for instance, Berry, S. et al., “Interpreting movements in broad money”, *Bank of England Quarterly Bulletin*, Q3 2007, p. 378.

19 See Tobin, J. “A general equilibrium approach to monetary theory”, *Journal of Money, Credit and Banking*, Vol. 1, No 1, 1969, pp. 15-29; Meltzer, A., “Monetary, credit (and other) transmission processes: a monetarist perspective”, *Journal of Economic Perspectives*, Vol. 9, No 4, 1995, pp. 49-72.



**Chart 2 Structure of euro area credit institutions' main liabilities**

(EUR billion; not adjusted for seasonal and calendar effects)



Source: ECB.

Notes: Core deposit funding comprises deposits of households and non-financial corporations. Funding from other stable funding sources consists of longer-term deposits of insurance corporations and pension funds, deposits redeemable at notice of more than three months held by other non-monetary financial intermediaries, all deposits of general government excluding central government and all deposits by non-bank non-euro area residents. Funding from other volatile funding sources consists of short-term deposits of insurance corporations and pension funds, all deposits of other non-monetary financial intermediaries not related to securitisation, all deposits of central government and MFI debt securities with an initial maturity of up to one year. Long-term debt securities and securitisation comprise MFI debt securities with an initial maturity of more than one year and deposits of other non-monetary financial intermediaries with an agreed maturity of more than one year.

euro area, with a small remaining part financed through debt securities issuance and capital and reserves. The euro area perspective, however, masks considerable heterogeneity across member countries, which reflects, inter alia, the structure and concentration of the banking sector, as well as accounting practices and the regulatory environment.

### 3.1 SECURITISATION AND DEBT SECURITIES ISSUANCE

Banks can manage the maturity mismatch between assets and liabilities by issuing debt securities that are congruent in terms of maturity with the lending activity. A key difference

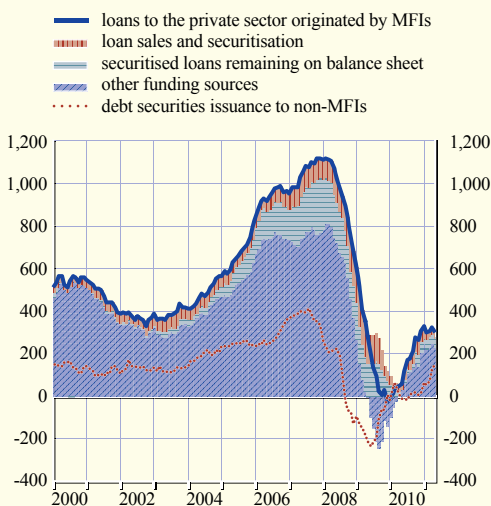
between market-based funding and traditional deposit funding is that, in the first case, the bank has to pay a higher risk premium to investors than on traditional deposit funding, as the latter are to some extent insured by governments. A further important difference is that under normal market conditions market funding can be fine-tuned to needs, while deposit funding adjusts more sluggishly. In the past two decades, the rapid growth in the assets managed by institutional investors has meant that banks have been able to rely on a large pool of market funds that could be tapped with complex products. This contributed to the expansion of securitisation and the covered bond market.

From a monetary analysis perspective, three elements are important. First, monetary analysis is interested in the interplay of money and credit, which typically fluctuate closely together. Market-based funding may dilute this relationship, both temporarily and more durably. Second, through securitisation, the loans on credit institutions' balance sheets, which were traditionally illiquid, have now become available to investors outside of the banking sector. Securitisation, if adequately performed, exhibits large economies of scale, in part, because banks use automated credit scoring models – a technology with a low ratio of variable costs to fixed costs – to evaluate loan applications before packaging the loans and selling them. It also provides an additional global funding source, as it makes the loan book tradable and thus lifts the quantitative restrictions implied by the size of the domestic deposit base. Third, a greater reliance on market-based funding compared with deposit-based funding implies that banks with hard-to-value loan books are likely to face elevated and variable costs of funding. Financial market perceptions may have an increased impact on the ability and incentives to grant credit, as banks are likely to be more sensitive to investors' perceptions and overall financial market conditions.<sup>20</sup>

<sup>20</sup> Gambacorta, L. and Marques-Ibanez, D. "The bank lending channel: lessons from the crisis", *Working Paper Series*, No 1335, ECB, Frankfurt am Main, 2011.

**Chart 3 Market-based funding of MFI loans to the private sector**

(annual flows in EUR billion; not adjusted for seasonal and calendar effects)



Source: ECB.

Note: Securitised loans remaining on balance sheet are proxied by deposits with agreed maturity of over one year held by the sector of non-monetary financial intermediaries excluding insurance corporations and pension funds.

Chart 3 shows the annual flow of loans originated by MFIs to the euro area private sector, as well as different measures of market-based funding. Loan sales and securitisation activities are inherently linked to the lending business. From 1999 loan sales and securitisation played a growing role in the funding of credit growth until the financial crisis resulted in a closure of the market. Credit institutions have continued to securitise assets in order to create collateral for use in Eurosystem refinancing operations, leading to “retained securitisation”. In addition, loan sales to “bad bank” schemes have been a second element since 2010.<sup>21</sup> Chart 3 identifies the share of loans derecognised from the MFI balance sheet through sale or securitisation, as well as the securitised loans that, owing to the accounting treatment, remain on balance sheet, but effectively have been funded through security issuance by financial vehicle corporations. Finally, the chart shows the volume of debt security issuance with a maturity of more than one year. The issuance is likely to have contributed to the funding of the entire

balance sheet, not only loans. Market-based funding played a supportive role in the period of strong credit growth, providing incremental funding to banks in a flexible manner. However, Chart 3 also shows that a large share of euro area loan growth has been funded from other sources such as deposits. Thus, a large part of the loan growth in the euro area is still based on the traditional “originate-and-hold” model of banking, underlining the importance of the money and credit nexus for gauging the effect of banking on the macroeconomy.

### 3.2 INTERNATIONALISATION OF INTERBANK FUNDING

The internationalisation of interbank funding during the past decade has had a profound impact on banks’ management of their liabilities. From a monetary analysis perspective, this development needs to be factored in, as the access to deep and liquid international markets is likely to alleviate the funding risks faced by the banks. It should therefore facilitate the provision of money and credit to the economy.<sup>22</sup> Understanding the funding models of banks and the interlinkages both within and across banks operating internationally is important in order to assess the impact of global liquidity conditions for euro area money and credit growth. In this respect, monetary analysis may be instrumental in understanding these effects.

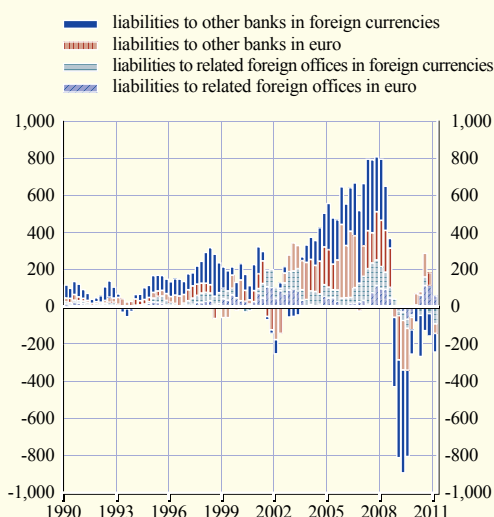
Chart 4 illustrates the expansion of cross-border interbank funding by banks headquartered in a euro area country along two dimensions: distinguishing the funds obtained from affiliates located outside the home country and the denomination of the liabilities. The chart shows that cross-border borrowing by banks increased only gradually until 2001, with the predominant share denominated in foreign currencies. Throughout this period foreign offices belonging to the same banking group played a marginal

21 See the box entitled “Revisiting the impact of asset transfers to ‘bad banks’ on MFI credit to the euro area private sector”, *Monthly Bulletin*, ECB, Frankfurt am Main, January 2011.

22 See the article entitled “The external dimension of monetary analysis”, *Monthly Bulletin*, ECB, Frankfurt am Main, August 2008.

**Chart 4 Cross-border interbank funding of euro area banks**

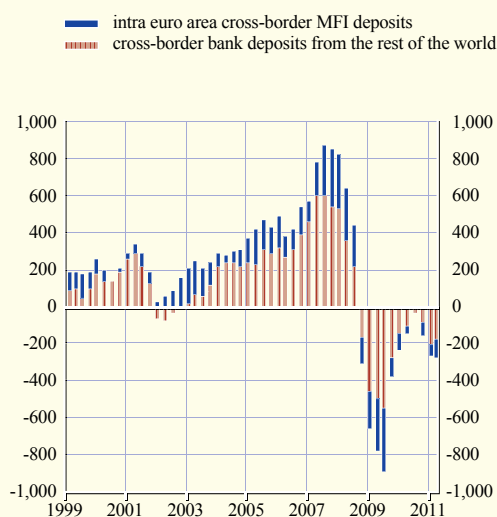
(annual flows in EUR billion)



Source: BIS.  
Note: BIS banking data by nationality are available for banks headquartered in Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands and Austria.

**Chart 5 Deposits of euro area MFIs received from other MFIs and banks resident in the rest of the world**

(annual flows in EUR billion; not adjusted for seasonal and calendar effects)



Source: ECB.

role in attracting funds. Starting in 2003 cross-border deposit-taking increased substantially in an environment of growing global liquidity. This was accompanied by a more significant role for these foreign offices, as well as by a larger share of euro-denominated deposits.

Both of these developments changed the options open to banks in their funding decisions. The growing international outreach of euro area banks contributed to the development of internal capital markets to move liquid funds between domestic and foreign offices on the basis of the relative needs. The availability of such markets to large banks, on the one hand, insulates the lending activity from local funding conditions and, on the other hand, transmits local liquidity shocks to other parts of the bank. In addition, euro area financial integration increased the availability of deposits denominated in euro from outside the home country. Euro area banks facing strong credit demand were thus able to fund their balance sheet expansion in euro, without having to manage exchange rate risks.

Chart 4 and Chart 5 also show the increased role of international funding, illustrated by the large share of cross-border deposits funded from foreign non-related entities. These deposits that were collected from banks in the rest of the world were mainly denominated in foreign currencies. In part, these funds were then reinvested in foreign assets, but overall euro area banks enjoyed deposit inflows between 2004 and 2008. This period of strong internationalisation of bank funding coincided with strong money and credit growth in the euro area. With the collapse of Lehman Brothers, euro area banks suffered significant outflows of cross-border interbank deposits, mainly as non-affiliated depositors withdrew.

The internationalisation of bank funding affected the supply of money in the euro area, over and beyond the amount of net interbank funding received, predominantly by facilitating the intermediation process. Indeed, in the period up to 2008, access to deep and liquid cross-border financial markets reduced banks' funding risks

and thereby eased the strains on banks' liquidity management, such as quantitative constraints in refinancing strong domestic credit growth. Subsequently, with the outbreak of the financial crisis, the withdrawal of cross-border funding is likely to have contributed to the transmission of global funding pressures to the euro area and to a perception of reduced liquidity.

### 3.3 MONETARY SERVICES OF EURO AREA MONETARY INSTRUMENTS

From a monetary analysis perspective, the core deposits provided by euro area households and non-financial corporations are of particular importance as they account for a third of banks' main liabilities in the aggregate balance sheet. The bulk of these deposits can be withdrawn at relatively short notice. However, in practice, these deposits are held on a fairly continuous basis, thus providing a reliable source of funding to the banks. In exchange, depositors receive compensation for holding these instruments in the form of interest rate remuneration and monetary services. The monetary services compensate the depositors for the interest they forego by holding liquid deposits rather than higher yielding but less liquid assets.

During the period of strong credit growth between 2004 and 2008, a strong increase in M3 deposits was observed, driven mainly by short-term deposits with agreed maturity. At the same time, overnight deposits contributed positively to the expansion of bank liabilities, despite the fact that the opportunity cost of holding these deposits increased considerably during this period. This implies that the monetary services consumed by the holders of deposits increased during this period as shown in Chart 6, which presents a proxy measure of the monetary services relative to real GDP obtained by the euro area money-holding sector from holding liquid monetary instruments.<sup>23</sup> The strong increase in this measure of monetary services between 2005 and 2009 suggests that, during this period, economic agents attached a high

Chart 6 Monetary services relative to real GDP



Source: ECB estimates.

Notes: Liquidity services are computed as a weighted average of the difference between the remuneration on each monetary instrument and the yield on a benchmark asset deemed to provide no liquidity services. The weights are relative shares of monetary instruments in M3.

value to these services. It is not clear whether this reflects a stronger preference for these services or whether improvements to the deposit instrument contributed to this higher valuation. Admittedly, this proxy assumes that the interest rate differential only captures the monetary services and is not tainted by other factors, such as imperfect competition in the banking sector.

The availability of a large deposit base implies that banks were able to fund their lending at attractive rates. At the same time, it may have contributed to insulating the pass-through of market rates to bank lending rates (see Box 3 on “Banks’ intermediation margin and funding conditions”) during the period of strong credit growth until the start of the financial tensions, thereby contributing to the stronger supply of money to the economy.

<sup>23</sup> Liquidity services are computed as a weighted average of the difference between the remuneration on each monetary instrument and the yield on a benchmark asset deemed to provide no liquidity services. The weights are relative shares of monetary instruments in M3. For details, see Papademos, L. and Stark, J. (eds.), *Enhancing Monetary Analysis*, Chapter 3, Annex 4, ECB, Frankfurt am Main, 2010.

Box 3

**BANKS' INTERMEDIATION MARGIN AND FUNDING CONDITIONS**

The structure and conditions of banks' funding sources are major determinants of the financial intermediation spread, which in turn constitutes a substantial part of banks' profits. In the euro area, core deposits by households and non-financial corporations are a primary source of banks' stable funding. Therefore, the developments in deposit markets and their impact on retail loan and deposit interest rate margins are key elements for monitoring and analysing euro area banks' overall financial intermediation margin. This box provides a brief overview of developments in euro area banks' loan and deposit margins in view of changes in the banking sector's funding situation.

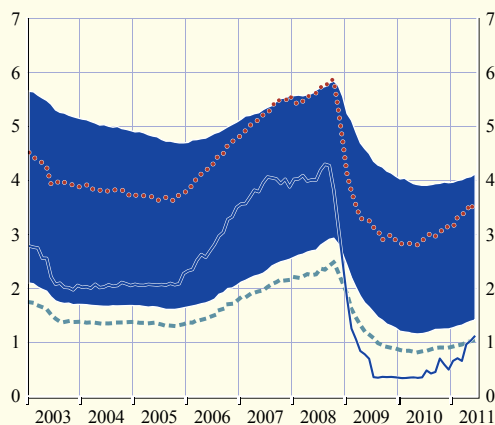
More generally, banks' interest rate-setting behaviour, as captured by the spread between interest rates on deposits and loans, can be expected to depend on the degree of competition (or bank market power) and on factors related to the cost of intermediation, such as interest rate risk, credit risk, the banks' degree of risk aversion, unit operating costs, banks' capital and liquidity positions and their product diversification.<sup>1</sup> Nonetheless, the most direct determinants of retail bank lending and deposit rates for households and firms are policy (and hence market) interest rates (see Chart A). This reflects the typical empirical finding that deposit rates tend to react rather sluggishly to changes in market rates and hence that the difference between market rates and deposit rates generally moves in parallel with the short-term interest rate. Notably in the period before the collapse of Lehman Brothers, the short-term money market rates were safely above the composite deposit rate, a configuration that was reversed during the financial crisis

1 For a more thorough description of the bank interest rate pass-through, see the article entitled "Recent developments in the retail bank interest rate pass-through in the euro area", *Monthly Bulletin*, ECB, Frankfurt am Main, August 2009.

**Chart A Loan-deposit spread and EONIA**

(percentages per annum; percentage points)

- loan-deposit intermediation spread on outstanding amounts
- composite loan rate on new business
- - - composite deposit rate on new business
- EONIA

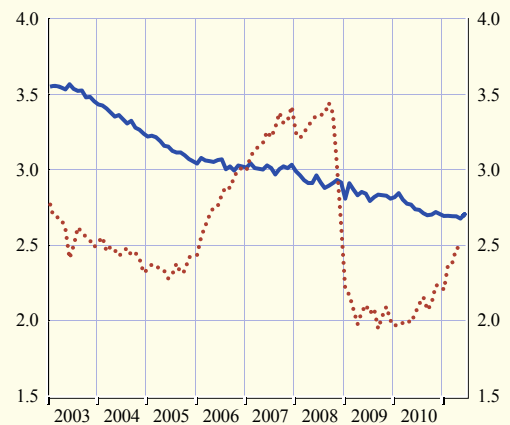


Sources: ECB and ECB calculations.

**Chart B Loan-deposit intermediation spread: average and marginal**

(percentage points)

- average
- marginal



Sources: ECB and ECB calculations.

until recently. Bank rates have declined less than money market rates. Monetary conditions in general, and availability of funding from customers more specifically, are likely to affect the pricing of bank retail interest rates.

Chart A illustrates the two measures of the loan-deposit spread, a marginal intermediation spread as the difference between composite rates on new business and an average intermediation spread based on outstanding amounts. The first measure can be considered a proxy for the conditions offered to bank customers, while the second measure is related to banks' overall net interest income and profitability. The fact that the marginal intermediation spread is generally below the average intermediation spread suggests that the cost of intermediation through banks is declining over time. This is reflected in Chart B, which shows a slow decline in the average intermediation spread since 2003, in part resulting from the lower marginal spreads feeding into the average intermediation spreads as business is gradually rolled over. Indeed, the composite lending rate on new business seems to have declined more than the composite deposit rate, thereby driving the compression of the average intermediation spread.

#### 4 CONCLUSIONS

This article has argued that the behaviour of banks has considerable implications for the macroeconomy. The examination of money and credit developments for the purposes of monetary analysis provides information on the functioning of banks' intermediation activity. It helps the timely identification of the propagation of changes in bank behaviour through the business cycle onto longer-term economic trends. In this respect, innovations in technology and operational management are likely to be of a lasting nature. However, the changes to banks' behaviour that result may evolve over time, which makes it difficult to assess the relative importance of the short-term versus the more persistent effects on the economy. In addition, agents' expectations with regard to the changes in banks' intermediation activities, which evolve over time, are essential in this respect as well. Nonetheless, banks intermediation behaviour, as well as its perception by households and firms, needs to be taken into account in formulating monetary policy.

The examples described in the article illustrate how the changes in bank funding behaviour contributed to the period of strong credit growth between 2004 and 2008. The financial crisis and the regulatory response to it are likely to trigger further changes in banking, as is already

evident in the new international regulatory framework for banks (Basel III). For instance, the implementation of the Liquidity Coverage Ratio and the Net Stable Funding Ratio is likely to induce adjustments in how maturity transformation is conducted and priced. In the future, the real-time identification of the effects of these developments on the supply of money will be an important contribution of the monetary analysis to the assessment of the appropriate monetary policy stance.





# STRUCTURAL FEATURES OF THE DISTRIBUTIVE TRADES SECTORS AND THEIR IMPACT ON EURO AREA PRICE DEVELOPMENTS

## ARTICLES

Structural features of the distributive trades sectors and their impact on euro area price developments

*The distributive trades, consisting primarily of the wholesale and retail trades, are key sectors of the economy and are also of significant relevance for monetary policy-makers. They act as the main interface between producers and consumers, and most consumer goods prices are ultimately set in these sectors. The purpose of this article is to consider their structural features, and to understand the extent to which these, together with other indicators, help explain differences in price levels and dynamics in the euro area.*

*The distributive trades sectors vary significantly across both euro area countries and sub-sectors. They have undergone considerable changes, including growing consolidation and internationalisation, and changing retail formats. In particular, the share of the market accounted for by supermarkets and hypermarkets has increased, as has the number of private label brands, while the discount sector has also grown. These developments influence competition and cost structure, and play an important role in determining mark-ups, thereby affecting final consumer prices in the euro area.*

*The main findings of the article are that: (a) structural and regulatory features of the distributive trades sectors help explain differences in price levels across countries; (b) more competition is associated with more frequent price changes in the retail sub-sector; (c) higher market concentration at the regional level is associated with higher growth in food and drink prices in the recent period; and (d) with regard to the magnitude and speed of cost pass-through, producer prices react faster and more strongly to cost shocks than consumer prices, while differences in retail formats also play a role.*

*From a policy perspective, the analysis has highlighted the importance of the need for continued structural reforms, which should enhance competition in the distributive trades. A crucial step towards further progress would be the full implementation of the Services Directive in order to improve the functioning of the Single Market.*

## I INTRODUCTION

The distributive trades, consisting primarily of the wholesale and retail trades, are key sectors of the economy. As the main interface between producers and consumers (around half of private consumption is accounted for by the retail trades), the distributive sectors are not only economically important in their own right, but are also particularly important from a monetary policy point of view. Most consumer goods prices are ultimately set in these sectors. The “value added” of the intermediation service provided by the distributive trades is substantial, accounting for, on average, about 25% of consumer goods prices.

Mark-ups in the distributive trades can be considerable and, despite almost 20 years of the Single Market, still differ significantly across countries, while cross-border trade remains

limited. The objective of this report is to shed light on these aspects by specifically examining (a) the main features of, and issues in, the euro area distributive trades sectors from a monetary policy perspective and (b) the impact of these features on price levels and dynamics.

This article draws extensively from the 2011 Eurosystem Structural Issues Report on “Structural features of distributive trades and their impact on prices in the euro area”.<sup>1</sup> The structure of this article is as follows: Section 2 provides an overview of the distributive trades sectors in the euro area along three main themes – the main features and structural trends, the nature and impact of regulation, and the measurement and assessment of competition. Section 3 considers the impact of structural

<sup>1</sup> European Central Bank (2011), “Structural features of distributive trades and their impact on prices in the euro area”, *Structural Issues Report*.

features of the distributive trades sectors on price levels and price dynamics. Section 4 concludes.

## 2 STRUCTURAL FEATURES OF THE EURO AREA DISTRIBUTIVE TRADES SECTORS

### 2.1 OVERVIEW OF DISTRIBUTIVE TRADES

The distributive trades provide an intermediary service between producers and consumers. While they generally do not produce goods themselves (although this is changing, with the increasing importance of private or own-label brands), they do provide a key economic service. The distributive trades sectors cover three broad areas: the motor, wholesale and retail trades.<sup>2</sup> Wholesale trade companies do not generally sell directly to consumers, but rather to businesses and retailers. Retailers generally sell directly to consumers.

Depending on which measure is considered, the distributive trades account for around a third of the non-financial business sectors (in the case of total turnover, number of firms and self-employment) and around 15-25% of these sectors in terms of other metrics (such as value added and overall employment) (see Chart 1). Although the wholesale trade sub-sector is larger than the retail trade sub-sector by some measures (most notably value added), the focus in this article is on the latter, which is more important in terms of direct employment, owing to its close links to consumers and consumer prices.

#### WHAT ARE THEIR MAIN FEATURES?

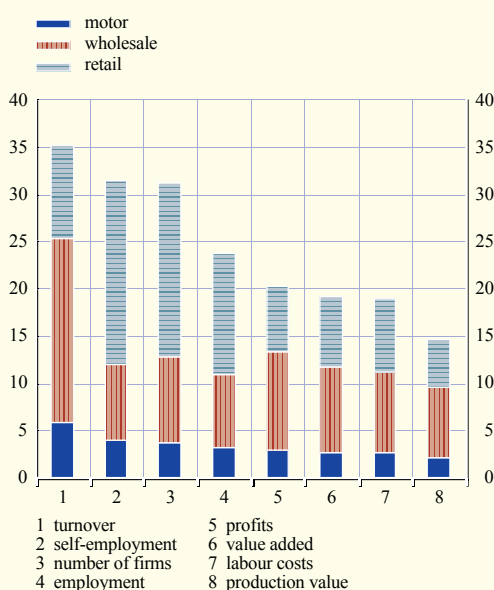
The distributive trades sectors generally, and retail trades in particular, have a number of distinguishing features relative to the rest of the non-financial business sectors. A demographic analysis of the distributive trades sectors in the euro area suggests that they are still highly fragmented (there is a prevalence of micro and small firms), but are slowly moving towards consolidation (the number of larger firms has increased somewhat). They are generally more labour-intensive, with lower-skilled workers on average. Profit margins in both retail and wholesale are below the average of the total economy, but this may reflect more a high degree of turnover (per unit of capital employed) rather than strong competitive pressures. Profit margins are discussed in more detail below in Section 2.3.

In terms of labour market characteristics, the distributive trades sectors differ from the rest of the economy in a number of important ways, with the sectors as a whole – and retailing, in particular – characterised by above-average shares of self-employment, part-time work, females and younger workers (providing just over 40% of total euro area employment for the under-25s).

<sup>2</sup> The motor trades sectors are not considered in this article, as they are viewed as separate sectors with very different characteristics, partly because of the close link between companies in these sectors and the automotive industry.

Chart 1 Share of distributive trades in the non-financial business sector

(2006; percentages)



Sources: Eurostat SBS database and Eurosystem staff calculations.

Relatively low productivity in the distributive trades sectors is a major contributor to the growing aggregate productivity gap between the euro area and the United States. Productivity growth is particularly low in the euro area retail trade (see Box 1 entitled “Labour productivity in the distributive trades: a comparison with the United States”).

## Box 1

## LABOUR PRODUCTIVITY IN THE DISTRIBUTIVE TRADES: A COMPARISON WITH THE UNITED STATES

The sharp divergence in productivity growth between the euro area and the United States since the mid-1990s is a major concern for policy-makers. More recently, it has been suggested that much of the widening differential between the two economies can be traced to poor productivity growth in the service industries in the euro area.<sup>1</sup> This box uses the EU KLEMS database to examine comparative developments in productivity in the euro area and the United States, focusing on developments in the distributive trades.

More than a third of the increasing productivity gap between the United States and the euro area over the period 1995-2007 was attributable to the distributive trades.<sup>2</sup> While rates of productivity growth in the distributive trades declined in both economies between 1995 and 2007, the differential remained large – 2.2 percentage points in the retail sub-sector – roughly three times the average for the whole economy – see the Table. This can be partially attributed to the much stronger growth in retail value added in the United States over this period. Retail productivity in the euro area fell from around 95% of the US level in 1995 to 71% by 2007.

One line of argument put forward to explain the notable US productivity advantage – both at the aggregate level and in the distributive trades – contends that much of the gap could be explained by a better exploitation of new information and communication technologies (ICT) in the United States than that achieved in European economies. The Chart shows the contributions to retail productivity growth from the respective factor inputs of labour, ICT capital and non-ICT capital. That part of productivity growth which cannot be attributed to these factors, but which stems from broader intangible structural differences, technological changes or organisational changes, is captured in the residual component, commonly referred

## Productivity growth

(average annual percentage change; percentage points)

(a) Gross value-added per hour worked: *whole economy*

	EA	US	differential
1995-2001	1.4	2.0	0.6
2001-2007	1.2	1.9	0.8

(b) Gross value-added per hour worked: *distributive trades*

	EA	US	differential
1995-2001	2.0	6.1	4.1
2001-2007	1.0	2.6	1.6

(c) Gross value-added per hour worked: *retail trade*

	EA	US	differential
1995-2001	1.5	4.1	2.7
2001-2007	0.3	2.5	2.2

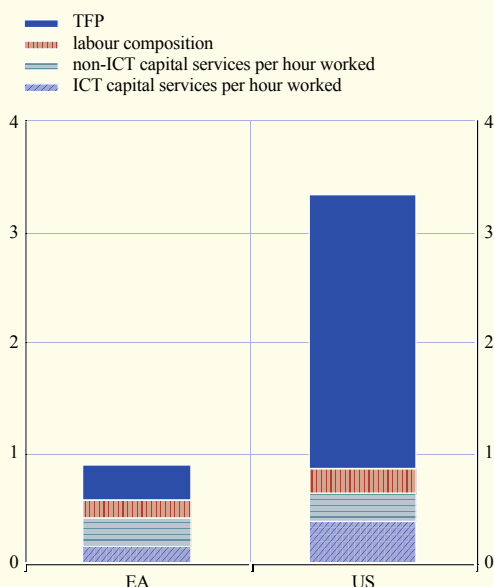
Sources: EU KLEMS (2009) and Eurosystem staff calculations.  
Notes: EA refers to euro area aggregate.

1 See, for example, European Central Bank (2006), “Competition, productivity, and prices in the euro area service sector”, *Occasional Paper Series*, No 44, and Van Ark, B., McGuckin, R. H. and Spiegelman, M. (2005), *The Retail Revolution: Can Europe Match U.S. Productivity Performance?*, Conference Board, March.

2 Following nearly two decades of comparable growth, euro area aggregate productivity growth has slowed progressively since the mid-1990s, averaging only 1.3% per year between 1995 and 2007, compared with roughly 2.0% per year in the United States (see the Table). As a result, aggregate euro area productivity slipped from roughly 90% of the US level to around 83% by 2007.

### Contributions to retail productivity growth: euro area and United States, 1995-2007

(annual average percentage changes: percentage points)



Sources: EU KLEMS (2009) and Eurosystem staff calculations. Note: EA refers to euro area aggregate. TFP denotes total factor productivity. ICT denotes information and communication technology.

regulations constraining the size and density of larger-format stores, restricting the number of certain types of stores in a given location or impeding cross-border expansions. Others contend that labour tends to be less flexible (and more costly) than in the United States.

The sources of the productivity gap between the United States and the euro area retail sectors are many and varied. An earlier adaptation to technological change has undoubtedly played a role, but much more of the gap seems to be attributable to structural and organisational factors. Research on US retailing suggests that much of the strong productivity growth seen in the 1990s was led by new entrants to the industry displacing less efficient incumbent and exiting establishments. Tackling restrictive regulations in the euro area distributive trades – so as to boost competition and enable euro area retailers to operate at the productivity levels of European “best practice” – would assist the pursuit of higher long-run economic growth.

Retail trade is roughly evenly divided into grocery (primarily food and certain household items) and non-grocery (e.g. clothing and footwear, household furnishings, electronic goods, etc.) trade. Most consumers obtain the basic necessities, such as food and household goods for day-to-day living, in the grocery sector. These two sub-sectors differ in terms of their main economic characteristics, with the grocery sector being somewhat more homogeneous than

to as total factor productivity (TFP). The Chart shows that expenditure on ICT capital services was somewhat higher in the United States than in the euro area over the 1995-2007 period. Moreover, some of the full impact of ICT capital may also be embodied in the remaining factors, since ICT investment is often a catalyst for broad-based restructuring (including organisational changes and/or human capital investments).

However, even accepting a broad-based complementarity between the contributions from ICT investments and the other factors, it is unlikely that ICT and its associated spillovers can adequately explain the significantly higher growth of TFP in US retailing. Thus, in recent years, an alternative view has gained ground, which argues that intangible and structural factors may be more important in explaining the US advantage since 1995. It is often argued, for instance, that the euro area regulatory environment is more restrictive (and thus less competitive) in retailing than in the United States – with land zoning

regulations constraining the size and density of larger-format stores, restricting the number of certain types of stores in a given location or impeding cross-border expansions. Others contend that labour tends to be less flexible (and more costly) than in the United States.

### GROCERY TRADES BY “FORMAT”

The structure of the grocery trade varies considerably across countries, reflecting a combination of historical legacies; societal

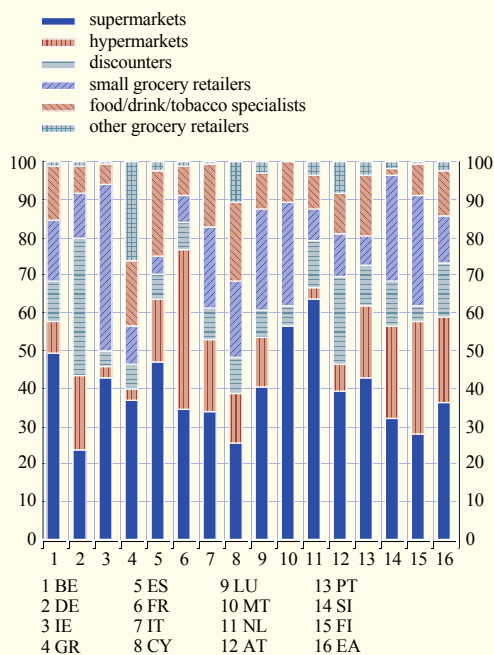
preferences; sociological, economic and geographic factors; and regulatory conditions. Chart 2 reports the distribution of grocery sales by store format across countries. The definition of store formats is, to some extent, arbitrary. Generally, the size (in terms of square metres) and range (in terms of the number and breadth of goods stocked) of a store are used as determining criteria. Hypermarkets tend to be above 2,500 sq. m., supermarkets between 1,000 and 2,500 sq. m., and so-called “discounters” between 400 sq. m. and 1,000 sq. m, stocking a relatively limited range of goods.<sup>3</sup>

On average across the euro area, supermarkets accounted for just over a third of grocery sales in 2009. The share was lowest in Germany (where discounters are dominant – see below) at around 25%, and Cyprus (where smaller, more traditional retailers account for a relatively large proportion). The share of supermarkets was relatively large in the Netherlands and Malta, where hypermarkets account for a relatively small share of the market.<sup>4</sup> On average across the euro area, hypermarkets accounted for approximately a quarter of grocery sales. The share of hypermarkets was largest in France (at over 40%), but was also relatively high in Finland and Slovenia. Discounters – discussed in more detail below – accounted for just under 14% of grocery sales, but the share was much higher in some countries, such as Germany and Austria. More traditional retail formats, such as small grocers and specialist retailers, account for a relatively large proportion of retail sales in Ireland, Greece and Cyprus.

In terms of their evolution over recent years, the shares of supermarkets and hypermarkets have remained broadly unchanged. Overall, the share of discounters has risen, while the share of smaller grocers and specialist retailers (food, drink and tobacco) has fallen. A relatively recent phenomenon not captured in the Chart is the growth of so-called “superettes”. These are small and compact but modern convenience stores. A number of leading supermarket retailers with supermarket and hypermarket chains have

Chart 2 Distribution of grocery sales by store format

(2009; percentages)



Sources: Euromonitor and Eurosystem staff calculations.

started to expand into this segment as a means of extending their coverage of the market.

#### THE GROWTH OF DISCOUNTERS AND PRIVATE LABELS

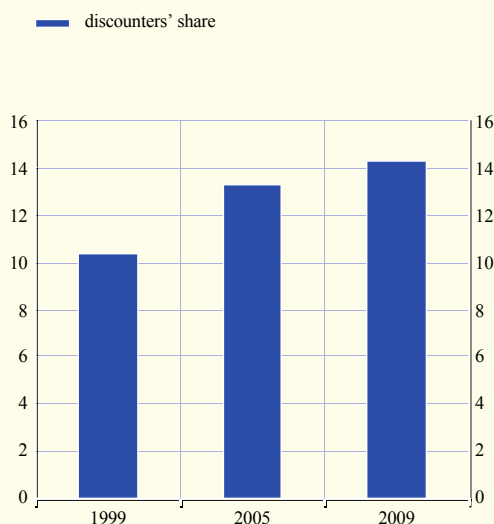
A key development in modern grocery retailing is the emergence of so-called “discounters”. Chart 3 shows that the share of the grocery retail market accounted for by so-called “hard discounters” grew from around 10% in 1999 to nearly 15% in 2009. However, this share varies

3 The term “discounter” is generally used to refer to a retailer that offers a relatively limited number of products, which are frequently own-brand or unbranded, with a relatively small selling area, keeping costs to a minimum and focusing on price competition. Generally, discounters offer a smaller range of goods (e.g. usually less than 1,000 stock-keeping units (SKUs), compared with over 20,000 in a typical large supermarket). So-called “hard discounters” are characterised by a predominance of low-priced, own-label, dry goods, while “soft discounters” stock more brands and fresh food.

4 While the small size of the market may explain this in the case of Malta, it clearly cannot in the Netherlands, where planning restrictions account for the absence of hypermarkets (as noted by the OECD in its economic surveys of the Netherlands).

**Chart 3 Evolution of discounters' market share in euro area**

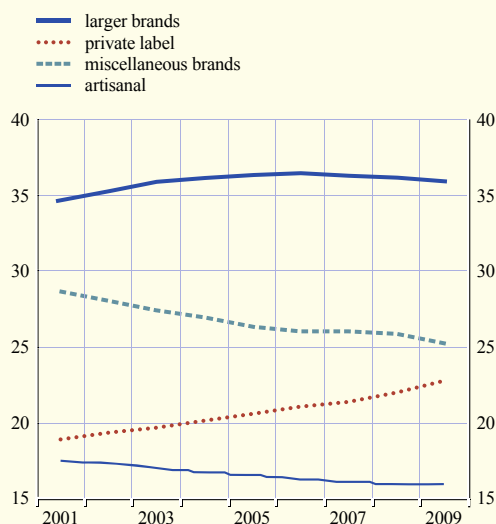
(discounters' share; percentages)



Sources: Euromonitor and Eurosystem staff calculations.

**Chart 4 Evolution of brands**

(market share, percentages)



Sources: Euromonitor and Eurosystem staff calculations.  
Notes: Larger brands refer to those with separate market shares reported by Euromonitor; miscellaneous brands refer to those not separately reported by Euromonitor (as they have a market share that is either too small or regional).

substantially across countries – in Germany and Austria, the market share of discounters is above 20%, whereas in Ireland and Finland it is below 5%.

Given that discounters tend to have lower prices (although the lack of comparable brands makes it difficult to compare prices), this increase in market share over time and heterogeneity across countries may have implications for price levels and inflation (both in terms of measurement issues – see Box 2 entitled “Implications of structural developments in the retail trade for inflation measurement” – and in explaining differences across countries).

Partially in response to, but also owing to, the emergence of discounters, another key development in retailing, in particular the grocery trade, over the last two decades has been the emergence of so-called private label (or own-label) brands. These are brands developed and owned (but not necessarily produced) by the retailers themselves. Chart 4 shows that the share of

private label goods has been increasing steadily in the euro area since 2001. However, this has not occurred at the expense of larger brands, which have broadly maintained or even slightly increased their market share. Rather, it is smaller (miscellaneous) brands, as well as artisanal products (e.g. those of traditional bakeries), that have seen their market shares decline. Other things being equal, an increased penetration of private label goods is likely to have a downward impact on price levels.

#### THE EVOLUTION OF ONLINE TRADE

Online retail trade has already transformed many markets (e.g. electronics, e-books, music and travel services) and offers enormous potential for adding to price transparency and competition, thereby increasing economies of scale and choice. The evolution of the online retail trade may foster lower and less diverging prices for equal or comparable products. The EU e-commerce market has reached a considerable size. In 2006 it was estimated to have reached



€106 billion, which was roughly comparable to the e-commerce market in the United States.<sup>5</sup>

However, there has been a widening discrepancy between domestic and cross-border e-commerce. From 2006 to 2008 the share of all EU consumers who have bought at least one item over the internet increased from 27% to 33%, while cross-border e-commerce remains much less important (increasing from 6% to 7%) and only a very small proportion of e-commerce within the EU is conducted across national borders (around 2%-4%).<sup>6</sup> Although the range of possibilities in the field of cross-border e-commerce appears to be enormous, consumers often end up being confined to sites in their country of origin in practice. Frequently, they are redirected to national sites or even refused a sale.<sup>7</sup> Regulatory barriers contribute to the significant market fragmentation at the EU level, with consumer law, electronic waste regulations and postal systems being particularly affected.

### THE ROLE OF BUYING GROUPS

A noteworthy feature of the grocery sector is the role of buying groups.<sup>8</sup> Buying groups are important because, by combining the buying power of their individual members, they can achieve a very large scale and potentially alter the balance of power in negotiations between retailers and suppliers.<sup>9</sup> Their existence also implies that measures of competition based on company-level data may overstate the true level

of competition and understate their bargaining power relative to suppliers (for a more detailed discussion, see Section 2.3 below).<sup>10</sup>

### THE COST STRUCTURES OF THE DISTRIBUTIVE TRADES

Cost structure is of particular importance for a number of reasons. Most notably, it is an important determinant of price setting. The cost of goods sold (COGS) represents the single biggest cost incurred by firms in the distributive trades, accounting for three-quarters and two-thirds of net turnover in the wholesale and retail trades, respectively (see Table 1).

5 Source: European Commission (2009), "Report on cross-border e-commerce in the EU", *Commission Staff Working Document*, SEC(2009) 283.

6 Source: European Commission (2009), *op. cit.*

7 In an EU-wide test of online shops, it was only possible to place an order with an online shop that was not located in the same country as the buyer in 39% of the cases. 61% of all orders failed either because traders refused to serve the consumer's country or for other reasons (technical problems or because a particular payment option was not available). Language barriers may also be an issue, although their importance is not easy to quantify.

8 A buying group is an organisation of retailers that combines the buying power of its individual members to purchase goods on better terms than might be obtained through individual negotiation.

9 For example, the largest buying group in Europe comprises more than ten national supermarket chains, operating across 19 countries, with a combined turnover of approximately €120 billion. To put this into context, the largest European retailer, which is the second largest retailer in the world, has a total global turnover of around €90 billion.

10 It should be noted that buying groups are usually structured in such a way as to avoid competing members. Generally, therefore, no two members of an international buying group come from the same country, and the spheres of operation tend not to overlap too much.

Table 1 Cost structure – distributive trades sectors

(percentages)						
	Distributive trades	Wholesale trade	Retail trade	Retail (grocery)	Retail (non-grocery)	
Turnover/sales (excluding taxes)	100.0	100.0	100.0	100.0	100.0	100.0
Costs of goods sold	72.0	73.6	66.7	74.6	62.0	
Gross margin	28.0	26.4	33.3	25.4	38.0	
Other costs	14.4	14.7	14.8	11.1	17.0	
Value added	13.5	11.7	18.5	14.3	21.0	
Labour costs – unadjusted	7.8	6.2	11.6	9.7	12.7	
- Wages and salaries	6.1	4.8	9.0	7.6	9.9	
- Social security contributions	1.7	1.4	2.5	2.1	2.8	
Profits – unadjusted	5.8	5.4	6.9	4.6	8.2	

Sources: Eurostat SBS database and Eurosystem staff calculations

Note: Labour costs and profits have not been adjusted for the implicit labour income of the self-employed.



Within retailing, notable differences are to be found between the grocery and non-grocery sub-sectors. The 75% COGS share in grocery retailing is considerably higher than for most other retail sub-sectors (with the exception of the electronics and appliances sub-sector). The higher COGS share for the grocery, and electronics and appliances retail sub-sectors most likely reflects the more internationalised, efficient and concentrated nature of these sub-sectors (see Section 2.3 on concentration and competition), which helps drive down costs (including unit labour costs). The COGS share is noticeably low for clothing and footwear at around 55%.

The share of value added accounts for 18.5% of retail trade turnover. Within the retail trade, it is highest in the clothing and footwear sector, at 23.6% of turnover. Some variation in *profit margins* across the distributive trades sectors is evident, ranging from 5.4% in wholesale to 8.2% in non-grocery retail. It should, however, be noted that an analysis of the profitability of the grocery sector based solely on profit margin can prove somewhat misleading, as the sector's characteristically high turnover (per unit of capital employed) needs to be taken into consideration. In this instance, the rate of return on capital may provide a more informative measure of profitability.<sup>11</sup>

## 2.2 REGULATION AND DISTRIBUTIVE TRADES

In the distributive trades sectors, many areas of activity are subject to specific regulations, especially in the retail sector, with notable cross-country differences, and in some cases even between regions and municipalities in the same country. Regulation covers issues as diverse as the set-up of establishments, contractual relationships with suppliers, use of inputs, opening hours, price controls, promotions, sales conditions, after sales, and waste and recycling.

Planning rules in particular are often found to play an important role in creating barriers to entry or expansion and therefore in constraining competition by impeding the emergence of

competitors – especially large ones – able to challenge existing retailers. General planning provisions, building permits and a specific prior authorisation to establish retail outlets are found in the majority of the euro area countries.<sup>12</sup> In this respect, the European Commission (2010) has pointed out that current fragmented national, regional and local commercial planning frameworks, in conjunction with different rules on property and land ownership, are factors likely to dissuade entrepreneurs/firms from entering certain markets.<sup>13</sup>

Regulations may also have unintended consequences. For instance, some commentators (see, for example, McKinsey and Company (2005)) have argued that the strong growth in the market share of discounters is due to the fact that their business model (i.e. a small store size with a limited range) has allowed them to expand where store threshold limits prevented the opening of larger-store formats such as supermarkets and hypermarkets.<sup>14</sup>

The Product Market Regulation (PMR) indicators calculated by the OECD, which measure the regulatory burden for the retail trade sector, give an idea of the degree of regulation in each country. These indicators, which cover areas such as shop opening hours, licences, regulations of large outlets, and price controls, have the advantage of being internationally comparable. The most recent figures refer to 2008, but these have been updated up to 2010 – see Chart 5 – using information provided by the Eurosystem NCBs. The results of these indicators need to be interpreted carefully, especially comparisons at a very detailed level. In addition, for some criteria, the indicator only takes into account

11 Adjusting for the implicit labour income of the self-employed also impacts on apparent profit margins across sub-sectors, reducing apparent differences.

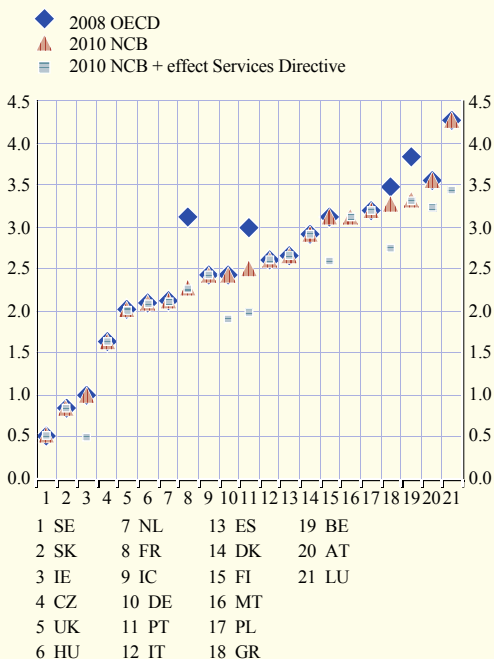
12 Specific prior authorisation to establish retail outlets is not required in the Netherlands, Slovenia and Slovakia.

13 European Commission (2010), “On Retail Services in the Internal Market”, *Comission staff working document*, Brussels.

14 McKinsey and Company (2005) “Responding to Discount: A new business model for food retailers?”, (A study conducted for the Coca-Cola Retailing Research Council Europe), Project XI, August.

Chart 5 Retail sector regulation indicators  
(PMR from the OECD updated for 2010)

(range 0–6, from less regulated to more regulated)



Sources: OECD and Eurosystem staff calculations.  
Note: 2008 refers to OECD data. 2010 NCB refers to data provided by NCBs. 2010 NCB + effects Services Directive refers to the previous indicator plus the impact of the Services Directive, if not yet reflected in the indicator.

the country-level regulation, although it may be different at the regional level.

Nonetheless, it appears that there is an important dispersion in the results for the different countries, which reflects the variety of the existing regulations. The tendency towards less regulation which has been observed in the past is once again confirmed in 2010: in all the countries in which changes in legislation have been recorded since 2008, the score is lower in 2010 (i.e. France, Portugal, Belgium and Greece). This can probably be partly attributed to the implementation of the Services Directive.<sup>15</sup> However, as shown in Chart 5, the expected impact of the Services Directive is not yet reflected in the indicators in many countries.

## 2.3 MEASURING AND ASSESSING COMPETITION IN THE DISTRIBUTIVE TRADES SECTORS

This section reviews alternative indicators of the degree of competition in the distributive trades sectors. Measuring the degree of competition in any market is challenging in practice. However, it may be especially difficult to do so for the distributive trades sectors, with their considerable heterogeneity across sub-sectors and countries, as well as their role as intermediaries between, and their complex interaction with, suppliers and customers.

With regard to the question of which measure of competition is best, two broad measures of competition are considered, based on (i) concentration and (ii) profitability. *Concentration measures* may be thought of as ex ante indicators of potential competition. *Profitability measures* may be considered as ex post indicators of competition, as they are the outcome of decisions made by competing firms. In principle, profitability in a highly competitive market should be driven down to a common minimum acceptable level. In practice, however, measuring profitability is challenging, and the more easily calculated measures have limitations and need to be interpreted with caution.

The degree of concentration varies substantially across retail sub-sectors. On average across the euro area, the most concentrated sectors tend to be the electronics and appliances, and grocery sub-sectors. There was a slight upward drift in concentration observed across all the sub-sectors over the period 2004–2009.

In the grocery sector, a general finding is that concentration at the national level is relatively low in the Southern European countries, owing to the persistence of a more traditional retail

<sup>15</sup> The Services Directive is an EU directive aimed at creating a single market for services by removing legal and administrative barriers to trade in services.

structure. However, using a unique dataset on the location of over 100,000 individual grocery stores across the euro area, regional and local measures of competition are also constructed. While there are some similarities with the results using national data, there are also some notable differences, with some markets appearing to be relatively fragmented at the national level, but turning out to be quite concentrated at the local level and vice versa. In summary, measuring the degree of competition in the retail trades is not straightforward and should be carefully considered along a number of different dimensions.

With regard to profit margins as indicators of competition, even though they, too, are not without their limitations, profitability-based measures may reflect actual competition better than concentration measures, as the degree of concentration can have positive or negative consequences depending on whether the negative competitive or positive efficiency effects of higher concentration dominate. On an unadjusted (for the imputed labour income of the self-

employed) basis, profit margins are highest in the retail sector (6.9%), especially the non-grocery retail sector (8.2%), and lowest in the grocery sector (4.6%). Although the pattern is not as clear as was the case with the concentration measures, some of the Southern European countries (most noticeably Greece, Spain and Italy) tend to have relatively high margins. However, this is partially accounted for by the high share of self-employed in these countries, as the relative rankings improve (i.e. their profit margins become relatively lower) when margins are adjusted for the implicit labour income of the self-employment. Thus, while there is a significant degree of variation in margins across countries, this is reduced considerably when adjusted profit margins are considered.

Cross-checking the concentration and profitability measures suggests that there is generally a positive correlation between concentration and profitability across countries (i.e. higher concentration is associated with higher profitability) for both grocery and overall non-grocery retail.

## Box 2

### IMPLICATIONS OF STRUCTURAL DEVELOPMENTS IN THE RETAIL TRADE FOR INFLATION MEASUREMENT

Some of the structural trends outlined above (such as the increasing share of discounters, the growth of online trade and the emergence of private label products) have possible implications for inflation measurement. This box explains how structural developments in the retail trade are treated in the HICP and discusses the potential implications for inflation measurement, drawing on the empirical evidence of previous studies.

Structural changes in the variety and market shares of retail outlets over time can pose two distinct issues for inflation measurement. Firstly, such changes can mean that, after a while, the sample of outlets used for compiling the consumer price index is no longer representative. Measurement errors may then occur if price changes vary across the outlet types or if there are significant changes in the market shares of different outlet types. Such errors do not necessarily go in a particular direction. A second distinct issue is the method by which new outlets with a different average price level from the previous outlets are introduced into the sample. How such price level differences should be reflected in the HICP depends, in principle, on the extent to which the lower prices are due to the seller having a lower level of retail services (less convenient location, more basic presentation of goods, less brand selection, etc.). In practice, statistical offices generally use a linking technique, which attributes the whole of the price difference to

differences in the quality of retail services. The new lower prices therefore have no impact on the level of the index. The likelihood that this is an over-adjustment suggests an upward bias (which affects not only the euro area HICP, but almost all CPIs across the world).

### Treatment in the HICP and implications for inflation measurement

In constructing their HICPs, national statistical offices select a sample of products and outlets which aims to be representative of all transactions (and therefore across all outlets) within the scope of the index. There is no specific regulation regarding the frequency of updating samples, but eight euro area countries, accounting for around 49% of the euro area HICP, currently update their outlet samples on an annual or continuous basis, with most of the remaining countries updating them once every five years. Only four euro area countries widely cover internet retailers in their HICP samples for goods. In some cases, internet retailers are included, but only for a very limited number of products (e.g. PCs and books).

When an outlet goes out of business or is no longer representative, it is replaced by an alternative outlet via a linking procedure. Whether this approach is appropriate depends on the value consumers attach to the difference in the quality of the retail services provided by the two stores. The assumption inherent in linking is that the price level differences at the time of linking are equal to the consumer valuation of these differences in the quality of the retail services. In reality, the clear trends in the market shares of certain types of outlet and consistent patterns of price differentials across outlet types would suggest that, even after allowing for differences in the retail services offered, many consumers consider the prices to be better value. The practice of linking would therefore impart an upward bias to the HICP inflation rate.

### Evidence of price level differences across outlet types and empirical evidence of the impact of new outlet bias on inflation measurement

A number of studies for the US and European markets have shown that price level differences are typical, especially between discounters and traditional types of store. Based on US data, Leibtag et al. (2010) compare identical items (at the universal product code (UPC) level), showing an expenditure-weighted average price discount of 7.5%, with differences ranging from 3% to 28% lower in non-traditional stores than traditional stores.<sup>1</sup> In Europe, Nielsen (2007) reports that prices in the largest two discount groups were between 30% and 40% lower than average across a range of categories. However, these differences can vary substantially across product types.<sup>2</sup>

With regard to the impact structural changes and price differences have on measured inflation, most of the empirical evidence for the size of the new outlet bias is based on US CPI data.<sup>3</sup>

1 Leibtag, E., Barker, C. and Dutko, P. (2010), "How Much Lower Are Prices at Discount Stores? An Examination of Retail Food Prices", *Economic Research Report*, United States Department of Agriculture, No 105, October.

2 Nielsen (2007), "The Hard Discounter Report: An Overview of Aldi and Lidl in Europe", *Consumer Insight Report*, June.

3 Reinsdorf (1993) found an upward bias of 0.25 percentage point per year in the US CPI for food at home and petrol. Lebow et al. (1994) extrapolated these results to come to an estimate for the overall US CPI of 0.1 percentage point per year. More recently, Hausman and Leibtag (2004) modelled the direct impact of the growth of discounters in the US market and the indirect effects of the more traditional retailers through price competition, estimating a bias of 0.32-0.42 percentage point in the food component of the US CPI. See Reinsdorf, M. (1993), "The Effect of Outlet Price Differentials on the US Consumer Price Index" in Foss, M., Manser, M. and Young, A. (eds.), *Price Measurements and Their Uses*, University of Chicago Press; Lebow, D. E., Roberts, J. M. and Stockton, D. J. (1994), "Monetary Policy and The Price Level", (Unpublished paper by the Board of Governors of the Federal Reserve System), July; and Hausman, J. and Leibtag, E. (2004), "CPI Bias from Supercenters: Does the BLS Know that Wal-Mart Exists?", *NBER Working Paper*, No 10712, August.

Evidence for euro area countries is more scarce and generally refers to national CPIs during the late 1990s: for France, Lequiller (1997) suggests a range of 0.05-0.15 percentage point per annum; for Germany, Hoffmann (1998) arrived at an estimate “unlikely to exceed 0.1 percentage point annually”; and, for Portugal, Covas and Silva (1999) used microdata to conclude that, during a period of rapid change in the Portuguese grocery sector in the early 1990s, the new outlet bias reached 0.5 percentage point per annum, but that this had decreased to 0.25 percentage point per annum by the end of the 1990s.<sup>4</sup> No quantitative studies on bias in the euro area HICP have been conducted to date, largely as a result of the large data requirements and the fact that practices at the detailed level of index construction are heterogeneous across the euro area.

### Alternative approaches to dealing with changes in the retail structure

In general, the regular updating of HICP outlet samples seems to be appropriate, although there is a danger that structural changes mean that samples become unrepresentative in countries which update them only once every five years or less. The limited coverage of internet retailing in many national HICPs is a symptom of this. With regard to the new outlet bias, a satisfactory approach would require an explicit valuation of various facets of retail services, similar to that of quality adjustments for product characteristics. Hedonic approaches which regress price information on a range of retail service characteristics may be one avenue that warrants further research. Alternatively, consideration may be given to conducting consumer surveys in order to obtain direct valuations of different aspects of retail services. While both approaches may appear resource-intensive, it may also be considered that structural changes in the retail trade sector are relatively gradual and that innovations are much less frequent or varied than in product characteristics. Therefore, such research and, in particular, explicit valuations might be estimated infrequently, but applied in the regular monthly compilation of the HICP.

Although evidence from the 1990s suggests that new outlet bias was not a source of a very significant bias, recent developments in the market shares of discounters and online retailers suggest that the challenges these structural developments pose for inflation measurement should remain a concern for policy-makers and a topic worthy of further research.

4 Lequiller, F. (1997), “Does the French Consumer Price Index Overstate Inflation?”, *Institut National de la Statistique et des Études Économiques (INSEE) Série des documents de travail de la Direction des Etudes et Synthèses Économiques*; Hoffmann, J. (1998), “Problems of Inflation Measurement in Germany”, *Discussion Paper*, Economic Research Group of the Deutsche Bundesbank, Vol. 1, No 98; and Covas, F. and Santos Silva, J. (1999), “Outlet substitution bias”, *Economic Bulletin*, Banco de Portugal, September.

## 3 THE IMPACT OF STRUCTURAL FEATURES ON EURO AREA PRICE DEVELOPMENTS

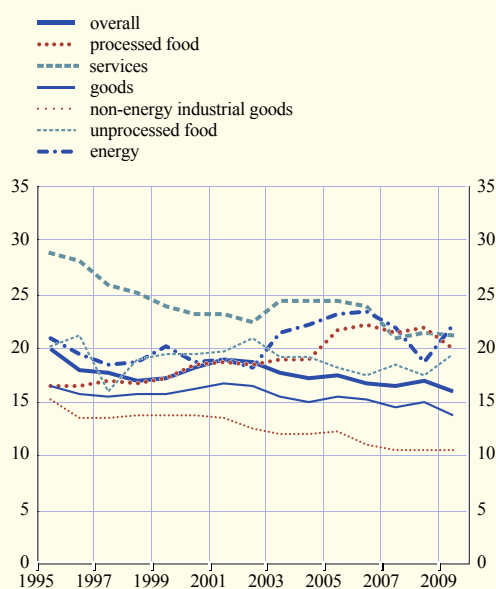
### 3.1 THE IMPACT OF STRUCTURAL FEATURES ON PRICE LEVEL DIFFERENCES ACROSS THE EURO AREA

This section provides a descriptive overview of the degree of price level dispersion across the euro area in terms of magnitude and characteristics across products. It examines the degree of convergence in price levels. Lastly, information on structural aspects of the retail sector is combined with other indicators

to assess the extent to which these structural aspects help understand price level differences and convergence.

Although there is a considerable degree of volatility within and across individual product price series over time and a substantial amount of heterogeneity at the individual product category level, a number of patterns regarding the degree of price dispersion become evident when the data are aggregated. Chart 6 shows price dispersion as measured by the coefficient of variation and reveals that it was, on average over the sample period (1995-2009), lower

**Chart 6 Evolution of the coefficient of variation across HICP special aggregate categories**



Source: Eurostat Purchasing Power Parity (PPP) dataset and Eurosystem staff calculations.

for goods (slightly below 15 in 2009) than for services (slightly above 20 in 2009). It should be noted that, although goods, unlike services, are generally internationally traded, goods prices may also include a substantial non-traded element, particularly in the form of retail intermediation services. For overall consumer prices, and in particular for non-energy industrial goods and for services, the degree of dispersion has been falling on average over the past 15 years. Considering the profile over time more broadly, the overall degree of price dispersion seemed to decline slightly between 1995 and 1998, and increase somewhat between 1998 and 2001, before easing thereafter to reach a minimum in 2009. However, it should be noted that, with a rising price level, the coefficient of variation may overstate the degree of price convergence. In this regard, the standard deviation of prices, which takes into account price levels, declined up to the mid-2000s, but rose somewhat thereafter.

Considering even more detailed product-level data from the purchasing power parity (PPP)

dataset, the extent to which prices differ more within or across countries (the so-called “border effect”) can be analysed. The border effect refers to the fact that price dispersion tends to be higher between cities across borders than between cities within borders. While there has been extensive and rich literature on this topic (see, for example, Bergin and Glick (2006), and Parsley and Wei (2001))<sup>16</sup>, this effect has not been studied across euro area countries using PPP data before.<sup>17</sup> These data make it possible to ascertain whether prices vary more across countries than within countries. Although there are some caveats to using these data, the findings are quite robust even with these caveats in mind, as shown below.<sup>18</sup> Chart 7 shows the median dispersion of individual price observations within countries, as well as the dispersion in average prices across countries for 356 food and non-alcoholic beverage products. On average, the degree of dispersion in average prices across countries is considerably higher than the degree of dispersion in individual observations within countries (medians of 0.25 and 0.15, respectively). Also, the spread across products in dispersion is higher (the inter-quartile range across countries is 0.12, compared with 0.06 within countries). The evidence shown

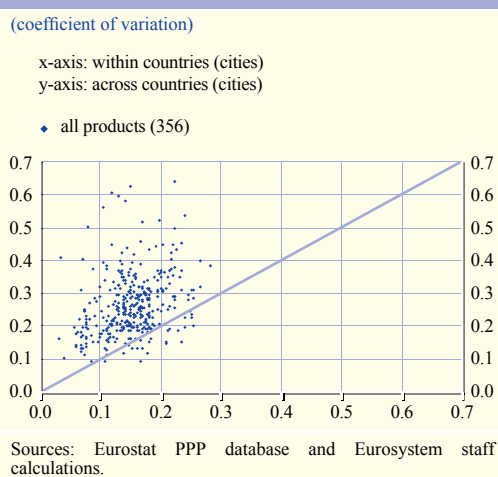
16 Bergin, P. R. and Glick, R. (2006), “Global Price Dispersion: Are Prices Converging or Diverging?”, (Paper prepared for the Journal of International Money and Finance – Santa Cruz Center for International Economics Conference on “Financial and Commercial Integrations”), September 29-30. Parsley, D. C. and Wei, S.-J. (2001), “Explaining the Border Effect: The Role of Exchange Rate Variability, Shipping Costs, and Geography”, *Journal of International Economics*, Vol. 55, No 1, pp. 87–105.

17 It is possible to assess the existence of a border effect using data from the so-called “Quaranta tables” compiled at the product level (over 2,500 items). For each individual product in each country, the Quaranta tables contain information on the average price recorded, the number of price observations recorded and the coefficient of variation of the prices recorded.

18 The main caveat is that it is not possible to extract the coefficient of variation of all observations across all countries; only (a) the coefficient of variation of the individual observations recorded within a country and (b) the coefficient of variation of the average prices observed across countries can be observed. However, a priori, one would expect the coefficient of variation of a sample average (i.e. the average prices observed) to be lower than the coefficient of variation of the raw data (the individual price observations). Therefore, if the coefficient of variation across countries is higher than that within countries, it strongly suggests the presence of a border effect.



**Chart 7 Degree of dispersion of food, beverage and tobacco prices**



represents compelling evidence of the existence of a border effect. Nonetheless, it could be argued that this effect also captures the impact of geographical distance rather than just the impact of national borders. However, further analysis shows that it is indeed a border effect (for further details, see Section 2.1 of the 2011 Structural Issues Report).

Having documented the considerable and persistent price dispersion and strong border effects in the euro area, it may be informative to consider the factors that may be behind these features and the role played by structural aspects of the distributive trades sectors. Table 2 descriptively summarises the results of a panel regression pooling price level data across both products and countries, and including fixed effects (for products and countries). It should be noted that, in addition to explicitly considering the role of structural factors, the analysis controlled for other factors that may impact on price levels across countries. In this regard, the existing (benchmark) literature models price level differences across countries as a function of (i) income differentials, (ii) VAT differences, (iii) expenditure intensity, and (iv) population density and scale effects.<sup>19</sup>

**Table 2 Summary of econometric analysis of factors impacting on cross-country price levels**

Benchmark variables	
Income levels	+ive
VAT	+ive
Expenditure intensity	-ive
Population density	-ive
Structural variables	
Concentration (HHI)	-ive
Concentration (CR5)	+ive
Profitability	+ive
PMR (barriers to entry)	+ive
PMR (price controls)	-ive
PMR (operating restrictions)	n.s.
EPL	-ive

Notes: PMR denotes OECD product market regulation indicator; EPL denotes OECD employment protection legislation indicator; +ive ⇒ positive and statistically significant coefficient; -ive ⇒ negative and statistically significant coefficient; n.s. denotes not statistically significant.

The results in Table 2 show that the impacts of both the benchmark and structural variables are very much in line with the a priori expectations. Relative income levels and VAT rates have a positive and significant impact on relative price levels. Expenditure intensity has a negative and significant impact on price levels, suggesting that either greater attention or scale effects have an impact on price levels. Population density also has a negative and significant impact on price levels.

To capture the impact of structural features of the distributive trades sectors, three broad categories of variables were used, capturing

<sup>19</sup> By far the most common element in this literature is the hypothesised link between price levels and living standards, usually motivated by the Balassa-Samuelson type of argument. Therefore, relative real gross domestic product (GDP) per capita is included in the benchmark model. Secondly, although there has been some degree of harmonisation of indirect taxes in the EU, there are still differences across countries. VAT rates are therefore included in the benchmark model. Thirdly, drawing on the “rational inattention” literature, the relative share of expenditure on a specific product in a country, relative to the euro area average, is added to capture the expenditure intensity and, presumably, “attention intensity” for each product. For example, if Italian households consume proportionally more pasta than households in other countries, they will presumably invest more effort in searching for and comparing prices of pasta products. Thus, other things being equal (and maybe being helped by scale and competition effects), prices of pasta should be lower in Italy. Finally, population density is included as a control for potential efficiencies driven by high versus low population density.



(a) market concentration, (b) profitability, and (c) regulation. Considering first the market concentration measures, a general finding was that the Herfindahl–Hirschman Index (HHI) indicator impacted negatively on relative price levels (suggesting that the HHI captures the inefficiency effect stemming from low concentration), whereas the k-firm concentration ratio (CRk) indicator impacted positively on price levels (suggesting that this indicator therefore captures the adverse competitive impact stemming from the market power of the largest k-firms). The profitability indicator (profit margins adjusted for the implicit labour income for the self-employed) impacted positively and significantly. Lastly, with respect to the OECD product market regulation indicators for the distributive trades sectors, the different components of the overall indicator (barriers to entry, operating restrictions and price controls) appear to have quite different effects, with the former having a positive effect, but the latter and the employment protection legislation indicator a negative effect, while operating restrictions were insignificant.

In summary, while a model with relative income levels, VAT rates, expenditure intensity and population density performs relatively well when explaining price level differences, augmenting it with structural indicators of the distributive trades sectors improves its performance. This analysis confirms that structural features of the distributive trades sectors may impact on price levels and explain some of the divergence across countries and the “border effect” observed in the price data.

### 3.2 THE IMPACT OF STRUCTURAL FEATURES ON PRICE-SETTING BEHAVIOUR

Having considered the impact of structural features of the distributive trades sectors on price level differences, their impact on price and wage-setting behaviour more generally is now considered, namely in terms of the responsiveness of retailers’ prices to changes in competitors’ prices, the frequency of price changes and the pass-through of cost changes into prices.

### RESPONSIVENESS TO COMPETITORS’ PRICES AND THE FREQUENCY OF PRICE CHANGES

To address the issue of how structural features of the distributive trades sectors impact on price-setting behaviour, evidence from the Eurosystem Wage Dynamics Network (WDN) and the Inflation Persistence Network (IPN) is reviewed.<sup>20</sup>

One important question is whether retail firms faced with competition tend to change their prices more frequently. In the WDN survey, around 1,000 retail firms responded to the following question: “*Suppose that the main competitor for your firm’s main product decreases its prices; how likely is your firm to react by decreasing its own price? Please choose a single option. (Very likely, Likely, Not likely, Not at all, It doesn’t apply)*”. More than half of the retail firms state that it would be very likely or likely that they would reduce their price. More interestingly, when cross-checked against structural features facing firms, the degree of competition reported has a statistically significant effect on the reported frequency of price changes, i.e. more competition leads to more frequent price adjustment. In addition, larger retail firms, measured by the number of employees, have a higher reported frequency of price changes.

The results from the IPN show that outlet types have a significant influence on the frequency of price changes, controlling for country and type-of-good effects. Hypermarkets have, on average, a frequency of price change that is 12 percentage points higher than traditional corner shops. For supermarkets and discount stores, these are, respectively, 6.3 and 6.8 percentage points higher than traditional shops. Lastly, while the type of outlet has a strong and significant impact on the frequency of price changes, the results

20 For a more detailed overview of the WDN and IPN, see European Central Bank (2009), “Wage dynamics in Europe: Final report of the Wage Dynamics Network (WDN)”, December, and Altissimo, F., Ehrmann, M. and Smets, F. (2010), “Inflation persistence and price-setting behaviour in the euro area – a summary of the IPN evidence”, *Occasional Paper Series*, No 46, ECB, June.

suggest that it does not have an effect on the magnitude of price changes. Other things being equal, more flexible prices should mean that prices adjust more quickly and completely to changes in the “optimal” price.

### THE IMPACT OF MARKET CONCENTRATION AND PRICE DYNAMICS: A REGIONAL LEVEL ANALYSIS

The aim of this section is to combine information on concentration across different dimensions of the grocery sector with disaggregated regional data on price dynamics. This represents an initial attempt to analyse the impact of competition on price dynamics across the euro area at a local level. Using a unique dataset on the location of over 100,000 individual grocery stores across the euro area, a regional analysis of the relationship between the degree of retail market concentration and price changes is conducted for two categories of grocery goods (food and non-alcoholic beverages; and alcoholic beverages and tobacco) in Germany, Spain, Italy, Austria, Portugal and Finland.<sup>21</sup>

When considering the HHI at the buying group level, a positive and statistically significant relationship between concentration and price dynamics was found for both food and beverages and for alcohol and tobacco. The interpretation of these findings is that a higher degree of market concentration at the buying group level does not always seem to have been associated with negative price dynamics.

When considering the results based on concentration indices computed at the local level, broadly similar results are obtained. Thus, the main finding, i.e. that higher market concentration is associated with higher price growth in food and drink products in the recent period, holds for different levels of aggregation. The interpretation of this correlation calls for further research, but it appears to be robust and to hold across individual countries.

In summary, it can be shown – using a unique database containing both regional year-on-year percentage price changes and concentration

measures – that these price changes are positively affected by the degree of concentration (for further details, see Section 2.3 of the 2011 Structural Issues Report).

### THE IMPACT OF STRUCTURAL FEATURES ON COST PASS-THROUGH

Structural features of the distributive trades may also impact on the pass-through of costs to domestic prices (consumer and producer). To investigate this, the pass-through of import and producer prices to consumer non-energy industrial goods prices in euro area countries was analysed.<sup>22</sup> A general finding was that price changes for domestic goods (PPI) tend to be of higher importance for prices of manufactured consumer goods in the larger euro area countries, reflecting significant domestic production, while import price changes (UVI) are more relevant for consumer prices in smaller, more “open” euro area countries where imports play a greater role. In the case of these smaller, more “open” euro area countries, there seems to be a link to the fact that the level of imports in retail sales is likely to be higher, as well as the fact that the level of production in these countries is relatively low.

When focusing solely on the pass-through of import prices, there is some evidence that the magnitude of the estimated pass-through is related to the degree of competition/concentration in the specific country and sector, as a negative – albeit weak – relationship between the estimated import price elasticity and the HHI was found, suggesting that the stronger the competition (the lower the HHI index), the higher the elasticity of consumer prices seems to be with respect to import price changes.

21 Regional CPI data were not available for the other euro area countries.

22 It should be noted that, owing to different costs, the complete pass-through of a given cost change to retail prices does not entail a one-to-one relationship between the percentage change in costs and the percentage change in prices. Other things being equal, the higher the proportion of the final selling price that is accounted for by the cost, the higher the pass-through coefficient will be. Therefore, the pass-through coefficient (the elasticity of the selling price with respect to a specific cost factor) may be less than unity even when pass-through is complete.

Part of the difficulty in finding robust and meaningful pass-through estimates for the different non-energy industrial goods components may stem from the heterogeneity of products considered and the wide range of production technologies and market structures across the different product groupings. In this regard, a VAR analysis of food price pass-through using detailed information on farm-gate, producer and consumer prices yields more meaningful and consistent results. In particular, the analysis shows that consumer prices tend to respond less than producer prices to commodity shocks. It is also found that the size of the shocks varies across markets and countries. This feature is partially reflected in cross-sectional differences between retailers and producers in terms of composition and types. A more pronounced presence of discounters seems more likely to be associated with a higher pass-through and, conversely, markets characterised by shops with a smaller format seem to respond less to commodity price shocks.

#### 4 CONCLUSIONS

This article summarises the 2011 Eurosystem Structural Issues Report (SIR) on the distributive trades in the euro area, which aims to contribute to a better understanding of the impact of structural features of the distributive trades on prices and price-setting behaviour. The main findings are:

- There remains a considerable degree of price dispersion across the euro area. The evidence indicates a limited degree of price convergence up to the period around 2004-2006, which subsequently appears to have stalled or even been reversed. There is also compelling evidence of a strong “border effect” on prices across euro area countries, which suggests ample scope for further improving the Single Market. Structural and regulatory features of the distributive trades sectors help explain cross-country differences in price levels.

- Using information drawn from the IPN and WDN, price-setting behaviour is considered. More competition is found to be associated with more frequent price changes in the retail sector.
- The relationship between price dynamics at the regional level and competition measured at different levels of organisational and spatial aggregation and across a number of product groups is examined. A key finding is that higher market concentration is associated with higher price growth for food and drink products in the recent period.
- This report also addresses the magnitude and speed of cost pass-through. Producer prices generally react faster and more strongly to cost shocks than consumer prices. The degree of competition appears to be positively related to the pass-through of import to consumer prices. With regard to food prices, a greater presence of discounters seems to be associated with a higher pass-through.

From a policy perspective, the analysis has highlighted the importance of structural reforms in enhancing competition in the distributive trades. The findings regarding the impact of structural features on price-setting behaviour and on price level differences suggest that further progress in enhancing effective competition in the distributive trades sectors could contribute to a reduction of border effects and a narrowing of price differentials. In respect of product market regulation, although there is evidence of an easing pattern in the degree of regulation, there remains considerable scope for further progress.

All in all, a crucial step towards further progress would be the full and consistent implementation of the Services Directive. The benefits from further liberalisation and harmonisation of market conditions may be seen in part from the finding in this report that more product market regulation is associated with higher price levels. Moreover, reforms could reduce mark-ups and give rise to significant increases in both

output and real wages. In order to unleash the full potential and benefits of online and cross-border trade, the remaining regulatory and legislative barriers (such as consumer law) need to be addressed. Legislation envisaged under the Single Market Act, an initiative by the European Commission to improve the functioning of the Single Market, is a step in the right direction. Relevant proposals include measures to increase data protection and legal certainty in electronic commerce.

# THE FINANCIAL CRISIS IN THE LIGHT OF THE EURO AREA ACCOUNTS: A FLOW-OF-FUNDS PERSPECTIVE

ARTICLES

The financial crisis in the light of the euro area accounts: a flow-of-funds perspective

*The global financial crisis that erupted in 2008 has shown how a build-up of financial imbalances in various sectors of the economy, in conjunction with innovation in the financial system, can give rise to powerful feedback loops between the financial and the real side of the economy. The crisis has underlined the importance of developments in balance sheets and financial flows as well as the need to look at both quantities and price variables. This article examines the evolution of the various stages of the financial crisis through the lens of the integrated Euro Area Accounts, which provide comprehensive information on economic and financial developments by institutional sector. It highlights three main issues: the evolution and interplay of sectoral financial balances, the dynamics of sectoral leverage and the associated changes in financial intermediation patterns in successive stages of the crisis.*

## I INTRODUCTION

Since the insolvency of Lehman Brothers in September 2008, vast efforts have been devoted to describing and explaining the developments prior to, during and after the associated financial crisis. Although the crisis originated in the United States – where substantial imbalances had accumulated, eventually unfolding into severe financial turmoil – the implications were global. This article looks at developments in the euro area, covering the period up to the first quarter of 2011. It focuses on the interactions between real and financial variables across all sectors of the economy during the build-up of domestic imbalances before the global crisis, as well as their unravelling during the subsequent recession and recovery phases. This is done by adopting a flow-of-funds approach, looking at the evolution of the crisis through the integrated and consistent lens of the Euro Area Accounts (EAA),<sup>1</sup> which bring together the financial and non-financial accounts of the different institutional sectors (i.e. households<sup>2</sup>, non-financial corporations, financial corporations and general government) and the rest of the world, and present data in nominal rather than real terms (see Box 1 for a conceptual discussion of this). Having consistent flows and balance sheets makes it easier to analyse the accumulation of imbalances and associated balance sheet vulnerabilities.

This article covers three main issues: sectoral shifts in financial deficits/surpluses, leveraging/deleveraging trends, and changes in financial intermediation patterns. The article also points to country heterogeneity in sectoral deficits/

surpluses within the euro area. Section 2 examines selected components of the non-financial accounts to review developments in the different phases of the crisis. Section 3 takes a sectoral perspective, examining the dynamics of financial surpluses/deficits shifting between sectors during the successive phases of the crisis. Section 4 discusses the leverage behaviour of households and of financial and non-financial corporations, as measured by debt-to-income and debt-to-asset ratios. Section 5 describes the changes in financial intermediation patterns which occurred after Lehman's insolvency. And Section 6 provides brief concluding remarks.

## 2 DEVELOPMENTS IN THE NON-FINANCIAL ACCOUNTS

This section describes developments in income, saving and investment in the euro area, broken down by sector, and discusses the resulting sectoral net lending/net borrowing positions (i.e. the financial surplus/deficit, which is also the balance between revenue and expenditure).<sup>3</sup>

1 For further reading, see Papademos, L. and Stark, J. (eds.), "Cross-checking and the flow of funds", Chapter 7 of *Enhancing Monetary Analysis*, ECB, Frankfurt am Main, 2010, and the article entitled "The introduction of quarterly sectoral accounts statistics for the euro area", *Monthly Bulletin*, ECB, November 2007. For a comparison with developments in the United States, see the article entitled "The external financing of households and non-financial corporations: a comparison of the euro area and the United States.", *Monthly Bulletin*, ECB, April 2009.

2 Including non-profit institutions serving households.

3 The net lending/net borrowing of a sector is the balance of its capital account, which measures the excess of saving and net capital transfers received over capital investments (net lending), or vice versa (net borrowing). It is also the balance of the financial accounts, which measures the difference between transactions in financial assets and transactions in liabilities. See also Box 1.

In the eight years or so prior to the financial turmoil of 2008, the configuration of income growth distribution showed a traditional pattern (see Chart 1), with household income growing at a stable pace, driven by increases in wages. At the same time, income accruing to the government sector grew fairly robustly until 2008, allowing for a gradual reduction of public deficits. In the first three quarters of 2008, while household income was still growing at a stable pace, non-financial corporations' income was already decreasing – partly due to incomplete pass-through of the commodity price shock at that time (see Section 3) – and government income<sup>4</sup> had slowed.

After September 2008, growth in euro area disposable income plummeted, reflecting the fall in nominal production.<sup>5</sup> The strong initial downward pressure on household income (driven by a sharp fall in the compensation of employees) was then mitigated by the impact of automatic fiscal stabilisers, putting strain on

government accounts. After a gradual recovery in activity, starting in mid-2009, all sectors experienced positive income growth again by the second quarter of 2010, and as the economic expansion consolidated in subsequent quarters, income distribution across sectors has been approaching a pre-crisis configuration.

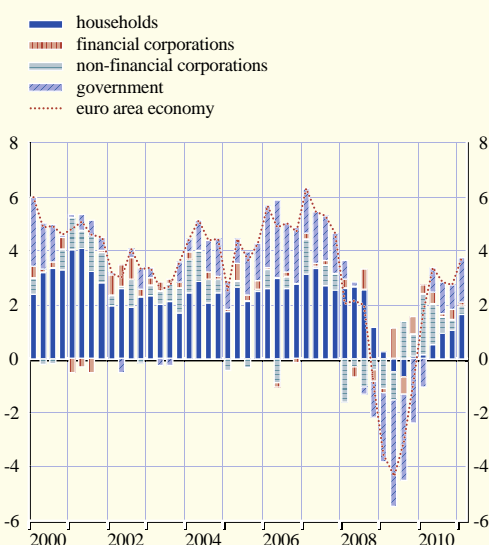
The crisis also induced significant changes to saving and capital formation flows in the euro area. The growth rate of *euro area saving* had been gradually increasing from 2005 until the first quarter of 2007 (see Chart 2). This was driven to a large extent – but not exclusively – by the government sector, reflecting deficit reductions. The euro area-wide growth rate of savings started to decline in the course of 2007 and suddenly turned negative in the first quarter

4 Government income differs from government revenue, as the former nets certain expenditure items. For more details, see Box 1.

5 Nominal GDP is closely related to nominal disposable income, because income in national accounts arises only from production.

Chart 1 Euro area gross disposable income

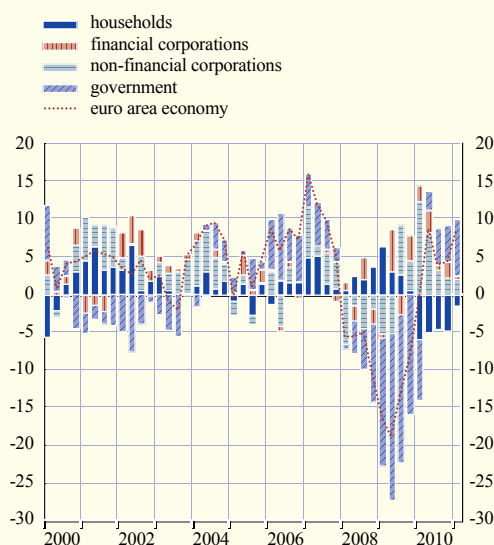
(annual percentage changes; percentage change contributions)



Sources: Eurostat and ECB.

Chart 2 Euro area saving

(annual percentage changes; percentage change contributions)



Sources: Eurostat and ECB.

Note: With government saving being negative in level in recent quarters, a positive contribution of government to growth in euro area gross saving merely reflects a reduction in the level of dissaving.



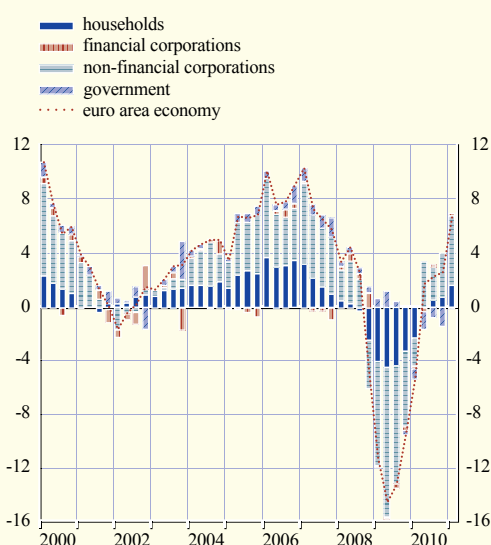
of 2008, particularly for governments and non-financial corporations, whereas households, by contrast, continued to increase savings.

After a steep contraction during 2008-09, growth in euro area-wide saving recovered on the back of the economic upturn led by net exports and capital formation (in particular, restocking) with still subdued consumption. Benefiting from this recovery, non-financial corporations increased their saving again from mid-2009. As automatic fiscal stabilisers reversed and deficit-reducing measures started to take hold, governments were able to decrease their rate of dissaving from the second quarter of 2010. In contrast to this, as of the first quarter of 2010, households started to reduce their saving flows amid improving confidence.

Even more pronounced was the adjustment in the *non-financial investment* decisions of private agents, as can be seen in Chart 3, which depicts growth in euro area nominal gross fixed capital formation by sector. Since 2002 growth in investment had been gradually increasing, with non-financial corporations taking the lead.

Chart 3 Euro area gross fixed capital formation

(annual percentage changes; percentage change contributions)



Sources: Eurostat and ECB.

The booming housing markets of several euro area countries can also be seen in the robust growth rates of household investment. As housing markets started to lose momentum around 2007, household investment did the same. Following Lehman's insolvency, the sudden aggravation of the financial crisis induced a substantial drop in investment by households and an even more pronounced one by non-financial corporations (see Chart 3), which amplified the recession, before a rebound began in mid-2009.

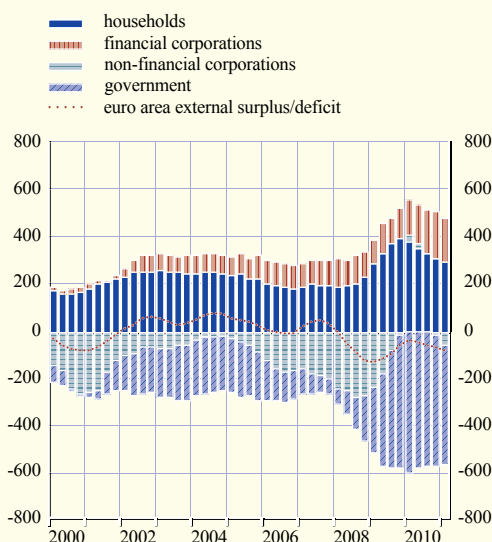
Chart 4 depicts the *net lending/net borrowing* by institutional sectors, which essentially results from the balance between saving and capital formation. Throughout the whole period of Monetary Union, both households and financial corporations have been net lenders (i.e. showing an excess of savings over capital formation). In 2004 non-financial corporations gradually started to increase their net borrowing to finance the excess of investment over retained earnings (i.e. saving). Owing to stable growth in income and saving, governments were, at the same time, able to reduce their deficits. However, while the euro area general government deficit declined gradually, most governments did not seize the opportunity of favourable economic conditions to sufficiently consolidate their fiscal positions by accelerating deficit reduction. Indeed, as Chart 4 indicates, euro area governments continued to show a deficit at the height of the economic expansion, thus failing to build up sufficient buffers during the boom period to face, in the short term, the eventual turnaround of the cycle, and failing to accumulate the required assets to face, in the longer term, the consequences of an ageing population. Nonetheless, with the net lending of households and financial corporations broadly offsetting the borrowing needs of non-financial corporations and governments, these developments did not lead to any significant change in the external deficit (reflecting the euro area current account balance).

In the run-up to the crisis, unlike non-financial corporations, households started retrenching



**Chart 4 Euro area net lending/net borrowing**

(four-quarter sum of transactions; EUR billions)

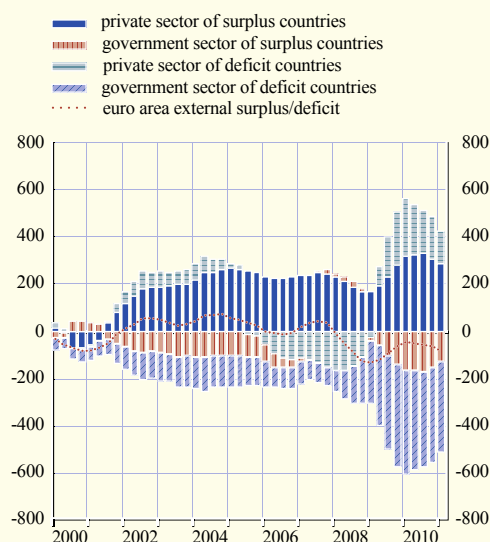


Sources: Eurostat and ECB.

Notes: The net borrowing of non-financial corporations in the period from the third quarter of 2000 to the first quarter of 2001 is affected by the purchase of mobile phone licenses (UMTS).

**Chart 5 Euro area net lending/net borrowing: surplus vs deficit countries**

(four-quarter sum of transactions; EUR billions)



Sources: Eurostat, ECB and ECB staff calculations.

Note: "Surplus countries" refer to Belgium, Germany, Luxembourg, the Netherlands, Austria and Finland. The "private sector" contains here all sectors other than government.

expenditure early on. They gradually increased their financial surpluses in the period 2006-08, first by way of a gradual moderation in housing investment growth and, later on, by restraining consumption and thus increasing saving. This adjustment by households exerted significant downward pressure on aggregate demand. At the same time, non-financial corporations continued on their expansionary path, thus compensating somewhat for these dampening influences, and kept increasing their financial deficit further, until Lehman's insolvency.

After this turning point, both sectors improved their financial balances simultaneously: households widened their surpluses, while non-financial corporations swung sharply from financial deficits into surpluses (notably by cutting fixed investment and destocking). The abrupt decline in activity and the activation of automatic stabilisers put considerable strain on government accounts, resulting in much higher government deficits.

In addition to some weaknesses in the configuration of sectoral deficits/surpluses at the euro area level, substantial regional intra-euro area imbalances were also building up prior to the crisis. Chart 5 presents an alternative description of the net lending/net borrowing positions within the euro area, where the non-government sectors taken as a whole and the general government sector are each split between countries running external current account surpluses (for most of the recent period until the crisis hit ("surplus countries") and those running deficits ("deficit countries"). In the period 2006-08, the mounting deficits of both the private and government sectors in the deficit countries were covered by the ample private sector surpluses of the surplus countries. The heavy strains on government accounts arising from the recession were more pronounced in the deficit countries, as they failed in aggregate to balance their budgets at the peak of the cycle (in contrast to surplus countries in aggregate) and because their private sectors adjusted particularly strongly – swinging from large

deficit to significant surplus positions. By then, the initial geographical disequilibrium in private sector deficits/surpluses had turned into marked regional heterogeneities in government deficits across the euro area, eventually triggering doubts on government debt sustainability in some deficit countries.

Adding to the vulnerability of these sectors was a substantial build-up of leverage in the financial sector, especially in the other financial intermediaries (OFI) sector, as well as in the households and non-financial corporations sectors in many euro area countries, several of them experiencing housing booms. As the financial crisis hit, asset prices declined sharply, thereby further increasing leverage ratios (see Section 4). Banks' sources of market

funding suddenly became highly constrained due to money market tensions, a situation mitigated by the ample liquidity promptly made available by the Eurosystem.<sup>6</sup> As banks substantially tightened credit conditions to the non-financial private sector at the end of 2008,<sup>7</sup> concerns over credit supply in an environment of acute uncertainty, contributed to turning a mild cyclical slowdown into a severe real economy crisis. The tightening of bank credit conditions was also a factor spurring a change in the pattern of financial intermediation (see Section 5).

<sup>6</sup> See, for instance, Chart 21.

<sup>7</sup> According to the bank lending survey, banks started to tighten credit conditions in 2007, but the pace of tightening accelerated in the two quarters after Lehman's insolvency.

## Box I

### CONCEPTS USED IN SECTORAL ACCOUNTS

The sectoral accounts present the accounts of institutional sectors in a coherent and integrated way, linking – similar to the way in which profit and loss, cash flows and balance sheet statements are linked in business accounting<sup>1</sup> – uses/expenditure, resources/revenue, financial flows and their accumulation into balance sheets from one period to the next.

To this effect, all units in the economy are classified in one of the four institutional sectors (i.e. households, non-financial corporations, financial corporations and general government). Their accounts are presented using identical classifications and accounting rules (those of ESA 95), in a manner such that each transaction/asset reported by one unit will be symmetrically reported by the counterpart unit (at least in principle). Accordingly, the sectoral accounts present the data with three constraints: each sector must be in balance vertically (e.g. the excess of expenditure on revenue must be equal to financing); all sectors must add up horizontally (e.g. all wages paid by sectors must be earned by households); and transactions in assets/liabilities plus holding gains/losses and other changes in the volume of assets/liabilities must be consistent with changes in balance sheets (stock-flow consistency). The sectoral accounts are commonly presented in a matrix form, with sectors in columns and transactions/instruments in rows, with horizontal and vertical totals adding up (see the example in the table).<sup>2</sup>

<sup>1</sup> Sectoral accounts differ from business accounting in a number of ways, and most notably in the sense that the latter does not systematically distinguish *transactions* from *others flows* (although an increasing emphasis for distinguishing between *income* and *comprehensive income* in business accounting can be observed).

<sup>2</sup> For a comprehensive matrix presentation of the euro area, see Table 3.1. of the euro area statistics section.

### Simplified matrix presentation of the EAA

	F=A to E =G to K											
	A	B	C	D	E	G	H	I	J	K		
	HH	NFC	FC	Gov	RoW	Total economy	HH	NFC	FC	Gov	RoW	
	<b>Uses/Expenditure</b>					<b>Resources/Revenue</b>						
1=2+3+4+5	<b>Total</b>	<b>92</b>	<b>105</b>	<b>30</b>	<b>20</b>	<b>15</b>	<b>262</b>	<b>100</b>	<b>100</b>	<b>30</b>	<b>16</b>	<b>16</b>
2	Products	76	15	10	10	10	111	-	100	-	-	11
3	Wages		60	5	10		75	75	-	-	-	
4	Interests		30	25		5	60	25	-	30	-	5
5	Taxes	16	-	-	-	-	16	-	-	-	16	-
6=1(G-A), 1(H-B), ... =7(A-G), 7(B-H), ...	<b>Surplus/deficit</b>	<b>8</b>	<b>-5</b>	<b>0</b>	<b>-4</b>	<b>1</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Transactions in financial assets</b>					<b>Transactions in liabilities</b>						
7=8+9	<b>Total</b>	<b>13</b>	<b>1</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>30</b>	<b>5</b>	<b>6</b>	<b>15</b>	<b>4</b>	<b>-</b>
8	Deposits	13	1	-	-	1	15	-	-	15	-	-
9	Loans	-	-	15	-	-	15	5	6	-	4	-
10=1A+7A-1G-7G, 1B+7B-1H-7H, ...	<b>Net total transactions</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Financial assets</b>					<b>Liabilities</b>						
11	<b>Opening balance sheet</b>	<b>70</b>	<b>20</b>	<b>100</b>	<b>-</b>	<b>12</b>	<b>202</b>	<b>40</b>	<b>60</b>	<b>90</b>	<b>2</b>	<b>10</b>
12=7	Transactions	13	1	15	-	1	30	5	6	15	4	-
13	Other economic flows	1	1	-	-	-	2	-	-	2	-	-
14=11+12+13	<b>Closing balance sheet</b>	<b>84</b>	<b>22</b>	<b>115</b>	<b>-</b>	<b>13</b>	<b>234</b>	<b>45</b>	<b>66</b>	<b>107</b>	<b>6</b>	<b>10</b>
15=14(A-G), 14(B-H), ...	<b>Net financial worth</b>	<b>39</b>	<b>-44</b>	<b>8</b>	<b>-6</b>	<b>3</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Notes: HH: households, NFC: non-financial corporations, FC: financial corporations, Gov: general government, RoW: rest of the world. The figures shown in this table are simply illustrative.

The first five rows of the table show the expenditure and revenues of each of the sectors (broken down into types of expenditure/revenue). In row 6, the difference between revenue and expenditure (the surplus/deficit) is shown.

The notions of revenue and expenditure<sup>3</sup> are close to, but generally less encompassing than, the more traditional national account concepts of resources and uses. Income can then be defined as revenue (except capital transfers received) minus expenditure other than final consumption and capital expenditure (capital formation and capital transfers paid). For corporations, income corresponds to retained earnings. Savings is the excess of income over final consumption.<sup>4</sup>

Surpluses/deficits are then associated with transactions in financial assets and liabilities in each sector. This is shown in rows 7 to 10. The bottom part of the table shows the stocks of assets and liabilities, which result from the accumulation of transactions and other flows. This table is extremely simplified (e.g. omitting an explicit presentation of the stock of non-financial assets).<sup>5</sup>

3 ESA 95 formally defines revenue and expenditure for the government sector by reference to uses of the government sector.

4 A glossary of national accounts terms can be found at: [http://www.ecb.europa.eu/stats/pdf/eea/AAA\\_Glossary.pdf?3f0aa8a9cd63211f9b30a47738e3d69](http://www.ecb.europa.eu/stats/pdf/eea/AAA_Glossary.pdf?3f0aa8a9cd63211f9b30a47738e3d69)

5 For a methodological description of the EAA, see [http://www.ecb.europa.eu/stats/pdf/eea/eas\\_note\\_ch3.pdf?766369a89fd9e1c4d1ff32f25a54eeal](http://www.ecb.europa.eu/stats/pdf/eea/eas_note_ch3.pdf?766369a89fd9e1c4d1ff32f25a54eeal)

The excess of revenue over expenditure is the net lending/net borrowing (i.e. financial surplus/deficit), a key indicator of the sectoral accounts. Typically, a household's revenue will exceed its expenditure. Households are thus providers of net lending to the rest of the economy. Non-financial corporations typically do not cover their expenditure by revenue, as they finance at least part of their non-financial investments by funds from other sectors in addition to internal funds. Non-financial corporations are thus typically net borrowers. Governments are also often net borrowers. If the net lending provided by households is not sufficient to cover the net borrowing of the other sectors, the economy as a whole has a net borrowing position vis-à-vis the rest of the world. Deviations from this typical constellation were apparent in several euro area countries before the crisis, in particular, with extremely elevated residential investment that resulted in households becoming net borrowers (as has been the case in the United States).

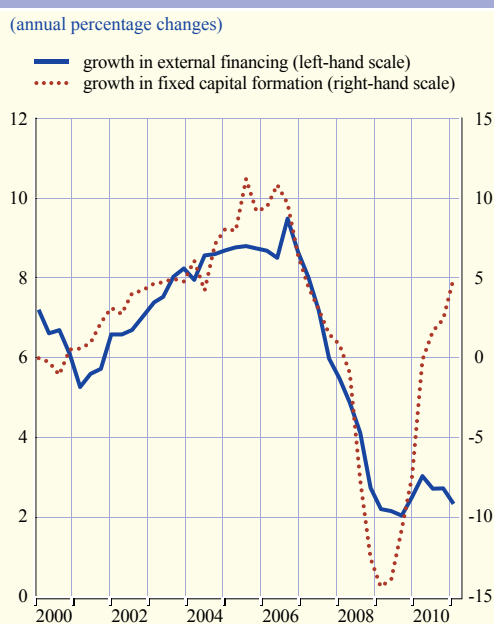
The adding-up constraints in the accounts require that any (ex ante) increase in the financial balance of one sector is matched by a reduction in the financial balances of other sectors. The accounting framework does not, however, indicate by which mechanism this reduction will be brought about, or which mechanisms are at play.<sup>6</sup> The EAA makes it possible to track changes in net lending in the different sectors of the economy. It also specifies the financial instruments affected and shows how the transactions and valuation changes leave a lasting effect on the balance sheets of the sectors.

<sup>6</sup> If, for example, the net lending of households increases because they consume less and save more, this results, in the first instance, in higher inventories of non-financial corporations, which in turn need to be financed. Thus, the higher household sector saving provides the required financing to non-financial corporations. This can subsequently prompt adjustments whereby, for example, non-financial corporations cut costs, in turn reducing household revenue, and thus reducing the funds that households have available for non-financial corporations.

### 3 SHIFTS IN SECTORAL FINANCIAL DEFICITS/ SURPLUSES

This section looks in more detail at developments – during the slowdown, the recession and the recovery – underlying the dynamics of the net lending/net borrowing positions of the different sectors. In the run-up to the crisis, *households* started to retrench expenditure early on. They steadily increased their financial surpluses in the period 2006-08, first by way of a gradual moderation in housing investment growth and, later on, by restraining consumption. In 2007, with conditions in housing markets deteriorating, growth in (nominal) housing investment by euro area households started to moderate, eventually turning into a slight yearly decline by mid-2008. This was one of the main factors behind the halving of the growth rate of households' external financing (comprising all liabilities) (see Chart 6). Although household income kept growing around a fairly stable annual nominal

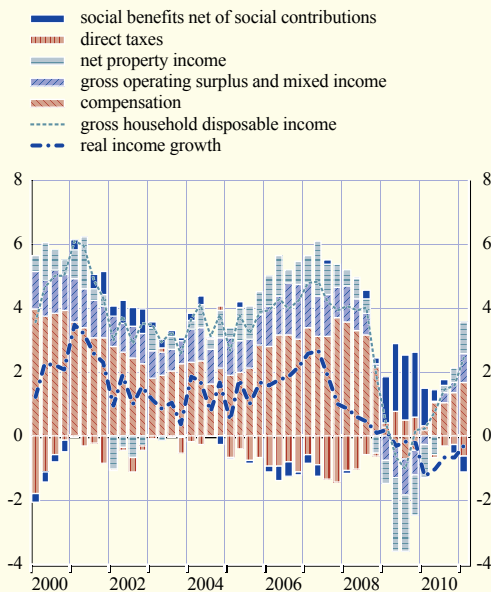
Chart 6 Household fixed capital formation and external financing



Sources: Eurostat and ECB.

**Chart 7 Households' nominal gross disposable income**

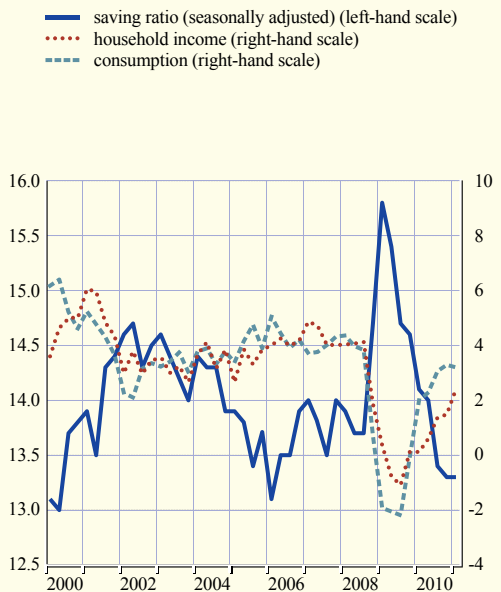
(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB.

**Chart 8 Household income, consumption and savings ratio**

(annual percentage changes; percentages)



Sources: Eurostat and ECB.

rate of 4% (see Chart 7), by the end of 2007 this was barely sufficient to compensate for the rapid acceleration in HICP inflation, which peaked at 4.1% in July 2008, fuelled by rapidly increasing commodity prices. Confronted with this real income shock, households preferred to slow their real consumption, rather than to try to smooth consumption by reducing their savings flows.

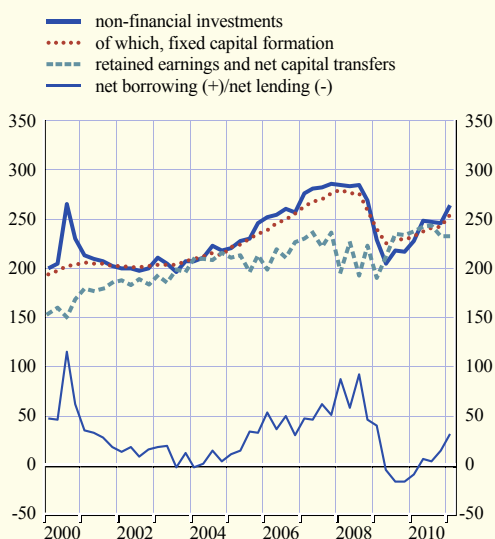
In the two quarters following Lehman's insolvency, household spending softened further. The decline in housing investment accelerated, reaching -14.9% in year-on-year terms by the second quarter of 2009. Households also cut nominal consumption, partly facilitated by a short episode of falling consumer prices. They also raised their savings ratio by 1.5 percentage points over two quarters (see Chart 8). In the context of declining compensation of employees as well as contracting net property income earned (interest and dividends), net transfers originating from government (social benefits minus taxes and social contributions) strongly supported household income growth, a phenomenon that

progressively reversed in the course of 2010 as the other components of household income recovered (see Chart 7). With income recovering, consumption growth received further support from a rapid decline of savings ratios to decade lows by the end of 2010. Country developments presented strong heterogeneities with, for instance, some countries showing booms in housing investment prior to 2007, or more pronounced savings ratio cycles than others over the period 2008-10.

In contrast to the early slowdown in household spending, *non-financial corporations* continued to increase their borrowing and expand their balance sheets until the third quarter of 2008. Chart 9 shows the upswing up to that date in net borrowing of non-financial corporations (seasonally adjusted), arising from elevated capital formation and falling retained earnings. The breakdown of non-financial corporations' external financing by "use of funds" (as shown in Chart 10) also points at increasing risk exposure, with stepped-up purchases of quoted shares, up to mid-2008. Furthermore, the hefty

**Chart 9 Non-financial corporations' capital formation, retained earnings and net borrowing (+)/net lending (-)**

(EUR billions; seasonally adjusted)

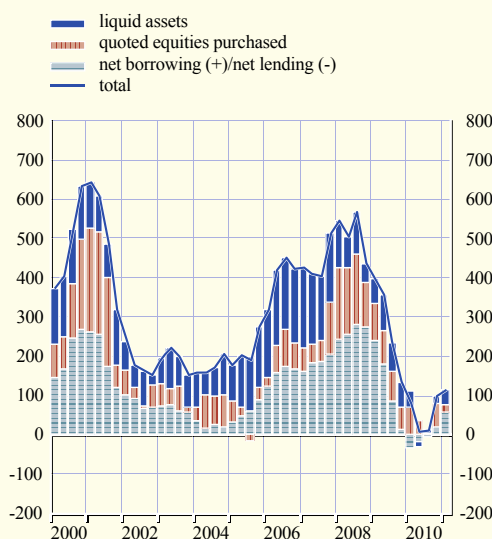


Sources: Eurostat, ECB and ECB staff calculations.

Notes: The spike in 2000 investment and net borrowing reflects the impact of the mobile phone licences (UMTS) that were accounted as non-financial corporation expenditure.

**Chart 10 Non-financial corporations' external financing by use of funds**

(four-quarter moving sum; EUR billions)



Sources: Eurostat and ECB.

Note: For presentational purposes, some transactions in assets are netted from financing, as they are predominantly internal to the sector (loans granted by non-financial corporations, unquoted shares, other accounts receivable/payable).

accumulation of liquid assets<sup>8</sup> observed since 2006 had moderated from the end of 2007 onwards, as corporations started drawing on their liquidity buffers. Abruptly reversing course in the last quarter of 2008, non-financial corporations cut all types of expenditure – fixed investments, inventories, wages, current expenses (e.g. travel), but also interest and dividends – and of other outlays, such as the acquisition of quoted shares. They also paid less tax on their income. Non-financial corporations managed to turn their very large financial deficit recorded in 2008 into a financial surplus by summer 2009, hoarding cash and compressing their external financing needs. From mid-2009 onwards, the uptick in capital formation (initially driven largely by the reversal of the steep destocking in the first half of 2009) was almost fully matched by improved retained earnings. This led to a situation where non-financial corporations avoided returning to any noticeable financial deficit position, and where the upturn in their external financing was mostly accompanied by renewed liquidity accumulation,

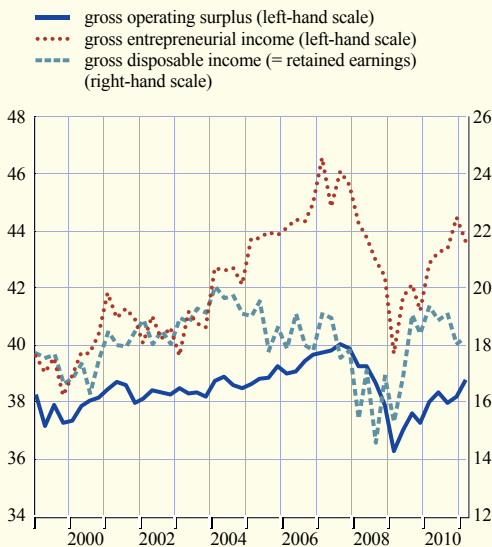
until the first quarter of 2011, when net borrowing by non-financial corporations increased significantly.

An analysis of profit margins can be based on a number of concepts compiled from the EAA, as shown in Chart 11. Particularly noticeable is the steep fall in gross operating surplus and gross entrepreneurial income since mid-2007, which subsequently bottomed out in the first quarter of 2009. This decline was due initially, among other things, to incomplete pass-through of commodity price increases and persistent wage pressures, and thereafter, to the adverse impact of the recession. In the course of the recovery, gross operating surplus margins recovered gradually, in a context of strong competitive pressures and incomplete pass-through of high input costs. By contrast, retained earnings of non-financial corporations rebounded more quickly, on the back of lower net interest paid (corporations being prime beneficiaries of the

8 Deposits, debt securities held and mutual fund shares.

**Chart 11 Gross profit measures of euro area non-financial corporations**

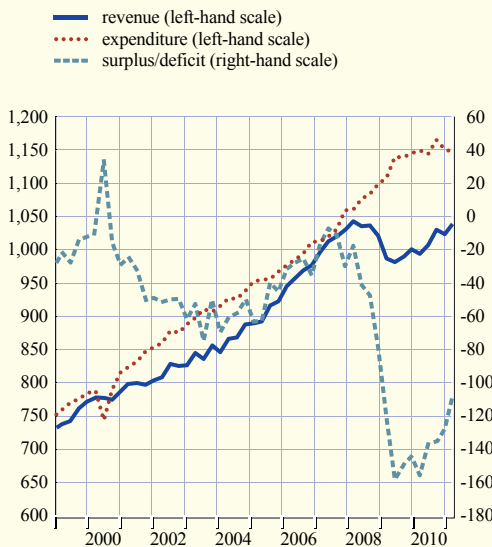
(as a percentage of value added; seasonally adjusted)



Sources: Eurostat, ECB and ECB staff calculations.

**Chart 12 Government expenditure, revenue and deficit**

(EUR billions; seasonally adjusted)



Sources: Eurostat, ECB and ECB staff calculations (seasonal adjustments by the authors).

very low policy rates), low taxes paid (delayed impact of the trough in activity) and low net dividends paid (corporations widely cut or froze dividends in 2009 as supplementary cash-saving measures). The recovery in entrepreneurial income presents an intermediate case, more pronounced than that of the operating surplus, but less so than that of retained earnings.<sup>9</sup>

The *government* position started to deteriorate slowly from near balance in the second quarter of 2007 until the third quarter of 2008, mostly owing to slower growth in revenue. In 2009, however, it deteriorated markedly on account of the operation of automatic fiscal stabilisers and the implementation of a number of policy measures<sup>10</sup> (see Chart 12). Direct taxes on households and non-financial corporations, as well as social contributions levied, contracted substantially, and social benefits paid accelerated, all of which supported the income of households and corporations. The recession had by then transformed private sector imbalances, accumulated in some countries before the crisis, into large (or larger) government sector deficits, triggering an urgent need for fiscal adjustment.

As of the first quarter of 2010, the implementation of corrective fiscal packages started to slow down government expenditure, reaching a negative year-on-year rate of change in the first quarter of 2011 for the first time on record since the start of Monetary Union, with governments' compensation of employees being nearly stable year on year for three quarters in a row. At the same time, government revenue began to increase due to consolidation measures and the effects of automatic fiscal stabilisers in a recovering economy. This has resulted in a moderate

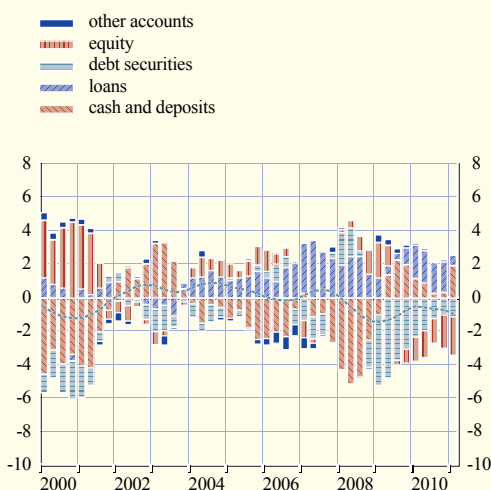
<sup>9</sup> The gross operating surplus captures the margins on production activity (broadly, sales minus purchases and compensation of employees). The transition from gross operating surplus to gross entrepreneurial income adds to this net interest received and dividend received. Retained earnings (which, for corporations, is also the disposable income, as well as saving) deducts further other net current transfers: mostly taxes and dividends paid. Assessing margins based on entrepreneurial income can be prone to misinterpretation, mostly because dividends internal to the sector (i.e. distributed by resident non-financial corporations and earned by other resident non-financial corporations) are generally not eliminated. As a rough indication, dividends earned by non-financial corporations increased from 3.8% of value added in 2000 to 7.8% in 2010.

<sup>10</sup> These exclude, however, most measures in support of the banking sector classified by Eurostat as not having an impact on the deficit (see Section 5).



Chart 13 Euro area net lending vis-à-vis the rest of the world (by instrument)

(as a percentage of GDP, four-quarter moving sums)



Sources: Eurostat and ECB.

Note: This chart depicts transactions in euro area residents' financial assets net of liabilities against non-residents, by instrument, thus measuring net inflows (-) or outflows (+) of the euro area in a given instrument.

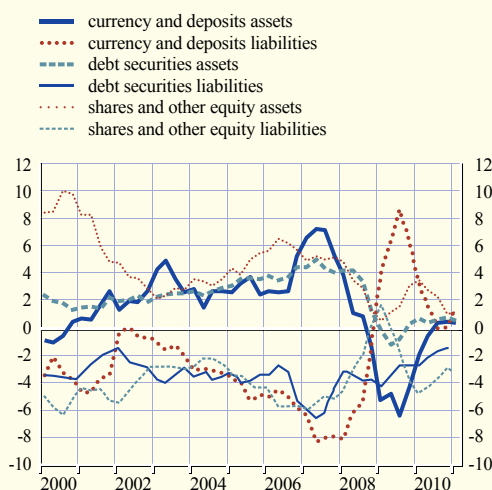
reduction of the government deficit, starting from the first quarter of 2010. Fiscal imbalances, however, remain large.

To complete the examination of institutional sectors, it is worth noting that *financial corporations* in the euro area exhibit a fairly regular and large financial surplus, mostly reflecting retained earnings that add to their capital. These were, however, insufficient to prevent their leverage ratio from rising (see Section 4). Moreover, their financial surpluses tended to increase further during and after the crisis. This somewhat counter-intuitive result largely reflects the rebounds in spreads charged on intermediation activities since 2007, which had previously fallen to very low levels.<sup>11</sup>

The excess of resident sectors' surpluses over deficits has led, over the period 2002-07, to a euro area net lending position vis-à-vis the rest of the world. In the course of 2007 and 2008, the combined effect of a negative terms-of-trade shock (driven by a large commodity price increase) and repeated negative net trade contributions to GDP growth turned the euro

Chart 14 Euro area cross-border deposits and securities flows

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



Source: ECB.

Notes: Assets and liabilities of the euro area. Inflows (-)/outflows (+).

area surpluses into deficits (see Charts 13 and 5). Thereafter, the terms of trade markedly improved from mid-2008 for a few quarters, but rapidly deteriorated again from mid-2009. Although the euro area generally registered positive net trade contributions from the second quarter of 2009, benefiting from a solid world economic recovery, this was insufficient to return the external balance to surplus.

The financing of the euro area net borrowing position took place smoothly during both the crisis and the recovery, although one can identify three separate phases. First, from mid-2007 to mid-2008, large net inflows in deposits were financing outflows in other instruments: loans, debt securities and equity. Second, after Lehman's insolvency, gross cross-border transactions contracted rapidly, particularly interbank deposits (see Chart 14).

<sup>11</sup> Under the ESA 95 accounting rules, earnings exclude holding losses (or gains) such as those stemming from the toxic assets that banks had purchased during the boom. In addition, the rescue packages are not accounted as income of recipient (or capital transfers received) by Eurostat, but as financing.

The euro area deficit of 2008-09 was predominantly financed by net inflows in debt securities – mostly purchases, by non-residents, of bonds issued by residents (rather than disposal by the latter of bonds issued by non-residents). In a third phase in 2010, the euro area deficit was mainly financed by net inflows in equity (mostly purchases by non-residents) at the time of a fairly strong euro.

#### 4 LEVERAGE OF INSTITUTIONAL SECTORS

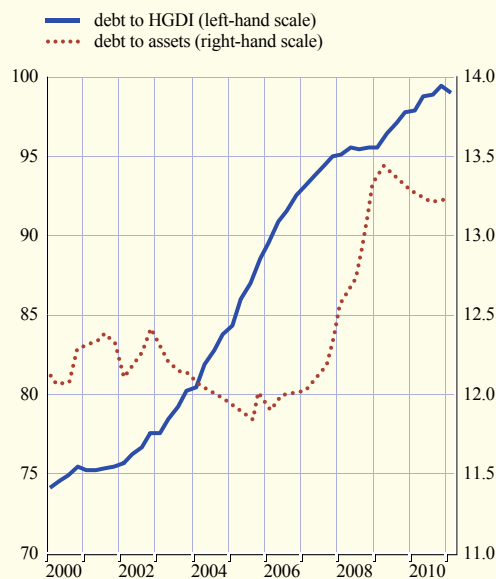
Financial deficits/surpluses and investments in non-financial assets both affect balance sheet developments and are affected by them. In particular, the balance between debt<sup>12</sup> and assets is a key focus of economic and financial analysis, notably with a view to monitoring financial stability and debt sustainability. Although it is difficult to determine a priori what constitutes a sustainable level of debt,<sup>13</sup> sudden changes in the perception of debt sustainability can trigger ensuing corrections with large macroeconomic consequences, as seen during this financial crisis. Indebtedness can be measured in relation to income, but also by reference to both financial and non-financial assets (see Box 2).

##### NON-FINANCIAL SECTORS LEVERAGE

Before the crisis, households in the euro area increased their indebtedness substantially when compared with their disposable income – from about 75% in 2000 to about 94% in 2007 (see Chart 15). However, as the value of household assets – both financial and non-financial – grew faster, households' debt-to-asset ratios actually decreased slightly over the same period. This may have contributed to the fall in the household savings ratio during this period via wealth effects. Starting in 2007, house prices in some euro area countries declined and, in 2008, the aggregate value of households' non-financial assets in the euro area declined substantially, leading to contractions in households' net worth.<sup>14</sup> Reacting to this, households reduced both their residential investments and their debt financing, managing

Chart 15 Household debt ratios

(as a percentage of households' gross disposable income (HGDI) and of assets<sup>1)</sup>)



Sources: Eurostat and ECB.  
1) Financial and non-financial assets.

to temporarily halt the growth of their debt-to-income ratio. In 2009 they cut their non-financial investment and associated financing needs even further, although their debt-to-income ratio rose again as their disposable income shrank. Only in 2010 did this ratio stabilise (at around 99%), as the very low growth in household debt was offset by a similarly moderate rise in disposable income.

12 In this section, debt is defined as comprising all ESA 95 liabilities excluding shares and other equity and financial derivatives. For the non-financial sectors, other accounts payable are also excluded.

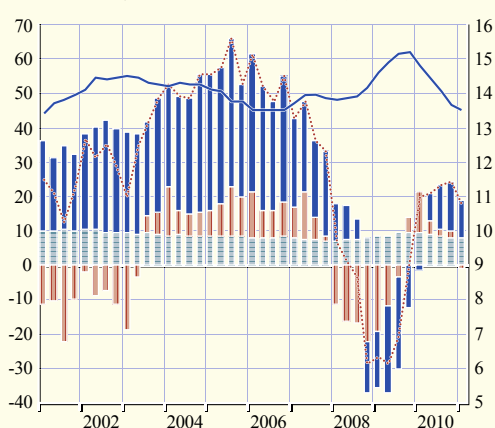
13 Most of the theoretical literature has focused on the composition of financing or leverage rather than on debt levels following the Modigliani-Miller propositions. For the original formulation of the "irrelevance proposition" (on capital structure) see Modigliani, F. and Miller, M., "The Cost of Capital, Corporation Finance and the Theory of Investment", *American Economic Review*, No 48(3), 1958, pp. 261-97. The subsequent literature on firms' capital structure has identified factors that affect the optimal equity to debt ratio. For a review of the subsequent literature see Villamil, A., "The Modigliani-Miller theorem" in Durlauf, S.N. and Blume, L.E. (eds.), *The New Palgrave Dictionary of Economics*, Palgrave MacMillan, 2008.

14 Net worth in ESA 95 is defined as assets minus liabilities, including equity.

**Chart 16 Change in net worth of euro area households**

(four-quarter moving sums; as a percentage of disposable income)

- other flows in non-financial assets<sup>1)</sup> (left-hand scale)
- other flows in financial assets and liabilities<sup>2)</sup> (left-hand scale)
- change in net worth owing to saving<sup>3)</sup> (left-hand scale)
- savings rate (right-hand scale)
- ⋯ change in net worth (left-hand scale)



Sources: Eurostat and ECB.

1) Mainly holding gains and losses on real estate and land.

2) Mainly holding gains and losses on shares and other equity.

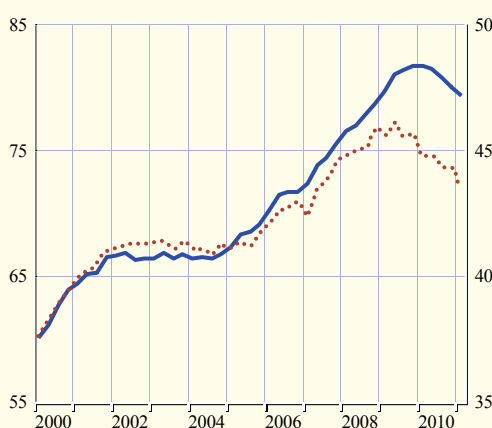
3) This item comprises: net saving, net capital transfers received, and the discrepancy between the non-financial and financial accounts.

The development of household net worth can be further analysed by decomposing its quarterly changes into transactions and other changes<sup>15</sup> (see Chart 16). The latter are mostly due to holding gains on shares and residential property. During the years prior to the crisis, euro area household net worth, expressed here in Chart 16 as a percentage of disposable income, grew strongly, largely due to continued house price increases.

These valuation gains were much larger than the accumulation of wealth through savings. Later on, the sharp decline in share prices in 2008 led to large valuation losses in financial assets, a situation further aggravated by losses in residential property values towards the end of 2008. These developments, as well as the general deterioration in overall economic prospects, prompted households to raise their savings, which, however, barely slowed the decline in net worth in 2009. It was only in 2010 that net

**Chart 17 Debt ratios of non-financial corporations**(as a percentage of GDP and of assets<sup>1)</sup>)

- debt to GDP (left-hand scale)
- ⋯ debt to assets (right-hand scale)



Sources: Eurostat and ECB.

1) Financial and non-financial assets.

worth started to increase again, as holding losses on assets turned into holding gains.

As explained in Section 3, euro area non-financial corporations started to retrench on expenditure later than households. Until mid-2008, they continued to accumulate debt at a fast pace in a context of high investment and mergers and acquisitions activity financed by debt; a trend that had started in 2004. Thereafter, as GDP decreased sharply in 2009, the debt-to-GDP ratio of non-financial corporations continued to rise throughout the year (denominator effect), despite the fact that non-financial corporations had reacted quickly by cutting their financial deficits, turning them into surpluses within a few quarters. Only in 2010 did the debt-to-GDP ratio of non-financial corporations start to fall, as recovering GDP growth outpaced debt financing (see Chart 17).

<sup>15</sup> The so-called *other economic flows*, which comprise *holding gains and losses* and *other changes in volume of assets*.



## FINANCIAL SECTOR LEVERAGE

Unlike the non-financial sectors, the dynamics of financial intermediaries' balance sheets are not dominated by own-sector expenditure-revenue imbalances and do not directly respond to them. In line with their economic function, intermediaries' balance sheets are vehicles for channelling financing between non-financial agents. Thus, their balance sheet developments are more intertwined with those of the latter.

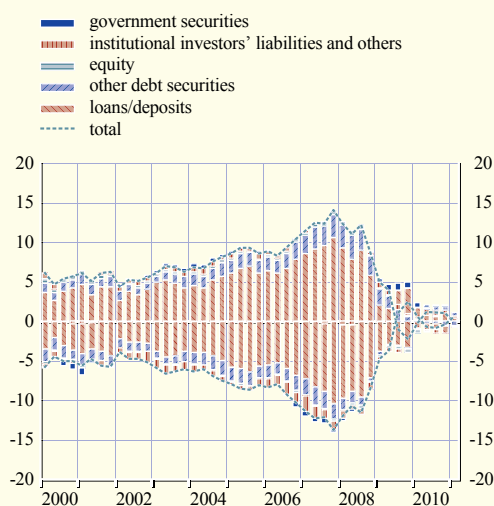
In economic expansions, intermediaries' balance sheets grow above average, as non-financial institutional units increasingly need funds, while in slowdowns, growth in intermediaries' balance sheets tends to be more moderate. Chart 18 shows how this pattern has been epitomised in the EAA by euro area monetary financial institutions (MFIs) since 2005, with a gradual acceleration in annual balance sheet growth that reached 14% by the end of 2007. The following year showed a moderate slowdown in the growth rate, which developed into a sharp drop after Lehman's insolvency and reached an annual rate of contraction of 2% by the end of 2009.

Periods of high growth in financial intermediaries' balance sheets may result in pro-cyclical increases in their debt-to-asset ratio (in the following referred to as the "leverage ratio") that could pose risks to financial stability and trigger or exacerbate a boom-bust cycle in economic growth.<sup>16</sup> Chart 19 presents the leverage ratios for MFIs and other financial intermediaries (OFIs)<sup>17</sup> over the last ten years distinguishing between the "headline" ratio and the "notional" ratio resulting only from the active accumulation of debt and capital, abstracting from effects of asset prices on leverage (see also Box 2). This makes it possible to examine changes in leverage due to asset price movements as well as the active reaction of intermediaries to them (and their effect on leverage).

The level of the ratios is higher for MFIs, for which leverage is part of their basic business activity, i.e. taking deposits and granting loans. However, since the turn of the century, OFIs have increased their headline leverage ratio considerably, from 27% at

Chart 18 MFI balance sheet

(annual percentage changes; percentage point contributions)



Source: Eurostat and ECB.

the beginning of 2000 to 41% by the end of 2010 (by contrast, the ratio of banks rose by less than two percentage points over the same period, to 92%), indicating a progressive shift of financial intermediation to non-bank institutions.<sup>18</sup>

The review of developments in leverage can be structured into three distinct phases. First, up to

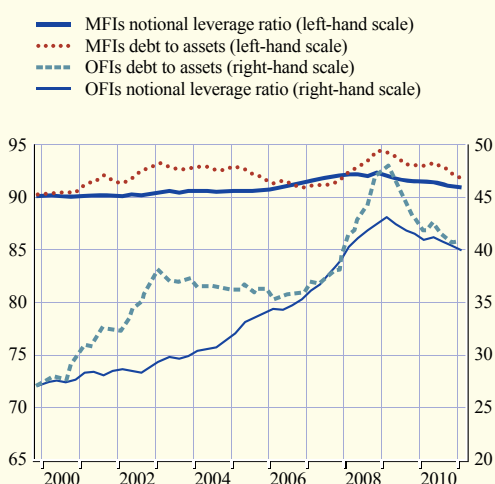
<sup>16</sup> Parts of the financial sector are subject to incentives to react to asset price increases by engaging in further debt accumulation so to restore or even increase their leverage (see, for instance, Adrian, T. and Shin, H.S., "Liquidity and Leverage", *FRB of New York Staff Report No 328*, 1 January 2009). Moreover, institutional factors might further encourage such behaviour, such as a tendency towards looser regulation in boom times (see "The role of valuation and leverage in procyclicality", *CGFS Papers*, No 34, Report of the joint Working Group of the Financial Stability Forum and the Committee on the Global Financial System, chaired by Jean-Pierre Landau, Banque de France, April 2009).

<sup>17</sup> The OFI sector encompasses very different agents: leveraged bank-like intermediaries – sometimes referred to as "shadow banking" – such as securitisation vehicles, but also investment funds, whose liabilities are almost entirely comprised of equity.

<sup>18</sup> Unlike the banking sector, these intermediaries lack a deposit insurance scheme, access to central bank liquidity facilities and stringent regulatory requirements. The adoption of business models that economise on regulatory capital, prompted intermediation activity to migrate to agents included in the OFI sector, such as securitisation vehicles, as a result of a shift from traditional banking (deposit/loan intermediation) to the originate-to-distribute model (loans originated by banks but distributed to investors through securitisation).

Chart 19 Leverage in the financial institutions sector

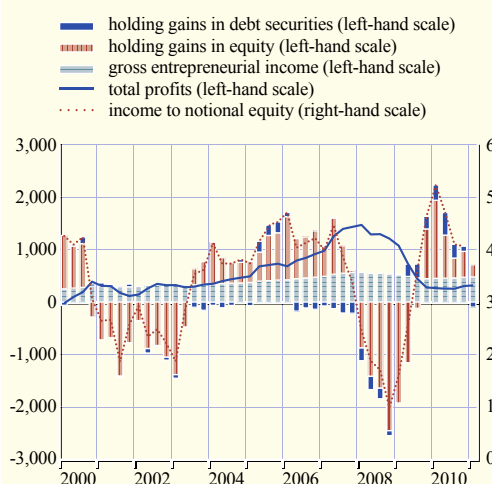
(debt as a percentage of assets)



Sources: Eurostat and ECB.

Chart 20 Profits of financial institutions

(four quarter flows in EUR billions; percentages)



Sources: Eurostat and ECB.

Notes: Profits defined as the sum of gross entrepreneurial income and holding gains in equity and debt securities assets (see footnote 19). Income to notional equity refers to gross entrepreneurial income to notional equity. Notional equity is the result of accumulating equity transactions to the stock of equity at market value at the end of the first quarter of 1999. Equity comprises shares and other equity (excluding money market fund shares). Equity transactions cover financial transactions in equity (equity issuance) and retained earnings.

the end of 2004, the notional leverage ratio of MFIs remained fairly unchanged, while OFIs strongly increased theirs. This development is not clearly visible in the headline ratios, which are affected by the asset price increases that took place over that period. Second, from early 2005 to mid-2008, the masking effect of asset prices was even more pronounced, as the headline leverage ratios showed a flat profile for OFIs and a decreasing one for MFIs, while both sectors were in fact heavily adding debt, thus increasing their notional leverage. The headline ratio for both sectors only started to increase from the end of 2007, when asset prices started to slow down. Finally, the aftermath of Lehman's insolvency was then characterised by sustained deleveraging in both sectors, to some extent influenced by the large impact that the asset price declines had on their headline ratio and the subsequent reaction to bring them back to sustainable levels. In this context, the growth in financial corporations' balance sheets almost came to a halt (see Chart 18 for MFIs), reflecting, on the

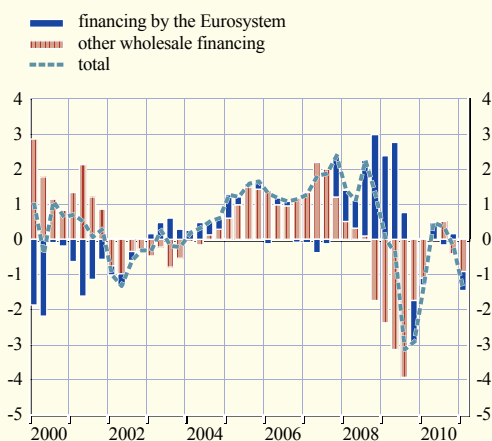
one hand, disinvestment in non-core assets and, on the other, a shift from bank to market financing (see Section 5). This sequence of events would suggest that there is a lead-lag relation between the headline leverage ratios and the notional ratios, and that positive feedback forces between asset prices and leverage play a relevant role in euro area debt developments.

The sharp increase in leverage of the last decade also contributed to the apparent substantial increase in ex post return on equity, as measured by entrepreneurial income to notional equity in Chart 20. In addition, Chart 20 shows a broader measure of profits of financial institutions comprising entrepreneurial income and holding gains on assets<sup>19</sup>. Entrepreneurial income

<sup>19</sup> Gross entrepreneurial income (see footnote 9) in the case of MFIs basically covers interest received minus interest paid, plus banking fees and dividends received. Holding gains in assets cover valuation changes in assets (which are valued at market prices in national accounts), comprising both the profits and losses realised when selling assets but also those latent in the balance sheet but not yet realised.

**Chart 21 MFI wholesale financing by MFIs**

(annual percentage changes; percentage point contributions)



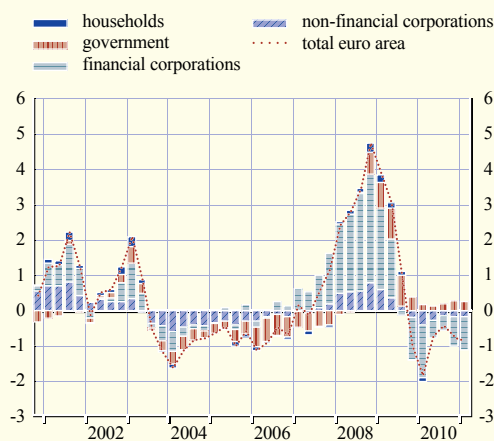
Sources: Eurostat and ECB.  
Note: Changes in the share of wholesale financing of total deposit/loan financing.

contributed steadily to profitability up until 2008, when the slowdown in activity and subsequent reductions in interest rates hit profits of financial institutions, which, together with a decrease in leverage, has caused the ratio of income to notional equity to decrease by more than one percentage point since the end of 2007. At the same time, financial institutions have benefited from holding gains in equity since mid-2009, compensating, to a large extent, for the losses suffered during the first phase of the financial crisis.

The leverage ratios of financial institutions also reflect the proliferation of numerous intermediation “layers” and the lengthening of intermediation chains<sup>20</sup> between ultimate lenders and ultimate borrowers. Chart 21 illustrates this phenomenon by looking at the change in the share of MFI wholesale financing within total MFI financing via deposits and loans. Wholesale financing is the funds channelled to MFIs via other intermediaries: other MFIs (i.e. the interbank market), institutional investors (OFIs), non-residents (mostly foreign banks) or the Eurosystem. It therefore excludes direct traditional deposit financing from the non-financial sector.<sup>21</sup> Wholesale financing rose sharply from 2004 onwards, reflecting a progressive departure from traditional financing

**Chart 22 Euro area leverage ratio<sup>1)</sup> and contribution by sector**

(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB.  
1) “Headline” leverage ratio – non-consolidated data.

patterns (moving, for instance, to an “originate-to-distribute” business model or to repo financing), and eventually increasing the exposure of MFIs to disruptions in money markets. When the financial turmoil unfolded in 2007 and money markets became impaired, recourse to the Eurosystem initially provided support to overall wholesale financing. Thereafter, the malfunctioning of the money markets led to a severe drop in the share of wholesale financing, in spite of increasing support from the Eurosystem. This retrenchment in wholesale financing was an important element in the MFI adjustment of balance sheets in the wake of the crisis.

## TOTAL ECONOMY LEVERAGE

Chart 22, which depicts changes in the debt-to-asset ratio (headline ratio, at market value) of the total economy broken down by institutional sector, shows the prominent role

<sup>20</sup> See, for instance, Shin, H.S., “Financial intermediation and the post-crisis financial system”, *BIS Working Paper Series*, No 304, Basel, March 2010.

<sup>21</sup> A more thorough analysis should include debt security financing. The EAA does not yet provide a counterpart sector breakdown of securities holdings by issuing sectors. However, the ECB envisages compiling such information in future.



played by financial institutions in building up leverage in the run-up to the crisis. The two episodes of balance sheet adjustment observed since the turn of the century (i.e. 2000-02 and 2008-09) have in common the prominent role of non-financial corporations in leveraging drives prior to busts. However, the recent

period has been characterised by a notably larger contribution by financial institutions to leverage. This suggests a much more relevant role of bank or bank-like leverage in this recent credit boom, whereas the “dotcom bubble” at the turn of the century was more market and equity-driven.

## Box 2

## INDEBTEDNESS AND LEVERAGE METHODOLOGY

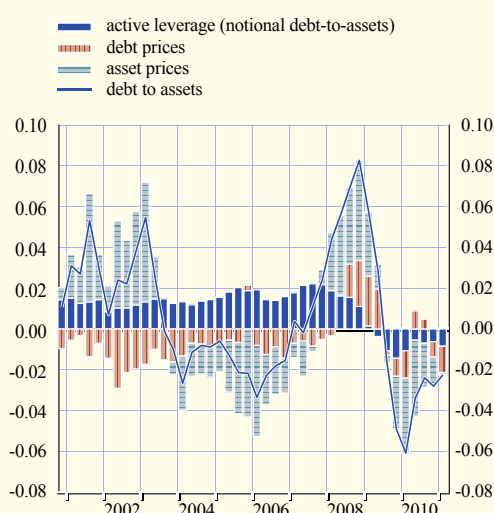
Analyses to assess indebtedness commonly rely on examining debt-to-income or debt-service-to-income ratios. However, given that debts are incurred to finance assets, it is also important to analyse debt by reference to assets, as captured by leverage ratios (debt-to-asset ratio).<sup>1</sup> Assets comprise not only financial assets, but also non-financial assets, the value of which is considerable but difficult to measure.<sup>2</sup> A primary justification for favouring leverage analysis is that assets often provide sources of cash flows needed to satisfy the debt service, serve as collateral for refinancing and can be available for sale in case the debtor runs into funding difficulties.<sup>3</sup> An alternative leverage indicator consists of taking the debt to equity at market value (or to debt plus equity). Results will differ from the debt-to-asset ratio to the extent that the market value of equity does not equal net assets, but net assets plus net worth. In particular, the market value of equity also captures non-recognised assets (such as non-recognised goodwill), among other things.

When analysing leverage ratios, consolidation<sup>4</sup> must be carefully considered, as leverage measures will depend on whether data are presented within the sector in a consolidated or non-consolidated form.

This is particularly relevant for financial institutions, which interact with each other through intricate networks of financial claims, but also for non-financial corporations that hold large amounts of intra-sector loans and payables/receivables (see Section 5).<sup>5</sup> Furthermore, given

## Change in financial institutions leverage ratio

(year-on-year changes in logarithms)



Sources: Eurostat and ECB.

1 Separately, every debt is also an asset: the debt of one agent is the asset of another agent. Thus, from a flow-of-funds perspective, analysis of debt accumulation behaviours cannot be separated from that of accumulation of assets (of other agents).

2 The EAA do not yet include inventories and the value of land in the assets of non-financial corporations.

3 Certain assets such as loans or even certain debt securities issued by securitisation entities can, however, be difficult to sell.

4 Consolidation in statistics implies solely the elimination of intra-sector links (e.g. holdings, transactions). It differs from consolidation in accounting, as the latter additionally involves defining a perimeter of consolidation.

5 This problem of consolidation also has an impact on more traditional measures of indebtedness, such as debt to income.



that equity holdings constitute a significant share of non-financial corporations' assets (30% in the euro area at the end of 2010), the absence of consolidation of this item also tends to underestimate leverage. A non-consolidated analysis approach has been adopted in this article, partially because of difficulties obtaining data, but also because non-consolidated analysis allows for a more complete picture of intermediation patterns (see Section 5).

Given that the accounts follow the market-value principle,<sup>6</sup> the leverage ratio often fluctuates widely, not only due to net savings and equity issuance ("active leverage"), but also due to holding gains (on assets and on liabilities). To identify the component more directly controlled by agents and to remove excessive volatility, aside from the "headline" leverage ratio, it can be useful, from an analytical point of view, to trace the evolution of a "notional leverage", which cumulates "active leverage" flows (retaining only transactions, and excluding holding gains). As an example, the chart shows a decomposition of the annual change in (financial) headline leverage of financial institutions, distinguishing the impact of price movements from other causes of change in leverage, in three components: transactions in assets and liabilities, holding gains on assets, and holding gains on liabilities. This shows that the fall in leverage since 2009 ("deleveraging" period) stems largely from holding gains on assets and, to a lesser extent, from active deleveraging (the net impact of transactions, i.e. equity issuance and asset disposals to redeem debt).

6 With some notable exceptions, such as loans, deposits and other accounts payable/receivable.

## 5 CHANGES IN INTERMEDIATION PATTERNS

The EEA help to trace the disintermediation phenomenon that occurred after Lehman's insolvency. Reacting to the tighter credit conditions in the context of deleveraging pressures on banks, non-financial agents raised less finance from banks and other financial intermediaries, obtaining it more directly from other sources. At the same time, there was less intermediation of financial investments via banks.

Although euro area *non-financial corporations* generally fund themselves more from banks than from the market (particularly compared with the United States), this tendency reversed after Lehman's insolvency. Chart 23 shows that the four-quarter sum flows of external financing, which were dominated by MFI loans up until the end of 2008 (up to an annual level of €450 billion), were thereafter redirected towards market financing:<sup>22</sup> debt securities issued and quoted equity raised were topped up to €150 billion annually in 2009-10, while non-financial corporations redeemed MFI loans of around €100 billion a year. This swift movement in volumes of

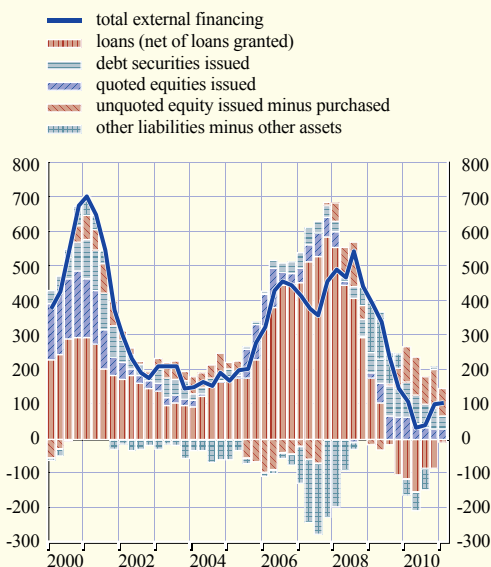
issuance towards market funding was all the more remarkable, given that the cost of market finance initially rose sharply after Lehman's insolvency (before gradually falling during 2009 to reach very low levels in 2010). This contrasts with interest rates on bank loans, as measured by MIR statistics, which started falling quickly, closely following ECB rate cuts in conjunction with ample liquidity provision by the Eurosystem. This would initially indicate heightened quantitative constraints in bank financing: banks substantially tightened credit standards – as documented by the bank lending survey – and instead preferred to arrange market funding for their non-financial corporation clients, which would not transit as loans via their balance sheet. The evidence available would suggest that, in the course of 2009 and 2010, non-standard measures were effective in their intended aim of maintaining the transmission mechanism of monetary policy by supporting funding conditions for banks to enhance the provision of credit to the private sector.<sup>23</sup> An

22 Market financing temporarily vanished in the first year of the financial turbulence (i.e. August 2007 to August 2008).

23 See the article entitled "The ECB's non-standard measures – impact and phasing-out", *Monthly Bulletin*, ECB, July 2011.

**Chart 23 External financing of non-financial corporations by source of funds**

(four-quarter moving sums; EUR billions)

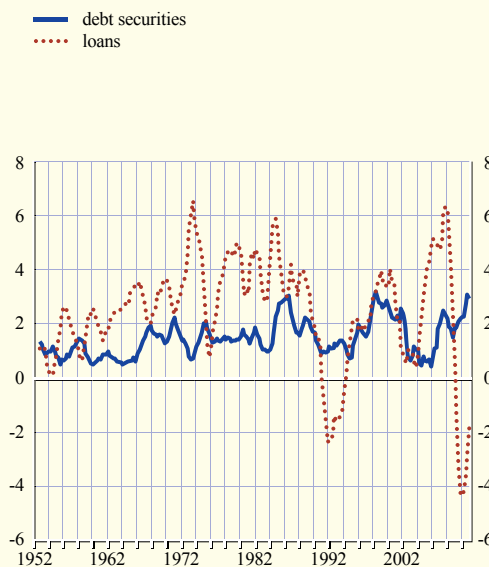


Sources: Eurostat and ECB.

Note: For presentational purposes, some transactions in assets are netted from financing, as they are predominantly internal to the sector (loans granted by non-financial corporations, unquoted shares, other accounts receivable/payable).

**Chart 24 US non-financial corporations' financing in loans and debt securities**

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



Sources: Board of Governors of the Federal Reserve System (flow of funds accounts of the United States) and ECB calculations.

even more pronounced movement towards market financing can be observed in the United States from 2009 onwards, as shown in Chart 24, with strong issuance of debt securities by US businesses, coupled with large net loan redemptions. The longer perspective of the US flow of funds reveals, more generally, the propensity of debt securities issuance to be significantly less volatile than bank finance, the latter exhibiting strong cyclical features.

Aside from dynamic market funding, intra-sector funding<sup>24</sup> also played a critical buffering role, particularly by allowing smaller firms (which cannot tap the capital markets) to raise the necessary funding. Chart 25 shows that loans<sup>25</sup> granted by non-financial corporations (mostly to other corporations) accelerated during 2007 – reaching the considerable level of €400 billion a year – and continued to be fairly high during the recession, albeit declining. These mostly correspond to intra-group funding: smaller entities constrained in

their bank funding started to draw from their parent companies that were less constrained or had easier access to capital markets. Nonetheless, additional anecdotal evidence confirms that outright loans were occasionally arranged by firms to help critically credit-constrained suppliers, even if these did not belong to the group (e.g. in the automobile industry). In addition, while flows of trade credits generally tend to move in synchrony with the growth rate of the value added of non-financial corporations, at the economic trough, the stock of trade credit contracted much less than implied by the fall in activity.<sup>26</sup>

24 Data on intra-sector funding are only available to the EAA.

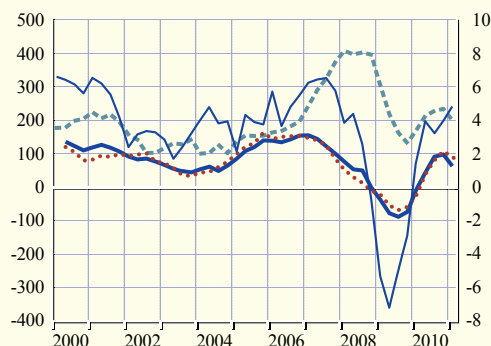
25 Trade credit differs from loans in that the former is associated to deliveries of goods and services, whereas the latter capture the payment delays associated to other transactions than the purchase of goods and services.

26 Trade credit should not be confused with trade finance, which involves a third party financial institution and would comprise discounting of trade bills, factoring, letters of credit, credit insurance, export insurance, etc. After Lehman's insolvency, trade finance was heavily impaired.

**Chart 25 Loans granted by non-financial corporations and trade credit receivable and payable**

(four-quarter moving sums in EUR billions; annual percentage changes)

- trade credit receivable (left-hand scale)
- ... trade credit payable (left-hand scale)
- - - loans granted by non-financial corporations (left-hand scale)
- annual growth rate in value added (right-hand scale)

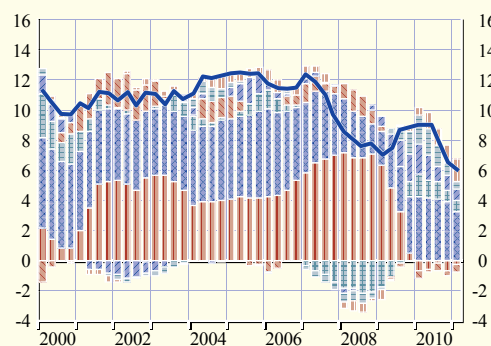


Sources: Eurostat and ECB.  
Note: Trade credit receivable and payable are estimated by the ECB on the basis of partial information.

**Chart 26 Households' financial investment**

(four-quarter moving sums, as a percentage of gross disposable income)

- total assets
- M3
- deposits not included in M3
- equity
- debt securities not included in M3
- mutual fund shares (other than money market fund shares)
- insurance technical reserves
- other financial investment



Sources: Eurostat and ECB.

Accordingly, the average delay of payments increased significantly. More recently, signs of re-intermediation have appeared, as MFI lending to non-financial corporations picked up (turning positive in the first quarter of 2011), while there was a moderation in the hitherto strong market funding and buoyant intra-sector lending.

A parallel – and, to some extent, symmetric – movement of disintermediation could also be observed in the investment behaviour of *households*. After an initial portfolio reallocation favouring safe and liquid financial assets included in M3 in the period 2007-08 and heavy sales of securities, households started, from 2009 onwards, to rebalance their portfolios (see Chart 26). Reacting to expected returns on various instruments – and, in particular, to the steep fall in remuneration of deposits – they subsequently resumed purchasing mutual fund shares and quoted shares, while moving out of low-yielding monetary assets. They also returned to purchases of life insurance and pension contracts.<sup>27</sup>

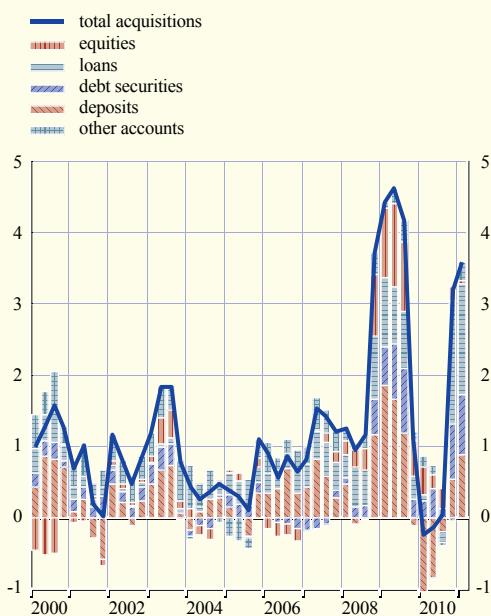
At the height of the financial turmoil, i.e. at the end of 2008, in a context of an impaired interbank market, *governments* also provided extensive support to their banking sectors, by purchasing banks' equity and bonds, extending loans, or sometimes placing large amounts of deposits with banks<sup>28</sup> (see Chart 27). In so doing, from a flow-of-funds perspective, governments de facto temporarily assumed something of an intermediation role. This induced them to issue on the market much more debt securities than implied by their own deficits. The general flight to safety into the government bond market observed at the end of 2008 implied that governments initially found no difficulty at that time in funding these exceptionally large borrowing needs. Finally, banks started to

27 For a longer-term country analysis, see Ramb, F. and Scharnagl, M., "Household's portfolio structure in Germany – analysis of financial accounts data 1959-2009", *Working Paper Series*, No 1355, ECB, Frankfurt am Main, June 2011.

28 Governments also provided support to the financial system by extending guarantees on intermediaries' liabilities. Being contingent liabilities, such guarantees do not appear in the balance sheet of the government sector.

**Chart 27 Euro area government acquisition of financial assets**

(four-quarter moving sums, as a percentage of GDP)



Sources: Eurostat and ECB.

become very large purchasers of government bonds (together with non-residents), exploiting carry-trade opportunities along the yield curve with assets perceived at that time to be fairly safe, and as part of a deleveraging and risk reducing process (in a context where regulation tends to assign zero or reduced weight to government liabilities for the calculation of solvability/solvency ratios). However, this exposed them to additional strain, as fears about debt sustainability unfolded at a later stage of the crisis (see Sections 3 and 4).

## 6 CONCLUSION

The use of euro area sectoral accounts, combined with corresponding country data, enables a detailed examination of income-expenditure flows and balance sheet developments and helps to identify emerging imbalances, from sectoral and geographical perspectives. During the years prior to the financial crisis, sectoral imbalances were building up across the private sectors of

some of the countries in the euro area, creating a dichotomy between those countries that were generating surpluses in their private sectors and those generating deficits. During this period, many governments failed to build up a surplus position substantial enough to cushion the effect of the eventual downturn in the cycle. At the same time, in the context of a growing economy, private sector imbalances rose. When the financial crisis erupted initially in the United States, spilling over into the global economy, and the euro area entered recession, private deficits were mostly replaced by further government deficits. There is now a broad agreement that private sector debt financing should be monitored in addition to the monitoring of excessive deficits of the government sector.<sup>29</sup>

Moreover, the build-up of debt during the boom (2005-07) had not been accompanied by a similar build-up of capital, as attested by increasing underlying leverage trends. The development was particularly pronounced in the financial institutions sectors, where intermediation activity progressively moved away from the regulated banking sector into other intermediaries facing less stringent capital requirements (notably through practices such as securitisation, prompting a lengthening of intermediation chains). The high level of leverage masked by the buoyant asset prices at that time left financial institutions vulnerable to subsequent asset prices reversals. When this materialised, starting from mid-2007, and more drastically after Lehman's insolvency, financial institutions experienced a sharp increase in their leverage position, and capital shortfalls relative to regulatory requirements, which gave rise to acute deleveraging pressures.

29 The G20 initiative related to "Economic and financial indicators for multilateral surveillance" as well as the EU initiative for the correction of "excessive macroeconomic imbalances" (COM(2010) 525) suggest the use of sector accounts in order to derive comprehensive measures of debt financing. On the broader statistical post-crisis agenda, see also the IMF/Financial Stability Board report to G20 finance ministers and central bank governors of October 2009, <http://www.imf.org/external/np/g20/pdf/102909.pdf>

In the wake of the crisis, a change in financial intermediation patterns could be observed, as agents reacted to tighter credit conditions, and non-financial corporations increased their recourse to market and inter-company financing (including through trade credits). At the same time, investors – searching for yields – turned less to monetary assets and more towards higher yielding assets. It remains to be seen whether this pattern will be reversed going forward or whether it will remain a more lasting legacy of the financial crisis.

# EURO AREA STATISTICS







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<sup>1</sup> For further information, please contact us at: [statistics@ecb.europa.eu](mailto:statistics@ecb.europa.eu). See the ECB's Statistical Data Warehouse in the "Statistics" section of the ECB's website (<http://sdw.ecb.europa.eu>) for longer runs and more detailed data.

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#### Conventions used in the tables

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



# EURO AREA OVERVIEW

## Summary of economic indicators for the euro area

(annual percentage changes, unless otherwise indicated)

### 1. Monetary developments and interest rates <sup>1)</sup>

	M1 <sup>2)</sup>	M2 <sup>2)</sup>	M3 <sup>2),3)</sup>	M3 <sup>2),3)</sup> 3-month moving average (centred)	MFI loans to euro area residents excluding MFIs and general government <sup>2)</sup>	Securities other than shares issued in euro by non-MFI corporations <sup>2)</sup>	3-month interest rate (EURIBOR; % per annum; period averages)	10-year spot rate (% per annum; end of period) <sup>4)</sup>
	1	2	3	4	5	6	7	8
2009	9.5	4.8	3.3	-	1.6	23.7	1.22	3.76
2010	8.5	1.8	0.5	-	0.6	3.8	0.81	3.36
2010 Q4	4.9	2.2	1.5	-	1.7	2.1	1.02	3.36
2011 Q1	3.2	2.4	1.9	-	2.4	2.2	1.10	3.66
Q2	1.7	2.4	2.1	-	2.6	1.7	1.42	3.41
Q3	.	.	.	-	.	.	1.56	2.48
2011 Apr.	1.6	2.4	1.9	2.1	2.6	1.7	1.32	3.55
May	1.2	2.4	2.3	2.1	2.7	1.5	1.43	3.37
June	1.3	2.3	1.9	2.1	2.5	2.1	1.49	3.41
July	1.0	2.2	2.1	2.3	2.4	1.5	1.60	3.06
Aug.	1.7	2.4	2.8	.	2.6	.	1.55	2.76
Sep.	.	.	.	.	.	.	1.54	2.48

### 2. Prices, output, demand and labour markets <sup>5)</sup>

	HICP <sup>1)</sup>	Industrial producer prices	Hourly labour costs	Real GDP (s.a.)	Industrial production excluding construction	Capacity utilisation in manufacturing (%)	Employment (s.a.)	Unemployment (% of labour force; s.a.)
	1	2	3	4	5	6	7	8
2009	0.3	-5.1	2.7	-4.2	-14.8	70.9	-1.9	9.6
2010	1.6	2.9	1.6	1.8	7.5	76.9	-0.5	10.1
2010 Q4	2.0	4.8	1.7	1.9	8.1	79.1	0.2	10.1
2011 Q1	2.5	6.5	2.7	2.4	6.5	80.9	0.3	10.0
Q2	2.8	6.3	3.6	1.6	4.1	81.3	0.5	10.0
2011 Apr.	2.8	6.8	-	-	5.2	81.6	-	9.9
May	2.7	6.2	-	-	4.3	-	-	10.0
June	2.7	5.9	-	-	2.7	-	-	10.0
July	2.5	6.1	-	-	4.2	80.9	-	10.0
Aug.	2.5	5.9	-	-	.	-	-	10.0
Sep.	3.0	.	-	-	.	-	-	.

### 3. External statistics

(EUR billions, unless otherwise indicated)

	Balance of payments (net transactions)			Reserve assets (end-of-period positions)	Net international investment position (as a % of GDP)	Gross external debt (as a % of GDP)	Effective exchange rate of the euro: EER-20 <sup>6)</sup> (index: 1999 Q1 = 100)		USD/EUR exchange rate
	Current and capital accounts	Goods	Combined direct and portfolio investment				Nominal	Real (CPI)	
2009	-19.1	37.5	161.3	462.4	-16.4	116.5	111.7	110.6	1.3948
2010	-33.8	19.5	88.6	591.2	-12.9	118.9	104.6	103.0	1.3257
2010 Q4	3.6	6.4	92.8	591.2	-12.9	118.9	104.4	102.4	1.3583
2011 Q1	-27.9	-12.5	121.8	576.6	-13.2	116.8	103.7	101.5	1.3680
Q2	-27.4	-1.6	161.4	580.9	.	.	106.4	104.2	1.4391
Q3	.	.	.	.	.	.	104.6	102.1	1.4127
2011 Apr.	-6.4	-3.5	20.0	571.7	.	.	107.0	104.9	1.4442
May	-18.2	1.0	51.9	592.7	.	.	106.0	103.8	1.4349
June	-2.7	0.9	89.4	580.9	.	.	106.1	104.0	1.4388
July	-2.7	3.3	-16.0	621.6	.	.	105.2	102.7	1.4264
Aug.	.	.	.	656.4	.	.	104.9	102.3	1.4343
Sep.	.	.	.	.	.	.	103.8	101.1	1.3770

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

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

- 1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 2) Annual percentage changes for monthly data refer to the end of the month, whereas those for quarterly and yearly data refer to the annual change in the period average. See the Technical Notes for details.
- 3) M3 and its components exclude holdings by non-euro area residents of money market fund shares/units and debt securities with a maturity of up to two years.
- 4) Based on AAA-rated euro area central government bond yield curves. For further information, see Section 4.7.
- 5) Data refer to the Euro 17, unless otherwise indicated.
- 6) For a definition of the trading partner groups and other information, please refer to the General Notes.



# MONETARY POLICY STATISTICS

## I.1 Consolidated financial statement of the Eurosystem

(EUR millions)

### 1. Assets

	9 September 2011	16 September 2011	23 September 2011	30 September 2011
<b>Gold and gold receivables</b>	363,249	363,249	363,249	420,005
<b>Claims on non-euro area residents in foreign currency</b>	214,335	213,907	213,018	226,522
<b>Claims on euro area residents in foreign currency</b>	29,084	29,754	31,572	35,327
<b>Claims on non-euro area residents in euro</b>	19,778	20,846	20,637	19,694
<b>Lending to euro area credit institutions in euro</b>	507,519	534,638	571,294	588,786
Main refinancing operations	115,408	163,768	201,149	208,349
Longer-term refinancing operations	392,055	369,636	369,636	378,935
Fine-tuning reverse operations	0	0	0	0
Structural reverse operations	0	0	0	0
Marginal lending facility	20	1,215	475	1,414
Credits related to margin calls	36	19	34	88
<b>Other claims on euro area credit institutions in euro</b>	48,024	52,229	50,153	52,322
<b>Securities of euro area residents in euro</b>	539,218	547,128	552,123	556,662
Securities held for monetary policy purposes	202,424	212,022	215,905	219,941
Other securities	336,794	335,106	336,218	336,721
<b>General government debt in euro</b>	33,944	33,949	33,949	33,965
<b>Other assets</b>	331,212	339,021	344,081	355,289
<b>Total assets</b>	<b>2,086,364</b>	<b>2,134,721</b>	<b>2,180,075</b>	<b>2,288,571</b>

### 2. Liabilities

	9 September 2011	16 September 2011	23 September 2011	30 September 2011
<b>Banknotes in circulation</b>	853,226	852,676	852,490	857,372
<b>Liabilities to euro area credit institutions in euro</b>	455,280	506,203	530,030	563,015
Current accounts (covering the minimum reserve system)	139,261	241,536	223,526	204,871
Deposit facility	181,788	111,514	150,651	199,639
Fixed-term deposits	129,000	143,000	152,500	156,500
Fine-tuning reverse operations	0	0	0	0
Deposits related to margin calls	5,232	10,153	3,353	2,004
<b>Other liabilities to euro area credit institutions in euro</b>	3,556	3,721	4,562	3,298
<b>Debt certificates issued</b>	0	0	0	0
<b>Liabilities to other euro area residents in euro</b>	54,315	48,979	64,405	59,740
<b>Liabilities to non-euro area residents in euro</b>	46,993	52,109	56,347	50,036
<b>Liabilities to euro area residents in foreign currency</b>	2,445	2,056	2,330	2,476
<b>Liabilities to non-euro area residents in foreign currency</b>	11,941	11,526	12,249	13,802
<b>Counterpart of special drawing rights allocated by the IMF</b>	52,170	52,170	52,170	54,486
<b>Other liabilities</b>	208,299	207,142	207,352	219,590
<b>Revaluation accounts</b>	316,657	316,657	316,657	383,276
<b>Capital and reserves</b>	81,481	81,481	81,481	81,481
<b>Total liabilities</b>	<b>2,086,364</b>	<b>2,134,721</b>	<b>2,180,075</b>	<b>2,288,571</b>

Source: ECB.

**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		Change	Level
	Fixed rate	Minimum bid rate		Level	Change		
	Level	Change	Level			Level	Change
	1	2	3	4	5	6	7
1999 1 Jan.	2.00	-	3.00	-	-	4.50	-
4 <sup>2)</sup>	2.75	0.75	3.00	-	...	3.25	-1.25
22	2.00	-0.75	3.00	-	...	4.50	1.25
9 Apr.	1.50	-0.50	2.50	-	-0.50	3.50	-1.00
5 Nov.	2.00	0.50	3.00	-	0.50	4.00	0.50
2000 4 Feb.	2.25	0.25	3.25	-	0.25	4.25	0.25
17 Mar.	2.50	0.25	3.50	-	0.25	4.50	0.25
28 Apr.	2.75	0.25	3.75	-	0.25	4.75	0.25
9 June	3.25	0.50	4.25	-	0.50	5.25	0.50
28 <sup>3)</sup>	3.25	...	-	4.25	...	5.25	...
1 Sep.	3.50	0.25	-	4.50	0.25	5.50	0.25
6 Oct.	3.75	0.25	-	4.75	0.25	5.75	0.25
2001 11 May	3.50	-0.25	-	4.50	-0.25	5.50	-0.25
31 Aug.	3.25	-0.25	-	4.25	-0.25	5.25	-0.25
18 Sep.	2.75	-0.50	-	3.75	-0.50	4.75	-0.50
9 Nov.	2.25	-0.50	-	3.25	-0.50	4.25	-0.50
2002 6 Dec.	1.75	-0.50	-	2.75	-0.50	3.75	-0.50
2003 7 Mar.	1.50	-0.25	-	2.50	-0.25	3.50	-0.25
6 June	1.00	-0.50	-	2.00	-0.50	3.00	-0.50
2005 6 Dec.	1.25	0.25	-	2.25	0.25	3.25	0.25
2006 8 Mar.	1.50	0.25	-	2.50	0.25	3.50	0.25
15 June	1.75	0.25	-	2.75	0.25	3.75	0.25
9 Aug.	2.00	0.25	-	3.00	0.25	4.00	0.25
11 Oct.	2.25	0.25	-	3.25	0.25	4.25	0.25
13 Dec.	2.50	0.25	-	3.50	0.25	4.50	0.25
2007 14 Mar.	2.75	0.25	-	3.75	0.25	4.75	0.25
13 June	3.00	0.25	-	4.00	0.25	5.00	0.25
2008 9 July	3.25	0.25	-	4.25	0.25	5.25	0.25
8 Oct.	2.75	-0.50	-	-	-	4.75	-0.50
9 <sup>4)</sup>	3.25	0.50	-	-	-	4.25	-0.50
15 <sup>5)</sup>	3.25	...	3.75	-	-0.50	4.25	...
12 Nov.	2.75	-0.50	3.25	-	-0.50	3.75	-0.50
10 Dec.	2.00	-0.75	2.50	-	-0.75	3.00	-0.75
2009 21 Jan.	1.00	-1.00	2.00	-	-0.50	3.00	...
11 Mar.	0.50	-0.50	1.50	-	-0.50	2.50	-0.50
8 Apr.	0.25	-0.25	1.25	-	-0.25	2.25	-0.25
13 May	0.25	...	1.00	-	-0.25	1.75	-0.50
2011 13 Apr.	0.50	0.25	1.25	-	0.25	2.00	0.25
13 July	0.75	0.25	1.50	-	0.25	2.25	0.25

Source: ECB.

- From 1 January 1999 to 9 March 2004, the date refers to the deposit and marginal lending facilities. For main refinancing operations, changes in the rate are effective from the first operation following the date indicated. The change on 18 September 2001 was effective on that same day. From 10 March 2004 onwards, the date refers both to the deposit and marginal lending facilities and to the main refinancing operations (with changes effective from the first main refinancing operation following the Governing Council decision), unless otherwise indicated.
- On 22 December 1998 the ECB announced that, as an exceptional measure between 4 and 21 January 1999, a narrow corridor of 50 basis points would be applied between the interest rates for the marginal lending facility and the deposit facility, aimed at facilitating the transition to the new monetary regime by market participants.
- 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.
- As of 9 October 2008 the ECB reduced the standing facilities corridor from 200 basis points to 100 basis points around the interest rate on the main refinancing operations. The standing facilities corridor was restored to 200 basis points as of 21 January 2009.
- On 8 October 2008 the ECB announced that, starting from the operation to be settled on 15 October, the weekly main refinancing operations would be carried out through a fixed rate tender procedure with full allotment at the interest rate on the main refinancing operations. This change overrode the previous decision (made on the same day) to cut by 50 basis points the minimum bid rate on the main refinancing operations conducted as variable rate tenders.

### 1.3 Eurosystem monetary policy operations allotted through tender procedures <sup>1), 2)</sup>

(EUR millions; interest rates in percentages per annum)

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

Date of settlement	Bids (amount)	Number of participants	Allotment (amount)	Fixed rate tender procedures	Variable rate tender procedures			Running for (... days)
				Fixed rate	Minimum bid rate	Marginal rate <sup>4)</sup>	Weighted average rate	
1	2	3	4	5	6	7	8	
Main refinancing operations								
2011 22 June	186,942	353	186,942	1.25	-	-	-	7
29	141,461	232	141,461	1.25	-	-	-	7
6 July	120,024	185	120,024	1.25	-	-	-	7
13	153,597	230	153,597	1.50	-	-	-	7
20	197,070	291	197,070	1.50	-	-	-	7
27	164,200	193	164,200	1.50	-	-	-	7
3 Aug.	172,021	168	172,021	1.50	-	-	-	7
10	157,073	153	157,073	1.50	-	-	-	7
17	147,689	139	147,689	1.50	-	-	-	7
24	133,674	133	133,674	1.50	-	-	-	7
31	121,669	135	121,669	1.50	-	-	-	7
7 Sep.	115,408	126	115,408	1.50	-	-	-	7
14	163,768	142	163,768	1.50	-	-	-	7
21	201,149	153	201,149	1.50	-	-	-	7
28	208,349	159	208,349	1.50	-	-	-	7
5 Oct.	198,881	166	198,881	1.50	-	-	-	7
Longer-term refinancing operations								
2011 28 Apr. <sup>5)</sup>	63,411	177	63,411	1.29	-	-	-	91
11 May	80,653	60	80,653	1.25	-	-	-	35
26 <sup>5)</sup>	48,131	182	48,131	1.38	-	-	-	98
15 June	69,403	60	69,403	1.25	-	-	-	28
30 <sup>5)</sup>	132,219	265	132,219	1.46	-	-	-	91
13 July	67,748	57	67,748	1.50	-	-	-	28
28 <sup>5)</sup>	84,977	165	84,977	-	-	-	-	91
10 Aug.	75,751	39	75,751	1.50	-	-	-	35
11 <sup>5)</sup>	49,752	114	49,752	-	-	-	-	203
1 Sep. <sup>5)</sup>	49,356	128	49,356	-	-	-	-	91
14	54,222	37	54,222	1.50	-	-	-	28
29 <sup>5)</sup>	140,628	214	140,628	-	-	-	-	84

#### 2. Other tender operations

Date of settlement	Type of operation	Bids (amount)	Number of participants	Allotment (amount)	Fixed rate tender procedures	Variable rate tender procedures			Running for (... days)	
					Fixed rate	Minimum bid rate	Maximum bid rate	Marginal rate <sup>4)</sup>		Weighted average rate
1	2	3	4	5	6	7	8	9	10	
2011 13 July	Collection of fixed-term deposits	91,891	64	74,000	-	-	1.50	1.46	1.39	7
20	Collection of fixed-term deposits	86,144	63	74,000	-	-	1.50	1.40	1.31	7
27	Collection of fixed-term deposits	93,188	69	74,000	-	-	1.50	1.16	1.09	7
3 Aug.	Collection of fixed-term deposits	86,770	68	74,000	-	-	1.50	0.99	0.92	7
9	Collection of fixed-term deposits	145,149	121	145,149	-	-	1.50	1.30	1.27	1
10	Collection of fixed-term deposits	95,431	65	74,000	-	-	1.50	1.14	1.01	7
17	Collection of fixed-term deposits	123,165	78	96,000	-	-	1.50	1.20	0.96	7
24	Collection of fixed-term deposits	132,874	91	110,500	-	-	1.50	1.15	1.03	7
31	Collection of fixed-term deposits	152,913	98	115,500	-	-	1.50	1.14	1.02	7
7 Sep.	Collection of fixed-term deposits	173,575	100	129,000	-	-	1.50	1.05	1.00	7
13	Collection of fixed-term deposits	167,763	130	166,963	-	-	1.50	1.30	1.27	1
14	Collection of fixed-term deposits	187,685	104	143,000	-	-	1.50	1.06	1.01	7
21	Collection of fixed-term deposits	203,366	109	152,500	-	-	1.50	1.05	0.99	7
28	Collection of fixed-term deposits	202,875	103	156,500	-	-	1.50	1.15	1.05	7
5 Oct.	Collection of fixed-term deposits	240,553	100	160,500	-	-	1.50	1.02	0.96	7

Source: ECB.

- The amounts shown may differ slightly from those in Section 1.1 owing to operations that have been allotted but not settled.
- With effect from April 2002, split tender operations (i.e. operations with a one-week maturity conducted as standard tender procedures in parallel with a main refinancing operation) are classified as main refinancing operations. For split tender operations conducted before this month, see Table 2 in Section 1.3.
- On 8 June 2000 the ECB announced that, starting from the operation to be settled on 28 June 2000, the main refinancing operations of the Eurosystem would be conducted as variable rate tender procedures. The minimum bid rate refers to the minimum interest rate at which counterparties may place their bids. On 8 October 2008 the ECB announced that, starting from the operation to be settled on 15 October 2008, the weekly main refinancing operations would be carried out through a fixed rate tender procedure with full allotment at the interest rate on the main refinancing operations. On 4 March 2010 the ECB decided to return to variable rate tender procedures in the regular three-month longer-term refinancing operations, starting with the operation to be allotted on 28 April 2010 and settled on 29 April 2010.
- In liquidity-providing (absorbing) operations, the marginal rate refers to the lowest (highest) rate at which bids were accepted.
- In this longer-term refinancing operation, the rate at which all bids are satisfied is indexed to the average minimum bid rate in the main refinancing operations over the life of the operation. The interest rates displayed for these indexed longer-term refinancing operations have been rounded to two decimal places. For the precise calculation method, please refer to the Technical Notes.

**1.4 Minimum reserve and liquidity statistics**

(EUR billions; period averages of daily positions, unless otherwise indicated; interest rates as percentages per annum)

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

Reserve base as at: <sup>1)</sup>	Total	Liabilities to which a 2% reserve coefficient is applied		Liabilities to which a 0% reserve coefficient is applied		
		Overnight deposits and deposits with an agreed maturity or notice period of up to 2 years	Debt securities issued with a maturity of up to 2 years	Deposits with an agreed maturity or notice period of over 2 years	Repos	Debt securities issued with a maturity of over 2 years
	1	2	3	4	5	6
2008	18,169.6	10,056.8	848.7	2,376.9	1,243.5	3,643.7
2009	18,318.2	9,808.5	760.4	2,475.7	1,170.1	4,103.5
2010	18,948.1	9,962.6	644.3	2,683.3	1,335.4	4,322.5
2011 Mar.	18,872.4	9,700.2	671.9	2,737.5	1,399.8	4,363.0
Apr.	18,988.1	9,749.5	662.8	2,744.0	1,475.2	4,356.6
May	19,175.7	9,787.9	677.0	2,764.2	1,538.4	4,408.3
June	19,039.4	9,730.8	643.5	2,777.9	1,491.7	4,395.4
July	19,046.3	9,695.1	635.0	2,777.7	1,502.7	4,435.8

**2. Reserve maintenance**

Maintenance period ending on:	Required reserves	Credit institutions' current accounts	Excess reserves	Deficiencies	Interest rate on minimum reserves
	1	2	3	4	5
2009	210.2	211.4	1.2	0.0	1.00
2010	211.8	212.5	0.7	0.5	1.00
2011 10 May	208.3	209.5	1.2	0.0	1.25
14 June	206.9	209.0	2.0	0.0	1.25
12 July	207.7	210.9	3.1	0.0	1.25
9 Aug.	208.8	211.5	2.7	0.0	1.50
13 Sep.	207.0	209.5	2.5	0.0	1.50
11 Oct.	206.1	.	.	.	.

**3. Liquidity**

Maintenance period ending on:	Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current accounts	Base money
	Eurosystème's net assets in gold and foreign currency	Monetary policy operations of the Eurosystem				Deposit facility	Other liquidity-absorbing operations <sup>3)</sup>	Banknotes in circulation	Central government deposits with the Eurosystem	Other factors (net)		
1		2	3	4	5						6	7
2009	407.6	55.8	593.4	0.7	24.6	65.7	9.9	775.2	150.1	-130.2	211.4	1,052.3
2010	511.1	179.5	336.3	1.9	130.4	44.7	70.8	815.9	94.4	-79.1	212.5	1,073.1
2011 12 Apr.	544.1	97.3	335.4	0.8	137.6	23.0	79.5	824.4	73.1	-95.2	210.5	1,057.9
10 May	525.9	109.2	320.5	0.4	136.6	22.8	76.8	833.9	61.3	-111.6	209.5	1,066.1
14 June	526.8	114.7	317.9	0.0	135.5	18.4	76.2	836.6	62.6	-107.9	209.0	1,064.0
12 July	533.6	146.0	311.6	0.2	134.2	29.5	76.9	846.2	73.4	-111.2	210.9	1,086.6
9 Aug.	541.3	171.7	321.5	0.1	133.9	56.7	79.2	854.2	71.4	-104.5	211.5	1,122.4
13 Sep.	540.3	135.1	389.8	0.3	178.0	121.8	109.8	853.2	52.3	-103.0	209.5	1,184.5

Source: ECB.

1) End of period.

2) Includes liquidity provided under the Eurosystem's covered bond purchase programme and the Eurosystem's securities markets programme.

3) Includes liquidity absorbed as a result of the Eurosystem's foreign exchange swap operations.

 For more information, please see: <http://www.ecb.europa.eu/mopo/liq/html/index.en.html>





## MONEY, BANKING AND OTHER FINANCIAL CORPORATIONS

### 2.1 Aggregated balance sheet of euro area MFIs <sup>1)</sup>

(EUR billions; outstanding amounts at end of period)

#### 1. Assets

	Total	Loans to euro area residents			Holdings of securities other than shares issued by euro area residents				Money market fund shares/units <sup>2)</sup>	Holdings of shares/other equity issued by euro area residents	External assets	Fixed assets	Remaining assets <sup>3)</sup>	
		Total	General government	Other euro area residents	MFIs	Total	General government	Other euro area residents						MFIs
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Eurosystem</b>														
2009	2,829.9	1,475.5	19.5	0.7	1,455.3	451.7	368.3	7.5	75.9	-	16.5	556.8	8.5	321.0
2010	3,212.4	1,537.4	18.6	0.9	1,517.8	574.4	463.8	9.6	101.1	-	18.1	684.3	8.5	389.8
2011 Q1	3,038.5	1,347.1	18.5	1.0	1,327.6	580.8	468.5	9.8	102.5	-	19.5	670.4	8.5	412.2
Q2	3,132.7	1,415.7	17.8	1.0	1,396.9	594.9	468.9	9.9	116.2	-	19.4	688.4	8.6	405.6
2011 May	3,134.2	1,415.7	18.2	1.0	1,396.5	588.4	472.5	9.8	106.0	-	19.5	696.0	8.6	406.1
June	3,132.7	1,415.7	17.8	1.0	1,396.9	594.9	468.9	9.9	116.2	-	19.4	688.4	8.6	405.6
July	3,245.0	1,519.1	17.8	1.0	1,500.4	578.0	464.8	10.2	103.0	-	19.0	727.8	8.7	392.4
Aug. <sup>(p)</sup>	3,551.1	1,714.1	17.8	1.0	1,695.4	628.8	514.8	10.4	103.5	-	18.2	776.9	8.7	404.4
<b>MFIs excluding the Eurosystem</b>														
2009	31,144.3	17,701.6	1,001.7	10,783.9	5,916.1	5,060.0	1,482.1	1,498.0	2,079.9	85.1	1,236.1	4,252.4	220.7	2,588.3
2010	32,199.8	17,763.0	1,221.8	11,026.1	5,515.2	4,938.6	1,524.1	1,528.7	1,885.8	59.9	1,233.1	4,323.4	223.5	3,658.3
2011 Q1	31,564.3	17,793.6	1,188.8	11,116.0	5,488.8	4,704.2	1,412.9	1,492.9	1,798.3	64.5	1,202.9	4,277.0	227.4	3,294.8
Q2	31,742.3	17,889.4	1,152.7	11,225.4	5,511.3	4,695.0	1,457.7	1,473.1	1,764.3	61.6	1,251.6	4,282.9	228.9	3,333.0
2011 May	32,103.9	17,904.9	1,155.9	11,201.2	5,547.8	4,713.3	1,430.3	1,496.9	1,786.2	65.1	1,256.3	4,436.9	229.0	3,498.4
June	31,742.3	17,889.4	1,152.7	11,225.4	5,511.3	4,695.0	1,457.7	1,473.1	1,764.3	61.6	1,251.6	4,282.9	228.9	3,333.0
July	32,154.2	18,001.3	1,157.3	11,240.1	5,603.9	4,665.2	1,437.6	1,477.7	1,750.0	61.0	1,248.4	4,297.4	229.5	3,651.4
Aug. <sup>(p)</sup>	32,782.0	18,148.3	1,144.8	11,241.5	5,762.0	4,653.5	1,425.8	1,458.3	1,769.4	62.2	1,231.5	4,328.2	229.5	4,128.8

#### 2. Liabilities

	Total	Currency in circulation	Deposits of euro area residents			Money market fund shares/units <sup>4)</sup>	Debt securities issued <sup>5)</sup>	Capital and reserves	External liabilities	Remaining liabilities <sup>3)</sup>	
			Total	Central government	Other general government/other euro area residents						MFIs
	1	2	3	4	5	6	7	8	9	10	11
<b>Eurosystem</b>											
2009	2,829.9	829.3	1,192.0	102.6	22.1	1,067.4	-	0.1	319.8	140.2	348.5
2010	3,212.4	863.7	1,394.4	68.0	8.7	1,317.7	-	0.0	428.5	153.8	372.1
2011 Q1	3,038.5	848.4	1,264.5	60.8	8.9	1,194.9	-	0.0	402.3	155.0	368.3
Q2	3,132.7	871.6	1,320.1	72.5	11.2	1,236.3	-	0.0	412.2	157.5	371.4
2011 May	3,134.2	862.4	1,313.9	65.4	10.4	1,238.1	-	0.0	423.8	158.4	375.6
June	3,132.7	871.6	1,320.1	72.5	11.2	1,236.3	-	0.0	412.2	157.5	371.4
July	3,245.0	880.4	1,364.1	86.0	8.2	1,269.9	-	0.0	445.0	174.0	381.4
Aug. <sup>(p)</sup>	3,551.1	874.5	1,616.6	69.5	8.7	1,538.4	-	0.0	493.7	176.4	389.9
<b>MFIs excluding the Eurosystem</b>											
2009	31,144.3	-	16,469.0	146.0	10,041.4	6,281.6	732.6	4,908.5	1,921.2	4,098.5	3,014.5
2010	32,199.8	-	16,497.6	196.2	10,526.4	5,774.9	612.3	4,845.2	2,045.0	4,220.3	3,979.4
2011 Q1	31,564.3	-	16,457.4	235.8	10,528.2	5,693.4	632.8	4,873.1	2,079.4	4,018.8	3,502.9
Q2	31,742.3	-	16,614.0	266.4	10,654.7	5,692.8	609.7	4,903.0	2,155.1	3,973.5	3,487.1
2011 May	32,103.9	-	16,581.2	222.0	10,643.9	5,715.3	631.8	4,899.5	2,121.9	4,191.8	3,677.6
June	31,742.3	-	16,614.0	266.4	10,654.7	5,692.8	609.7	4,903.0	2,155.1	3,973.5	3,487.1
July	32,154.2	-	16,707.3	230.2	10,648.2	5,829.0	599.8	4,893.6	2,190.9	3,970.4	3,792.2
Aug. <sup>(p)</sup>	32,782.0	-	16,820.2	186.6	10,713.4	5,920.2	619.2	4,908.9	2,194.8	3,979.7	4,259.3

Source: ECB.

- 1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 2) Amounts issued by euro area residents. Amounts issued by non-euro area residents are included in external assets.
- 3) In December 2010 a change was made to the recording practice for derivatives in one Member State, leading to an increase in this position.
- 4) Amounts held by euro area residents.
- 5) Amounts issued with a maturity of up to two years and held by non-euro area residents are included in external liabilities.

**2.2 Consolidated balance sheet of euro area MFIs<sup>1)</sup>**

(EUR billions; outstanding amounts at end of period; transactions during period)

**1. Assets**

	Total	Loans to euro area residents			Holdings of securities other than shares issued by euro area residents			Holdings of shares/other equity issued by other euro area residents	External assets	Fixed assets	Remaining assets <sup>2)</sup>
		Total	General government	Other euro area residents	Total	General government	Other euro area residents				
	1	2	3	4	5	6	7	8	9	10	11
<b>Outstanding amounts</b>											
2009	23,862.5	11,805.7	1,021.1	10,784.5	3,355.9	1,850.4	1,505.5	812.7	4,809.2	229.1	2,850.0
2010	25,826.0	12,267.4	1,240.4	11,027.0	3,526.2	1,987.9	1,538.3	799.9	5,007.7	232.0	3,993.0
2011 Q1	25,327.7	12,324.3	1,207.3	11,117.0	3,384.2	1,881.4	1,502.7	779.0	4,947.4	235.9	3,657.0
Q2	25,490.7	12,396.9	1,170.5	11,226.4	3,409.5	1,926.6	1,483.0	788.8	4,971.3	237.6	3,686.7
2011 May	25,808.8	12,376.3	1,174.2	11,202.1	3,409.5	1,902.8	1,506.7	800.0	5,132.9	237.6	3,852.5
June	25,490.7	12,396.9	1,170.5	11,226.4	3,409.5	1,926.6	1,483.0	788.8	4,971.3	237.6	3,686.7
July	25,843.3	12,416.1	1,175.1	11,241.1	3,390.3	1,902.4	1,487.9	782.0	5,025.1	238.2	3,991.6
Aug. <sup>(p)</sup>	26,405.1	12,405.1	1,162.6	11,242.4	3,409.3	1,940.6	1,468.7	765.3	5,105.1	238.2	4,482.1
<b>Transactions</b>											
2009	-644.8	15.8	29.4	-13.6	365.2	270.2	95.0	12.4	-464.8	7.8	-581.9
2010	600.3	413.0	206.4	206.6	143.9	145.8	-2.0	5.7	-110.0	2.4	145.2
2011 Q1	-278.4	39.0	-28.3	67.3	-11.0	19.2	-30.1	7.6	81.8	0.9	-396.7
Q2	191.4	68.0	-37.2	105.2	28.6	49.6	-21.0	14.7	35.6	1.9	42.6
2011 May	229.1	17.1	-23.3	40.4	7.1	10.2	-3.1	-18.4	83.2	1.3	138.9
June	-275.6	24.8	-3.4	28.2	5.4	28.3	-22.9	-7.7	-130.3	0.0	-167.7
July	304.9	8.1	4.2	3.9	-8.2	-14.1	5.9	-1.8	-28.6	0.7	334.7
Aug. <sup>(p)</sup>	551.4	-3.0	-14.1	11.1	12.6	28.2	-15.7	-8.6	62.4	0.0	488.1

**2. Liabilities**

	Total	Currency in circulation	Deposits of central government	Deposits of other general government/other euro area residents	Money market fund shares/units <sup>3)</sup>	Debt securities issued <sup>4)</sup>	Capital and reserves	External liabilities	Remaining liabilities <sup>2)</sup>	Excess of inter-MFI liabilities over inter-MFI assets
<b>Outstanding amounts</b>										
2009	23,862.5	769.9	248.6	10,063.5	647.5	2,752.9	1,801.0	4,238.8	3,362.9	-22.5
2010	25,826.0	808.6	264.2	10,535.1	552.4	2,858.3	2,022.2	4,374.1	4,351.5	59.7
2011 Q1	25,327.7	798.3	296.6	10,537.1	568.2	2,972.3	2,038.3	4,173.8	3,871.2	71.9
Q2	25,490.7	819.7	339.0	10,666.0	548.1	3,022.6	2,085.1	4,131.0	3,858.5	21.0
2011 May	25,808.8	810.4	287.4	10,654.3	566.7	3,007.4	2,070.0	4,350.2	4,053.2	9.1
June	25,490.7	819.7	339.0	10,666.0	548.1	3,022.6	2,085.1	4,131.0	3,858.5	21.0
July	25,843.3	828.2	316.2	10,656.4	538.9	3,040.7	2,150.4	4,144.4	4,173.6	-5.4
Aug. <sup>(p)</sup>	26,405.1	823.4	256.1	10,722.1	557.0	3,036.0	2,204.0	4,156.1	4,649.2	1.2
<b>Transactions</b>										
2009	-644.8	45.8	-2.4	286.0	-12.5	-56.4	143.1	-590.3	-505.5	47.4
2010	600.3	38.6	12.8	331.5	-98.2	42.5	113.0	-27.4	132.7	54.8
2011 Q1	-278.4	-10.1	36.2	-20.0	-4.5	80.0	12.7	-48.0	-344.6	19.8
Q2	191.4	21.3	42.6	121.3	-19.7	34.4	45.4	-20.3	-1.9	-31.9
2011 May	229.1	5.0	-17.0	27.7	-3.5	3.8	12.0	73.3	148.8	-21.0
June	-275.6	9.2	51.6	13.3	-18.4	17.8	32.7	-200.7	-193.1	12.0
July	304.9	8.5	-22.7	-14.0	-6.8	-0.5	41.5	-22.1	306.2	14.8
Aug. <sup>(p)</sup>	551.4	-4.8	-60.2	69.1	18.3	4.0	10.5	36.8	471.1	6.5

Source: ECB.

- 1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 2) In December 2010 a change was made to the recording practice for derivatives in one Member State, leading to an increase in this position.
- 3) Amounts held by euro area residents.
- 4) Amounts issued with a maturity of up to two years and held by non-euro area residents are included in external liabilities.

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

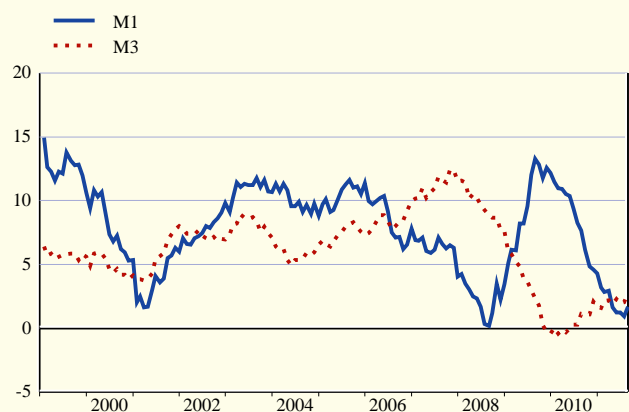
(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

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

	M3				M3 3-month moving average (centred)	Longer-term financial liabilities	Credit to general government	Credit to other euro area residents		Net external assets <sup>3)</sup>		
	M2		M3-M2	Loans				Loans adjusted for sales and securitisation <sup>4)</sup>				
	M1	M2-M1										
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts												
2009	4,495.7	3,701.6	8,197.3	1,134.1	9,331.4	-	6,762.9	2,909.6	13,105.9	10,792.9	-	552.2
2010	4,694.8	3,700.0	8,394.8	1,125.2	9,520.0	-	7,313.3	3,270.3	13,365.1	11,033.5	-	615.3
2011 Q1	4,709.7	3,743.7	8,453.4	1,132.3	9,585.6	-	7,449.3	3,092.2	13,422.3	11,129.1	-	784.1
Q2	4,715.7	3,782.4	8,498.1	1,163.4	9,661.5	-	7,543.7	3,061.4	13,466.1	11,195.1	-	840.9
2011 May	4,702.0	3,786.4	8,488.3	1,171.5	9,659.9	-	7,546.0	3,068.3	13,487.3	11,197.2	-	813.4
June	4,715.7	3,782.4	8,498.1	1,163.4	9,661.5	-	7,543.7	3,061.4	13,466.1	11,195.1	-	840.9
July	4,730.1	3,793.7	8,523.8	1,164.7	9,688.5	-	7,619.3	3,064.2	13,494.3	11,216.3	-	889.2
Aug. <sup>(p)</sup>	4,779.5	3,804.0	8,583.6	1,218.5	9,802.1	-	7,693.4	3,108.4	13,511.6	11,263.2	-	948.6
Transactions												
2009	488.7	-368.0	120.7	-160.4	-39.6	-	422.7	307.6	90.1	-14.7	31.2	125.1
2010	194.1	-12.2	181.9	-24.1	157.9	-	265.6	356.4	207.0	204.9	261.8	-82.6
2011 Q1	14.6	40.4	55.0	-14.0	41.0	-	80.9	-48.4	68.7	72.9	43.7	158.5
Q2	9.2	31.9	41.1	13.8	54.9	-	91.0	-26.7	43.2	61.8	69.1	46.1
2011 May	1.1	25.5	26.7	24.1	50.8	-	24.6	-10.3	30.7	32.1	34.8	15.5
June	14.5	-3.6	10.9	-8.3	2.6	-	18.9	-2.2	-12.9	1.9	2.7	40.3
July	11.9	9.7	21.7	5.4	27.1	-	31.2	12.5	23.5	10.3	21.5	1.3
Aug. <sup>(p)</sup>	51.0	11.2	62.2	54.3	116.5	-	40.3	32.6	38.7	56.7	58.6	16.7
Growth rates												
2009	12.2	-9.0	1.5	-11.9	-0.4	-0.2	6.7	11.8	0.7	-0.1	0.3	125.1
2010	4.3	-0.3	2.2	-2.1	1.7	1.8	3.8	12.2	1.6	1.9	2.4	-82.6
2011 Q1	2.9	2.3	2.6	-1.0	2.2	2.1	3.9	8.0	2.2	2.5	2.8	74.2
Q2	1.3	3.7	2.3	-0.9	1.9	2.1	4.9	4.7	2.2	2.5	2.8	137.2
2011 May	1.2	3.9	2.4	1.5	2.3	2.1	4.4	5.7	2.6	2.7	3.0	55.2
June	1.3	3.7	2.3	-0.9	1.9	2.1	4.9	4.7	2.2	2.5	2.8	137.2
July	1.0	3.7	2.2	1.2	2.1	2.3	4.6	4.9	2.0	2.4	2.6	166.0
Aug. <sup>(p)</sup>	1.7	3.3	2.4	5.4	2.8	.	4.8	5.3	1.8	2.6	2.8	189.9

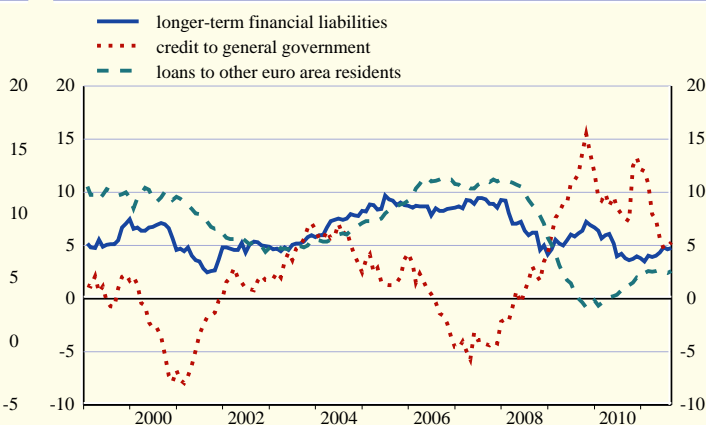
### C1 Monetary aggregates <sup>1)</sup>

(annual growth rates; seasonally adjusted)



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

(annual growth rates; seasonally adjusted)



Source: ECB.

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

Monthly and other shorter-term growth rates for selected items are available at: <http://www.ecb.europa.eu/stats/money/aggregates/aggr/html/index.en.html>

2) Monetary liabilities of MFIs and central government (post office, treasury, etc.) vis-à-vis non-MFI euro area residents excluding central government.

For definitions of M1, M2 and M3, see glossary.

3) Values in the section "growth rates" are sums of the transactions during the 12 months ending in the period indicated.

4) Adjustment for the derecognition of loans on the MFI balance sheet on account of their sale or securitisation.

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

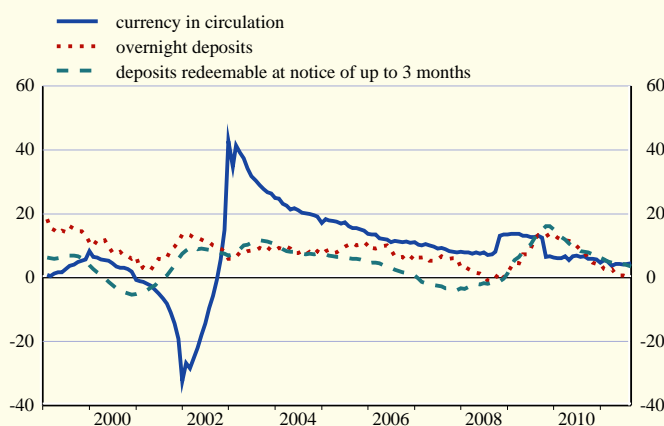
(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

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

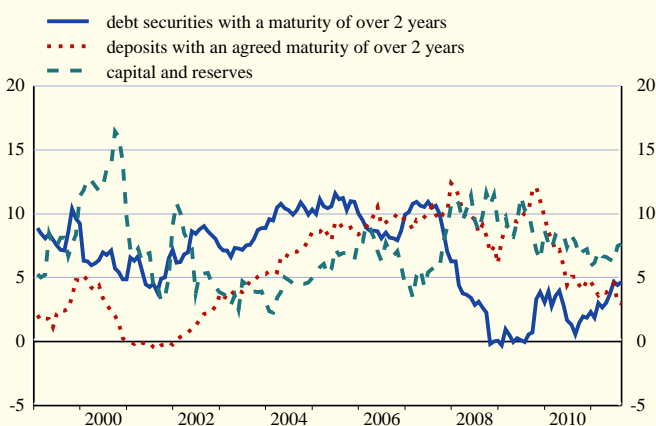
	Currency in circulation	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits redeemable at notice of up to 3 months	Repos	Money market fund shares/units	Debt securities with a maturity of up to 2 years	Debt securities with a maturity of over 2 years	Deposits redeemable at notice of over 3 months	Deposits with an agreed maturity of over 2 years	Capital and reserves
	1	2	3	4	5	6	7	8	9	10	11
Outstanding amounts											
2009	757.5	3,738.1	1,896.8	1,804.8	334.3	668.1	131.8	2,635.4	132.5	2,207.9	1,787.2
2010	793.6	3,901.2	1,785.1	1,914.9	433.8	570.2	121.2	2,753.6	118.4	2,436.0	2,005.3
2011 Q1	802.7	3,907.0	1,821.6	1,922.1	410.2	568.5	153.6	2,815.7	119.7	2,472.9	2,041.0
2011 Q2	815.4	3,900.3	1,844.6	1,937.8	441.2	550.6	171.6	2,845.2	119.7	2,494.2	2,084.6
2011 May	812.5	3,889.4	1,852.4	1,933.9	457.3	556.1	158.1	2,842.3	119.6	2,493.1	2,091.0
2011 June	815.4	3,900.3	1,844.6	1,937.8	441.2	550.6	171.6	2,845.2	119.7	2,494.2	2,084.6
2011 July	816.3	3,913.8	1,849.6	1,944.1	455.7	535.1	174.0	2,855.3	120.0	2,496.3	2,147.7
2011 Aug. <sup>(p)</sup>	825.4	3,954.1	1,850.4	1,953.6	500.4	546.3	171.9	2,857.1	119.9	2,510.4	2,206.0
Transactions											
2009	44.3	444.4	-605.2	237.2	-12.6	-13.1	-134.7	78.6	9.0	194.0	141.1
2010	36.0	158.1	-125.1	113.0	95.2	-101.2	-18.1	61.9	-14.1	108.2	109.6
2011 Q1	9.2	5.4	35.6	4.9	-12.3	-22.2	20.4	40.2	1.4	7.2	32.2
2011 Q2	12.7	-3.6	18.2	13.8	31.4	-17.5	-0.1	31.8	0.0	17.1	42.1
2011 May	10.0	-8.9	14.9	10.7	39.0	-7.5	-7.3	5.8	-0.2	0.9	18.0
2011 June	2.9	11.6	-7.4	3.8	-16.1	-5.3	13.0	5.9	0.2	1.6	11.2
2011 July	0.9	11.0	3.5	6.3	19.1	-13.1	-0.6	-5.5	0.3	-2.9	39.3
2011 Aug. <sup>(p)</sup>	9.1	41.9	1.6	9.6	44.9	11.4	-2.0	10.3	-0.1	14.9	15.2
Growth rates											
2009	6.2	13.5	-24.2	15.1	-3.5	-1.9	-50.4	3.0	7.3	9.7	8.7
2010	4.8	4.2	-6.6	6.3	28.3	-15.1	-13.4	2.3	-10.7	4.7	5.9
2011 Q1	3.7	2.8	-0.2	4.8	20.8	-13.1	-0.8	2.7	-9.3	3.9	6.7
2011 Q2	4.1	0.7	3.1	4.2	14.0	-12.4	8.4	4.7	-6.3	4.5	6.3
2011 May	4.3	0.6	3.1	4.6	29.7	-13.0	-5.1	3.7	-7.9	4.1	6.4
2011 June	4.1	0.7	3.1	4.2	14.0	-12.4	8.4	4.7	-6.3	4.5	6.3
2011 July	4.3	0.3	3.5	3.9	20.1	-12.2	7.0	4.4	-4.6	3.1	7.5
2011 Aug. <sup>(p)</sup>	4.5	1.1	3.0	3.5	31.7	-11.1	6.3	4.7	-3.9	3.0	7.6

**C3 Components of monetary aggregates <sup>1)</sup>**

(annual growth rates; seasonally adjusted)


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

(annual growth rates; seasonally adjusted)



Source: ECB.

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

## 2.4 MFI loans: breakdown <sup>1), 2)</sup>

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

### 1. Loans to financial intermediaries, non-financial corporations and households

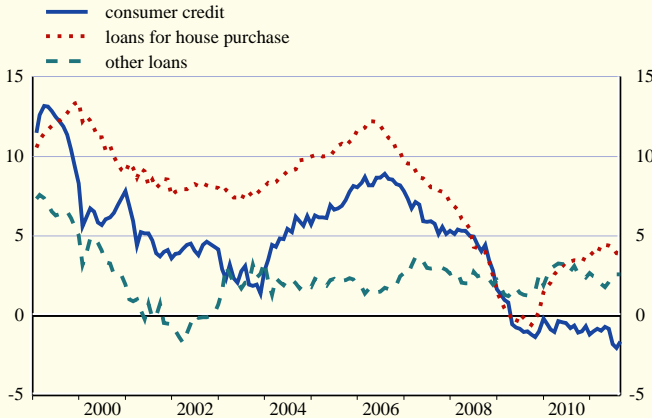
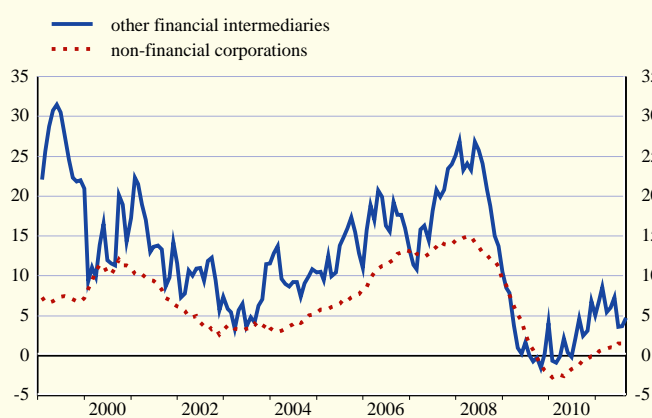
	Insurance corporations and pension funds		Non-financial corporations				Households <sup>3)</sup>					
	Total	Total	Total	Loans adjusted for sales and securitisation <sup>4)</sup>	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Loans adjusted for sales and securitisation <sup>4)</sup>	Consumer credit	Loans for house purchase	Other loans
<b>Outstanding amounts</b>												
2009	89.0	1,060.7	4,690.9	-	1,187.8	937.6	2,565.5	4,952.2	-	631.3	3,546.6	774.3
2010	95.0	1,112.0	4,667.2	-	1,127.3	899.0	2,640.9	5,159.3	-	639.3	3,701.3	818.7
2011 Q1	87.8	1,108.9	4,704.8	-	1,146.9	883.4	2,674.5	5,227.6	-	637.0	3,762.2	828.5
Q2	88.8	1,118.4	4,732.5	-	1,175.8	867.3	2,689.4	5,255.4	-	629.4	3,792.7	833.2
2011 May	87.5	1,142.4	4,713.6	-	1,152.8	879.7	2,681.1	5,253.7	-	636.2	3,786.5	831.0
June	88.8	1,118.4	4,732.5	-	1,175.8	867.3	2,689.4	5,255.4	-	629.4	3,792.7	833.2
July	91.0	1,140.9	4,732.7	-	1,168.3	865.9	2,698.5	5,251.7	-	626.4	3,790.7	834.5
Aug. <sup>6)</sup>	99.1	1,163.7	4,737.7	-	1,168.4	867.9	2,701.4	5,262.7	-	630.1	3,796.5	836.0
<b>Transactions</b>												
2009	-13.6	40.8	-107.0	-108.0	-181.2	-18.9	93.2	65.1	99.5	-1.0	51.4	14.7
2010	7.0	52.9	-2.2	45.6	-37.0	-26.2	61.0	147.1	155.8	-7.6	133.7	21.0
2011 Q1	-3.1	-21.0	37.4	37.2	20.1	-2.9	20.3	59.6	30.5	-1.2	59.0	1.8
Q2	1.0	3.5	30.2	32.8	30.9	-17.2	16.5	27.0	31.0	-7.1	25.5	8.6
2011 May	1.5	8.9	10.0	10.8	3.8	2.6	3.6	11.7	13.2	-1.8	8.7	4.8
June	1.3	-24.8	22.7	23.4	23.9	-11.3	10.1	2.7	2.8	-6.1	6.0	2.8
July	2.1	19.4	-4.2	-3.5	-9.2	-2.0	7.0	-7.1	3.5	-3.2	-4.7	0.8
Aug. <sup>6)</sup>	8.1	22.4	12.6	12.7	1.6	4.4	6.5	13.6	15.4	3.2	7.1	3.3
<b>Growth rates</b>												
2009	-13.2	4.2	-2.2	-	-13.1	-2.0	3.7	1.3	-	-0.2	1.5	1.9
2010	8.0	4.9	0.0	1.0	-3.1	-2.8	2.4	2.9	3.1	-1.2	3.8	2.7
2011 Q1	5.7	5.6	0.9	1.8	0.0	-2.3	2.4	3.4	3.0	-0.9	4.5	2.0
Q2	5.7	3.5	1.5	2.4	4.3	-3.7	2.1	3.2	2.9	-1.8	4.3	2.5
2011 May	3.0	7.3	1.0	1.8	1.3	-2.6	2.1	3.4	3.1	-0.8	4.4	2.1
June	5.7	3.5	1.5	2.4	4.3	-3.7	2.1	3.2	2.9	-1.8	4.3	2.5
July	3.8	3.6	1.6	2.2	4.1	-3.5	2.2	3.0	2.7	-2.0	3.9	2.6
Aug. <sup>6)</sup>	9.8	4.6	1.6	2.2	4.0	-3.1	2.2	3.0	2.7	-1.6	3.9	2.6

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

(annual growth rates; not seasonally adjusted)

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

(annual growth rates; not seasonally adjusted)



Source: ECB.

- 1) MFI sector excluding the Eurosystem; sectoral classification is based on the ESA 95.
- 2) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 3) Including non-profit institutions serving households.
- 4) Adjustment for the derecognition of loans on the MFI balance sheet on account of their sale or securitisation.

**2.4 MFI loans: breakdown 1), 2)**

(EUR billions and annual growth rates; not seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

**2. Loans to financial intermediaries and non-financial corporations**

	Insurance corporations and pension funds				Other financial intermediaries				Non-financial corporations				
	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years	
	1	2	3	4	5	6 Reverse repos to central counterparties	7	8	9	10	11	12	13
Outstanding amounts													
2010	86.2	66.6	5.2	14.4	1,104.7	142.9	587.7	206.4	310.6	4,667.2	1,120.6	898.6	2,648.0
2011 Q1	86.8	66.6	5.8	14.5	1,107.7	137.6	581.4	208.6	317.7	4,703.8	1,147.8	883.5	2,672.5
2011 Q2	91.1	71.2	5.6	14.2	1,131.2	153.1	601.4	203.6	326.2	4,740.6	1,185.0	868.6	2,687.0
2011 June	91.1	71.2	5.6	14.2	1,131.2	153.1	601.4	203.6	326.2	4,740.6	1,185.0	868.6	2,687.0
2011 July	93.7	73.7	5.8	14.2	1,143.1	159.2	609.6	204.6	328.9	4,743.5	1,174.2	867.6	2,701.7
2011 Aug. <sup>(p)</sup>	99.7	80.1	5.3	14.2	1,154.9	174.9	618.8	206.5	329.6	4,723.9	1,156.3	867.0	2,700.7
Transactions													
2010	6.8	10.1	-1.8	-1.5	54.4	-	17.8	7.1	29.5	-2.5	-37.2	-26.2	60.9
2011 Q1	4.7	5.0	0.6	-0.9	-14.7	-5.4	-5.6	-11.2	2.1	36.5	27.7	-2.4	11.2
2011 Q2	4.2	4.6	-0.1	-0.3	17.5	15.6	14.9	-5.0	7.6	39.3	39.2	-16.0	16.1
2011 June	0.0	0.3	-0.1	-0.2	-19.0	-9.8	-17.0	-6.3	4.2	26.6	30.9	-10.8	6.5
2011 July	2.5	2.4	0.1	0.0	8.9	6.1	6.5	0.4	1.9	-1.4	-12.5	-1.6	12.6
2011 Aug. <sup>(p)</sup>	6.1	6.5	-0.4	0.0	11.3	15.7	9.8	0.7	0.8	-12.1	-16.4	1.8	2.6
Growth rates													
2010	8.4	17.5	-25.4	-9.1	5.0	-	2.9	3.2	10.4	-0.1	-3.2	-2.8	2.4
2011 Q1	5.7	11.3	0.3	-14.8	5.5	-	4.6	0.9	9.9	0.9	0.1	-2.3	2.4
2011 Q2	5.7	11.1	3.3	-15.9	3.6	21.2	2.6	-3.2	10.5	1.5	4.2	-3.7	2.1
2011 June	5.7	11.1	3.3	-15.9	3.6	21.2	2.6	-3.2	10.5	1.5	4.2	-3.7	2.1
2011 July	3.8	7.6	10.5	-15.2	3.7	18.8	4.1	-3.3	7.7	1.5	4.1	-3.6	2.2
2011 Aug. <sup>(p)</sup>	9.9	16.1	9.6	-16.5	4.7	20.4	6.3	-2.4	6.6	1.6	4.1	-3.1	2.2

**3. Loans to households 3)**

	Total	Consumer credit				Loans for house purchase				Other loans				
	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total	Up to 1 year	Over 1 and up to 5 years	Over 5 years		
	1	2	3	4	5	6	7	8	9	10 Sole proprietors	11	12	13	14
Outstanding amounts														
2010	5,168.0	641.7	147.0	186.5	308.2	3,706.9	14.7	54.9	3,637.2	819.4	402.4	146.7	85.7	587.0
2011 Q1	5,217.6	633.7	140.5	186.9	306.2	3,756.6	14.2	54.0	3,688.4	827.3	401.0	149.6	85.1	592.7
2011 Q2	5,262.5	633.0	141.9	185.3	305.7	3,791.0	14.6	55.2	3,721.2	838.6	404.2	152.1	87.0	599.4
2011 June	5,262.5	633.0	141.9	185.3	305.7	3,791.0	14.6	55.2	3,721.2	838.6	404.2	152.1	87.0	599.4
2011 July	5,259.8	629.8	140.4	184.3	305.1	3,796.0	14.8	55.6	3,725.6	834.1	403.7	145.3	87.0	601.8
2011 Aug. <sup>(p)</sup>	5,263.0	631.0	141.4	185.5	304.2	3,797.8	14.7	56.0	3,727.0	834.2	405.9	145.5	88.1	600.6
Transactions														
2010	147.5	-7.7	-4.8	-8.8	5.9	134.2	-0.6	-3.7	138.5	20.9	-	-6.9	-4.5	32.3
2011 Q1	40.9	-6.9	-6.1	-1.7	0.9	47.8	-0.7	0.0	48.6	0.0	-1.8	-0.6	-1.6	2.1
2011 Q2	44.1	-0.3	2.5	-2.0	-0.8	29.3	0.5	1.1	27.7	15.1	1.7	5.1	0.2	9.8
2011 June	20.6	0.4	3.0	-2.4	-0.2	10.7	0.3	0.5	9.9	9.6	0.3	7.1	1.0	1.4
2011 July	-6.0	-3.3	-1.5	-1.0	-0.8	2.3	0.1	0.5	1.8	-5.0	-1.1	-7.1	-0.1	2.2
2011 Aug. <sup>(p)</sup>	5.7	0.7	1.1	1.2	-1.6	3.1	0.0	0.4	2.7	2.0	2.4	0.0	1.6	0.4
Growth rates														
2010	3.0	-1.2	-3.5	-4.5	2.0	3.8	-4.2	-6.2	4.0	2.7	-	-4.6	-5.1	5.9
2011 Q1	3.4	-0.9	-3.8	-4.1	2.5	4.4	-7.6	-3.7	4.6	2.0	-	-5.0	-5.9	5.1
2011 Q2	3.2	-1.8	-2.6	-5.0	0.6	4.3	0.0	2.6	4.3	2.5	0.4	0.6	-3.3	3.9
2011 June	3.2	-1.8	-2.6	-5.0	0.6	4.3	0.0	2.6	4.3	2.5	0.4	0.6	-3.3	3.9
2011 July	3.0	-2.0	-2.1	-5.6	0.3	3.9	-0.1	2.1	4.0	2.6	0.5	-0.1	-3.5	4.2
2011 Aug. <sup>(p)</sup>	3.0	-1.6	-1.6	-4.2	-0.1	3.9	-1.6	2.6	3.9	2.6	0.1	0.2	-1.3	3.8

Source: ECB.

- 1) MFI sector excluding the Eurosystem; sectoral classification is based on the ESA 95.
- 2) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 3) Including non-profit institutions serving households.

## 2.4 MFI loans: breakdown <sup>1), 2)</sup>

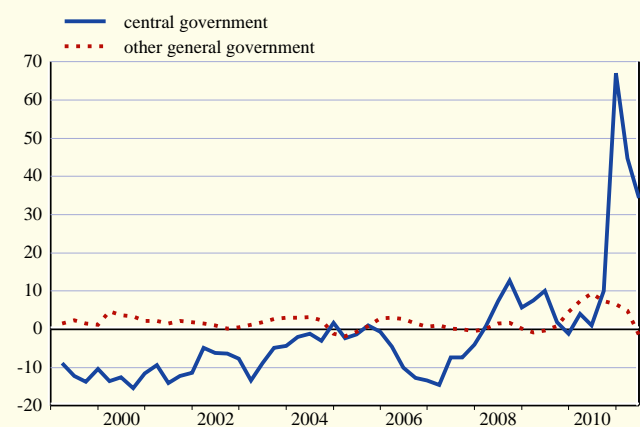
(EUR billions and annual growth rates; not seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

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

	General government					Non-euro area residents				
	Total	Central government	Other general government			Total	Banks <sup>3)</sup>	Non-banks		
			State government	Local government	Social security funds			Total	General government	Other
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2010	1,221.8	397.5	225.2	553.0	46.1	2,963.0	2,010.9	952.1	49.5	902.6
2011 <sup>(p)</sup>	1,152.7	346.4	223.4	555.6	27.0	2,998.3	2,003.8	994.5	60.1	934.4
2010 Q3	1,075.6	263.8	223.2	544.1	44.5	2,951.5	1,995.5	955.9	51.9	904.1
Q4	1,221.8	397.5	225.2	553.0	46.1	2,963.0	2,010.9	952.1	49.5	902.6
2011 Q1	1,188.8	359.4	229.6	557.8	41.9	2,934.4	1,957.5	976.9	54.5	922.4
Q2 <sup>(p)</sup>	1,152.7	346.4	223.4	555.6	27.0	2,998.3	2,003.8	994.5	60.1	934.4
Transactions										
2010	207.2	156.3	14.9	24.1	11.9	5.2	9.9	-5.0	0.5	-5.5
2011 <sup>(p)</sup>	-64.7	-47.3	-2.2	2.5	-18.1	100.2	20.0	80.0	13.0	66.9
2010 Q3	1.6	7.9	-1.9	-3.8	-0.5	-11.6	-14.2	2.5	3.8	-1.2
Q4	138.7	126.7	1.6	8.8	1.5	-17.0	-1.9	-15.1	-2.0	-13.1
2011 Q1	-28.2	-34.3	4.4	4.9	-3.2	55.7	-1.5	57.0	7.0	50.1
Q2 <sup>(p)</sup>	-36.5	-13.0	-6.5	-2.4	-14.9	44.5	21.6	22.9	6.1	16.8
Growth rates										
2010	20.6	67.1	7.1	4.6	35.1	0.5	0.6	-0.4	0.4	-0.5
2011 <sup>(p)</sup>	6.5	34.4	-1.1	1.4	-38.7	4.4	0.2	7.0	30.9	5.8
2010 Q3	8.0	10.0	6.5	5.4	43.9	0.9	1.3	-0.5	1.6	-0.6
Q4	20.6	67.1	7.1	4.6	35.1	0.5	0.6	-0.4	0.4	-0.5
2011 Q1	14.3	44.7	9.6	3.4	0.6	0.5	-0.8	2.2	16.0	1.5
Q2 <sup>(p)</sup>	7.1	34.4	-1.1	1.4	-38.7	2.6	0.2	7.0	30.9	5.8

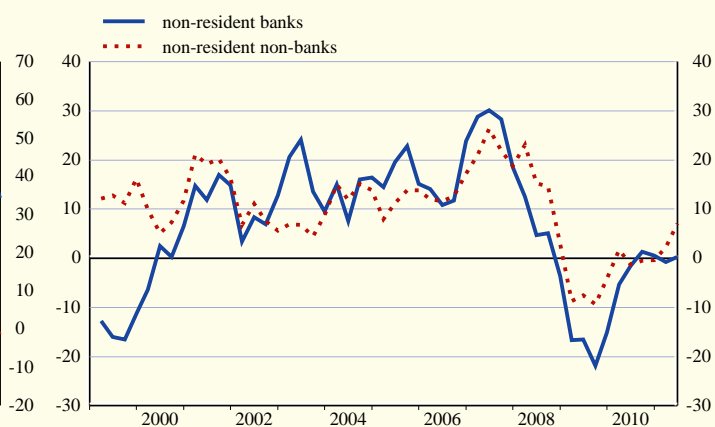
### C7 Loans to government <sup>2)</sup>

(annual growth rates; not seasonally adjusted)



### C8 Loans to non-euro area residents <sup>2)</sup>

(annual growth rates; not seasonally adjusted)



Source: ECB.

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

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

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



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

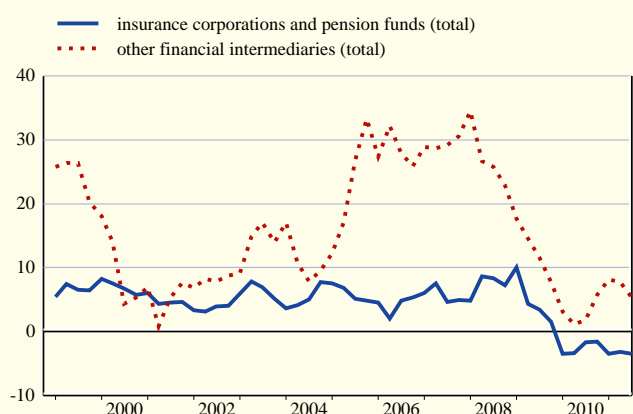
(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

**1. Deposits by financial intermediaries**

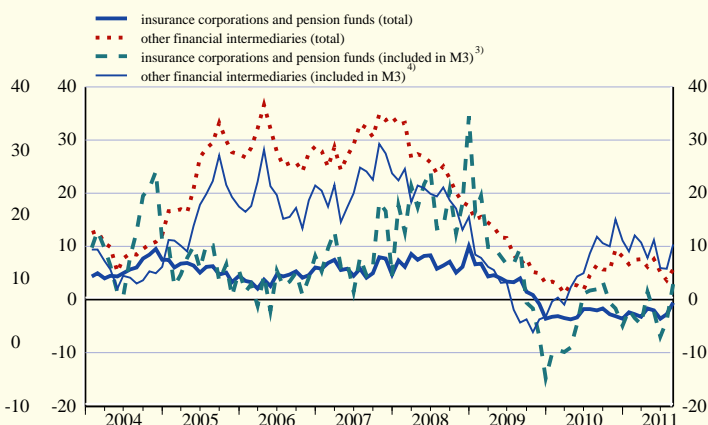
	Insurance corporations and pension funds							Other financial intermediaries							
	Total	Overnight	With an agreed maturity of:		Redeemable at notice of:		Repos	Total	Overnight	With an agreed maturity of:		Redeemable at notice of:		Repos	
			Up to 2 years	Over 2 years	Up to 3 months	Over 3 months				Up to 2 years	Over 2 years	Up to 3 months	Over 3 months		
															1
<b>Outstanding amounts</b>															
2009	738.5	84.1	86.9	543.7	2.2	1.4	20.2	1,871.2	311.7	335.1	957.5	15.9	0.0	250.9	-
2010	716.9	84.5	79.4	528.3	2.6	0.3	21.9	2,167.4	358.3	305.1	1,132.6	10.7	0.5	360.3	255.0
2011 Q1	710.7	82.9	79.9	526.6	3.0	0.2	18.0	2,161.5	371.0	291.6	1,146.4	11.8	0.5	340.2	240.6
Q2	708.6	84.6	77.2	524.0	3.2	0.2	19.3	2,210.2	369.7	291.0	1,152.0	12.5	0.3	384.7	290.4
2011 May	714.3	85.3	79.6	525.5	3.8	0.2	19.9	2,235.4	370.1	309.2	1,153.7	12.0	0.2	390.2	288.3
June	708.6	84.6	77.2	524.0	3.2	0.2	19.3	2,210.2	369.7	291.0	1,152.0	12.5	0.3	384.7	290.4
July	713.8	82.8	81.6	523.4	3.7	0.2	22.1	2,186.3	359.8	294.6	1,148.4	11.6	0.3	371.7	282.3
Aug. <sup>(p)</sup>	727.3	88.9	89.8	523.4	3.7	0.2	21.1	2,247.2	368.2	297.7	1,151.9	11.8	0.5	417.2	315.5
<b>Transactions</b>															
2009	-26.8	-1.0	-30.4	6.3	1.1	-0.1	-2.7	55.4	5.5	-93.6	85.8	3.7	0.0	54.0	-
2010	-26.5	-3.4	-8.2	-16.6	0.2	0.0	1.6	155.9	45.2	-38.6	52.8	-8.0	0.4	104.2	-
2011 Q1	-0.9	3.2	-0.3	-1.2	0.3	0.0	-2.9	-9.7	15.8	-6.2	-12.9	1.0	0.1	-7.4	-14.3
Q2	-1.6	1.7	-2.2	-2.7	0.3	0.0	1.3	37.8	-1.7	-8.0	2.6	0.7	-0.3	44.5	49.8
2011 May	-6.4	-0.1	-3.6	-0.6	-0.1	0.0	-1.9	24.9	-7.4	2.8	-6.6	0.9	-0.2	35.4	41.1
June	-5.7	-0.7	-2.3	-1.5	-0.6	0.0	-0.6	-24.4	-0.1	-18.3	-1.2	0.5	0.0	-5.4	2.1
July	5.0	-1.9	4.2	-0.6	0.5	0.0	2.8	-25.6	-10.9	3.0	-8.6	-0.9	0.0	-8.3	-8.2
Aug. <sup>(p)</sup>	13.6	6.2	8.3	0.1	0.0	0.0	-0.9	62.7	9.1	3.4	4.3	0.2	0.2	45.6	33.3
<b>Growth rates</b>															
2009	-3.5	-1.1	-26.4	1.2	96.8	-	-11.8	3.1	1.5	-22.0	10.0	30.0	-	27.4	-
2010	-3.6	-3.6	-9.4	-3.0	9.7	-	7.8	8.1	14.5	-11.4	4.9	-48.5	-	41.1	-
2011 Q1	-3.2	-3.0	-6.3	-2.6	7.1	-	-6.2	7.7	14.0	-5.0	4.5	-47.3	-	28.7	-
Q2	-3.5	-5.7	-9.2	-2.2	26.4	-	-6.6	5.3	1.0	0.6	4.7	5.4	-	15.8	32.9
2011 May	-1.9	-4.5	-8.5	-1.8	41.4	-	40.0	7.6	2.0	3.7	4.2	-25.3	-	31.1	-
June	-3.5	-5.7	-9.2	-2.2	26.4	-	-6.6	5.3	1.0	0.6	4.7	5.4	-	15.8	32.9
July	-2.7	-7.4	-7.8	-2.2	41.0	-	25.5	3.7	-0.2	-1.7	1.7	-0.8	-	19.9	34.7
Aug. <sup>(p)</sup>	-0.6	4.6	-2.9	-1.9	38.4	-	17.7	5.7	0.9	-2.7	1.6	5.1	-	34.0	43.7

**C9 Total deposits by sector <sup>2)</sup>**

(annual growth rates)


**C10 Total deposits and deposits included in M3 by sector <sup>2)</sup>**

(annual growth rates)



Source: ECB.

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

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

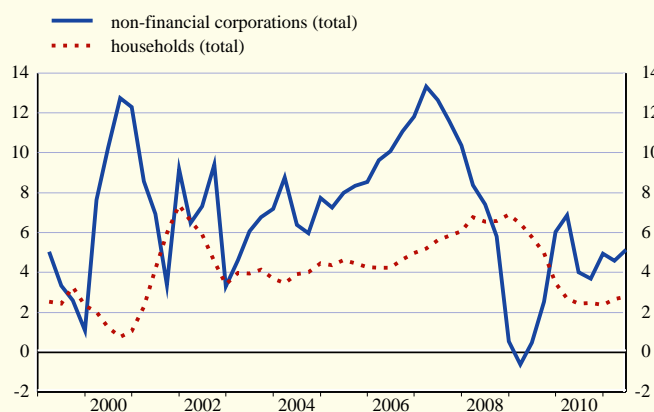
(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

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

	Non-financial corporations							Households <sup>3)</sup>									
	Total		Overnight		With an agreed maturity of:		Redeemable at notice of:	Repos	Total		Overnight		With an agreed maturity of:		Redeemable at notice of:	Repos	
	1	2	Up to 2 years		Over 2 years		Up to 3 months	Over 3 months	6	8	9	Up to 2 years		Over 2 years		Up to 3 months	Over 3 months
Outstanding amounts																	
2009	1,601.2	999.2	434.5	80.7	68.7	1.7	16.3	5,601.7	2,156.9	996.5	607.1	1,680.2	123.7	37.3			
2010	1,671.6	1,034.1	458.7	87.2	75.8	1.5	14.2	5,739.1	2,243.9	901.6	665.0	1,788.5	110.3	29.8			
2011 Q1	1,649.3	1,001.4	463.5	90.8	77.6	2.0	14.0	5,766.9	2,223.8	908.3	681.3	1,811.8	110.3	31.4			
Q2	1,658.5	1,011.4	457.0	94.8	77.3	2.0	15.9	5,822.4	2,257.9	904.1	702.0	1,815.6	109.4	33.5			
2011 May	1,654.5	999.0	461.2	94.2	77.8	2.0	20.4	5,793.4	2,232.0	905.1	695.5	1,816.9	109.5	34.3			
June	1,658.5	1,011.4	457.0	94.8	77.3	2.0	15.9	5,822.4	2,257.9	904.1	702.0	1,815.6	109.4	33.5			
July	1,656.2	1,002.1	461.4	95.5	76.5	2.0	18.7	5,844.9	2,261.7	914.0	705.1	1,819.3	109.5	35.4			
Aug. <sup>4)</sup>	1,655.1	994.1	467.1	95.3	77.4	1.8	19.5	5,831.3	2,236.2	919.4	707.0	1,823.8	109.4	35.5			
Transactions																	
2009	91.1	112.3	-70.1	15.1	40.8	0.4	-7.4	187.7	320.5	-371.5	85.9	190.5	8.6	-46.3			
2010	78.9	40.3	24.1	9.0	7.8	-0.2	-2.1	133.0	81.7	-98.8	58.7	113.6	-14.6	-7.5			
2011 Q1	-33.8	-37.6	2.5	2.1	1.0	0.5	-2.3	17.3	-23.5	2.9	14.3	21.9	0.0	1.7			
Q2	11.9	12.4	-5.2	4.0	-0.9	0.0	1.6	55.7	35.2	-2.8	19.5	2.6	-0.9	2.1			
2011 May	3.6	-1.5	0.9	1.7	-0.4	0.0	3.0	-4.8	-15.2	0.0	7.6	0.9	0.0	1.9			
June	4.5	12.7	-3.9	0.6	-0.5	0.1	-4.5	29.2	26.0	-0.9	6.4	-1.3	-0.1	-0.8			
July	-3.9	-10.4	4.0	0.6	-0.8	0.0	2.7	21.8	3.4	9.6	3.1	3.7	0.1	1.8			
Aug. <sup>4)</sup>	-0.1	-7.4	5.9	-0.2	0.9	-0.2	0.9	-13.2	-25.2	5.6	1.9	4.5	-0.1	0.2			
Growth rates																	
2009	6.0	12.7	-13.9	23.1	146.6	28.3	-31.2	3.5	17.5	-27.1	16.5	12.8	7.5	-55.4			
2010	4.9	4.1	5.5	11.2	11.4	-10.0	-12.8	2.4	3.8	-9.9	9.7	6.8	-11.8	-20.2			
2011 Q1	4.6	2.2	8.8	11.0	6.4	11.6	-4.9	2.7	2.6	-3.3	7.4	5.5	-10.3	-12.9			
Q2	5.1	1.6	11.8	16.7	2.3	-1.4	6.4	2.8	1.3	-0.2	8.5	4.6	-6.4	10.2			
2011 May	4.0	0.0	11.6	8.4	4.3	8.4	34.8	2.7	1.5	-1.0	7.9	5.0	-8.2	6.6			
June	5.1	1.6	11.8	16.7	2.3	-1.4	6.4	2.8	1.3	-0.2	8.5	4.6	-6.4	10.2			
July	4.8	1.7	10.1	14.8	-0.2	-4.6	34.8	2.9	1.0	1.4	8.4	4.2	-4.6	12.2			
Aug. <sup>4)</sup>	3.8	0.9	8.6	14.0	-1.7	-15.2	37.8	2.9	1.2	2.0	8.2	3.8	-3.2	11.4			

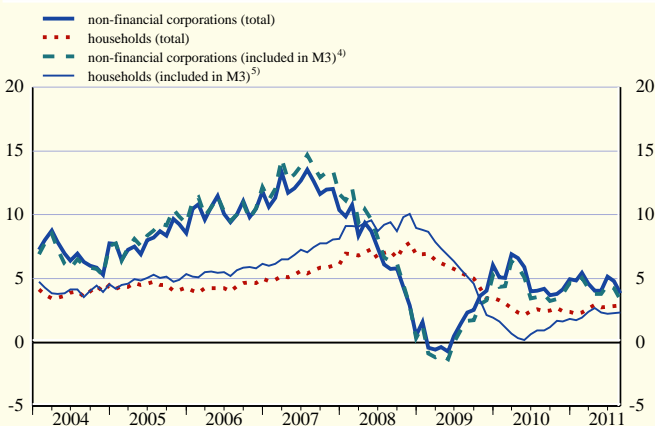
### C11 Total deposits by sector <sup>2)</sup>

(annual growth rates)



### C12 Total deposits and deposits included in M3 by sector <sup>2)</sup>

(annual growth rates)



Source: ECB.

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

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

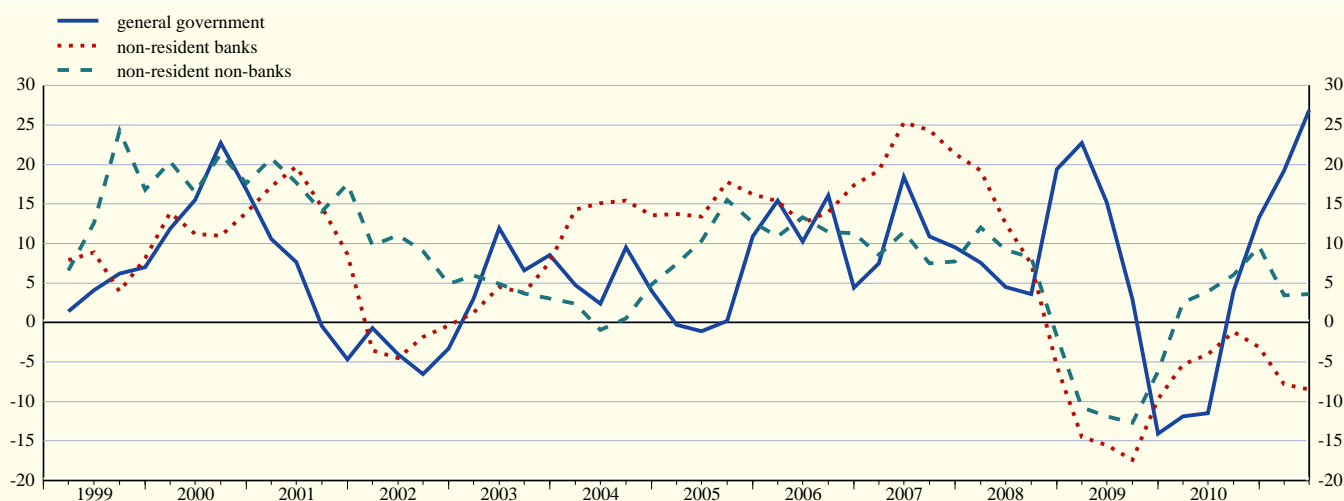
(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

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

	General government					Non-euro area residents				
	Total	Central government	Other general government			Total	Banks <sup>3)</sup>	Non-banks		
			State government	Local government	Social security funds			Total	General government	Other
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2010	427.6	196.2	47.7	109.6	74.1	3,488.8	2,491.9	996.9	45.9	950.9
2011 <sup>(p)</sup>	521.5	266.4	55.0	112.6	87.5	3,280.6	2,295.9	984.5	47.7	936.8
2010 Q3	421.4	176.2	58.7	111.9	74.5	3,580.9	2,597.2	983.7	48.0	935.7
Q4	427.6	196.2	47.7	109.6	74.1	3,488.8	2,491.9	996.9	45.9	950.9
2011 Q1	475.6	235.8	52.3	108.7	78.8	3,314.1	2,346.7	967.4	41.4	925.9
Q2 <sup>(p)</sup>	521.5	266.4	55.0	112.6	87.5	3,280.6	2,295.9	984.5	47.7	936.8
Transactions										
2010	50.0	47.4	4.3	-4.9	2.9	0.1	-82.5	82.6	7.5	75.1
2011 <sup>(p)</sup>	96.1	74.3	7.4	1.5	12.9	-97.0	-115.3	18.0	2.8	15.2
2010 Q3	9.3	8.8	4.3	-2.0	-1.8	16.1	4.1	12.0	2.2	9.9
Q4	5.4	19.3	-11.0	-2.3	-0.5	-102.5	-107.7	5.1	-2.7	7.8
2011 Q1	50.4	43.4	4.7	-2.4	4.7	-77.5	-73.5	-4.1	-3.6	-0.5
Q2 <sup>(p)</sup>	45.7	30.9	2.7	3.9	8.2	-19.5	-41.8	22.1	6.4	15.7
Growth rates										
2010	13.3	32.2	9.9	-4.3	4.1	0.3	-3.2	9.6	12.7	9.3
2011 <sup>(p)</sup>	8.2	14.5	1.2	-2.5	14.0	-6.3	-8.5	3.6	5.0	3.5
2010 Q3	4.0	10.9	15.0	-9.3	4.2	0.7	-1.2	6.0	14.4	5.5
Q4	13.3	32.2	9.9	-4.3	4.1	0.3	-3.2	9.6	12.7	9.3
2011 Q1	19.2	41.4	4.0	-1.3	9.2	-4.7	-7.8	3.4	-10.5	4.2
Q2 <sup>(p)</sup>	26.8	61.3	1.2	-2.5	14.0	-5.1	-8.5	3.6	5.0	3.5

**C13 Deposits by government and non-euro area residents <sup>2)</sup>**

(annual growth rates)



Source: ECB.

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

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

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

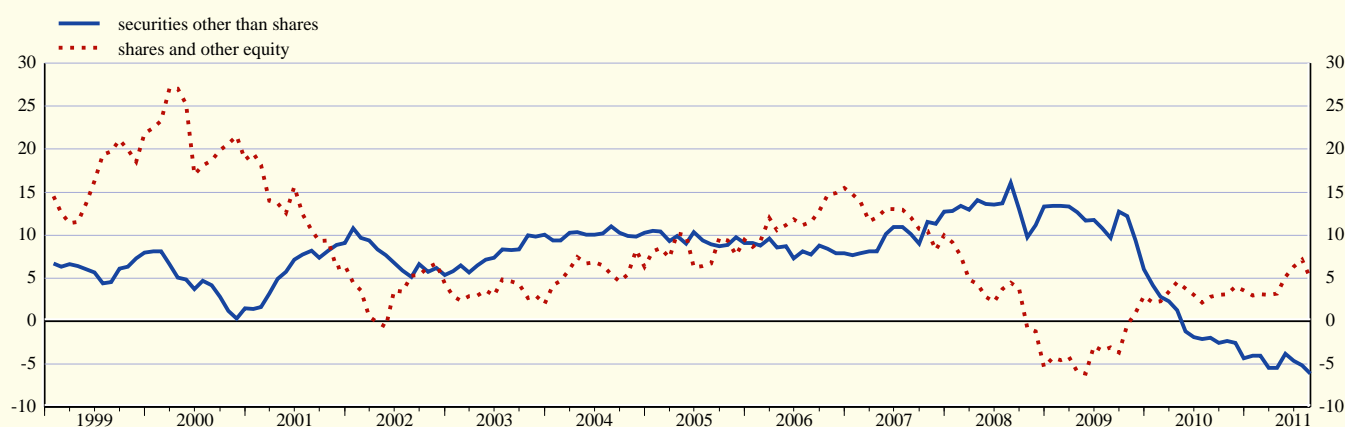
## 2.6 MFI holdings of securities: breakdown <sup>1), 2)</sup>

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

	Securities other than shares							Shares and other equity				
	Total	MFIs		General government		Other euro area residents		Non-euro area residents	Total	MFIs	Non-MFIs	Non-euro area residents
		Euro	Non-euro	Euro	Non-euro	Euro	Non-euro					
	1	2	3	4	5	6	7	8	9	10	11	12
<b>Outstanding amounts</b>												
2009	6,207.8	1,970.8	109.1	1,466.1	16.0	1,458.6	39.4	1,147.8	1,516.3	435.0	801.1	280.2
2010	5,993.1	1,778.4	107.4	1,507.7	16.4	1,500.9	27.8	1,054.5	1,535.9	445.3	787.8	302.8
2011 Q1	5,741.6	1,695.9	102.5	1,393.0	19.9	1,464.2	28.7	1,037.5	1,504.7	437.2	765.6	301.9
Q2	5,663.4	1,674.2	90.0	1,437.0	20.7	1,448.3	24.7	968.4	1,563.7	476.0	775.5	312.1
2011 May	5,717.8	1,686.9	99.3	1,410.8	19.4	1,471.3	25.5	1,004.4	1,570.9	469.6	786.7	314.6
June	5,663.4	1,674.2	90.0	1,437.0	20.7	1,448.3	24.7	968.4	1,563.7	476.0	775.5	312.1
July	5,628.7	1,660.3	89.7	1,417.0	20.6	1,452.6	25.1	963.5	1,560.8	479.4	769.1	312.3
Aug. <sup>(p)</sup>	5,583.1	1,685.4	84.0	1,402.0	23.8	1,431.0	27.3	929.6	1,532.5	478.3	753.2	300.9
<b>Transactions</b>												
2009	354.9	83.5	16.6	231.0	-3.2	103.0	-12.0	-64.0	43.0	29.1	11.6	2.3
2010	-269.3	-167.1	-7.2	42.7	-2.1	10.3	-14.6	-131.3	54.0	27.8	5.2	20.9
2011 Q1	-26.5	-24.0	1.0	8.7	4.4	-32.7	2.3	13.9	1.3	1.0	6.7	-6.4
Q2	-30.7	-33.7	5.9	44.6	1.0	-17.5	-3.7	-27.3	62.8	36.8	14.6	11.4
2011 May	25.4	4.6	9.7	7.5	-0.1	-3.3	0.0	7.1	17.5	30.5	-18.4	5.3
June	-51.9	-21.8	-8.2	28.7	1.5	-22.6	-0.5	-29.0	-4.4	4.5	-7.8	-1.1
July	-32.0	-13.0	0.3	-12.4	-0.7	6.0	-0.5	-11.7	3.5	4.7	-1.9	0.6
Aug. <sup>(p)</sup>	-42.6	24.3	-4.6	-22.2	3.5	-18.6	2.7	-27.7	-17.6	0.7	-8.6	-9.7
<b>Growth rates</b>												
2009	6.0	4.4	17.6	18.7	-15.8	7.6	-23.2	-5.3	2.9	7.0	1.5	0.8
2010	-4.3	-8.5	-5.7	2.9	-11.5	0.7	-35.0	-11.1	3.6	6.4	0.6	7.5
2011 Q1	-5.4	-10.1	-4.5	-1.0	13.9	-0.3	-25.6	-9.6	3.0	3.7	3.2	1.7
Q2	-4.6	-9.3	7.1	1.1	22.8	-1.9	1.9	-9.5	6.3	9.9	5.6	2.9
2011 May	-3.8	-9.1	16.4	0.2	15.7	0.1	3.1	-7.1	5.1	6.2	4.4	5.3
June	-4.6	-9.3	7.1	1.1	22.8	-1.9	1.9	-9.5	6.3	9.9	5.6	2.9
July	-5.2	-8.9	13.6	0.4	24.4	-3.5	-1.2	-10.9	7.1	11.5	5.7	4.4
Aug. <sup>(p)</sup>	-6.1	-7.6	-1.7	-0.4	48.5	-4.8	11.1	-14.6	5.0	10.7	3.1	1.6

## C14 MFI holdings of securities <sup>2)</sup>

(annual growth rates)



Source: ECB.

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

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

**2.7 Currency breakdown of selected MFI balance sheet items <sup>1), 2)</sup>**

(percentages of total; outstanding amounts in EUR billions; end of period)

**1. Loans, holdings of securities other than shares, and deposits**

	MFIs <sup>3)</sup>							Non-MFIs						
	All currencies (outstanding amount)	Euro <sup>4)</sup>	Non-euro currencies				All currencies (outstanding amount)	Euro <sup>4)</sup>	Non-euro currencies					
			Total	USD	JPY	CHF			GBP	Total	USD	JPY	CHF	GBP
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Loans</b>														
<i>To euro area residents</i>														
2009	5,916.1	-	-	-	-	-	11,785.5	96.2	3.8	1.9	0.2	1.0	0.4	
2010	5,515.2	-	-	-	-	-	12,247.8	96.0	4.0	2.1	0.2	1.1	0.4	
2011 Q1	5,488.8	-	-	-	-	-	12,304.8	96.3	3.7	1.8	0.2	1.1	0.4	
Q2	5,511.3	-	-	-	-	-	12,378.1	96.2	3.8	1.8	0.2	1.1	0.4	
<i>To non-euro area residents</i>														
2009	1,914.9	45.8	54.2	29.4	2.7	2.9	12.6	906.8	40.0	60.0	42.1	1.2	3.7	8.0
2010	2,010.9	44.9	55.1	30.7	2.9	3.2	11.6	952.1	39.9	60.1	42.8	1.4	3.7	6.7
2011 Q1	1,957.5	46.9	53.1	29.9	3.0	3.2	9.7	976.9	40.2	59.8	41.5	1.2	3.4	7.1
Q2	2,003.8	45.2	54.8	31.9	2.7	3.2	10.0	994.5	41.4	58.6	39.8	1.4	3.6	6.8
<b>Holdings of securities other than shares</b>														
<i>Issued by euro area residents</i>														
2009	2,079.9	94.8	5.2	3.1	0.2	0.3	1.4	2,980.2	98.1	1.9	1.2	0.2	0.1	0.3
2010	1,885.8	94.3	5.7	3.3	0.1	0.3	1.7	3,052.8	98.6	1.4	0.8	0.1	0.1	0.4
2011 Q1	1,798.3	94.3	5.7	3.2	0.2	0.3	1.7	2,905.9	98.3	1.7	0.9	0.2	0.1	0.4
Q2	1,764.3	94.9	5.1	2.9	0.1	0.3	1.4	2,930.8	98.4	1.6	0.8	0.1	0.1	0.4
<i>Issued by non-euro area residents</i>														
2009	546.6	55.8	44.2	26.3	0.4	0.5	14.8	601.2	35.0	65.0	38.5	4.2	0.9	15.2
2010	535.1	50.9	49.1	26.1	0.3	0.5	17.2	519.4	32.9	67.1	41.6	3.8	0.8	13.2
2011 Q1	526.4	50.5	49.5	26.6	0.3	1.1	17.0	511.1	33.7	66.3	39.5	4.8	0.7	13.0
Q2	476.9	54.2	45.8	23.0	0.4	0.6	16.2	491.8	32.8	67.2	40.3	5.2	0.7	12.1
<b>Deposits</b>														
<i>By euro area residents</i>														
2009	6,281.6	92.9	7.1	4.4	0.3	1.2	0.7	10,187.4	97.0	3.0	1.9	0.2	0.1	0.4
2010	5,774.9	92.9	7.1	4.1	0.3	1.3	0.8	10,722.6	97.1	2.9	1.9	0.2	0.1	0.4
2011 Q1	5,693.4	92.5	7.5	4.3	0.3	1.4	0.8	10,764.0	97.1	2.9	1.9	0.1	0.1	0.4
Q2	5,692.8	92.5	7.5	4.3	0.2	1.5	0.8	10,921.2	97.1	2.9	1.9	0.1	0.1	0.4
<i>By non-euro area residents</i>														
2009	2,532.8	49.2	50.8	34.2	1.8	2.2	9.6	836.7	53.5	46.5	31.4	1.1	1.7	7.5
2010	2,491.9	52.1	47.9	31.8	2.2	1.8	8.6	996.9	58.8	41.2	29.3	1.2	1.4	5.1
2011 Q1	2,346.7	53.5	46.5	30.0	2.1	1.9	8.1	967.4	58.3	41.7	29.5	1.4	1.5	4.4
Q2	2,295.9	53.4	46.6	29.8	2.2	1.9	8.0	984.5	58.7	41.3	29.3	1.3	1.4	4.5

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

	All currencies (outstanding amount)	Euro <sup>4)</sup>	Non-euro currencies				
			Total	USD	JPY	CHF	GBP
1	2	3	4	5	6	7	
2009	5,168.3	83.3	16.7	8.8	1.6	1.9	2.5
2010	5,082.6	81.6	18.4	9.7	1.8	2.1	2.5
2011 Q1	5,133.2	82.0	18.0	9.6	1.6	2.0	2.4
Q2	5,155.8	81.9	18.1	9.6	1.6	2.2	2.4

Source: ECB.

- 1) MFI sector excluding the Eurosystem; sectoral classification is based on the ESA 95.
- 2) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 3) For non-euro area residents, the term "MFIs" refers to institutions similar to euro area MFIs.
- 4) Including items expressed in the national denominations of the euro.

## 2.8 Aggregated balance sheet of euro area investment funds <sup>1)</sup>

(EUR billions; outstanding amounts at end of period; transactions during period)

### 1. Assets

	Total	Deposits and loan claims	Securities other than shares	Shares and other equity (excl. investment fund/money market fund shares)	Investment fund/money market fund shares	Non-financial assets	Other assets (incl. financial derivatives)
	1	2	3	4	5	6	7
Outstanding amounts							
2011 Jan.	6,301.4	381.7	2,355.0	1,984.1	871.8	221.7	487.2
Feb.	6,382.2	390.4	2,372.1	2,012.7	878.4	223.5	505.3
Mar.	6,338.4	387.3	2,354.8	1,973.7	882.7	221.4	518.5
Apr.	6,380.7	391.6	2,357.0	1,992.2	892.0	222.7	525.2
May	6,430.3	393.5	2,403.9	1,991.3	899.0	223.5	519.2
June	6,347.1	392.5	2,389.5	1,959.3	888.1	222.1	495.5
July <sup>(p)</sup>	6,397.2	390.5	2,423.2	1,939.2	890.1	222.6	531.6
Transactions							
2010 Q4	35.9	-11.0	48.2	49.9	16.6	-3.0	-64.8
2011 Q1	110.2	19.4	25.2	14.8	8.5	2.4	40.0
Q2	66.6	5.9	43.4	20.9	13.5	4.0	-21.0

### 2. Liabilities

	Total	Loans and deposits received	Investment fund shares issued				Other liabilities (incl. financial derivatives)
			Total	Held by euro area residents		Held by non-euro area residents	
				Investment funds			
	1	2	3	4	5	6	7
Outstanding amounts							
2011 Jan.	6,301.4	119.2	5,766.2	4,477.8	663.2	1,288.3	416.1
Feb.	6,382.2	124.0	5,823.8	4,519.8	668.1	1,304.0	434.4
Mar.	6,338.4	127.1	5,769.9	4,475.9	668.1	1,294.0	441.4
Apr.	6,380.7	126.0	5,813.2	4,510.1	678.2	1,303.1	441.5
May	6,430.3	126.1	5,859.2	4,533.5	684.3	1,325.8	445.0
June	6,347.1	119.1	5,786.7	4,466.3	675.6	1,320.4	441.4
July <sup>(p)</sup>	6,397.2	119.7	5,809.7	4,464.5	674.8	1,345.2	467.9
Transactions							
2010 Q4	35.9	-11.8	81.1	32.6	15.3	48.6	-33.4
2011 Q1	110.2	12.0	55.5	25.6	4.1	29.9	42.7
Q2	66.6	-4.7	76.2	25.2	11.1	51.1	-5.0

### 3. Investment fund shares issued broken down by investment policy and type of fund

	Total	Funds by investment policy						Funds by type		Memo item: Money market funds
		Bond funds	Equity funds	Mixed funds	Real estate funds	Hedge funds	Other funds	Open-end funds	Closed-end funds	
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2010 Dec.	5,770.2	1,808.8	1,726.2	1,399.4	264.4	111.4	460.0	5,687.9	82.3	1,106.5
2011 Jan.	5,766.2	1,801.4	1,720.5	1,403.5	264.9	111.3	464.7	5,681.6	84.6	1,090.4
Feb.	5,823.8	1,814.2	1,742.1	1,419.1	266.6	112.4	469.4	5,739.1	84.7	1,097.9
Mar.	5,769.9	1,799.7	1,707.8	1,410.4	267.3	112.7	471.9	5,685.4	84.4	1,077.4
Apr.	5,813.2	1,797.9	1,724.4	1,429.2	268.1	113.2	480.4	5,728.9	84.3	1,070.8
May	5,859.2	1,825.3	1,729.0	1,438.3	269.7	114.4	482.5	5,774.9	84.4	1,090.1
June	5,786.7	1,812.4	1,688.8	1,423.8	270.9	112.2	478.6	5,701.1	85.5	1,049.8
July <sup>(p)</sup>	5,809.7	1,836.8	1,670.9	1,426.6	282.3	116.0	477.1	5,723.6	86.1	1,032.6
Transactions										
2011 Jan.	25.3	5.9	9.3	7.7	1.0	0.3	1.0	24.4	0.9	-9.6
Feb.	21.5	10.0	4.1	5.7	0.4	0.7	0.6	21.6	-0.1	8.8
Mar.	8.7	4.3	-6.3	2.5	0.6	0.8	6.8	8.7	0.1	-8.7
Apr.	41.3	9.8	13.7	12.5	0.8	1.0	3.4	41.1	0.2	6.0
May	27.2	9.4	9.6	5.7	-0.2	-1.0	3.6	27.4	-0.3	7.9
June	7.8	2.5	2.1	0.6	2.8	-0.5	0.3	5.8	2.0	-34.7
July <sup>(p)</sup>	24.3	8.2	1.9	0.9	11.3	2.3	-0.3	23.8	0.6	-22.3

Source: ECB.

1) Other than money market funds (which are shown as a memo item in column 10 in Table 3 of this section). For further details, see the General Notes.

**2.9 Securities held by investment funds <sup>1)</sup> broken down by issuer of securities**

(EUR billions; outstanding amounts at end of period; transactions during period)

**1. Securities other than shares**

	Total	Euro area						Rest of the world			
		Total	MFIs	General government	Other financial intermediaries	Insurance corporations and pension funds	Non-financial corporations	EU Member States outside the euro area	United States	Japan	
	1	2	3	4	5	6	7	8	9	10	11
<b>Outstanding amounts</b>											
2010 Q3	2,345.7	1,471.5	385.4	721.8	193.5	6.4	164.3	874.2	242.6	330.9	16.3
2010 Q4	2,369.3	1,432.6	375.5	692.0	193.9	6.1	165.1	936.7	247.0	365.8	16.1
2011 Q1	2,354.8	1,430.3	383.4	675.7	200.1	5.5	165.7	924.5	246.4	354.5	14.1
2011 Q2 <sup>(p)</sup>	2,389.5	1,430.5	385.9	673.9	195.7	5.7	169.2	959.0	247.2	365.9	17.9
<b>Transactions</b>											
2010 Q4	48.2	-7.1	-3.3	-8.2	0.7	-0.2	3.8	55.3	6.4	30.0	-1.9
2011 Q1	25.2	10.7	9.4	-8.3	7.8	0.0	1.9	14.5	1.9	2.4	-1.0
2011 Q2 <sup>(p)</sup>	43.4	-1.5	1.5	-4.3	-1.7	0.5	2.5	43.3	8.7	13.8	3.6

**2. Shares and other equity (other than investment fund and money market fund shares)**

	Total	Euro area						Rest of the world			
		Total	MFIs	General government	Other financial intermediaries	Insurance corporations and pension funds	Non-financial corporations	EU Member States outside the euro area	United States	Japan	
	1	2	3	4	5	6	7	8	9	10	11
<b>Outstanding amounts</b>											
2010 Q3	1,792.3	711.8	80.2	-	36.4	24.2	571.0	1,080.4	153.2	314.7	67.3
2010 Q4	1,987.7	751.2	77.8	-	39.5	25.2	608.7	1,236.5	171.4	355.8	83.8
2011 Q1	1,973.7	782.7	89.2	-	41.7	26.1	625.6	1,191.0	167.2	365.2	71.1
2011 Q2 <sup>(p)</sup>	1,959.3	773.7	83.9	-	41.3	26.2	622.3	1,185.6	166.4	362.4	77.4
<b>Transactions</b>											
2010 Q4	49.9	4.9	4.5	-	1.7	-0.6	-0.7	45.0	5.1	3.4	6.6
2011 Q1	14.8	11.5	5.5	-	2.3	-0.9	4.6	3.3	-0.5	16.0	-3.9
2011 Q2 <sup>(p)</sup>	20.9	-1.0	-1.2	-	1.3	0.4	-1.5	21.9	2.8	3.5	7.2

**3. Investment fund/money market fund shares**

	Total	Euro area						Rest of the world			
		Total	MFIs <sup>2)</sup>	General government	Other financial intermediaries <sup>2)</sup>	Insurance corporations and pension funds	Non-financial corporations	EU Member States outside the euro area	United States	Japan	
	1	2	3	4	5	6	7	8	9	10	11
<b>Outstanding amounts</b>											
2010 Q3	831.1	707.1	77.1	-	630.0	-	-	124.0	21.4	34.8	0.4
2010 Q4	875.3	740.2	76.0	-	664.1	-	-	135.1	23.8	38.6	0.6
2011 Q1	882.7	746.1	78.0	-	668.1	-	-	136.6	22.6	41.7	0.5
2011 Q2 <sup>(p)</sup>	888.1	754.9	79.3	-	675.6	-	-	133.2	22.0	41.9	0.4
<b>Transactions</b>											
2010 Q4	16.6	13.4	-1.9	-	15.3	-	-	3.2	0.5	1.4	0.1
2011 Q1	8.5	6.1	2.1	-	4.1	-	-	2.3	-0.9	3.3	-0.1
2011 Q2 <sup>(p)</sup>	13.5	12.0	0.9	-	11.1	-	-	1.5	0.3	1.1	0.0

Source: ECB.

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

2) Investment fund shares (other than money market fund shares) are issued by other financial intermediaries. Money market fund shares are issued by MFIs.



## 2.10 Aggregated balance sheet of euro area financial vehicle corporations

(EUR billions; outstanding amounts at end of period; transactions during period)

### 1. Assets

	Total	Deposits and loan claims	Securitised loans						Securities other than shares	Other securitised assets	Shares and other equity	Other assets	
			Total	Originated in euro area				Originated outside euro area					
				MFIs	Other financial intermediaries, insurance corporations and pension funds	Non-financial corporations	General government						
													Remaining on the MFI balance sheet <sup>1)</sup>
1	2	3	4	5	6	7	8	9	10	11	12	13	
Outstanding amounts													
2010 Q1	2,290.8	358.3	1,440.7	1,135.4	552.3	137.6	25.0	7.3	135.4	280.4	99.3	43.5	68.6
Q2	2,285.6	363.1	1,437.2	1,131.6	563.7	140.5	24.7	6.4	133.8	278.7	101.3	41.1	64.2
Q3	2,284.8	350.1	1,467.2	1,173.9	576.3	133.8	24.6	6.4	128.6	260.2	100.3	41.4	65.7
Q4	2,350.0	373.4	1,522.1	1,238.2	601.2	125.0	22.7	6.0	130.2	251.6	92.5	41.9	68.6
2011 Q1	2,254.7	352.8	1,482.7	1,194.3	590.4	131.8	23.0	5.9	127.6	240.3	89.0	36.8	53.1
Q2	2,206.0	337.4	1,458.8	1,173.5	581.0	136.0	21.9	5.2	122.1	232.0	89.3	36.4	52.1
Transactions													
2010 Q2	-21.7	1.4	-13.0	-12.5	-	2.4	-0.9	-0.4	-1.6	-2.0	1.0	-3.2	-5.9
Q3	-3.9	-12.2	24.2	33.0	-	-2.1	-0.6	-0.1	-6.1	-16.5	-0.5	0.4	0.7
Q4	44.8	24.5	24.4	30.1	-	-4.7	-2.1	-0.4	1.4	-5.5	-0.9	-0.6	3.0
2011 Q1	-92.2	-23.2	-36.2	-44.2	-	9.1	0.6	0.0	-1.8	-10.1	-2.4	-4.9	-15.3
Q2	-56.7	-12.3	-26.8	-23.1	-	2.5	-0.9	-0.3	-5.0	-9.4	0.0	0.0	-8.2

### 2. Liabilities

	Total	Loans and deposits received	Debt securities issued			Capital and reserves	Other liabilities
			Total	Up to 2 years	Over 2 years		
1	2	3	4	5	6	7	
Outstanding amounts							
2010 Q1	2,290.8	99.1	1,982.6	96.0	1,886.6	48.4	160.7
Q2	2,285.6	107.6	1,960.8	91.1	1,869.7	45.0	172.2
Q3	2,284.8	119.9	1,946.7	86.5	1,860.2	43.2	175.0
Q4	2,350.0	134.3	1,969.9	93.5	1,876.4	42.6	203.2
2011 Q1	2,254.7	133.1	1,886.5	83.9	1,802.6	37.7	197.4
Q2	2,206.0	132.7	1,845.0	83.2	1,761.8	35.5	192.8
Transactions							
2010 Q2	-21.7	6.0	-23.0	-5.1	-17.9	-2.8	-1.9
Q3	-3.9	11.6	-10.3	-4.2	-6.1	-0.1	-5.1
Q4	44.8	15.9	23.9	5.7	18.3	-2.1	7.1
2011 Q1	-92.2	-0.9	-79.0	-9.9	-69.1	-4.5	-7.8
Q2	-56.7	-0.1	-48.6	-5.2	-43.4	-0.8	-7.2

### 3. Holdings of securitised loans originated by euro area MFIs and securities other than shares

	Securitized loans originated by euro area MFIs						Securities other than shares						
	Total	Euro area borrowing sector					Non-euro area borrowing sector	Total	Euro area residents				Non-euro area residents
		Households	Non-financial corporations	Other financial intermediaries	Insurance corporations and pension funds	General government			Total	MFIs	Non-MFIs		
											Financial vehicle corporations		
1	2	3	4	5	6	7	8	9	10	11	12	13	
Outstanding amounts													
2010 Q1	1,135.4	820.3	215.0	20.3	14.8	7.6	57.3	280.4	151.3	47.9	103.5	41.1	129.0
Q2	1,131.6	812.7	216.1	19.6	14.7	7.6	61.0	278.7	149.1	50.5	98.7	44.8	129.6
Q3	1,173.9	828.9	221.4	18.4	15.0	7.0	83.2	260.2	140.6	47.4	93.2	37.4	119.6
Q4	1,238.2	853.2	251.4	17.4	15.2	7.1	94.0	251.6	131.7	45.6	86.1	35.6	119.9
2011 Q1	1,194.3	804.3	250.9	17.1	15.4	7.2	99.4	240.3	125.6	42.4	83.2	36.1	114.7
Q2	1,173.5	784.9	251.6	18.2	15.4	9.8	93.7	232.0	124.7	43.0	81.8	35.2	107.2
Transactions													
2010 Q2	-12.5	-11.9	-3.5	0.0	-0.1	0.0	3.0	-2.0	2.9	-0.2	3.1	3.0	-4.8
Q3	33.0	10.1	1.2	-0.8	0.2	-0.6	22.9	-16.5	-10.0	-2.5	-7.5	-6.9	-6.5
Q4	30.1	16.5	14.0	-1.6	-0.2	0.1	1.4	-5.5	-5.3	-1.1	-4.2	-2.2	-0.2
2011 Q1	-44.2	-52.5	3.4	-0.5	0.0	0.0	5.3	-10.1	-6.0	-3.2	-2.8	-0.3	-4.1
Q2	-23.1	-22.1	0.5	0.6	-0.2	2.6	-4.4	-9.4	-0.5	-0.4	-0.1	-1.1	-8.9

Source: ECB.

1) Loans securitised using euro area financial vehicle corporations which remain on the balance sheet of the relevant MFI - i.e. which have not been derecognised. Whether or not loans are derecognised from the balance sheet of the MFI depends on the relevant accounting rules. For further information, see the General Notes.

**2.11 Aggregated balance sheet of euro area insurance corporations and pension funds**

(EUR billions; outstanding amounts at end of period)

**1. Assets**

	Total	Currency and deposits	Loans	Securities other than shares	Shares and other equity	Investment fund shares	Money market fund shares	Prepayments of insurance premiums and reserves for outstanding claims	Other accounts receivable/payable and financial derivatives	Non-financial assets
	1	2	3	4	5	6	7	8	9	10
2008 Q3	6,266.6	762.9	458.8	2,281.6	932.8	1,187.7	87.5	251.1	149.3	154.8
Q4	6,158.6	800.7	478.6	2,292.9	819.2	1,088.2	93.9	245.7	184.8	154.5
2009 Q1	6,188.2	797.2	493.7	2,361.0	785.7	1,071.9	101.6	244.1	176.2	156.7
Q2	6,330.2	782.8	487.7	2,384.4	819.0	1,200.4	89.7	248.6	162.1	155.4
Q3	6,517.6	784.2	483.4	2,424.9	792.6	1,377.5	86.1	252.0	163.2	153.9
Q4	6,642.6	786.9	477.9	2,462.8	804.4	1,456.8	86.5	256.2	158.1	152.9
2010 Q1	6,864.5	784.5	486.3	2,575.8	815.4	1,534.2	83.5	266.9	169.4	148.5
Q2	6,891.0	785.5	488.9	2,613.5	792.8	1,518.5	79.9	271.6	190.2	150.2
Q3	7,060.0	783.2	498.0	2,698.8	807.5	1,559.8	75.4	272.2	215.1	150.0
Q4	6,977.5	774.1	500.9	2,642.2	823.1	1,579.3	65.4	269.0	171.9	151.5
2011 Q1	7,048.4	775.1	499.7	2,676.4	826.8	1,602.1	63.5	277.8	172.8	154.2
Q2	7,085.5	778.2	505.1	2,688.3	834.2	1,607.6	66.7	275.4	175.8	154.3

**2. Holdings of securities other than shares**

	Total	Issued by euro area residents					Issued by non-euro area residents	
		Total	MFIs	General government	Other financial intermediaries	Insurance corporations and pension funds		Non-financial corporations
	1	2	3	4	5	6	7	8
2008 Q3	2,281.6	1,851.3	517.9	975.2	215.2	9.1	134.0	430.3
Q4	2,292.9	1,874.6	505.9	1,013.9	207.0	11.4	136.4	418.3
2009 Q1	2,361.0	1,939.4	531.1	1,040.5	218.3	13.5	136.1	421.6
Q2	2,384.4	1,987.6	541.7	1,060.7	231.2	15.0	139.0	396.8
Q3	2,424.9	2,021.6	552.6	1,086.6	229.4	15.1	137.8	403.2
Q4	2,462.8	2,053.6	543.7	1,114.3	239.4	16.7	139.5	409.2
2010 Q1	2,575.8	2,157.9	578.5	1,184.6	231.8	16.2	146.9	417.9
Q2	2,613.5	2,190.3	581.7	1,196.7	244.4	16.6	150.9	423.1
Q3	2,698.8	2,271.6	593.4	1,242.2	264.1	19.5	152.4	427.2
Q4	2,642.2	2,218.7	594.3	1,215.0	236.2	17.7	155.5	423.5
2011 Q1	2,676.4	2,260.3	617.2	1,208.7	262.0	19.0	153.5	416.1
Q2	2,688.3	2,263.6	636.9	1,227.6	223.5	16.0	159.6	424.7

**3. Liabilities and net worth**

	Liabilities								Net worth	
	Total	Loans received	Securities other than shares	Shares and other equity	Insurance technical reserves					Other accounts receivable/payable and financial derivatives
					Total	Net equity of households in life insurance reserves	Net equity of households in pension fund reserves	Prepayments of insurance premiums and reserves for outstanding claims		
	1	2	3	4	5	6	7	8	9	10
2008 Q3	6,177.2	331.4	29.7	475.0	5,190.2	2,938.1	1,410.5	841.6	151.0	89.4
Q4	6,123.7	348.8	31.7	422.1	5,178.6	2,909.2	1,445.8	823.6	142.6	34.9
2009 Q1	6,129.8	347.8	31.8	378.6	5,228.6	2,927.5	1,460.2	841.0	142.9	58.4
Q2	6,215.9	321.6	33.1	395.1	5,325.5	3,005.5	1,477.4	842.6	140.6	114.3
Q3	6,363.7	303.8	36.1	440.0	5,438.6	3,094.8	1,501.7	842.2	145.1	153.9
Q4	6,441.3	284.6	39.5	436.2	5,527.8	3,168.6	1,519.8	839.3	153.3	201.3
2010 Q1	6,620.1	293.6	39.5	454.0	5,675.5	3,255.5	1,560.2	859.8	157.5	244.4
Q2	6,655.6	298.9	40.9	425.1	5,730.6	3,280.6	1,589.1	860.9	160.0	235.4
Q3	6,765.4	315.0	39.8	431.6	5,823.8	3,337.6	1,629.5	856.6	155.2	294.6
Q4	6,802.9	283.9	42.3	439.0	5,887.7	3,380.3	1,651.3	856.0	150.1	174.6
2011 Q1	6,907.4	304.2	40.1	455.6	5,957.3	3,412.8	1,664.5	880.0	150.2	140.9
Q2	6,934.8	304.4	42.7	449.3	5,987.6	3,438.6	1,670.7	878.3	150.8	150.7

Source: ECB.



## EURO AREA ACCOUNTS

### 3.1 Integrated economic and financial accounts by institutional sector

(EUR billions)

Uses	Euro area	Households	Non-financial corporations	Financial corporations	General government	Rest of the world
<b>2011 Q1</b>						
<b>External account</b>						
Exports of goods and services						548
<i>Trade balance</i> <sup>1)</sup>						11
<b>Generation of income account</b>						
Gross value added (basic prices)						
Taxes less subsidies on products						
Gross domestic product (market prices)						
Compensation of employees	1,079	107	685	53	234	
Other taxes less subsidies on production	22	5	10	4	4	
Consumption of fixed capital	360	100	200	11	48	
<i>Net operating surplus and mixed income</i> <sup>1)</sup>	587	280	272	36	0	
<b>Allocation of primary income account</b>						
Net operating surplus and mixed income						6
Compensation of employees						
Taxes less subsidies on production						
Property income	648	35	258	289	66	92
Interest	362	33	63	200	66	50
Other property income	286	2	195	89	0	43
<i>Net national income</i> <sup>1)</sup>	1,929	1,566	98	49	215	
<b>Secondary distribution of income account</b>						
Net national income						
Current taxes on income, wealth, etc.	236	208	22	6	0	2
Social contributions	417	417				1
Social benefits other than social transfers in kind	451	1	17	34	398	1
Other current transfers	198	69	24	46	58	8
Net non-life insurance premiums	44	33	10	1	1	1
Non-life insurance claims	44			44		0
Other	110	36	15	1	58	6
<i>Net disposable income</i> <sup>1)</sup>	1,891	1,408	62	58	363	
<b>Use of income account</b>						
Net disposable income						
Final consumption expenditure	1,823	1,338			484	
Individual consumption expenditure	1,636	1,338			298	
Collective consumption expenditure	187				187	
Adjustment for the change in the net equity of households in pension fund reserves	14	0	0	14	0	0
<i>Net saving/current external account</i> <sup>1)</sup>	68	84	62	44	-122	49
<b>Capital account</b>						
Net saving/current external account						
Gross capital formation	477	137	286	10	45	
Gross fixed capital formation	433	132	247	10	45	
Changes in inventories and acquisitions less disposals of valuables	44	4	39	0	0	
Consumption of fixed capital						
Acquisitions less disposals of non-produced non-financial assets	0	-2	2	0	0	0
Capital transfers	30	7	0	2	21	5
Capital taxes	6	5	1	0	0	0
Other capital transfers	24	2	-1	2	21	5
<i>Net lending (+)/net borrowing (-) (from capital account)</i> <sup>1)</sup>	-46	54	-10	43	-134	46
Statistical discrepancy	0	7	-7	0	0	0

Sources: ECB and Eurostat.

1) For details of the calculation of the balancing items, see the Technical Notes.

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

(EUR billions)

Resources	Euro area	Households	Non-financial corporations	Financial corporations	General government	Rest of the world
2011 Q1						
<b>External account</b>						
Imports of goods and services						558
<i>Trade balance</i>						
<b>Generation of income account</b>						
Gross value added (basic prices)	2,048	492	1,167	104	286	
Taxes less subsidies on products	240					
Gross domestic product (market prices) <sup>2)</sup>	2,289					
Compensation of employees						
Other taxes less subsidies on production						
Consumption of fixed capital						
<i>Net operating surplus and mixed income</i>						
<b>Allocation of primary income account</b>						
Net operating surplus and mixed income	587	280	272	36	0	
Compensation of employees	1,082	1,082				3
Taxes less subsidies on production	261				261	1
Property income	647	240	85	302	20	93
Interest	356	54	38	256	7	56
Other property income	291	185	46	47	13	38
<i>Net national income</i>						
<b>Secondary distribution of income account</b>						
Net national income	1,929	1,566	98	49	215	
Current taxes on income, wealth, etc.	237				237	1
Social contributions	417	1	17	48	350	1
Social benefits other than social transfers in kind	449	449				3
Other current transfers	161	87	11	46	18	45
Net non-life insurance premiums	44			44		1
Non-life insurance claims	43	35	8	1	0	1
Other	74	53	3	0	18	42
<i>Net disposable income</i>						
<b>Use of income account</b>						
Net disposable income	1,891	1,408	62	58	363	
Final consumption expenditure						
Individual consumption expenditure						
Collective consumption expenditure						
Adjustment for the change in the net equity of households in pension fund reserves	14	14				0
<i>Net saving/current external account</i>						
<b>Capital account</b>						
Net saving/current external account	68	84	62	44	-122	49
Gross capital formation						
Gross fixed capital formation						
Changes in inventories and acquisitions less disposals of valuables						
Consumption of fixed capital	360	100	200	11	48	
Acquisitions less disposals of non-produced non-financial assets						
Capital transfers	33	13	14	1	5	2
Capital taxes	6				6	0
Other capital transfers	26	13	14	1	-1	2
<i>Net lending (+)/net borrowing (-) (from capital account)</i>						
Statistical discrepancy						

Sources: ECB and Eurostat.

2) Gross domestic product is equal to the gross value added of all domestic sectors plus net taxes (i.e. taxes less subsidies) on products.

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

(EUR billions)

Assets	Euro area	Households	Non-financial corporations	MFIs	Other financial inter- mediaries	Insurance corporations and pension funds	General govern- ment	Rest of the world
2011 Q1								
<b>Opening balance sheet, financial assets</b>								
Total financial assets		18,857	16,632	32,325	14,887	6,652	3,748	16,637
Monetary gold and special drawing rights (SDRs)				420				
Currency and deposits	6,631	1,902	9,223	2,337	800	709	3,778	
Short-term debt securities	40	81	555	322	40	43	647	
Long-term debt securities	1,365	244	6,048	2,431	2,577	492	3,647	
Loans	77	2,955	13,276	3,511	487	521	1,801	
<i>of which: Long-term</i>	59	1,672	10,206	2,454	352	440	.	
Shares and other equity	4,560	7,775	1,910	6,001	2,366	1,340	6,083	
Quoted shares	796	1,487	419	2,082	426	267	.	
Unquoted shares and other equity	2,229	5,929	1,180	2,963	412	884	.	
Mutual fund shares	1,535	359	310	956	1,527	188	.	
Insurance technical reserves	5,702	174	3	0	233	4	233	
Other accounts receivable and financial derivatives	482	3,501	889	284	150	639	449	
<i>Net financial worth</i>								
<b>Financial account, transactions in financial assets</b>								
Total transactions in financial assets		78	45	-188	112	101	31	192
Monetary gold and SDRs				-1				1
Currency and deposits	3	-27	-230	-42	12	42	-69	
Short-term debt securities	19	3	-44	10	3	-9	60	
Long-term debt securities	24	18	35	49	54	-15	18	
Loans	1	17	95	17	2	4	39	
<i>of which: Long-term</i>	1	1	44	0	2	19	.	
Shares and other equity	-27	35	-8	63	19	-7	130	
Quoted shares	-1	-12	-9	5	-2	-5	.	
Unquoted shares and other equity	-14	53	2	55	3	-2	.	
Mutual fund shares	-12	-6	-1	3	19	0	.	
Insurance technical reserves	62	5	0	0	9	0	-5	
Other accounts receivable and financial derivatives	-4	-6	-35	15	3	15	18	
<i>Changes in net financial worth due to transactions</i>								
<b>Other changes account, financial assets</b>								
Total other changes in financial assets		-30	155	-84	-100	-35	3	-228
Monetary gold and SDRs				-17				-108
Currency and deposits	7	-6	-38	5	-3	0	-21	
Short-term debt securities	-1	-1	3	0	0	0	-25	
Long-term debt securities	-15	0	-38	-44	-32	-4	24	
Loans	-3	-15	-29	-39	-1	0	.	
<i>of which: Long-term</i>	-3	-2	-21	-19	0	0	.	
Shares and other equity	34	161	31	-19	3	9	-101	
Quoted shares	19	96	4	-12	11	6	.	
Unquoted shares and other equity	21	71	33	3	-4	1	.	
Mutual fund shares	-7	-7	-6	-10	-4	2	.	
Insurance technical reserves	-36	0	0	0	-2	0	3	
Other accounts receivable and financial derivatives	-16	16	3	-4	-1	-2	0	
<i>Other changes in net financial worth</i>								
<b>Closing balance sheet, financial assets</b>								
Total financial assets		18,905	16,832	32,053	14,898	6,718	3,783	16,600
Monetary gold and SDRs				403				3,601
Currency and deposits	6,641	1,868	8,955	2,300	809	752	685	
Short-term debt securities	59	83	515	332	43	34	647	
Long-term debt securities	1,374	262	6,046	2,436	2,599	473	3,641	
Loans	75	2,957	13,342	3,489	489	526	1,864	
<i>of which: Long-term</i>	56	1,672	10,229	2,434	353	459	.	
Shares and other equity	4,567	7,971	1,933	6,045	2,388	1,341	6,112	
Quoted shares	814	1,571	414	2,076	435	268	.	
Unquoted shares and other equity	2,236	6,053	1,215	3,020	411	883	.	
Mutual fund shares	1,516	347	304	949	1,541	190	.	
Insurance technical reserves	5,729	179	3	0	239	4	231	
Other accounts receivable and financial derivatives	461	3,512	857	295	152	653	467	
<i>Net financial worth</i>								

Source: ECB.

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

Liabilities	Euro area	Households	Non-financial corporations	MFI's	Other financial intermediaries	Insurance corporations and pension funds	General government	Rest of the world
2011 Q1								
<b>Opening balance sheet, liabilities</b>								
Total liabilities		6,657	26,373	31,446	14,277	6,778	8,990	14,796
Monetary gold and special drawing rights (SDRs)								
Currency and deposits			30	22,423	26	0	260	2,641
Short-term debt securities			70	633	77	0	694	254
Long-term debt securities			805	4,514	2,736	33	5,801	2,917
Loans		6,077	8,414		3,164	267	1,722	2,985
<i>of which: Long-term</i>		5,718	5,969		1,657	116	1,361	.
Shares and other equity		7	13,091	2,700	8,206	422	7	5,600
Quoted shares			3,814	456	225	124	0	.
Unquoted shares and other equity		7	9,276	1,138	2,412	297	7	.
Mutual fund shares				1,107	5,569			.
Insurance technical reserves		34	335	66	1	5,910	1	
Other accounts payable and financial derivatives		539	3,628	1,110	67	147	504	399
<i>Net financial worth <sup>1)</sup></i>	-1,420	12,199	-9,741	879	610	-126	-5,241	
<b>Financial account, transactions in liabilities</b>								
Total transactions in liabilities		17	62	-181	66	96	165	146
Monetary gold and SDRs								
Currency and deposits			1	-306	-2	0	-8	3
Short-term debt securities			6	31	0	0	-12	17
Long-term debt securities			7	56	-34	0	157	-3
Loans		10	43		24	8	32	58
<i>of which: Long-term</i>		17	11		23	1	35	.
Shares and other equity		0	55	-1	88	1	0	62
Quoted shares			10	4	8	0	0	.
Unquoted shares and other equity		0	45	5	25	1	0	.
Mutual fund shares				-9	55			.
Insurance technical reserves		0	0	1	0	71	0	
Other accounts payable and financial derivatives		6	-49	38	-11	16	-5	10
<i>Changes in net financial worth due to transactions <sup>1)</sup></i>	-46	62	-17	-7	45	5	-134	46
<b>Other changes account, liabilities</b>								
Total other changes in liabilities		-2	195	-131	-31	-41	-74	-218
Monetary gold and SDRs								
Currency and deposits			0	-85	0	0	0	-57
Short-term debt securities			0	-10	-1	0	0	-7
Long-term debt securities			-36	-60	20	-2	-72	-8
Loans		-3	-7		4	-3	-1	-54
<i>of which: Long-term</i>		-7	-1		8	1	-2	.
Shares and other equity		0	265	21	-80	16	0	-105
Quoted shares			99	30	17	7	0	.
Unquoted shares and other equity		0	167	11	-36	9	0	.
Mutual fund shares				-20	-62			.
Insurance technical reserves		0	0	0	0	-35	0	
Other accounts payable and financial derivatives		2	-28	4	26	-17	-1	12
<i>Other changes in net financial worth <sup>1)</sup></i>	-7	-28	-40	47	-69	6	77	-10
<b>Closing balance sheet, liabilities</b>								
Total liabilities		6,672	26,630	31,134	14,312	6,833	9,080	14,725
Monetary gold and SDRs								
Currency and deposits			30	22,032	24	0	252	2,587
Short-term debt securities			76	653	76	0	682	264
Long-term debt securities			775	4,509	2,723	31	5,886	2,906
Loans		6,084	8,451		3,193	272	1,753	2,989
<i>of which: Long-term</i>		5,729	5,979		1,687	118	1,395	.
Shares and other equity		7	13,411	2,721	8,214	439	7	5,557
Quoted shares			3,923	490	251	131	0	.
Unquoted shares and other equity		7	9,487	1,154	2,401	307	7	.
Mutual fund shares				1,077	5,562			.
Insurance technical reserves		35	336	67	1	5,946	1	
Other accounts payable and financial derivatives		547	3,551	1,152	82	145	499	421
<i>Net financial worth <sup>1)</sup></i>	-1,473	12,233	-9,798	919	586	-115	-5,298	

Source: ECB.

## 3.2 Euro area non-financial accounts

(EUR billions; four-quarter cumulated flows)

Uses	2007	2008	2009	2009 Q2- 2010 Q1	2009 Q3- 2010 Q2	2009 Q4- 2010 Q3	2010 Q1- 2010 Q4	2010 Q2- 2011 Q1
<b>Generation of income account</b>								
Gross value added (basic prices)								
Taxes less subsidies on products								
Gross domestic product (market prices)								
Compensation of employees	4,271	4,451	4,434	4,436	4,453	4,468	4,488	4,514
Other taxes less subsidies on production	137	132	114	111	112	118	115	118
Consumption of fixed capital	1,325	1,388	1,404	1,404	1,408	1,415	1,423	1,431
<i>Net operating surplus and mixed income</i> <sup>1)</sup>	2,333	2,309	2,102	2,128	2,161	2,180	2,206	2,240
<b>Allocation of primary income account</b>								
Net operating surplus and mixed income								
Compensation of employees								
Taxes less subsidies on production								
Property income	3,688	3,964	2,977	2,840	2,761	2,751	2,793	2,833
Interest	2,115	2,360	1,618	1,497	1,433	1,407	1,406	1,420
Other property income	1,573	1,604	1,359	1,342	1,328	1,344	1,387	1,412
<i>Net national income</i> <sup>1)</sup>	7,735	7,795	7,518	7,558	7,628	7,688	7,740	7,814
<b>Secondary distribution of income account</b>								
Net national income								
Current taxes on income, wealth, etc.	1,113	1,123	1,014	1,013	1,022	1,028	1,037	1,050
Social contributions	1,597	1,668	1,675	1,678	1,683	1,688	1,699	1,709
Social benefits other than social transfers in kind	1,602	1,672	1,789	1,809	1,821	1,829	1,837	1,842
Other current transfers	736	768	769	773	770	771	764	765
Net non-life insurance premiums	183	187	182	182	180	179	178	177
Non-life insurance claims	184	189	183	183	181	180	179	178
Other	369	392	403	408	409	412	407	410
<i>Net disposable income</i> <sup>1)</sup>	7,641	7,692	7,409	7,445	7,515	7,570	7,626	7,698
<b>Use of income account</b>								
Net disposable income								
Final consumption expenditure	6,914	7,166	7,170	7,206	7,245	7,291	7,336	7,384
Individual consumption expenditure	6,198	6,414	6,385	6,419	6,457	6,502	6,547	6,593
Collective consumption expenditure	716	752	785	786	789	789	789	791
Adjustment for the change in the net equity of households in pension fund reserves	64	70	65	63	61	60	58	58
<i>Net saving</i> <sup>1)</sup>	727	526	239	239	269	279	289	314
<b>Capital account</b>								
Net saving								
Gross capital formation	2,033	2,044	1,712	1,695	1,734	1,762	1,788	1,839
Gross fixed capital formation	1,985	2,011	1,767	1,744	1,751	1,761	1,773	1,800
Changes in inventories and acquisitions less disposals of valuables	48	33	-55	-49	-17	1	15	39
Consumption of fixed capital								
Acquisitions less disposals of non-produced non-financial assets	-1	1	1	2	1	2	1	1
Capital transfers	154	155	187	195	188	200	208	194
Capital taxes	24	24	34	34	30	29	25	25
Other capital transfers	130	131	153	161	158	170	183	169
<i>Net lending (+)/net borrowing (-) (from capital account)</i> <sup>1)</sup>	35	-123	-61	-42	-47	-58	-65	-83

Sources: ECB and Eurostat.

1) For details of the calculation of the balancing items, see the Technical Notes.



## 3.2 Euro area non-financial accounts (cont'd)

(EUR billions; four-quarter cumulated flows)

Resources	2007	2008	2009	2009 Q2- 2010 Q1	2009 Q3- 2010 Q2	2009 Q4- 2010 Q3	2010 Q1- 2010 Q4	2010 Q2- 2011 Q1
<b>Generation of income account</b>								
Gross value added (basic prices)	8,066	8,279	8,053	8,079	8,133	8,180	8,233	8,303
Taxes less subsidies on products	963	948	893	895	910	930	939	954
Gross domestic product (market prices) <sup>2)</sup>	9,029	9,228	8,946	8,974	9,044	9,110	9,172	9,257
Compensation of employees								
Other taxes less subsidies on production								
Consumption of fixed capital								
<i>Net operating surplus and mixed income</i>								
<b>Allocation of primary income account</b>								
Net operating surplus and mixed income	2,333	2,309	2,102	2,128	2,161	2,180	2,206	2,240
Compensation of employees	4,279	4,457	4,440	4,442	4,459	4,474	4,495	4,520
Taxes less subsidies on production	1,107	1,087	1,024	1,024	1,037	1,061	1,067	1,085
Property income	3,705	3,906	2,929	2,804	2,731	2,723	2,764	2,802
Interest	2,084	2,309	1,569	1,454	1,395	1,369	1,365	1,383
Other property income	1,620	1,597	1,360	1,350	1,337	1,355	1,399	1,419
<i>Net national income</i>								
<b>Secondary distribution of income account</b>								
Net national income	7,735	7,795	7,518	7,558	7,628	7,688	7,740	7,814
Current taxes on income, wealth, etc.	1,121	1,132	1,020	1,019	1,026	1,033	1,042	1,056
Social contributions	1,596	1,666	1,674	1,678	1,683	1,688	1,698	1,709
Social benefits other than social transfers in kind	1,595	1,664	1,783	1,803	1,815	1,823	1,831	1,835
Other current transfers	642	666	662	661	657	655	650	650
Net non-life insurance premiums	184	189	183	183	181	180	179	178
Non-life insurance claims	182	186	180	180	178	177	175	175
Other	276	292	298	298	299	298	296	298
<i>Net disposable income</i>								
<b>Use of income account</b>								
Net disposable income	7,641	7,692	7,409	7,445	7,515	7,570	7,626	7,698
Final consumption expenditure								
Individual consumption expenditure								
Collective consumption expenditure								
Adjustment for the change in the net equity of households in pension fund reserves	64	70	65	63	61	60	58	58
<i>Net saving</i>								
<b>Capital account</b>								
Net saving	727	526	239	239	269	279	289	314
Gross capital formation								
Gross fixed capital formation								
Changes in inventories and acquisitions less disposals of valuables								
Consumption of fixed capital	1,325	1,388	1,404	1,404	1,408	1,415	1,423	1,431
Acquisitions less disposals of non-produced non-financial assets								
Capital transfers	169	164	196	206	199	212	220	206
Capital taxes	24	24	34	34	30	29	25	25
Other capital transfers	145	140	162	172	169	182	195	180
<i>Net lending (+)/net borrowing (-) (from capital account)</i>								

Sources: ECB and Eurostat.

2) Gross domestic product is equal to the gross value added of all domestic sectors plus net taxes (i.e. taxes less subsidies) on products.

### 3.3 Households

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

	2007	2008	2009	2009 Q2- 2010 Q1	2009 Q3- 2010 Q2	2009 Q4- 2010 Q3	2010 Q1- 2010 Q4	2010 Q2- 2011 Q1
<b>Income, saving and changes in net worth</b>								
Compensation of employees (+)	4,279	4,457	4,440	4,442	4,459	4,474	4,495	4,520
Gross operating surplus and mixed income (+)	1,487	1,530	1,474	1,470	1,471	1,476	1,481	1,494
Interest receivable (+)	315	347	242	224	215	211	210	214
Interest payable (-)	218	247	146	134	129	127	127	129
Other property income receivable (+)	805	817	730	721	715	720	728	741
Other property income payable (-)	10	10	10	10	10	10	10	10
Current taxes on income and wealth (-)	852	892	860	858	859	863	867	876
Net social contributions (-)	1,593	1,663	1,670	1,673	1,678	1,683	1,694	1,704
Net social benefits (+)	1,590	1,659	1,778	1,798	1,810	1,818	1,826	1,830
Net current transfers receivable (+)	62	69	74	73	72	71	69	69
<b>= Gross disposable income</b>	<b>5,865</b>	<b>6,067</b>	<b>6,051</b>	<b>6,054</b>	<b>6,066</b>	<b>6,088</b>	<b>6,112</b>	<b>6,148</b>
Final consumption expenditure (-)	5,105	5,269	5,187	5,212	5,242	5,282	5,325	5,367
Changes in net worth in pension funds (+)	63	69	65	63	60	59	58	58
<b>= Gross saving</b>	<b>823</b>	<b>868</b>	<b>929</b>	<b>905</b>	<b>885</b>	<b>865</b>	<b>845</b>	<b>839</b>
Consumption of fixed capital (-)	367	384	385	386	387	389	391	394
Net capital transfers receivable (+)	14	2	14	11	10	9	14	13
Other changes in net worth (+)	1,476	-2,235	-454	690	759	954	1,019	657
<b>= Changes in net worth</b>	<b>1,945</b>	<b>-1,749</b>	<b>103</b>	<b>1,220</b>	<b>1,266</b>	<b>1,440</b>	<b>1,486</b>	<b>1,115</b>
<b>Investment, financing and changes in net worth</b>								
Net acquisition of non-financial assets (+)	643	637	547	537	540	544	548	556
Consumption of fixed capital (-)	367	384	385	386	387	389	391	394
Main items of financial investment (+)								
Short-term assets	420	457	-16	-89	-77	-24	55	118
Currency and deposits	351	438	120	63	63	89	120	142
Money market fund shares	37	-6	-43	-74	-73	-84	-50	-37
Debt securities <sup>1)</sup>	32	26	-93	-78	-67	-29	-15	14
Long-term assets	173	17	536	629	601	503	420	331
Deposits	-31	-29	90	118	110	88	59	44
Debt securities	84	21	36	27	35	-1	4	42
Shares and other equity	-89	-105	184	233	212	177	135	45
Quoted and unquoted shares and other equity	-4	30	111	130	133	100	96	44
Mutual fund shares	-85	-135	73	104	80	77	39	1
Life insurance and pension fund reserves	209	130	225	251	244	239	223	201
Main items of financing (-)								
Loans	384	236	118	135	144	142	150	147
<i>of which: From euro area MFIs</i>	283	83	65	108	135	134	147	169
Other changes in assets (+)								
Non-financial assets	1,445	-890	-742	-71	478	810	872	666
Financial assets	70	-1,383	280	739	275	127	133	-26
Shares and other equity	29	-1,131	81	427	77	5	91	60
Life insurance and pension fund reserves	8	-244	176	266	172	115	78	-8
Remaining net flows (+)	-54	33	1	-4	-21	11	-2	11
<b>= Changes in net worth</b>	<b>1,945</b>	<b>-1,749</b>	<b>103</b>	<b>1,220</b>	<b>1,266</b>	<b>1,440</b>	<b>1,486</b>	<b>1,115</b>
<b>Balance sheet</b>								
Non-financial assets (+)	27,402	26,765	26,185	26,237	26,690	27,042	27,214	27,064
Financial assets (+)								
Short-term assets	5,263	5,804	5,778	5,739	5,781	5,768	5,840	5,881
Currency and deposits	4,851	5,322	5,474	5,446	5,506	5,498	5,598	5,598
Money market fund shares	280	315	239	232	216	203	190	208
Debt securities <sup>1)</sup>	131	167	65	61	59	66	52	75
Long-term assets	12,151	10,735	11,580	11,864	11,724	11,973	12,130	12,154
Deposits	965	913	974	1,003	1,014	1,020	1,033	1,043
Debt securities	1,275	1,302	1,386	1,392	1,373	1,367	1,353	1,358
Shares and other equity	5,125	3,848	4,145	4,267	4,103	4,253	4,370	4,359
Quoted and unquoted shares and other equity	3,686	2,806	2,917	2,987	2,847	2,952	3,025	3,051
Mutual fund shares	1,438	1,042	1,228	1,280	1,256	1,301	1,345	1,308
Life insurance and pension fund reserves	4,786	4,672	5,074	5,203	5,235	5,333	5,375	5,395
Remaining net assets (+)	327	322	298	268	288	310	306	281
Liabilities (-)								
Loans	5,569	5,801	5,914	5,925	5,993	6,019	6,077	6,084
<i>of which: From euro area MFIs</i>	4,831	4,914	4,968	4,986	5,140	5,159	5,213	5,256
<b>= Net worth</b>	<b>39,574</b>	<b>37,825</b>	<b>37,928</b>	<b>38,182</b>	<b>38,491</b>	<b>39,073</b>	<b>39,413</b>	<b>39,297</b>

Sources: ECB and Eurostat.

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

## 3.4 Non-financial corporations

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

	2007	2008	2009	2009 Q2- 2010 Q1	2009 Q3- 2010 Q2	2009 Q4- 2010 Q3	2010 Q1- 2010 Q4	2010 Q2- 2011 Q1
<b>Income and saving</b>								
Gross value added (basic prices) (+)	4,656	4,771	4,528	4,545	4,589	4,626	4,672	4,726
Compensation of employees (-)	2,726	2,847	2,793	2,790	2,801	2,813	2,832	2,855
Other taxes less subsidies on production (-)	80	77	63	59	59	64	60	61
= <b>Gross operating surplus (+)</b>	1,849	1,847	1,672	1,696	1,730	1,749	1,780	1,810
Consumption of fixed capital (-)	741	778	789	788	789	792	796	799
= <b>Net operating surplus (+)</b>	1,108	1,069	883	908	941	957	984	1,011
Property income receivable (+)	620	630	491	484	477	480	503	506
Interest receivable	215	232	159	150	145	142	140	142
Other property income receivable	405	398	332	335	332	339	363	363
Interest and rents payable (-)	363	415	293	274	263	258	259	261
= <b>Net entrepreneurial income (+)</b>	1,365	1,285	1,080	1,119	1,155	1,180	1,229	1,255
Distributed income (-)	1,003	1,042	921	910	905	918	956	975
Taxes on income and wealth payable (-)	211	198	126	126	132	133	137	141
Social contributions receivable (+)	63	67	69	69	68	68	68	69
Social benefits payable (-)	62	65	67	67	68	68	68	68
Other net transfers (-)	48	53	53	53	54	54	54	54
= <b>Net saving</b>	105	-7	-17	32	65	75	81	85
<b>Investment, financing and saving</b>								
Net acquisition of non-financial assets (+)	379	341	79	78	126	151	177	216
Gross fixed capital formation (+)	1,072	1,090	923	914	930	940	955	976
Consumption of fixed capital (-)	741	778	789	788	789	792	796	799
Net acquisition of other non-financial assets (+)	48	29	-55	-48	-15	3	18	40
Main items of financial investment (+)								
Short-term assets	167	72	94	91	22	22	17	9
Currency and deposits	153	15	87	97	57	51	68	61
Money market fund shares	-20	33	41	4	-22	-28	-41	-39
Debt securities <sup>1)</sup>	34	24	-35	-10	-14	-1	-9	-13
Long-term assets	725	693	254	213	243	319	394	383
Deposits	-13	36	10	-3	-6	-4	-19	-10
Debt securities	51	-29	14	0	4	-1	1	14
Shares and other equity	414	342	121	95	51	85	182	189
Other (mainly intercompany loans)	273	344	108	122	193	240	230	191
Remaining net assets (+)	173	-34	-16	85	88	97	29	34
Main items of financing (-)								
Debt	901	694	94	113	127	230	214	227
of which: Loans from euro area MFIs	537	395	-116	-99	-94	-38	-41	-19
of which: Debt securities	33	49	84	103	83	69	63	39
Shares and other equity	370	309	250	240	204	205	245	254
Quoted shares	58	6	67	67	47	37	31	31
Unquoted shares and other equity	312	303	183	173	157	168	214	223
Net capital transfers receivable (-)	69	74	81	80	80	79	75	74
= <b>Net saving</b>	105	-7	-17	32	65	75	81	85
<b>Financial balance sheet</b>								
Financial assets								
Short-term assets	1,801	1,891	1,973	1,934	1,916	1,940	1,989	1,954
Currency and deposits	1,507	1,538	1,632	1,601	1,608	1,625	1,693	1,666
Money market fund shares	176	206	228	215	198	196	188	181
Debt securities <sup>1)</sup>	118	148	113	118	110	119	107	107
Long-term assets	10,703	9,111	10,120	10,406	10,287	10,637	10,968	11,187
Deposits	208	239	223	224	233	243	208	202
Debt securities	231	197	208	217	224	224	218	238
Shares and other equity	7,989	6,090	6,981	7,183	6,948	7,249	7,587	7,790
Other (mainly intercompany loans)	2,276	2,585	2,708	2,782	2,882	2,921	2,955	2,957
Remaining net assets	294	292	233	248	199	207	77	170
Liabilities								
Debt	8,609	9,298	9,433	9,497	9,584	9,625	9,625	9,638
of which: Loans from euro area MFIs	4,472	4,871	4,707	4,711	4,727	4,705	4,676	4,696
of which: Debt securities	649	705	817	866	875	891	875	851
Shares and other equity	14,356	11,056	12,329	12,531	11,979	12,594	13,091	13,411
Quoted shares	5,061	2,935	3,517	3,590	3,316	3,542	3,814	3,923
Unquoted shares and other equity	9,295	8,121	8,812	8,941	8,663	9,052	9,276	9,487

Sources: ECB and Eurostat.

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

### 3.5 Insurance corporations and pension funds

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

	2007	2008	2009	2009 Q2- 2010 Q1	2009 Q3- 2010 Q2	2009 Q4- 2010 Q3	2010 Q1- 2010 Q4	2010 Q2- 2011 Q1
<b>Financial account, financial transactions</b>								
<b>Main items of financial investment (+)</b>								
Short-term assets	22	79	-53	-65	-18	-2	-11	-21
Currency and deposits	7	57	-33	-21	2	6	-9	-9
Money market fund shares	4	15	-1	-11	0	-2	-6	-12
Debt securities <sup>1)</sup>	11	7	-19	-33	-21	-6	4	0
Long-term assets	230	113	304	329	277	266	227	205
Deposits	47	-9	19	1	-6	-6	-8	5
Debt securities	108	50	112	125	145	163	153	131
Loans	-15	37	11	12	12	14	31	27
Quoted shares	-1	3	-68	-74	-71	4	2	0
Unquoted shares and other equity	22	14	-7	-1	0	2	8	10
Mutual fund shares	69	18	239	266	197	88	40	32
Remaining net assets (+)	6	21	6	25	16	20	16	-6
<b>Main items of financing (-)</b>								
Debt securities	3	4	5	3	5	2	0	0
Loans	-2	24	-20	-11	-4	15	11	6
Shares and other equity	4	5	0	-1	2	2	2	2
Insurance technical reserves	245	124	232	275	266	259	241	210
Net equity of households in life insurance and pension fund reserves	212	121	227	262	255	249	227	200
Prepayments of insurance premiums and reserves for outstanding claims	34	4	4	12	11	10	14	10
<b>= Changes in net financial worth due to transactions</b>	<b>9</b>	<b>56</b>	<b>40</b>	<b>24</b>	<b>6</b>	<b>5</b>	<b>-23</b>	<b>-39</b>
<b>Other changes account</b>								
<b>Other changes in financial assets (+)</b>								
Shares and other equity	-13	-506	187	287	120	72	77	26
Other net assets	-35	56	36	68	86	77	-19	-52
<b>Other changes in liabilities (-)</b>								
Shares and other equity	-20	-174	11	73	22	-16	-5	-5
Insurance technical reserves	30	-263	190	272	182	122	91	3
Net equity of households in life insurance and pension fund reserves	18	-251	185	271	179	123	94	6
Prepayments of insurance premiums and reserves for outstanding claims	12	-12	5	2	3	-1	-3	-2
<b>= Other changes in net financial worth</b>	<b>-58</b>	<b>-12</b>	<b>22</b>	<b>9</b>	<b>3</b>	<b>42</b>	<b>-28</b>	<b>-25</b>
<b>Financial balance sheet</b>								
<b>Financial assets (+)</b>								
Short-term assets	318	399	340	354	370	363	335	335
Currency and deposits	163	224	195	196	206	203	190	186
Money market fund shares	91	104	95	100	104	102	90	92
Debt securities <sup>1)</sup>	63	71	50	58	59	58	55	57
Long-term assets	5,467	5,089	5,648	5,822	5,806	5,941	5,934	5,992
Deposits	594	599	616	615	610	615	610	623
Debt securities	2,203	2,252	2,427	2,514	2,546	2,620	2,561	2,584
Loans	411	446	456	462	467	470	487	489
Quoted shares	684	397	409	426	401	423	426	435
Unquoted shares and other equity	415	419	411	408	405	399	412	411
Mutual fund shares	1,161	975	1,330	1,398	1,376	1,414	1,438	1,450
Remaining net assets (+)	175	241	223	243	256	274	236	245
<b>Liabilities (-)</b>								
Debt securities	19	23	30	31	31	30	33	31
Loans	244	273	253	265	271	284	267	272
Shares and other equity	583	415	425	442	411	416	422	439
Insurance technical reserves	5,295	5,156	5,578	5,732	5,774	5,873	5,910	5,946
Net equity of households in life insurance and pension fund reserves	4,472	4,342	4,754	4,891	4,930	5,032	5,074	5,097
Prepayments of insurance premiums and reserves for outstanding claims	822	814	824	841	844	841	835	849
<b>= Net financial wealth</b>	<b>-182</b>	<b>-138</b>	<b>-76</b>	<b>-51</b>	<b>-55</b>	<b>-25</b>	<b>-126</b>	<b>-115</b>

Source: ECB.

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



## FINANCIAL MARKETS

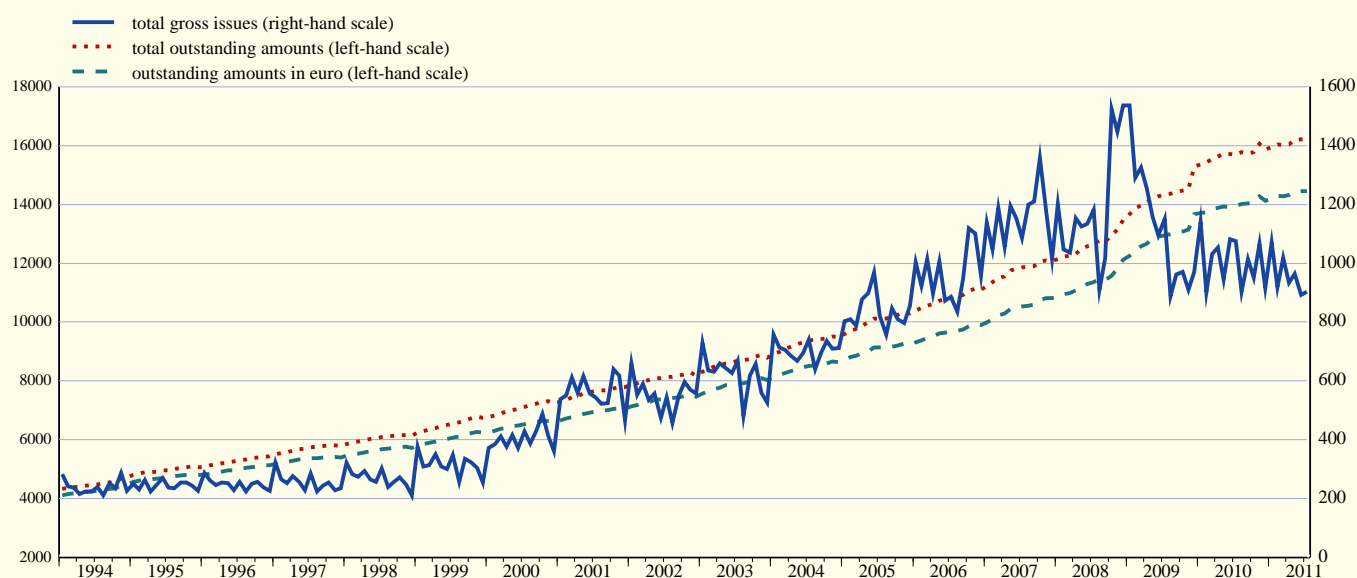
### 4.1 Securities other than shares by original maturity, residency of the issuer and currency

(EUR billions and period growth rates; seasonally adjusted; transactions during the month and end-of-period outstanding amounts; nominal values)

	Total in euro <sup>1)</sup>			By euro area residents								
	Outstanding amounts	Gross issues	Net issues	In euro			In all currencies					
				Outstanding amounts	Gross issues	Net issues	Outstanding amounts	Gross issues	Net issues	Annual growth rates	Seasonally adjusted <sup>2)</sup>	
1	2	3	4	5	6	7	8	9	10	Net issues 11	6-month growth rates 12	
<b>Total</b>												
2010 July	16,189.6	1,009.8	23.0	13,952.9	970.2	48.1	15,683.4	1,076.0	15.2	3.2	42.4	2.5
Aug.	16,254.3	841.1	65.0	14,014.8	800.7	62.2	15,789.4	903.1	82.1	3.6	112.1	4.1
Sep.	16,272.8	985.1	18.8	14,032.7	908.6	18.1	15,743.8	1,013.6	4.7	3.1	56.5	3.4
Oct.	16,280.3	888.0	10.1	14,070.2	843.2	40.1	15,782.0	950.3	52.7	3.2	39.5	3.1
Nov.	16,459.9	993.0	180.9	14,268.8	954.0	199.8	16,065.7	1,067.0	239.0	4.3	160.4	5.5
Dec.	16,297.1	876.7	-161.4	14,123.3	844.0	-144.1	15,874.7	916.6	-183.1	3.6	-63.1	4.5
2011 Jan.	16,376.6	1,005.0	78.7	14,197.9	954.4	73.9	15,947.7	1,070.1	91.6	3.7	77.7	4.9
Feb.	16,476.5	866.4	100.8	14,289.6	813.6	92.7	16,039.5	919.2	97.7	4.1	47.5	4.0
Mar.	16,477.5	978.2	1.3	14,283.3	911.3	-6.1	16,017.8	1,019.2	2.8	3.4	12.3	3.4
Apr.	16,498.3	888.9	21.5	14,330.9	850.2	48.3	16,044.4	934.7	51.6	3.2	25.7	3.3
May	16,609.2	920.9	109.2	14,432.4	865.6	99.8	16,200.5	963.2	125.9	3.6	49.4	1.9
June	16,645.5	847.9	36.3	14,459.7	796.1	27.3	16,219.2	893.0	24.3	3.9	50.1	3.3
July	.	.	.	14,451.6	821.1	-7.5	16,239.6	902.9	-1.6	3.8	24.1	2.6
<b>Long-term</b>												
2010 July	14,686.5	261.6	35.6	12,549.0	241.3	36.4	14,082.4	268.8	14.5	4.7	51.2	3.5
Aug.	14,717.8	140.8	32.1	12,580.1	127.4	32.0	14,148.0	152.8	43.5	4.7	83.8	4.5
Sep.	14,721.6	268.6	4.1	12,594.2	228.4	14.4	14,105.4	258.8	4.4	4.1	50.3	3.5
Oct.	14,758.9	222.2	37.5	12,643.6	195.4	49.4	14,161.2	233.3	65.7	4.0	66.5	3.7
Nov.	14,903.2	338.6	145.4	12,802.9	322.0	160.3	14,393.1	360.5	191.4	4.8	115.9	5.5
Dec.	14,860.7	186.9	-39.9	12,778.2	179.8	-22.0	14,335.9	193.9	-50.0	4.7	10.6	5.5
2011 Jan.	14,927.9	308.9	68.6	12,828.9	277.9	52.2	14,383.6	320.0	67.8	4.8	97.5	6.1
Feb.	15,033.7	283.8	106.1	12,924.4	252.8	95.9	14,471.2	284.8	92.1	5.0	42.7	5.5
Mar.	15,046.6	304.9	13.4	12,944.0	268.8	20.0	14,466.2	303.0	16.9	4.3	22.4	5.1
Apr.	15,100.4	302.6	54.1	13,009.3	278.4	65.7	14,513.4	308.9	68.7	4.3	49.3	4.8
May	15,186.9	276.9	85.3	13,088.7	245.8	78.2	14,629.4	268.7	90.5	4.5	25.0	3.5
June	15,243.9	255.1	56.5	13,143.4	224.0	54.2	14,684.0	252.8	58.0	4.7	48.3	4.0
July	.	.	.	13,135.0	191.8	-9.5	14,698.6	213.4	-7.0	4.6	31.7	3.1

### C15 Total outstanding amounts and gross issues of securities other than shares issued by euro area residents

(EUR billions)



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

- 1) Total euro-denominated securities other than shares issued by euro area residents and non-euro area residents.
- 2) For details of the calculation of the growth rates, see the Technical Notes. The six-month growth rates have been annualised.

## 4.2 Securities other than shares issued by euro area residents, by sector of the issuer and instrument type

(EUR billions ; transactions during the month and end-of-period outstanding amounts; nominal values)

### 1. Outstanding amounts and gross issues

	Outstanding amounts						Gross issues <sup>1)</sup>					
	Total	MFIs (including Eurosystem)	Non-MFI corporations		General government		Total	MFIs (including Eurosystem)	Non-MFI corporations		General government	
			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
1	2	3	4	5	6	7	8	9	10	11	12	
	Total											
2009	15,286	5,371	3,225	803	5,418	469	1,126	734	68	80	215	29
2010	15,875	5,246	3,289	854	5,932	554	1,007	625	79	69	205	29
2010 Q3	15,744	5,419	3,213	847	5,735	529	998	631	77	65	196	29
Q4	15,875	5,246	3,289	854	5,932	554	978	566	110	64	206	32
2011 Q1	16,018	5,347	3,255	827	6,024	564	1,003	592	89	58	220	43
Q2	16,219	5,363	3,257	836	6,166	597	930	551	85	60	192	43
2011 Apr.	16,044	5,337	3,254	827	6,059	568	935	520	99	54	216	46
May	16,201	5,394	3,259	844	6,119	585	963	592	86	67	177	42
June	16,219	5,363	3,257	836	6,166	597	893	541	69	59	182	42
July	16,240	5,371	3,270	850	6,161	588	903	533	80	62	194	34
	Short-term											
2009	1,638	733	89	71	714	31	876	635	25	63	133	20
2010	1,539	572	122	67	724	53	758	534	34	57	115	19
2010 Q3	1,638	743	94	72	689	41	771	545	31	55	118	21
Q4	1,539	572	122	67	724	53	715	484	38	52	117	24
2011 Q1	1,552	618	113	71	700	51	700	462	41	49	118	30
Q2	1,535	582	117	72	702	62	654	440	31	51	102	31
2011 Apr.	1,531	604	117	67	694	50	626	415	29	45	105	32
May	1,571	620	120	77	698	56	695	479	33	55	98	31
June	1,535	582	117	72	702	62	640	426	31	52	102	29
July	1,541	578	117	79	711	55	690	466	28	52	119	25
	Long-term <sup>2)</sup>											
2009	13,649	4,638	3,136	732	4,704	438	251	99	44	17	82	9
2010	14,336	4,674	3,167	787	5,207	500	248	91	46	12	90	10
2010 Q3	14,105	4,676	3,119	775	5,046	488	227	86	46	9	78	8
Q4	14,336	4,674	3,167	787	5,207	500	263	83	72	11	89	8
2011 Q1	14,466	4,729	3,143	757	5,324	513	303	130	48	10	102	13
Q2	14,684	4,781	3,140	764	5,465	535	277	111	54	9	90	12
2011 Apr.	14,513	4,733	3,137	759	5,365	518	309	105	70	9	111	14
May	14,629	4,773	3,139	768	5,421	529	269	113	53	12	79	11
June	14,684	4,781	3,140	764	5,465	535	253	115	38	7	80	12
July	14,699	4,793	3,153	771	5,450	533	213	67	52	10	75	9
	<i>of which: Long-term fixed rate</i>											
2009	8,800	2,564	1,026	598	4,261	351	172	60	18	16	72	6
2010	9,469	2,634	1,089	671	4,697	378	156	50	13	10	77	6
2010 Q3	9,305	2,627	1,062	657	4,590	369	141	48	12	8	68	5
Q4	9,469	2,634	1,089	671	4,697	378	143	43	19	11	65	6
2011 Q1	9,628	2,700	1,096	656	4,787	388	195	78	12	8	87	9
Q2	9,853	2,742	1,129	666	4,912	404	173	62	20	8	74	9
2011 Apr.	9,651	2,705	1,094	660	4,801	392	184	68	18	9	80	9
May	9,782	2,730	1,120	668	4,862	402	180	57	31	11	71	10
June	9,853	2,742	1,129	666	4,912	404	157	60	13	5	72	7
July	9,852	2,744	1,144	673	4,891	401	124	30	11	10	68	5
	<i>of which: Long-term variable rate</i>											
2009	4,409	1,786	2,043	124	371	85	62	28	25	1	6	2
2010	4,394	1,760	1,973	108	431	121	78	34	29	1	10	4
2010 Q3	4,357	1,768	1,979	109	382	117	73	30	33	1	6	3
Q4	4,394	1,760	1,973	108	431	121	102	33	44	1	22	2
2011 Q1	4,343	1,740	1,928	95	458	123	87	42	29	1	11	4
Q2	4,327	1,765	1,865	92	477	129	83	43	22	1	13	4
2011 Apr.	4,356	1,742	1,914	94	482	124	102	31	40	0	26	4
May	4,328	1,758	1,877	93	474	125	67	50	8	1	6	2
June	4,327	1,765	1,865	92	477	129	79	48	18	2	6	5
July	4,333	1,774	1,855	91	482	131	70	30	30	1	6	3

Source: ECB.

1) Monthly data on gross issues refer to transactions during the month. For the purposes of comparison, quarterly and annual data refer to the respective monthly averages.

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

## 4.2 Securities other than shares issued by euro area residents, by sector of the issuer and instrument type

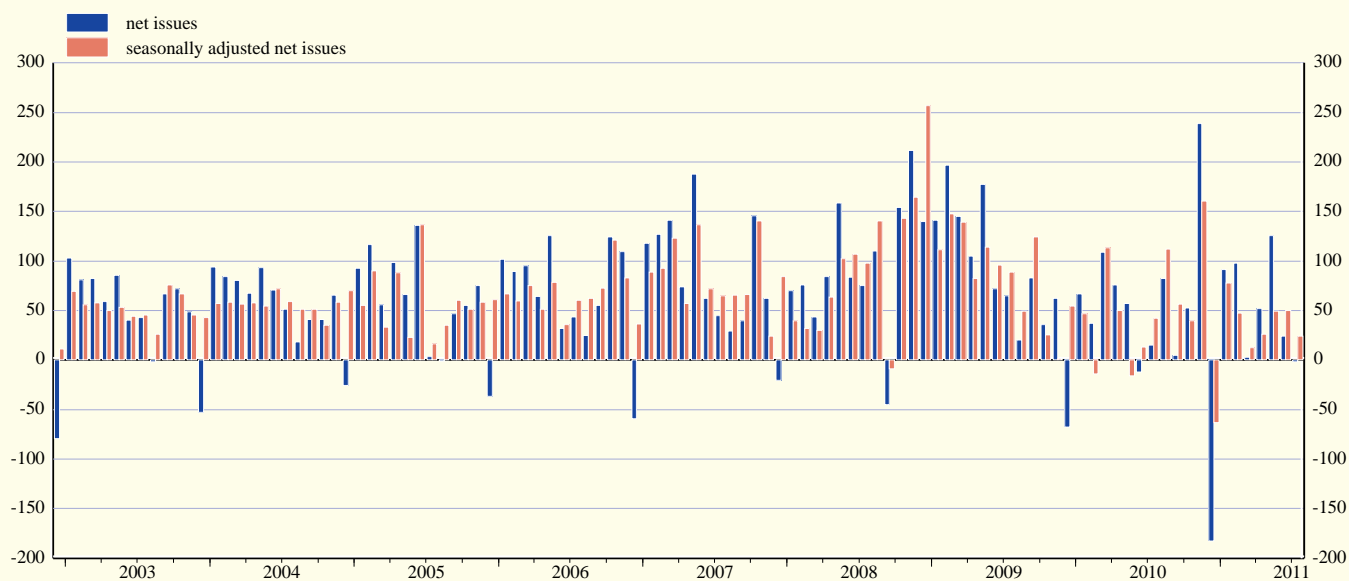
(EUR billions unless otherwise indicated; transactions during the period; nominal values)

### 2. Net issues

	Non-seasonally adjusted <sup>1)</sup>						Seasonally adjusted <sup>1)</sup>					
	Total	MFIs (including Eurosystem)	Non-MFI corporations		General government		Total	MFIs (including Eurosystem)	Non-MFI corporations		General government	
			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
1	2	3	4	5	6	7	8	9	10	11	12	
	Total											
2009	86.3	10.2	18.3	8.7	44.9	4.2	86.2	10.1	18.3	8.4	45.2	4.2
2010	45.3	-1.2	4.4	5.1	31.6	5.3	45.1	-1.4	4.6	5.1	31.8	5.1
2010 Q3	34.0	2.7	1.6	2.6	22.4	4.6	70.3	10.1	18.1	4.5	31.1	6.5
Q4	36.2	-19.9	24.2	1.3	22.9	7.7	45.6	-4.5	-2.7	4.2	44.0	4.6
2011 Q1	64.0	42.9	-19.8	4.2	32.5	4.3	45.8	23.9	-3.4	2.7	16.7	5.9
Q2	67.3	4.8	0.9	3.0	47.5	11.0	41.7	0.4	-4.2	0.0	34.2	11.4
2011 Apr.	51.6	3.1	3.2	2.0	37.7	5.6	25.7	-5.4	0.8	-2.7	28.5	4.5
May	125.9	39.2	0.8	14.0	56.8	15.1	49.4	10.2	-15.4	7.6	32.4	14.6
June	24.3	-27.7	-1.3	-7.1	47.9	12.4	50.1	-3.5	2.0	-5.0	41.5	15.1
July	-1.6	-3.2	10.1	8.4	-7.1	-9.8	24.1	-4.8	7.7	5.3	26.8	-10.9
	Long-term											
2009	87.0	14.9	21.5	12.8	33.0	4.8	87.1	15.1	21.4	12.8	33.0	4.8
2010	53.9	1.8	1.7	5.5	41.3	3.6	54.2	1.9	1.9	5.5	41.4	3.6
2010 Q3	20.8	-1.4	1.9	3.1	16.7	0.6	61.8	6.4	17.2	4.6	31.2	2.4
Q4	69.0	-5.3	14.7	3.0	53.1	3.6	64.3	8.2	-10.3	4.4	58.8	3.3
2011 Q1	58.9	27.3	-16.0	2.3	40.5	4.9	54.2	16.9	-1.0	2.5	31.2	4.6
Q2	72.4	16.6	-0.6	2.5	46.7	7.3	40.9	5.4	-4.9	-0.5	35.1	5.8
2011 Apr.	68.7	14.9	-1.1	5.5	43.2	6.2	49.3	4.8	-1.1	2.7	38.8	4.0
May	90.5	26.3	-2.7	4.4	53.0	9.5	25.0	3.9	-15.7	-0.6	28.3	9.1
June	58.0	8.5	1.8	-2.5	44.0	6.2	48.3	7.6	2.0	-3.7	38.1	4.3
July	-7.0	0.8	10.2	1.3	-16.4	-2.9	31.7	0.1	6.4	1.3	23.4	0.5

### CI6 Net issues of securities other than shares: seasonally adjusted and non-seasonally adjusted

(EUR billions; transactions during the month; nominal values)



Source: ECB.

1) Monthly data on net issues refer to transactions during the month. For the purposes of comparison, quarterly and annual data refer to the respective monthly averages.



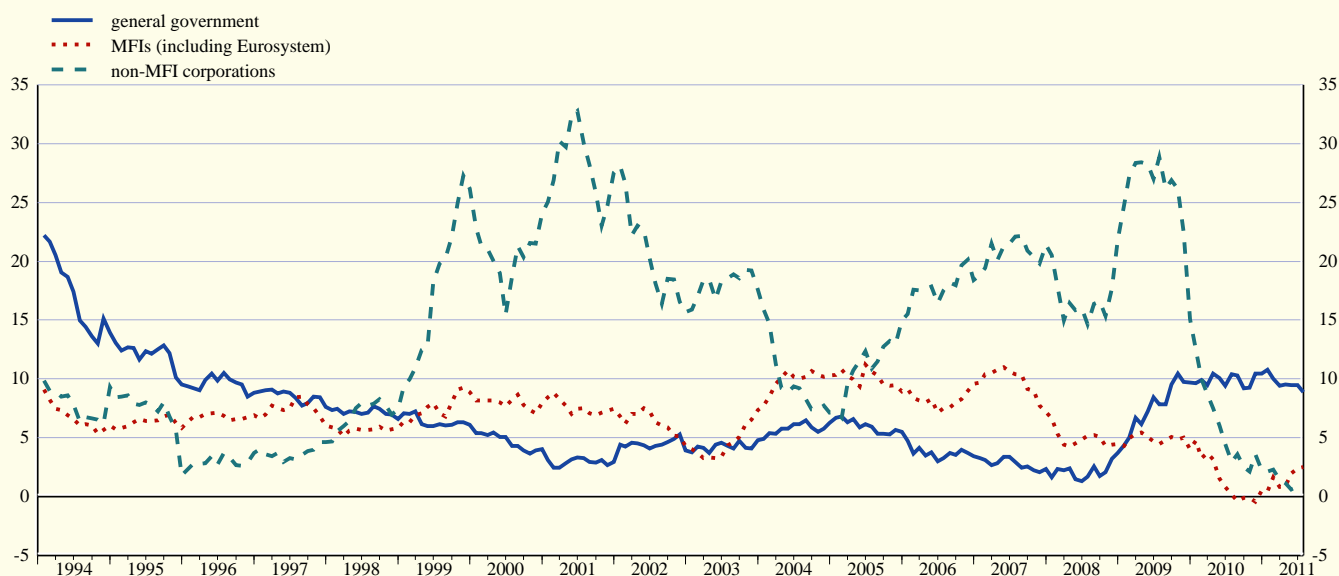
### 4.3 Growth rates of securities other than shares issued by euro area residents <sup>1)</sup>

(percentage changes)

	Annual growth rates (non-seasonally adjusted)						6-month seasonally adjusted growth rates					
	Total	MFIs (including Eurosystem)	Non-MFI corporations		General government		Total	MFIs (including Eurosystem)	Non-MFI corporations		General government	
			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
1	2	3	4	5	6	7	8	9	10	11	12	
Total												
2010 July	3.2	-1.0	0.3	10.4	7.6	10.9	2.5	-2.2	-0.3	8.1	6.9	15.9
Aug.	3.6	-0.4	1.4	10.5	7.5	10.9	4.1	0.7	3.4	5.4	6.8	14.5
Sep.	3.1	-0.4	0.7	8.9	6.5	12.1	3.4	-0.6	3.8	4.3	5.6	16.9
Oct.	3.2	0.0	0.3	8.7	6.4	11.8	3.1	-1.9	3.2	4.1	6.8	17.0
Nov.	4.3	0.1	2.5	8.6	8.1	12.8	5.5	0.5	4.7	4.6	9.7	19.2
Dec.	3.6	-0.3	1.6	7.6	7.0	13.2	4.5	0.6	2.9	6.4	8.0	13.3
2011 Jan.	3.7	0.0	1.7	7.2	7.1	13.4	4.9	2.3	3.7	6.3	7.3	10.9
Feb.	4.1	1.6	2.3	5.5	6.7	11.9	4.0	2.5	1.2	5.5	6.4	9.4
Mar.	3.4	0.7	1.3	4.7	5.9	14.5	3.4	2.2	-1.1	5.0	6.3	12.1
Apr.	3.2	0.4	1.2	3.3	6.0	14.6	3.3	2.9	-0.8	2.6	5.3	12.3
May	3.6	1.7	0.4	4.1	6.1	17.4	1.9	3.0	-3.8	3.7	2.7	15.8
June	3.9	1.7	0.7	4.1	6.5	16.1	3.3	2.8	-1.4	2.0	5.2	19.9
July	3.8	1.8	0.9	4.7	6.2	13.3	2.6	1.1	-1.7	3.2	5.1	15.9
Long-term												
2010 July	4.7	0.2	0.5	12.9	10.3	11.4	3.5	-2.8	-0.4	9.1	11.1	9.3
Aug.	4.7	-0.4	1.2	13.1	10.2	11.2	4.5	-0.7	2.6	7.1	10.1	8.9
Sep.	4.1	-0.1	0.4	11.4	8.9	12.0	3.5	-1.5	2.9	5.9	7.9	8.7
Oct.	4.0	-0.1	0.1	10.7	9.0	11.4	3.7	-1.6	2.2	5.9	9.0	10.2
Nov.	4.8	-0.5	2.2	9.8	10.4	11.2	5.5	0.4	4.0	7.2	10.4	13.4
Dec.	4.7	0.5	0.6	9.0	10.5	9.4	5.5	1.9	1.3	7.2	11.2	7.2
2011 Jan.	4.8	0.4	0.7	8.2	11.0	8.6	6.1	3.7	1.7	7.3	10.9	7.9
Feb.	5.0	1.6	1.2	6.6	10.1	8.8	5.5	4.1	-0.1	6.1	10.0	8.9
Mar.	4.3	0.8	0.4	5.8	9.4	9.3	5.1	3.2	-2.1	5.6	11.0	9.8
Apr.	4.3	0.9	0.2	5.1	9.5	9.7	4.8	3.4	-1.7	4.1	10.0	9.1
May	4.5	2.0	-0.5	5.1	9.1	12.8	3.5	3.6	-4.7	3.0	7.9	12.0
June	4.7	2.4	0.0	4.3	9.4	10.1	4.0	2.9	-1.1	1.6	7.8	12.9
July	4.6	2.5	0.1	4.7	8.7	10.5	3.1	1.3	-1.5	2.1	6.6	13.2

### C17 Annual growth rates of long-term debt securities, by sector of the issuer, in all currencies combined

(annual percentage changes)



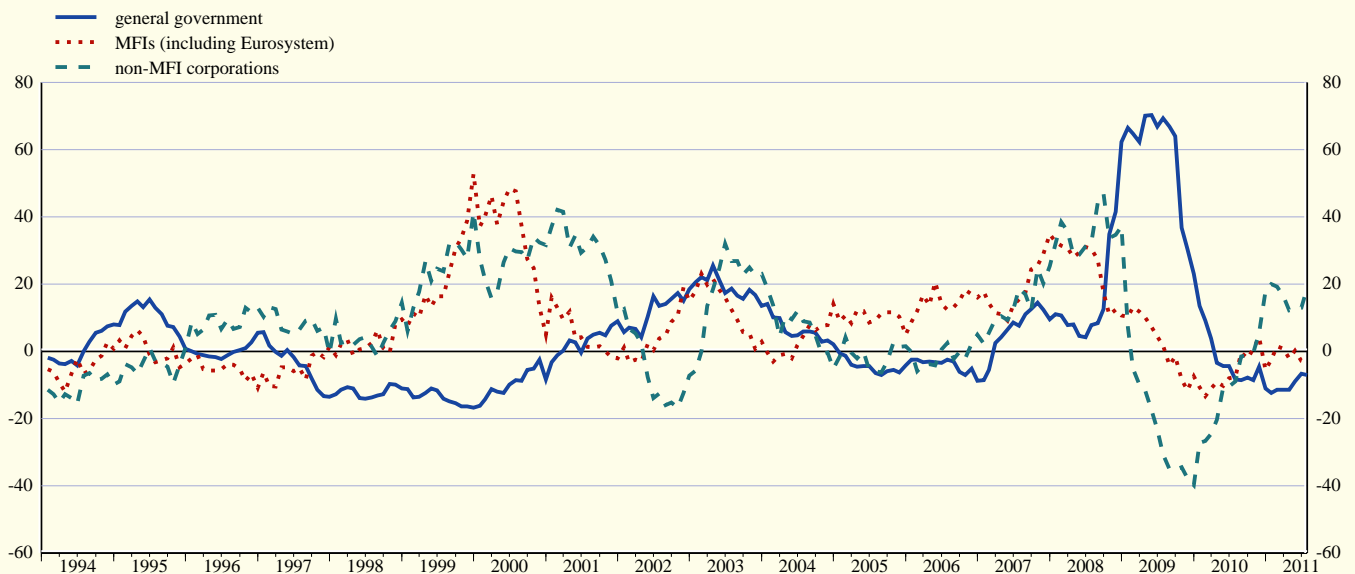
Source: ECB.

1) For details of the calculation of the growth rates, see the Technical Notes. The six-month growth rates have been annualised.

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

	Long-term fixed rate						Long-term variable rate					
	Total	MFIs (including Eurosystem)	Non-MFI corporations		General government		Total	MFIs (including Eurosystem)	Non-MFI corporations		General government	
			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government			Financial corporations other than MFIs	Non-financial corporations	Central government	Other general government
13	14	15	16	17	18	19	20	21	22	23	24	
In all currencies combined												
2009	9.5	7.2	17.2	25.3	8.0	5.4	12.2	1.6	36.7	-1.8	-0.3	22.2
2010	8.8	5.8	6.4	19.8	9.9	8.9	-0.5	-3.9	0.7	-1.4	6.4	27.5
2010 Q3	7.6	3.2	3.3	16.3	10.2	7.5	-1.5	-3.9	-1.5	-2.0	4.5	29.1
Q4	7.0	2.8	3.2	12.4	9.8	7.4	-0.2	-3.3	-0.8	-1.0	12.2	25.7
2011 Q1	6.9	3.3	3.2	9.2	9.7	5.9	0.5	-1.8	-1.8	-1.2	19.0	19.9
Q2	6.5	4.6	3.7	6.4	8.2	8.5	-0.2	-2.1	-4.2	-1.2	23.6	18.4
2011 Feb.	6.8	4.2	3.1	8.4	9.2	6.0	1.1	-1.3	-1.3	-2.5	20.9	19.0
Mar.	6.5	3.9	3.1	7.3	8.8	6.6	-0.3	-3.2	-2.7	-1.0	20.7	18.9
Apr.	6.1	3.8	2.8	6.2	8.1	7.1	0.1	-2.6	-3.2	-1.4	25.2	19.0
May	6.8	5.0	4.7	6.6	8.0	10.5	-0.5	-1.4	-5.3	-1.0	22.2	20.9
June	7.0	5.9	4.4	5.3	8.3	9.5	-0.3	-1.1	-5.3	-1.6	25.7	12.3
July	6.8	6.1	4.4	5.5	7.7	10.0	-1.0	-1.3	-6.4	-1.6	24.4	12.7
In euro												
2009	10.1	9.1	20.4	23.7	8.2	4.4	14.6	3.7	39.2	-2.3	-0.4	21.4
2010	9.1	5.6	7.5	20.1	10.0	8.4	-0.3	-3.3	0.5	-1.8	5.9	26.1
2010 Q3	8.0	2.8	4.4	16.6	10.3	7.4	-1.3	-3.2	-1.8	-2.8	4.1	28.4
Q4	7.2	1.6	4.3	12.8	10.0	6.8	0.1	-2.4	-1.2	-1.5	12.3	26.5
2011 Q1	7.0	2.2	3.4	9.5	9.9	4.8	1.0	-0.1	-2.6	-1.7	19.1	21.0
Q2	6.7	3.7	4.0	6.4	8.5	7.9	0.5	-0.6	-4.2	-2.3	23.5	18.1
2011 Feb.	6.9	3.1	3.3	8.7	9.4	4.9	1.7	0.7	-2.0	-2.8	21.0	20.0
Mar.	6.6	3.1	2.9	7.5	9.0	5.2	0.2	-1.5	-3.5	-2.3	20.7	19.2
Apr.	6.2	3.0	3.0	6.0	8.4	6.3	0.9	-1.2	-3.2	-2.7	25.3	18.9
May	6.9	4.2	5.3	6.5	8.3	10.3	0.4	0.1	-5.1	-2.2	22.2	21.0
June	7.1	4.9	4.8	6.0	8.5	9.1	0.5	0.1	-5.0	-2.0	25.5	10.6
July	6.9	5.3	4.7	6.2	7.9	9.5	-0.7	-0.2	-7.2	-3.0	24.3	10.7

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



Source: ECB.

<sup>1)</sup> Annual percentage changes for monthly data refer to the end of the month, whereas those for quarterly and yearly data refer to the annual change in the period average. See the Technical Notes for details.

#### 4.4 Quoted shares issued by euro area residents <sup>1)</sup>

(EUR billions, unless otherwise indicated; market values)

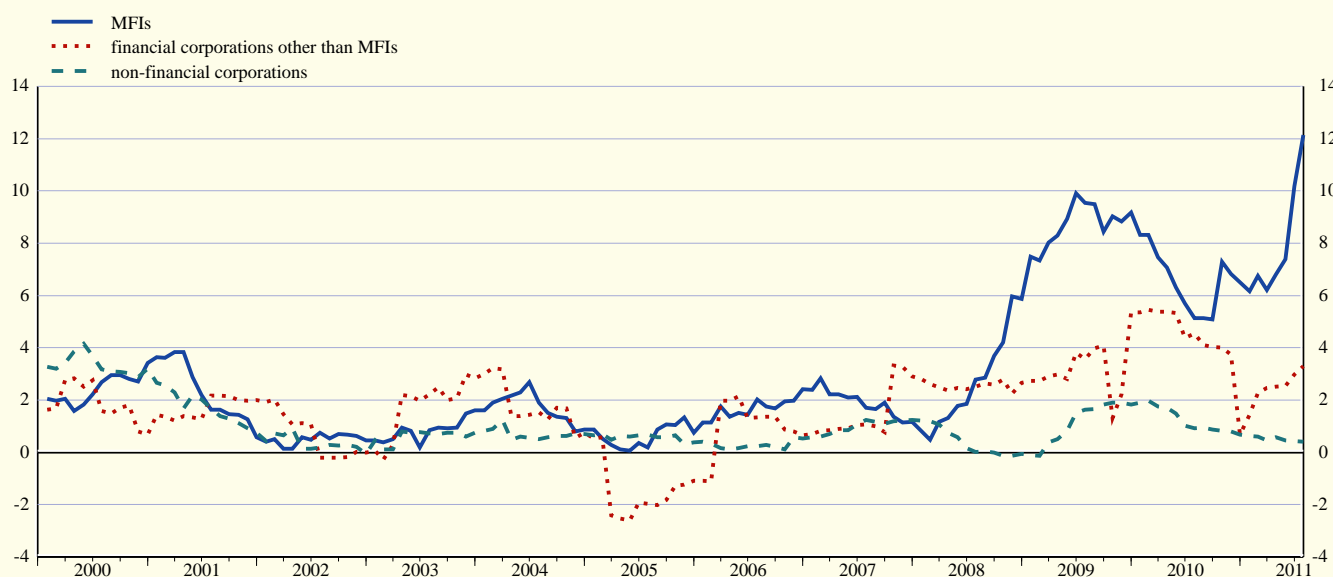
##### 1. Outstanding amounts and annual growth rates

(outstanding amounts as at end of period)

	Total			MFIs		Financial corporations other than MFIs		Non-financial corporations	
	Total	Index: Dec. 2008 = 100	Annual growth rates (%)	Total	Annual growth rates (%)	Total	Annual growth rates (%)	Total	Annual growth rates (%)
	1	2	3	4	5	6	7	8	9
2009 July	3,842.8	102.0	2.7	505.7	9.6	302.5	3.6	3,034.6	1.6
Aug.	4,041.3	102.0	2.7	568.4	9.5	323.1	4.0	3,149.8	1.6
Sep.	4,210.4	102.1	2.8	588.4	8.4	353.6	4.1	3,268.3	1.8
Oct.	4,065.1	102.3	2.7	563.3	9.0	328.3	1.3	3,173.5	1.9
Nov.	4,079.4	102.6	2.7	563.8	8.8	319.9	2.2	3,195.7	1.9
Dec.	4,411.1	103.0	3.0	566.0	9.2	350.9	5.4	3,494.2	1.8
2010 Jan.	4,243.3	103.1	2.9	516.7	8.3	340.7	5.4	3,385.9	1.9
Feb.	4,162.0	103.2	3.0	499.3	8.3	339.2	5.4	3,323.5	2.0
Mar.	4,474.9	103.4	2.8	543.6	7.5	365.2	5.4	3,566.0	1.8
Apr.	4,409.6	103.4	2.7	508.4	7.1	345.7	5.4	3,555.5	1.7
May	4,093.9	103.5	2.4	445.9	6.3	322.7	5.3	3,325.4	1.5
June	4,055.1	103.7	1.9	446.4	5.7	315.5	4.4	3,293.2	1.0
July	4,256.6	103.7	1.7	519.8	5.1	338.0	4.5	3,398.8	0.9
Aug.	4,121.7	103.7	1.7	479.3	5.1	314.4	4.1	3,328.0	0.9
Sep.	4,345.8	103.8	1.6	487.0	5.1	326.6	4.0	3,532.1	0.9
Oct.	4,531.5	104.2	1.8	514.4	7.3	333.5	4.0	3,683.6	0.8
Nov.	4,409.7	104.3	1.7	437.8	6.8	312.5	3.7	3,659.4	0.8
Dec.	4,593.9	104.3	1.3	458.4	6.5	331.2	0.7	3,804.3	0.7
2011 Jan.	4,757.8	104.4	1.3	514.3	6.2	363.3	1.4	3,880.2	0.6
Feb.	4,846.3	104.6	1.4	535.0	6.8	378.9	2.3	3,932.4	0.6
Mar.	4,767.8	104.7	1.2	491.7	6.2	363.2	2.5	3,913.0	0.5
Apr.	4,910.5	104.9	1.4	497.5	6.8	371.5	2.5	4,041.5	0.6
May	4,796.3	104.9	1.3	475.9	7.4	356.2	2.5	3,964.2	0.4
June	4,741.1	105.3	1.6	475.4	10.2	350.5	3.0	3,915.2	0.4
July	4,523.1	105.6	1.8	458.8	12.2	325.5	3.3	3,738.8	0.4

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

(annual percentage changes)



Source: ECB.

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

4.4 Quoted shares issued by euro area residents

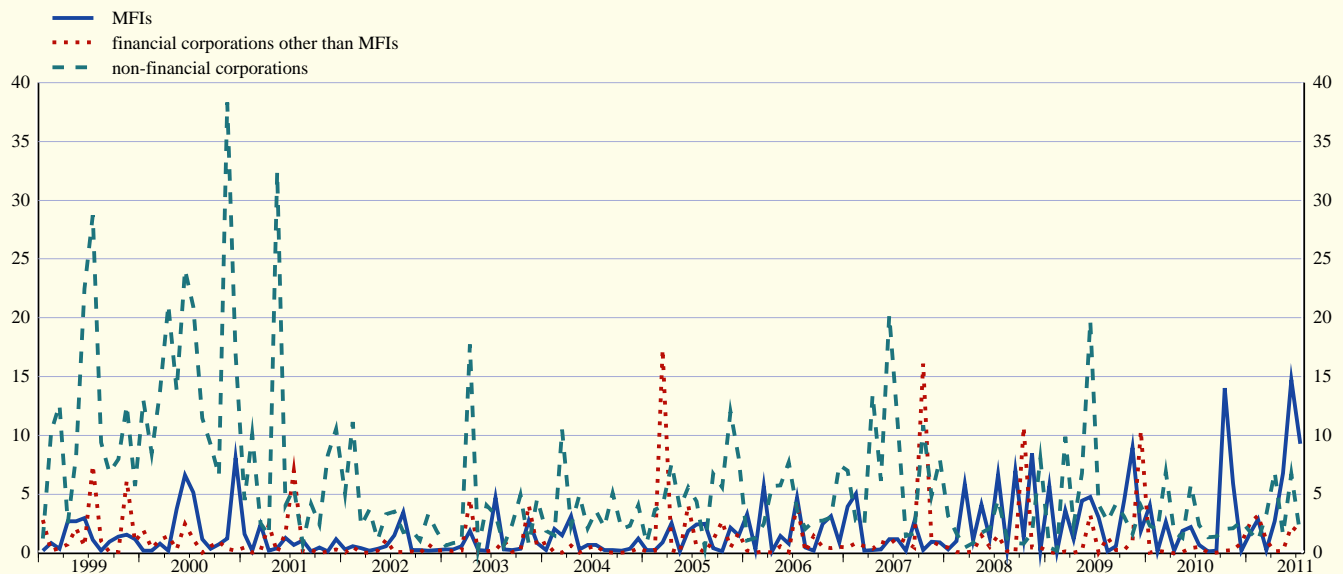
(EUR billions; market values)

2. Transactions during the month

	Total			MFIs			Financial corporations other than MFIs			Non-financial corporations		
	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues	Gross issues	Redemptions	Net issues
	1	2	3	4	5	6	7	8	9	10	11	12
2009 July	7.2	0.2	7.0	3.0	0.0	3.0	0.0	0.0	0.0	4.1	0.1	4.0
Aug.	4.0	3.3	0.7	0.0	0.0	0.0	1.3	0.0	1.3	2.7	3.3	-0.6
Sep.	5.0	0.3	4.7	0.6	0.0	0.6	0.2	0.0	0.2	4.2	0.2	3.9
Oct.	7.8	0.3	7.5	4.5	0.0	4.5	0.2	0.0	0.2	3.1	0.2	2.8
Nov.	11.6	0.2	11.4	9.0	0.0	9.0	1.0	0.0	1.0	1.6	0.2	1.4
Dec.	16.2	0.2	16.1	1.9	0.0	1.9	10.4	0.1	10.3	4.0	0.1	3.9
2010 Jan.	6.4	0.0	6.4	4.1	0.0	4.1	0.1	0.0	0.1	2.3	0.0	2.3
Feb.	2.2	0.3	1.9	0.0	0.0	0.0	0.2	0.0	0.2	2.0	0.3	1.7
Mar.	9.6	0.6	9.0	2.6	0.0	2.6	0.1	0.0	0.1	6.9	0.6	6.3
Apr.	1.8	0.4	1.5	0.1	0.0	0.0	0.0	0.0	0.0	1.8	0.3	1.5
May	3.2	0.8	2.4	1.9	0.0	1.9	0.1	0.0	0.1	1.3	0.8	0.4
June	8.4	0.4	8.0	2.2	0.0	2.2	0.4	0.0	0.4	5.8	0.4	5.4
July	3.6	0.8	2.7	0.7	0.0	0.7	0.5	0.0	0.5	2.4	0.8	1.6
Aug.	1.4	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2	0.2
Sep.	1.6	0.2	1.4	0.2	0.0	0.2	0.0	0.0	0.0	1.4	0.2	1.2
Oct.	16.3	0.2	16.0	14.0	0.0	14.0	0.2	0.1	0.1	2.0	0.2	1.9
Nov.	8.3	1.5	6.8	5.9	0.0	5.9	0.2	0.1	0.2	2.1	1.4	0.7
Dec.	3.7	3.5	0.2	0.2	0.0	0.2	0.9	0.3	0.5	2.7	3.2	-0.5
2011 Jan.	6.1	1.3	4.8	1.7	0.0	1.7	2.6	0.0	2.6	1.8	1.3	0.5
Feb.	7.1	0.2	6.9	2.9	0.0	2.9	3.2	0.0	3.2	1.1	0.2	0.8
Mar.	4.4	1.0	3.5	0.1	0.0	0.1	1.0	0.2	0.8	3.3	0.7	2.6
Apr.	9.7	0.5	9.2	2.7	0.0	2.7	0.1	0.0	0.1	6.9	0.5	6.4
May	8.5	8.8	-0.2	6.8	2.1	4.6	0.2	0.0	0.2	1.6	6.6	-5.1
June	23.7	1.3	22.5	14.7	0.0	14.7	2.3	0.3	2.0	6.7	1.0	5.7
July	12.4	0.7	11.7	9.3	0.0	9.3	1.6	0.0	1.6	1.5	0.7	0.8

C20 Gross issues of quoted shares by sector of the issuer

(EUR billions; transactions during the month; market values)



Source: ECB.

## 4.5 MFI interest rates on euro-denominated deposits from and loans to euro area residents <sup>1)</sup>

(percentages per annum; outstanding amounts as at end of period, new business as period average, unless otherwise indicated)

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

	Deposits from households						Deposits from non-financial corporations				Repos
	Overnight	With an agreed maturity of:			Redeemable at notice of: <sup>2)</sup>		Overnight	With an agreed maturity of:			
		Up to 1 year	Over 1 and up to 2 years	Over 2 years	Up to 3 months	Over 3 months		Up to 1 year	Over 1 and up to 2 years	Over 2 years	
	1	2	3	4	5	6	7	8	9	10	11
2010 Sep.	0.43	2.25	2.76	2.28	1.55	1.85	0.46	1.11	2.18	2.81	0.71
Oct.	0.43	2.35	2.75	2.80	1.54	1.82	0.49	1.18	2.36	2.53	0.94
Nov.	0.44	2.33	2.65	2.67	1.54	1.83	0.50	1.16	2.45	2.41	0.90
Dec.	0.43	2.27	2.77	2.59	1.55	1.84	0.50	1.19	2.56	2.60	1.07
2011 Jan.	0.43	2.38	2.61	2.77	1.53	1.85	0.54	1.29	2.42	2.52	1.02
Feb.	0.44	2.36	2.74	2.80	1.60	1.86	0.52	1.32	2.37	2.69	1.04
Mar.	0.45	2.34	2.78	2.90	1.61	1.88	0.54	1.37	2.53	2.81	1.14
Apr.	0.46	2.47	2.85	3.08	1.65	1.90	0.61	1.58	2.62	2.95	1.30
May	0.49	2.52	2.93	3.07	1.67	1.91	0.63	1.65	2.78	3.08	1.30
June	0.49	2.58	3.25	3.14	1.70	1.92	0.67	1.78	2.82	2.94	1.47
July	0.52	2.74	3.16	3.09	1.70	1.93	0.66	1.77	2.66	3.03	1.41
Aug.	0.54	2.74	3.16	2.99	1.77	1.93	0.68	1.64	2.70	2.99	1.42

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

	Revolving loans and overdrafts	Extended credit card debt <sup>3)</sup>	Consumer credit				Lending for house purchase				Lending to sole proprietors and unincorporated partnerships			
			By initial rate fixation			APRC <sup>4)</sup>	By initial rate fixation			APRC <sup>4)</sup>	By initial rate fixation			
			Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years		Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 and up to 10 years		Over 10 years	Floating rate and up to 1 year	Over 1 and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2010 Sep.	8.09	16.56	5.52	6.18	7.87	7.33	2.75	3.56	3.84	3.74	3.62	3.13	4.33	3.90
Oct.	8.01	16.53	5.36	6.03	7.71	7.17	2.76	3.55	3.78	3.69	3.61	3.21	4.34	4.04
Nov.	8.01	16.59	5.39	6.08	7.64	7.17	2.80	3.53	3.76	3.70	3.65	3.28	4.40	3.97
Dec.	8.00	16.59	5.16	5.95	7.24	6.89	2.78	3.52	3.80	3.71	3.68	3.36	4.32	3.96
2011 Jan.	8.05	16.73	5.09	6.13	7.83	7.20	2.94	3.69	3.91	3.84	3.83	3.21	4.24	4.08
Feb.	8.08	16.81	5.38	6.13	7.83	7.31	2.96	3.83	4.06	3.92	3.90	3.36	4.63	4.30
Mar.	8.03	16.88	5.44	6.22	7.82	7.32	3.01	3.82	4.15	4.01	3.93	3.43	4.69	4.43
Apr.	8.11	16.92	5.17	6.23	7.80	7.25	3.12	3.95	4.24	4.15	4.03	3.54	4.68	4.53
May	8.17	16.91	5.35	6.37	7.99	7.49	3.23	4.01	4.30	4.18	4.09	3.75	4.81	4.60
June	8.22	16.95	5.37	6.47	7.87	7.42	3.26	4.04	4.29	4.18	4.09	3.82	4.78	4.62
July	8.28	16.94	5.13	6.53	7.98	7.43	3.33	4.02	4.26	4.19	4.10	3.83	4.82	4.60
Aug.	8.31	17.10	5.33	6.54	7.97	7.57	3.47	3.96	4.20	4.15	4.16	4.04	4.96	4.39

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

	Revolving loans and overdrafts	Other loans of up to EUR 0.25 million by initial rate fixation						Other loans of over EUR 1 million by initial rate fixation					
		Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 and up to 3 years	Over 3 and up to 5 years	Over 5 and up to 10 years	Over 10 years	Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 and up to 3 years	Over 3 and up to 5 years	Over 5 and up to 10 years	Over 10 years
	1	2	3	4	5	6	7	8	9	10	11	12	13
2010 Sep.	3.91	3.70	4.02	4.29	4.58	4.05	3.71	2.20	2.56	2.63	2.88	3.42	3.61
Oct.	3.94	3.73	4.14	4.37	4.60	4.06	3.77	2.25	2.65	2.86	3.08	3.52	3.40
Nov.	3.96	3.82	4.32	4.43	4.67	4.09	3.72	2.36	2.71	2.80	3.44	3.62	3.44
Dec.	3.99	3.81	3.99	4.42	4.64	4.09	3.73	2.52	2.83	2.69	3.02	3.54	3.48
2011 Jan.	4.11	3.82	4.07	4.35	4.63	4.03	3.88	2.37	2.90	2.64	3.55	3.67	3.85
Feb.	4.12	3.98	4.21	4.48	4.89	4.39	3.94	2.55	3.06	2.96	3.86	3.88	3.75
Mar.	4.12	4.02	4.39	4.63	5.00	4.49	4.02	2.53	3.26	3.00	3.61	3.84	3.84
Apr.	4.25	4.07	4.47	4.73	5.05	4.57	4.15	2.72	3.31	3.38	3.78	4.36	4.15
May	4.30	4.18	4.65	4.79	5.14	4.67	4.19	2.65	3.37	3.17	3.63	3.65	4.11
June	4.41	4.23	4.68	4.74	5.16	4.67	4.44	2.78	3.49	3.50	3.61	2.77	4.00
July	4.42	4.38	4.79	4.79	5.10	4.68	4.44	2.88	3.45	3.46	3.98	4.09	3.24
Aug.	4.49	4.44	4.93	4.85	5.03	4.57	4.35	2.80	3.56	3.70	3.98	3.87	4.06

Source: ECB.

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

2) For this instrument category, households and non-financial corporations are merged and allocated to the household sector, since the outstanding amounts of non-financial corporations are negligible compared with those of the household sector when all participating Member States are combined.

3) This instrument category excludes convenience credit card debt, i.e. credit granted at an interest rate of 0% during the billing cycle.

4) The annual percentage rate of charge (APRC) covers the total cost of a loan. The total cost comprises both an interest rate component and a component incorporating other (related) charges, such as the cost of inquiries, administration, preparation of documents and guarantees.

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

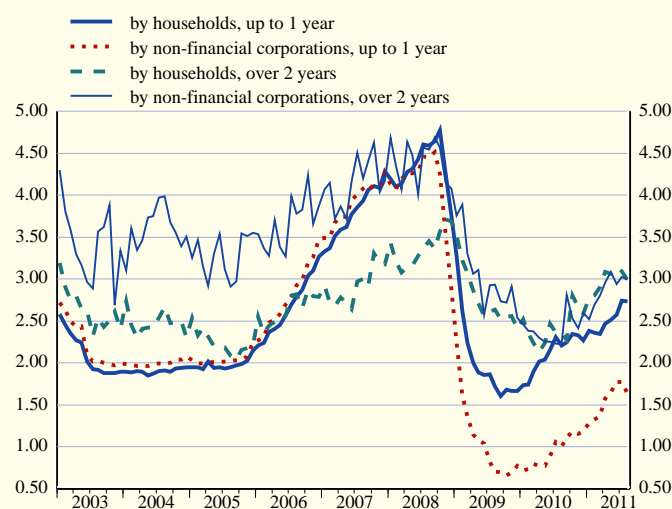
**4. Interest rates on deposits (outstanding amounts)**

	Deposits from households					Deposits from non-financial corporations			Repos
	Overnight <sup>2)</sup>	With an agreed maturity of:		Redeemable at notice of: <sup>2),3)</sup>		Overnight <sup>2)</sup>	With an agreed maturity of:		
		Up to 2 years	Over 2 years	Up to 3 months	Over 3 months		Up to 2 years	Over 2 years	
	1	2	3	4	5	6	7	8	9
2010 Sep.	0.43	2.19	2.74	1.55	1.85	0.46	1.62	3.07	1.26
Oct.	0.43	2.22	2.70	1.54	1.82	0.49	1.68	3.07	1.29
Nov.	0.44	2.25	2.72	1.54	1.83	0.50	1.70	3.11	1.33
Dec.	0.43	2.28	2.71	1.55	1.84	0.50	1.76	3.09	1.50
2011 Jan.	0.43	2.31	2.72	1.53	1.85	0.54	1.78	3.07	1.55
Feb.	0.44	2.34	2.73	1.60	1.86	0.52	1.79	3.09	1.59
Mar.	0.45	2.38	2.71	1.61	1.88	0.54	1.84	3.13	1.65
Apr.	0.46	2.40	2.73	1.65	1.90	0.61	1.93	3.12	1.72
May	0.49	2.45	2.73	1.67	1.91	0.63	1.99	3.12	1.76
June	0.49	2.49	2.75	1.70	1.92	0.67	2.07	3.11	1.93
July	0.52	2.53	2.77	1.70	1.93	0.66	2.13	3.13	1.94
Aug.	0.54	2.59	2.77	1.77	1.93	0.68	2.11	3.14	1.96

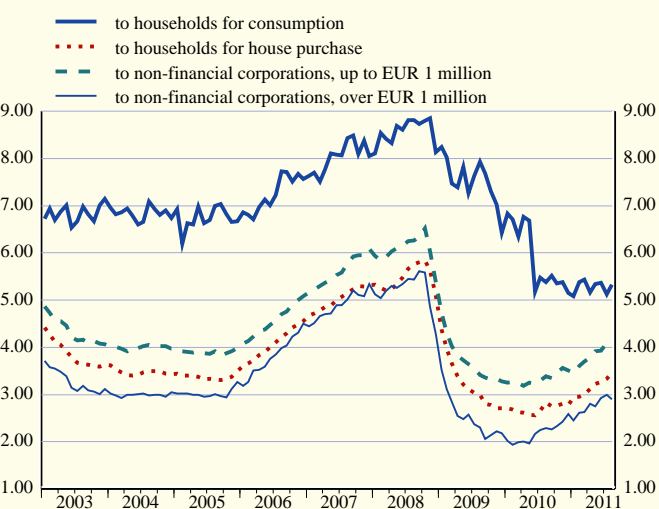
**5. Interest rates on loans (outstanding amounts)**

	Loans to households						Loans to non-financial corporations		
	Lending for house purchase with a maturity of:			Consumer credit and other loans with a maturity of:			With a maturity of:		
	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Up to 1 year	Over 1 and up to 5 years	Over 5 years
	1	2	3	4	5	6	7	8	9
2010 Sep.	3.83	3.88	3.83	7.89	6.45	5.21	3.42	3.29	3.37
Oct.	3.80	3.86	3.82	7.86	6.45	5.19	3.48	3.34	3.38
Nov.	3.77	3.86	3.84	7.72	6.47	5.20	3.50	3.39	3.41
Dec.	3.73	3.83	3.81	7.71	6.41	5.18	3.49	3.41	3.42
2011 Jan.	3.71	3.80	3.80	7.82	6.40	5.17	3.60	3.44	3.42
Feb.	3.68	3.81	3.82	7.85	6.43	5.20	3.64	3.47	3.47
Mar.	3.72	3.80	3.84	7.89	6.40	5.19	3.68	3.49	3.48
Apr.	3.82	3.78	3.84	7.91	6.43	5.23	3.77	3.59	3.54
May	3.81	3.78	3.85	7.88	6.38	5.23	3.84	3.64	3.56
June	3.87	3.78	3.86	7.92	6.45	5.28	3.92	3.73	3.63
July	4.02	3.79	3.90	8.01	6.42	5.29	3.99	3.80	3.69
Aug.	4.06	3.78	3.89	8.05	6.42	5.30	4.05	3.84	3.72

**C21 New deposits with an agreed maturity**  
(percentages per annum excluding charges; period averages)



**C22 New loans with a floating rate and up to 1 year's initial rate fixation**  
(percentages per annum excluding charges; period averages)



Source: ECB.

\* For the source of the data in the table and the related footnotes, please see page S42.

## 4.6 Money market interest rates

(percentages per annum; period averages)

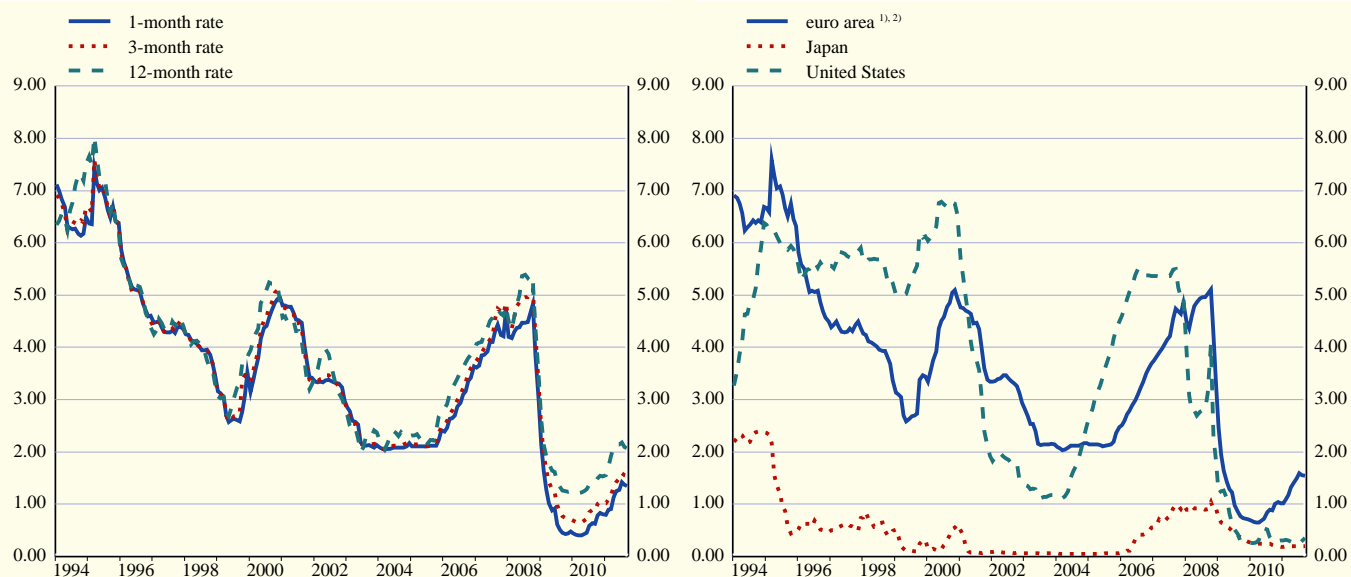
	Euro area <sup>1),2)</sup>					United States	Japan
	Overnight deposits (EONIA)	1-month deposits (EURIBOR)	3-month deposits (EURIBOR)	6-month deposits (EURIBOR)	12-month deposits (EURIBOR)	3-month deposits (LIBOR)	3-month deposits (LIBOR)
	1	2	3	4	5	6	7
2008	3.87	4.28	4.64	4.73	4.83	2.93	0.93
2009	0.71	0.89	1.22	1.43	1.61	0.69	0.47
2010	0.44	0.57	0.81	1.08	1.35	0.34	0.23
2010 Q3	0.45	0.61	0.87	1.13	1.40	0.39	0.24
Q4	0.59	0.81	1.02	1.25	1.52	0.29	0.19
2011 Q1	0.67	0.86	1.10	1.37	1.74	0.31	0.19
Q2	1.04	1.22	1.42	1.70	2.13	0.26	0.20
Q3	0.97	1.38	1.56	1.77	2.11	0.30	0.19
2010 Sep.	0.45	0.62	0.88	1.14	1.42	0.29	0.22
Oct.	0.70	0.78	1.00	1.22	1.50	0.29	0.20
Nov.	0.59	0.83	1.04	1.27	1.54	0.29	0.19
Dec.	0.50	0.81	1.02	1.25	1.53	0.30	0.18
2011 Jan.	0.66	0.79	1.02	1.25	1.55	0.30	0.19
Feb.	0.71	0.89	1.09	1.35	1.71	0.31	0.19
Mar.	0.66	0.90	1.18	1.48	1.92	0.31	0.20
Apr.	0.97	1.13	1.32	1.62	2.09	0.28	0.20
May	1.03	1.24	1.43	1.71	2.15	0.26	0.20
June	1.12	1.28	1.49	1.75	2.14	0.25	0.20
July	1.01	1.42	1.60	1.82	2.18	0.25	0.20
Aug.	0.91	1.37	1.55	1.75	2.10	0.29	0.19
Sep.	1.01	1.35	1.54	1.74	2.07	0.35	0.19

### C23 Euro area money market rates <sup>1), 2)</sup>

(monthly averages; percentages per annum)

### C24 3-month money market rates

(monthly averages; percentages per annum)



Source: ECB.

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



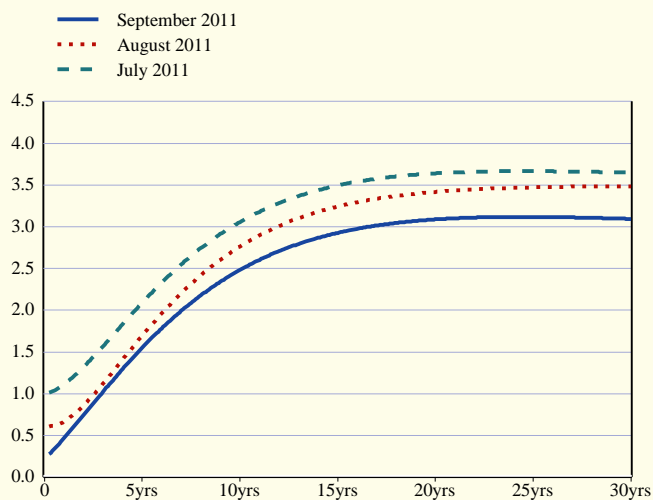
**4.7 Euro area yield curves <sup>1)</sup>**

(AAA-rated euro area central government bonds; end of period; rates in percentages per annum; spreads in percentage points)

	Spot rates								Instantaneous forward rates			
	3 months	1 year	2 years	5 years	7 years	10 years	10 years - 3 months (spread)	10 years - 2 years (spread)	1 year	2 years	5 years	10 years
	1	2	3	4	5	6	7	8	9	10	11	12
2008	1.75	1.85	2.14	2.95	3.32	3.69	1.94	1.55	2.09	2.76	4.04	4.60
2009	0.38	0.81	1.38	2.64	3.20	3.76	3.38	2.38	1.41	2.44	4.27	5.20
2010	0.49	0.60	0.93	2.15	2.78	3.36	2.87	2.43	0.85	1.70	3.99	4.69
2010 Q2	0.34	0.42	0.69	1.79	2.41	3.03	2.68	2.33	0.62	1.35	3.54	4.52
Q3	0.57	0.68	0.90	1.71	2.18	2.67	2.10	1.77	0.86	1.41	3.01	3.91
Q4	0.49	0.60	0.93	2.15	2.78	3.36	2.87	2.43	0.85	1.70	3.99	4.69
2011 Q1	0.87	1.30	1.79	2.83	3.26	3.66	2.79	1.87	1.84	2.69	4.12	4.63
Q2	1.24	1.39	1.65	2.50	2.94	3.41	2.17	1.75	1.63	2.22	3.76	4.60
2010 Sep.	0.57	0.68	0.90	1.71	2.18	2.67	2.10	1.77	0.86	1.41	3.01	3.91
Oct.	0.75	0.84	1.06	1.89	2.36	2.86	2.11	1.80	1.02	1.57	3.21	4.09
Nov.	0.63	0.72	0.99	2.02	2.58	3.11	2.48	2.12	0.92	1.62	3.62	4.35
Dec.	0.49	0.60	0.93	2.15	2.78	3.36	2.87	2.43	0.85	1.70	3.99	4.69
2011 Jan.	0.65	1.03	1.48	2.55	3.03	3.49	2.84	2.01	1.51	2.34	3.96	4.62
Feb.	0.69	1.08	1.53	2.55	3.02	3.49	2.80	1.96	1.56	2.37	3.91	4.67
Mar.	0.87	1.30	1.79	2.83	3.26	3.66	2.79	1.87	1.84	2.69	4.12	4.63
Apr.	1.02	1.41	1.86	2.80	3.19	3.55	2.53	1.70	1.90	2.67	3.96	4.46
May	1.03	1.32	1.67	2.52	2.93	3.37	2.34	1.69	1.69	2.34	3.69	4.51
June	1.24	1.39	1.65	2.50	2.94	3.41	2.17	1.75	1.63	2.22	3.76	4.60
July	1.01	1.11	1.32	2.09	2.55	3.06	2.05	1.74	1.28	1.79	3.34	4.39
Aug.	0.61	0.67	0.86	1.69	2.21	2.76	2.15	1.90	0.80	1.33	3.09	4.22
Sep.	0.27	0.47	0.75	1.55	1.99	2.48	2.21	1.74	0.74	1.31	2.77	3.79

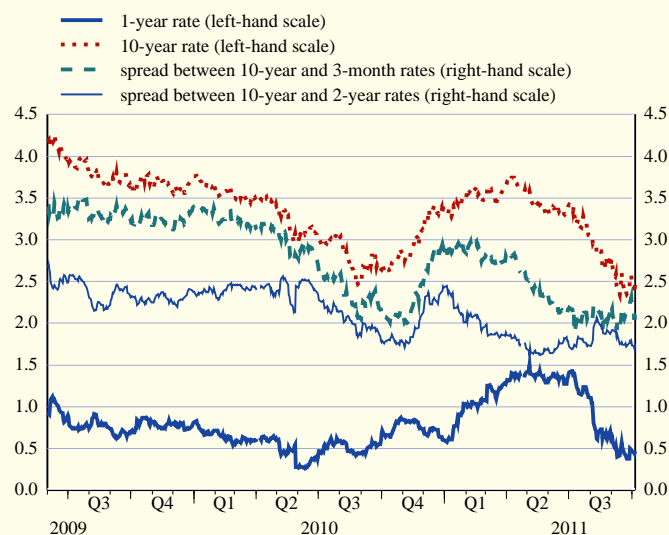
**C25 Euro area spot yield curves <sup>2)</sup>**

(percentages per annum; end of period)



**C26 Euro area spot rates and spreads <sup>2)</sup>**

(daily data; rates in percentages per annum; spreads in percentage points)



Sources: ECB calculations based on underlying data provided by EuroMTS and ratings provided by Fitch Ratings.

- 1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 2) Data cover AAA-rated euro area central government bonds.

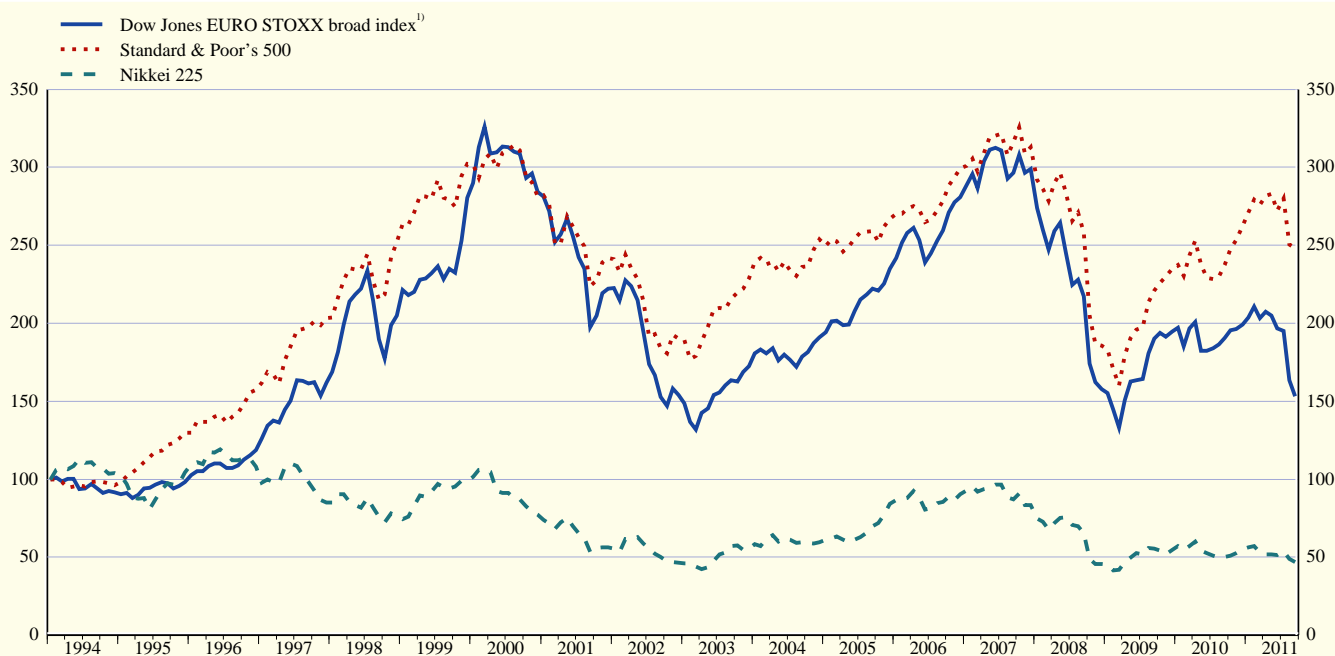
## 4.8 Stock market indices

(index levels in points; period averages)

	Dow Jones EURO STOXX indices <sup>1)</sup>												United States	Japan
	Benchmark		Main industry indices										Standard & Poor's 500	Nikkei 225
	Broad index	50	Basic materials	Consumer services	Consumer goods	Oil and gas	Financials	Industrials	Technology	Utilities	Telecoms	Health care		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
2008	313.7	3,319.5	480.4	169.3	290.7	380.9	265.0	350.9	282.5	502.0	431.5	411.5	1,220.7	12,151.6
2009	234.2	2,521.0	353.2	140.5	244.5	293.5	172.1	269.7	200.7	353.7	380.4	363.5	946.2	9,321.6
2010	265.5	2,779.3	463.1	166.2	323.4	307.2	182.8	337.6	224.1	344.9	389.6	408.4	1,140.0	10,006.5
2010 Q3	259.5	2,715.9	445.8	165.2	323.0	294.5	181.6	327.0	210.7	325.9	387.6	391.4	1,096.2	9,356.0
Q4	273.4	2,817.8	513.8	176.1	361.3	309.9	175.7	361.9	227.0	333.0	399.2	405.0	1,204.6	9,842.4
2011 Q1	285.5	2,932.9	532.7	175.5	366.3	341.1	185.0	388.0	249.6	347.7	396.7	415.0	1,302.5	10,285.3
Q2	281.2	2,862.7	552.0	169.6	370.7	328.8	175.2	391.5	239.7	333.7	385.0	448.4	1,318.3	9,609.4
Q3	236.0	2,381.6	463.7	146.0	341.5	282.0	133.8	323.0	199.8	270.2	333.0	435.0	1,225.3	9,246.3
2010 Sep.	264.6	2,766.1	460.9	171.6	332.4	298.4	183.0	331.9	212.9	329.0	400.9	401.8	1,122.1	9,346.7
Oct.	271.3	2,817.7	489.1	175.1	346.1	304.9	183.2	346.0	223.7	331.4	410.5	405.4	1,171.6	9,455.1
Nov.	272.2	2,809.6	509.9	176.3	359.9	307.4	174.4	358.5	222.9	335.0	403.0	405.0	1,198.9	9,797.2
Dec.	276.5	2,825.6	540.1	176.8	376.5	316.7	170.0	379.7	234.1	332.6	385.3	404.6	1,241.5	10,254.5
2011 Jan.	282.8	2,900.7	531.1	178.1	375.3	335.1	178.0	385.8	246.1	346.2	390.7	411.8	1,282.6	10,449.5
Feb.	292.3	3,015.7	540.5	179.0	369.7	348.0	193.5	393.1	257.6	359.0	402.9	418.7	1,321.1	10,622.3
Mar.	281.9	2,890.4	527.4	170.1	355.0	340.5	184.1	385.7	245.9	339.1	396.8	414.6	1,304.5	9,852.4
Apr.	287.5	2,947.2	557.3	172.5	366.6	343.8	182.4	397.9	250.0	346.9	402.8	435.4	1,331.5	9,644.6
May	284.0	2,885.8	557.0	171.7	374.9	330.4	176.3	395.5	246.5	337.8	386.4	457.8	1,338.3	9,650.8
June	272.9	2,766.6	542.5	164.9	370.0	314.3	168.0	382.0	224.1	318.3	368.2	450.3	1,287.3	9,541.5
July	270.5	2,743.5	550.7	160.8	384.4	317.4	160.6	375.7	221.0	307.8	360.0	467.4	1,325.2	9,996.7
Aug.	226.9	2,297.2	443.7	141.1	329.7	268.6	129.0	307.3	189.7	258.4	329.3	420.7	1,185.3	9,072.9
Sep.	212.6	2,124.3	401.4	137.0	312.8	262.4	113.3	289.2	190.1	246.7	311.1	419.0	1,173.9	8,695.4

## C27 Dow Jones EURO STOXX broad index, Standard & Poor's 500 and Nikkei 225

(January 1994 = 100; monthly averages)



Source: ECB.

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

# PRICES, OUTPUT, DEMAND AND LABOUR MARKETS



## 5.1 HICP, other prices and costs

(annual percentage changes, unless otherwise indicated)

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

	Total					Total (s.a.; percentage change vis-à-vis previous period)						Memo item: Administered prices <sup>2)</sup>	
	Index: 2005 = 100	Total		Goods	Services	Total	Processed food	Unprocessed food	Non-energy industrial goods	Energy (n.s.a.)	Services	Total HICP excluding administered prices	Administered prices
		Total excl. unprocessed food and energy											
% of total in 2011	100.0	100.0	82.3	58.6	41.4	100.0	11.9	7.4	28.9	10.4	41.4	88.7	11.3
	1	2	3	4	5	6	7	8	9	10	11	12	13
2007	104.4	2.1	2.0	1.9	2.5	-	-	-	-	-	-	2.1	2.2
2008	107.8	3.3	2.4	3.8	2.6	-	-	-	-	-	-	3.4	2.7
2009	108.1	0.3	1.3	-0.9	2.0	-	-	-	-	-	-	0.1	1.8
2010	109.8	1.6	1.0	1.8	1.4	-	-	-	-	-	-	1.6	1.5
2010 Q2	110.1	1.6	0.9	1.9	1.2	0.6	0.3	0.8	0.2	3.9	0.2	1.6	1.4
Q3	109.9	1.7	1.0	2.0	1.4	0.3	0.4	0.6	0.1	0.0	0.5	1.7	2.0
Q4	110.8	2.0	1.1	2.5	1.3	0.5	0.6	0.5	0.3	2.0	0.3	2.0	2.3
2011 Q1	111.3	2.5	1.3	3.1	1.6	1.0	0.8	0.4	0.0	6.3	0.5	2.4	3.4
Q2	113.1	2.8	1.8	3.3	1.9	0.9	1.2	0.3	0.6	2.8	0.6	2.7	3.6
2011 Apr.	113.1	2.8	1.8	3.4	2.0	0.4	0.4	-0.1	0.2	1.5	0.3	2.7	3.7
May	113.1	2.7	1.7	3.4	1.8	0.0	0.5	0.2	0.1	-0.6	0.0	2.6	3.6
June	113.1	2.7	1.8	3.2	2.0	0.1	0.2	-0.1	0.0	-0.5	0.3	2.6	3.6
July	112.4	2.5	1.5	2.9	2.0	-0.1	0.4	-0.1	-0.9	0.8	0.2	2.4	3.5
Aug. <sup>3)</sup>	112.6	2.5	1.5	3.0	1.9	0.1	0.3	0.1	0.1	-0.2	0.2	2.4	3.4
Sep. <sup>3)</sup>	.	3.0	.	.	.	.	.	.	.	.	.	.	.

	Goods						Services					
	Food (incl. alcoholic beverages and tobacco)			Industrial goods			Housing	Transport	Communication	Recreation and personal	Miscellaneous	
	Total	Processed food	Unprocessed food	Total	Non-energy industrial goods	Energy						Rents
% of total in 2011	19.3	11.9	7.4	39.3	28.9	10.4	10.1	6.0	6.5	3.2	14.6	7.0
	14	15	16	17	18	19	20	21	22	23	24	25
2007	2.8	2.8	3.0	1.4	1.0	2.6	2.7	2.0	2.6	-1.9	2.9	3.2
2008	5.1	6.1	3.5	3.1	0.8	10.3	2.3	1.9	3.9	-2.2	3.2	2.5
2009	0.7	1.1	0.2	-1.7	0.6	-8.1	2.0	1.8	2.9	-1.0	2.1	2.1
2010	1.1	0.9	1.3	2.2	0.5	7.4	1.8	1.5	2.3	-0.8	1.0	1.5
2010 Q2	0.9	0.8	1.0	2.4	0.5	8.1	1.8	1.5	2.3	-0.9	0.8	1.5
Q3	1.5	0.9	2.3	2.2	0.5	7.3	1.8	1.6	2.5	-0.8	1.0	1.5
Q4	1.9	1.3	2.7	2.9	0.8	9.2	1.6	1.3	1.9	-0.8	1.2	1.5
2011 Q1	2.2	2.1	2.3	3.6	0.5	12.7	1.8	1.3	2.0	-0.4	1.5	1.9
Q2	2.6	3.0	1.9	3.7	1.0	11.5	1.9	1.4	3.2	-1.0	2.0	2.1
2011 Mar.	2.4	2.5	2.2	4.0	0.9	13.0	1.8	1.3	2.3	-0.6	1.5	2.2
Apr.	2.2	2.8	1.4	4.0	1.0	12.5	1.8	1.4	3.2	-0.9	2.2	2.2
May	2.8	3.2	2.4	3.6	1.0	11.1	1.9	1.4	3.1	-1.0	1.7	2.1
June	2.7	3.1	2.0	3.5	0.9	10.9	1.9	1.5	3.4	-1.2	2.2	2.0
July	2.6	3.4	1.3	3.1	0.0	11.8	1.9	1.5	3.4	-1.6	2.2	2.0
Aug.	2.7	3.6	1.1	3.1	0.0	11.8	1.8	1.5	3.3	-1.8	2.2	2.1

Sources: Eurostat and ECB calculations.

- 1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
- 2) These experimental statistics can only provide an approximate measure of price administration, since changes in administered prices cannot be fully isolated from other influences. Please refer to Eurostat's website (<http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/introduction>) for a note explaining the methodology used in the compilation of this indicator.
- 3) Estimate based on provisional national releases, which usually cover around 95% of the euro area, as well as on early information on energy prices.

## 5.1 HICP, other prices and costs

(annual percentage changes, unless otherwise indicated)

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

	Industrial producer prices excluding construction										Construction <sup>1)</sup>	Residential property prices <sup>2)</sup>
	Total (index: 2005 = 100)	Total		Industry excluding construction and energy						Energy		
		Manu- facturing	Total	Intermediate goods	Capital goods	Consumer goods						
						Total	Durable	Non-durable				
% of total in 2005	100.0	100.0	82.8	75.6	30.0	22.0	23.7	2.7	21.0	24.4		
	1	2	3	4	5	6	7	8	9	10	11	12
2007	107.9	2.7	3.0	3.2	4.6	2.2	2.2	2.4	2.2	1.2	4.2	4.8
2008	114.4	6.1	4.8	3.4	3.9	2.1	3.9	2.8	4.1	14.2	3.8	1.3
2009	108.6	-5.1	-5.4	-2.9	-5.3	0.4	-2.1	1.2	-2.5	-11.8	0.1	-2.9
2010	111.7	2.9	3.4	1.6	3.5	0.3	0.4	0.9	0.3	6.4	1.9	1.9
2010 Q2	111.5	3.0	3.8	1.6	3.6	0.2	0.0	0.6	-0.1	7.2	2.3	1.7
Q3	112.3	4.0	3.7	2.3	4.8	0.7	0.6	1.1	0.5	8.7	2.5	2.7
Q4	113.5	4.8	4.6	3.1	5.9	0.8	1.5	1.4	1.5	9.6	2.8	2.9
2011 Q1	116.7	6.5	6.3	4.4	7.9	1.3	2.5	1.8	2.6	12.5	4.2	2.2
Q2	118.5	6.3	5.8	4.3	6.8	1.4	3.4	1.9	3.7	11.9	3.0	.
2011 Mar.	117.6	6.8	6.7	4.6	8.1	1.4	2.8	1.8	3.0	13.0	-	-
Apr.	118.6	6.8	6.3	4.5	7.3	1.4	3.4	2.0	3.5	13.2	-	-
May	118.4	6.2	5.6	4.2	6.6	1.2	3.5	1.9	3.8	11.8	-	-
June	118.4	5.9	5.5	4.1	6.3	1.4	3.4	1.8	3.7	10.7	-	-
July	118.9	6.1	5.8	4.1	6.1	1.6	3.3	1.9	3.5	11.9	-	-
Aug.	118.8	5.9	5.5	3.9	5.7	1.6	3.3	2.0	3.5	11.5	-	-

### 3. Commodity prices and gross domestic product deflators

	Oil prices <sup>3)</sup> (EUR per barrel)	Non-energy commodity prices						GDP deflators							
		Import-weighted <sup>4)</sup>			Use-weighted <sup>5)</sup>			Total (s.a.; index: 2005 = 100)	Total	Domestic demand				Exports <sup>6)</sup>	Imports <sup>6)</sup>
		Total	Food	Non-food	Total	Food	Non-food			Total	Private consump- tion	Government consump- tion	Gross fixed capital formation		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2007	52.8	7.8	14.3	5.5	5.3	9.3	2.9	104.2	2.3	2.2	2.2	1.8	2.5	1.6	1.2
2008	65.9	2.0	18.4	-4.4	-1.7	9.7	-8.6	106.2	1.9	2.5	2.7	2.7	2.3	2.4	3.9
2009	44.6	-18.5	-8.9	-23.0	-18.0	-11.4	-22.8	107.1	0.9	-0.1	-0.2	1.9	-0.5	-3.4	-5.9
2010	60.7	44.7	21.4	57.9	42.1	27.1	54.5	108.0	0.8	1.1	1.8	0.9	1.0	4.1	5.1
2010 Q2	62.6	48.2	12.5	70.2	41.7	14.0	67.3	107.8	0.7	1.2	1.8	1.1	1.1	4.3	5.8
Q3	59.6	51.5	29.7	63.1	49.4	41.0	55.8	108.3	1.1	1.4	2.0	0.5	1.6	5.3	6.5
Q4	64.4	48.6	36.6	54.7	48.7	48.4	48.9	108.3	1.0	1.5	2.1	0.7	1.6	5.2	6.6
2011 Q1	77.3	42.9	46.1	41.4	41.0	47.2	36.6	108.8	1.3	2.0	2.5	0.5	2.1	6.3	8.3
Q2	81.3	11.6	28.8	4.6	13.3	26.2	5.1	109.3	1.3	1.9	2.5	0.8	1.6	4.5	5.9
2011 Apr.	85.1	15.1	37.7	6.5	17.5	35.8	6.8	-	-	-	-	-	-	-	-
May	79.8	11.1	28.6	3.9	12.1	25.0	4.0	-	-	-	-	-	-	-	-
June	79.1	8.7	21.2	3.3	10.3	18.7	4.6	-	-	-	-	-	-	-	-
July	81.7	7.6	18.7	2.9	9.5	15.1	5.6	-	-	-	-	-	-	-	-
Aug.	76.7	2.5	17.2	-3.6	4.1	12.7	-1.8	-	-	-	-	-	-	-	-
Sep.	79.8	0.1	9.7	-3.9	-2.8	-3.1	-2.6	-	-	-	-	-	-	-	-

Sources: Eurostat, ECB calculations based on Eurostat data (column 7 in Table 2 in Section 5.1 and columns 8-15 in Table 3 in Section 5.1), ECB calculations based on Thomson Reuters data (column 1 in Table 3 in Section 5.1) and ECB calculations (column 12 in Table 2 in Section 5.1 and columns 2-7 in Table 3 in Section 5.1).

- 1) Input prices for residential buildings.
- 2) Experimental data based on non-harmonised national sources (see <http://www.ecb.europa.eu/stats/intro/html/experiment.en.html> for further details).
- 3) Brent Blend (for one-month forward delivery).
- 4) Refers to prices expressed in euro. Weighted according to the structure of euro area imports in the period 2004-06.
- 5) Refers to prices expressed in euro. Weighted according to euro area domestic demand (domestic production plus imports minus exports) in the period 2004-06. Experimental data (see <http://www.ecb.europa.eu/stats/intro/html/experiment.en.html> for details).
- 6) Deflators for exports and imports refer to goods and services and include cross-border trade within the euro area.

## 5.1 HICP, other prices and costs

(annual percentage changes, unless otherwise indicated)

### 4. Unit labour costs, compensation per labour input and labour productivity

(seasonally adjusted)

	Total (index: 2005 = 100)	Total	By economic activity					Public administration, education, health and other services
			Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	
	1	2	3	4	5	6	7	8
Unit labour costs <sup>1)</sup>								
2009	109.9	3.9	-3.0	8.8	2.0	5.7	0.6	2.7
2010	109.1	-0.7	0.3	-5.7	2.0	-1.4	1.6	0.8
2010 Q3	108.8	-0.7	1.7	-4.4	2.0	-1.7	2.1	0.1
Q4	109.4	-0.1	0.8	-3.3	1.0	-0.3	1.8	0.7
2011 Q1	109.6	0.2	1.9	-1.6	-0.7	0.4	2.9	0.7
Q2	110.5	1.3	1.4	0.6	-0.5	1.4	3.3	1.0
Compensation per employee								
2009	109.8	1.4	2.1	-0.3	2.5	1.8	1.2	2.5
2010	111.6	1.6	1.0	3.4	1.6	1.6	1.5	0.7
2010 Q3	111.6	1.5	1.1	3.4	1.8	1.8	1.6	0.0
Q4	112.4	1.6	1.5	3.8	1.4	1.8	1.4	0.3
2011 Q1	113.4	2.3	3.7	4.1	3.7	2.3	2.0	1.1
Q2	114.1	2.4	3.4	4.7	2.5	1.9	2.0	1.5
Labour productivity per person employed <sup>2)</sup>								
2009	99.9	-2.4	5.3	-8.3	0.5	-3.6	0.6	-0.2
2010	102.2	2.3	0.7	9.7	-0.4	3.1	-0.1	-0.1
2010 Q3	102.6	2.2	-0.6	8.2	-0.2	3.6	-0.4	-0.1
Q4	102.7	1.7	0.7	7.3	0.5	2.1	-0.4	-0.5
2011 Q1	103.4	2.1	1.8	5.8	4.5	1.9	-0.9	0.3
Q2	103.3	1.1	2.0	4.1	3.0	0.6	-1.3	0.5
Compensation per hour worked								
2009	112.1	3.3	2.6	4.4	5.2	3.2	2.7	3.0
2010	113.0	0.8	0.5	0.5	1.7	0.8	0.8	0.5
2010 Q3	112.9	0.6	0.4	0.2	1.9	0.9	0.7	-0.1
Q4	113.9	1.3	3.0	1.3	2.5	1.9	1.1	0.3
2011 Q1	114.6	1.9	1.5	1.8	3.3	2.8	1.5	1.0
Q2	115.9	2.8	6.2	3.6	3.1	3.5	2.8	1.3
Hourly labour productivity <sup>2)</sup>								
2009	102.2	-0.7	5.2	-4.3	2.7	-2.5	2.0	0.3
2010	103.7	1.5	1.4	6.6	-0.7	2.2	-0.7	-0.4
2010 Q3	103.9	1.2	0.0	4.7	-0.5	2.5	-1.2	-0.3
Q4	104.2	1.4	1.8	4.9	1.1	2.0	-0.5	-0.6
2011 Q1	104.6	1.6	0.3	3.5	3.5	2.0	-1.2	0.2
Q2	105.0	1.5	3.1	3.1	3.2	1.7	-0.2	0.2

### 5. Labour cost indices<sup>3)</sup>

	Total (s.a.; index: 2008 = 100)	Total	By component		For selected economic activities			Memo item: Indicator of negotiated wages <sup>4)</sup>
			Wages and salaries	Employers' social contributions	Mining, manufacturing and energy	Construction	Services	
	1	2	3	4	5	6	7	8
% of total in 2008	100.0	100.0	75.2	24.8	32.4	9.0	58.6	
2009	102.7	2.8	2.5	2.9	3.0	3.5	2.5	2.6
2010	104.3	1.6	1.4	1.9	0.9	1.9	1.9	1.7
2010 Q3	104.4	1.2	1.0	1.5	0.3	1.7	1.6	1.5
Q4	105.2	1.7	1.6	2.0	1.3	1.5	2.0	1.6
2011 Q1	106.4	2.7	2.3	3.4	2.4	2.2	2.8	1.7
Q2	107.7	3.6	3.5	4.3	4.5	3.0	3.2	1.9

Sources: Eurostat, ECB calculations based on Eurostat data (Table 4 in Section 5.1) and ECB calculations (column 8 in Table 5 in Section 5.1).

- 1) Compensation (at current prices) per employee divided by labour productivity per person employed.
- 2) Total GDP and value added by economic activity (volumes) per labour input (persons employed and hours worked).
- 3) Hourly labour cost indices for the whole economy, excluding agriculture, public administration, education, health and services not classified elsewhere. Owing to differences in coverage, the estimates for the components may not be consistent with the total.
- 4) Experimental data (see <http://www.ecb.europa.eu/stats/intro/html/experiment.en.html> for further details).

## 5.2 Output and demand

(quarterly data seasonally adjusted; annual data unadjusted)

### 1. GDP and expenditure components

	GDP								
	Total	Domestic demand					External balance <sup>1)</sup>		
		Total	Private consumption	Government consumption	Gross fixed capital formation	Changes in inventories <sup>2)</sup>	Total	Exports <sup>1)</sup>	Imports <sup>1)</sup>
1	2	3	4	5	6	7	8	9	
<i>Current prices (EUR billions)</i>									
2007	9,035.0	8,899.4	5,056.5	1,808.0	1,959.4	75.4	135.6	3,748.3	3,612.7
2008	9,248.8	9,159.6	5,211.9	1,901.3	1,983.3	63.1	89.2	3,880.8	3,791.6
2009	8,940.5	8,824.3	5,141.4	1,988.2	1,737.8	-43.1	116.3	3,269.3	3,153.0
2010	9,175.8	9,053.1	5,280.5	2,014.6	1,742.8	15.2	122.7	3,748.8	3,626.0
2010 Q2	2,287.5	2,260.2	1,314.8	503.6	437.2	4.6	27.3	930.1	902.9
Q3	2,307.4	2,273.1	1,324.5	505.1	438.3	5.2	34.3	958.2	923.9
Q4	2,313.7	2,283.0	1,336.6	503.0	438.4	5.0	30.7	976.4	945.7
2011 Q1	2,342.8	2,322.0	1,349.3	508.9	450.5	13.2	20.8	1,013.8	993.0
Q2	2,355.6	2,331.0	1,354.8	509.2	451.8	15.1	24.6	1,023.1	998.5
<i>percentage of GDP</i>									
2010	100.0	98.7	57.5	22.0	19.0	0.2	1.3	-	-
<i>Chain-linked volumes (prices for the previous year)</i>									
<i>quarter-on-quarter percentage changes</i>									
2010 Q2	0.9	0.8	0.2	0.2	2.2	-	-	4.2	3.9
Q3	0.4	0.3	0.3	0.0	0.0	-	-	1.8	1.5
Q4	0.3	0.2	0.3	0.0	-0.2	-	-	1.2	1.1
2011 Q1	0.8	0.9	0.2	0.4	1.8	-	-	1.4	1.6
Q2	0.2	-0.1	-0.2	-0.1	0.1	-	-	0.7	0.2
<i>annual percentage changes</i>									
2007	3.0	2.8	1.7	2.2	4.7	-	-	6.6	6.1
2008	0.4	0.4	0.4	2.4	-1.1	-	-	1.0	0.9
2009	-4.2	-3.6	-1.2	2.6	-12.0	-	-	-12.8	-11.7
2010	1.8	1.4	0.9	0.4	-0.8	-	-	10.1	9.3
2010 Q2	2.1	1.7	0.7	0.6	-0.4	-	-	12.1	11.2
Q3	2.1	1.8	1.1	0.2	0.7	-	-	11.1	10.7
Q4	1.9	1.8	1.2	-0.2	1.2	-	-	10.6	10.7
2011 Q1	2.4	2.1	0.9	0.7	3.8	-	-	8.8	8.3
Q2	1.6	1.3	0.5	0.3	1.7	-	-	5.3	4.5
<i>contributions to quarter-on-quarter percentage changes in GDP; percentage points</i>									
2010 Q2	0.9	0.8	0.1	0.1	0.4	0.2	0.2	-	-
Q3	0.4	0.3	0.2	0.0	0.0	0.1	0.2	-	-
Q4	0.3	0.2	0.2	0.0	0.0	0.1	0.1	-	-
2011 Q1	0.8	0.8	0.1	0.1	0.3	0.3	-0.1	-	-
Q2	0.2	-0.1	-0.1	0.0	0.0	0.1	0.2	-	-
<i>contributions to annual percentage changes in GDP; percentage points</i>									
2007	3.0	2.8	0.9	0.4	1.0	0.4	0.3	-	-
2008	0.4	0.4	0.2	0.5	-0.2	-0.1	0.1	-	-
2009	-4.2	-3.6	-0.7	0.5	-2.6	-0.9	-0.6	-	-
2010	1.8	1.4	0.5	0.1	-0.2	0.9	0.4	-	-
2010 Q2	2.1	1.7	0.4	0.1	-0.1	1.2	0.4	-	-
Q3	2.1	1.7	0.6	0.0	0.1	1.0	0.3	-	-
Q4	1.9	1.8	0.7	0.0	0.2	0.9	0.2	-	-
2011 Q1	2.4	2.1	0.5	0.2	0.7	0.7	0.3	-	-
Q2	1.6	1.2	0.3	0.1	0.3	0.5	0.4	-	-

Sources: Eurostat and ECB calculations.

- Exports and imports cover goods and services and include cross-border intra-euro area trade. They are not fully consistent with: Section 3.1; Table 1 of Section 7.1; Table 3 of Section 7.2; or Tables 1 or 3 of Section 7.5.
- Including acquisitions less disposals of valuables.

## 5.2 Output and demand

(quarterly data seasonally adjusted; annual data unadjusted)

### 2. Value added by economic activity

	Gross value added (basic prices)							Taxes less subsidies on products
	Total	Agriculture, hunting, forestry and fishing activities	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business activities	Public administration, education, health and other services	
	1	2	3	4	5	6	7	8
<i>Current prices (EUR billions)</i>								
2007	8,075.1	147.7	1,654.0	511.7	1,666.4	2,304.4	1,790.9	959.9
2008	8,302.9	143.1	1,653.9	527.3	1,725.6	2,381.1	1,871.8	945.9
2009	8,048.8	129.2	1,445.5	505.9	1,648.4	2,374.3	1,945.6	891.7
2010	8,236.6	138.6	1,530.6	486.8	1,690.5	2,409.7	1,980.5	939.2
2010 Q2	2,053.0	34.4	380.0	122.8	420.7	598.9	496.2	234.5
Q3	2,066.2	35.1	383.1	122.2	425.6	605.2	495.0	241.2
Q4	2,075.2	35.8	390.0	120.6	427.0	606.7	495.1	238.5
2011 Q1	2,100.8	36.7	397.2	125.2	431.6	611.8	498.3	242.0
Q2	2,112.6	36.6	400.2	125.6	434.4	614.2	501.6	243.0
<i>percentage of value added</i>								
2010	100.0	1.7	18.6	5.9	20.5	29.3	24.0	-
<i>Chain-linked volumes (prices for the previous year)</i>								
<i>quarter-on-quarter percentage changes</i>								
2010 Q2	0.8	-0.6	1.9	1.0	1.0	0.4	0.1	2.5
Q3	0.4	-0.9	0.8	-1.1	0.7	0.6	0.1	0.5
Q4	0.3	0.6	1.3	-1.3	0.0	0.3	0.1	0.0
2011 Q1	0.7	0.6	1.8	2.5	0.6	0.2	0.2	1.2
Q2	0.2	-0.2	0.4	0.1	0.2	0.2	0.2	-0.2
<i>annual percentage changes</i>								
2007	3.3	1.6	3.5	2.6	3.9	4.2	1.8	0.7
2008	0.6	1.3	-2.4	-1.6	1.4	1.6	2.0	-1.4
2009	-4.2	2.8	-13.1	-6.2	-5.3	-1.6	1.3	-3.9
2010	1.9	0.1	6.3	-4.1	2.4	1.0	0.9	1.3
2010 Q2	2.1	0.4	7.7	-3.8	2.7	0.7	1.0	1.9
Q3	2.0	-0.8	5.8	-3.1	3.1	1.2	0.8	2.2
Q4	2.0	0.0	6.3	-3.0	2.3	1.4	0.4	1.8
2011 Q1	2.2	-0.3	5.8	1.1	2.3	1.5	0.6	4.3
Q2	1.6	0.1	4.3	0.2	1.5	1.3	0.6	1.5
<i>contributions to quarter-on-quarter percentage changes in value added; percentage points</i>								
2010 Q2	0.8	0.0	0.4	0.1	0.2	0.1	0.0	-
Q3	0.4	0.0	0.1	-0.1	0.1	0.2	0.0	-
Q4	0.3	0.0	0.2	-0.1	0.0	0.1	0.0	-
2011 Q1	0.7	0.0	0.3	0.1	0.1	0.1	0.1	-
Q2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	-
<i>contributions to annual percentage changes in value added; percentage points</i>								
2007	3.3	0.0	0.7	0.2	0.8	1.2	0.4	-
2008	0.6	0.0	-0.5	-0.1	0.3	0.5	0.4	-
2009	-4.2	0.0	-2.6	-0.4	-1.1	-0.5	0.3	-
2010	1.9	0.0	1.1	-0.3	0.5	0.3	0.2	-
2010 Q2	2.1	0.0	1.4	-0.2	0.6	0.2	0.2	-
Q3	2.0	0.0	1.1	-0.2	0.6	0.4	0.2	-
Q4	2.0	0.0	1.1	-0.2	0.5	0.4	0.1	-
2011 Q1	2.2	0.0	1.1	0.1	0.5	0.4	0.1	-
Q2	1.6	0.0	0.8	0.0	0.3	0.4	0.1	-

Sources: Eurostat and ECB calculations.



## 5.2 Output and demand

(annual percentage changes, unless otherwise indicated)

### 3. Industrial production

	Total		Industry excluding construction								Construction	
	% of total in 2005	Total (s.a.; index: 2005 = 100)	Total	Industry excluding construction and energy							Energy	
				Manu- facturing	Total	Intermediate goods	Capital goods	Consumer goods				
								Total	Durable	Non-durable		
1	2	3	4	5	6	7	8	9	10	11	12	
% of total in 2005	100.0	77.8	77.8	69.2	68.7	28.1	22.3	18.3	2.6	15.7	9.1	22.2
2008	-2.4	106.6	-1.6	-1.7	-1.8	-3.4	0.1	-1.9	-5.2	-1.3	0.2	-5.5
2009	-13.6	90.9	-14.8	-15.8	-16.0	-19.0	-20.8	-4.9	-17.3	-2.9	-5.3	-8.0
2010	4.3	97.7	7.5	7.9	7.9	10.1	9.4	3.3	2.6	3.4	3.8	-7.7
2010 Q3	3.9	98.3	7.1	7.7	7.8	9.4	10.2	3.1	3.8	3.0	1.6	-8.1
Q4	4.6	100.1	8.1	8.6	8.6	7.9	14.3	2.9	2.0	3.0	4.8	-9.2
2011 Q1	4.6	101.0	6.5	8.1	8.1	8.9	13.1	1.4	2.7	1.2	-2.3	-2.3
Q2	2.1	101.3	4.1	5.3	5.5	4.2	9.3	2.3	1.0	2.5	-5.4	-5.2
2011 Feb.	6.5	101.2	7.8	9.6	9.5	10.0	15.1	2.7	3.5	2.6	-2.8	3.3
Mar.	3.5	101.2	5.7	6.9	7.1	7.5	11.5	1.0	2.5	0.7	-2.1	-5.3
Apr.	3.7	101.4	5.2	6.6	6.8	5.2	10.5	3.9	4.7	3.7	-5.4	-2.5
May	3.2	101.6	4.3	5.9	6.0	4.4	10.7	2.6	1.2	2.7	-7.3	-1.0
June	-0.3	100.9	2.7	3.6	3.7	2.9	6.9	0.5	-2.6	1.0	-3.6	-11.3
July	4.0	101.8	4.2	5.1	5.3	4.0	11.9	-0.2	2.9	-0.6	-4.4	1.7
<i>month-on-month percentage changes (s.a.)</i>												
2011 Feb.	0.9	-	0.5	1.2	1.2	0.5	2.4	0.7	0.9	0.9	-1.3	-0.5
Mar.	-0.3	-	-0.1	-0.4	-0.1	-0.1	-0.7	0.2	-0.1	0.4	-0.3	-0.2
Apr.	0.3	-	0.2	0.2	0.4	-0.1	0.8	0.7	0.9	0.4	-3.7	0.8
May	0.2	-	0.2	0.2	0.1	0.0	1.4	-0.2	-0.5	-0.1	0.3	0.1
June	-1.3	-	-0.7	-1.2	-0.7	-0.7	-1.6	-0.7	-2.5	-0.7	1.1	-1.1
July	1.8	-	0.9	0.8	0.9	0.6	3.3	-0.3	2.9	-0.7	-0.1	1.6

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

	Industrial new orders		Industrial turnover		Retail sales (excluding automotive fuel)							New passenger car registrations	
	Manufacturing <sup>1)</sup> (current prices)		Manufacturing (current prices)		Current prices	Constant prices						Total (s.a.; thousands) <sup>2)</sup>	Total
	Total (s.a.; index: 2005 = 100)	Total	Total (s.a.; index: 2005 = 100)	Total	Total	Total (s.a.; index: 2005 = 100)	Total	Food, beverages, tobacco	Non-food				
									Textiles, clothing, footwear	Household equipment			
1	2	3	4	5	6	7	8	9	10	11	12	13	
% of total in 2005	100.0	100.0	100.0	100.0	100.0	100.0	100.0	43.0	57.0	10.1	14.3		
2008	112.6	-5.9	116.9	1.8	1.7	103.4	-0.8	-1.8	-0.1	-1.8	-1.6	891	-7.8
2009	87.0	-22.7	95.4	-18.6	-2.9	101.4	-2.0	-1.7	-2.2	-1.8	-3.9	925	3.3
2010	102.2	17.4	104.8	10.2	1.4	102.5	1.1	0.5	1.7	2.6	0.6	843	-8.5
2010 Q3	105.3	16.3	105.6	10.1	2.1	102.8	1.7	0.4	2.9	5.6	1.1	798	-16.4
Q4	107.4	18.1	109.2	12.1	1.4	102.6	0.9	0.2	1.5	1.5	-0.2	850	-11.1
2011 Q1	111.5	18.5	113.8	14.3	1.0	102.6	0.3	-1.1	1.1	-0.2	1.7	862	-3.1
Q2	114.3	12.0	114.5	9.8	1.1	102.3	-0.2	-0.5	-0.1	1.7	-1.2	827	-1.8
2011 Mar.	112.4	14.5	113.7	11.5	-0.2	102.1	-1.2	-1.8	-0.9	-3.1	-1.0	864	-4.5
Apr.	112.0	11.7	115.4	9.7	2.8	102.7	1.5	1.5	1.4	4.5	1.7	829	-0.2
May	116.1	13.9	115.2	18.0	-0.3	101.8	-1.7	-2.9	-1.0	-0.7	-2.7	826	-1.1
June	114.8	10.6	112.9	2.6	0.8	102.4	-0.3	-0.2	-0.6	1.3	-2.6	827	-3.8
July	112.3	8.4	115.4	7.5	1.0	102.5	0.1	-2.3	1.6	2.3	1.3	816	2.2
Aug.	.	.	.	.	0.5	102.0	-0.9	-0.2	-1.3	.	.	819	6.1
<i>month-on-month percentage changes (s.a.)</i>													
2011 Apr.	-	-0.4	-	1.5	0.7	-	0.6	0.7	0.4	2.3	0.9	-	-4.1
May	-	3.7	-	-0.2	-0.9	-	-0.9	-1.1	-0.7	-2.5	-1.6	-	-0.4
June	-	-1.1	-	-2.0	0.7	-	0.6	0.8	0.5	1.5	0.3	-	0.1
July	-	-2.1	-	2.2	0.0	-	0.1	-0.7	0.5	1.6	1.2	-	-1.3
Aug.	-	.	-	.	-0.3	-	-0.5	0.1	-0.6	.	.	-	0.4

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

1) Includes manufacturing industries working mainly on the basis of orders, which represented 61.2% of total manufacturing in 2005.

2) Annual and quarterly figures are averages of monthly figures in the period concerned.

## 5.2 Output and demand

(percentage balances, <sup>1)</sup> unless otherwise indicated; seasonally adjusted)

### 5. Business and Consumer Surveys

	Economic sentiment indicator <sup>2)</sup> (long-term average = 100)	Manufacturing industry					Consumer confidence indicator				
		Industrial confidence indicator				Capacity utilisation <sup>3)</sup> (%)	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
2007	109.4	5.8	7.2	4.4	14.6	84.8	-4.9	-2.3	-4.3	5.0	-8.0
2008	93.7	-8.4	-13.3	10.8	-1.0	82.1	-18.1	-9.9	-25.3	23.5	-13.6
2009	80.7	-28.7	-56.8	14.6	-14.8	70.9	-24.8	-7.0	-26.3	55.5	-10.3
2010	100.9	-4.5	-24.6	0.6	11.6	76.9	-14.0	-5.2	-12.2	31.0	-7.6
2010 Q3	102.3	-2.5	-18.4	0.3	11.3	77.6	-12.1	-5.5	-11.3	23.4	-8.2
Q4	105.7	2.7	-9.5	-0.8	16.8	79.1	-10.4	-5.4	-8.7	20.9	-6.6
2011 Q1	107.4	6.5	-1.6	-2.0	19.0	80.9	-10.6	-6.0	-9.6	19.7	-7.0
Q2	105.7	4.3	-1.3	-0.9	13.4	81.3	-10.4	-6.6	-12.4	14.7	-7.9
Q3	98.8	-2.6	-8.5	4.5	5.3	.	-15.6	-7.3	-21.6	23.8	-9.6
2011 Apr.	106.1	5.6	0.1	-1.4	15.4	81.6	-11.6	-7.3	-14.4	16.6	-8.1
May	105.5	3.8	-2.7	-1.4	12.9	-	-9.9	-6.7	-11.6	13.9	-7.4
June	105.4	3.5	-1.4	0.1	12.0	-	-9.7	-5.8	-11.1	13.7	-8.2
July	103.0	0.9	-4.7	2.5	9.8	80.9	-11.2	-6.0	-14.2	16.1	-8.3
Aug.	98.4	-2.7	-9.0	5.0	5.9	-	-16.5	-7.2	-23.4	25.5	-10.0
Sep.	95.0	-5.9	-11.8	5.9	0.2	-	-19.1	-8.8	-27.2	29.8	-10.6
	Construction confidence indicator			Retail trade confidence indicator				Services confidence indicator			
	Total <sup>4)</sup>	Order books	Employment expectations	Total <sup>4)</sup>	Present business situation	Volume of stocks	Expected business situation	Total <sup>4)</sup>	Business climate	Demand in recent months	Demand in the months ahead
	12	13	14	15	16	17	18	19	20	21	22
2007	0.1	-7.6	7.8	1.1	5.1	13.2	11.4	16.1	13.3	14.6	20.4
2008	-13.4	-20.7	-6.1	-10.0	-10.6	16.0	-3.5	0.6	-3.7	0.7	4.7
2009	-32.7	-42.2	-23.2	-15.5	-21.0	9.9	-15.7	-15.5	-20.4	-17.9	-8.3
2010	-28.4	-39.6	-17.2	-4.0	-6.1	7.4	1.5	5.0	2.5	4.2	8.3
2010 Q3	-28.1	-39.8	-16.4	-2.8	-4.7	7.0	3.4	6.9	4.8	8.3	7.6
Q4	-26.2	-36.0	-16.3	0.8	1.3	7.4	8.5	9.0	6.8	8.4	11.9
2011 Q1	-25.2	-36.1	-14.3	-0.7	0.1	8.2	6.0	10.6	8.3	10.5	13.2
Q2	-24.2	-32.2	-16.1	-2.3	-0.9	9.9	4.0	9.9	7.6	10.3	11.8
Q3	-24.6	-32.6	-16.5	-7.4	-6.6	13.0	-2.5	3.9	0.7	4.3	6.6
2011 Apr.	-24.3	-33.6	-15.1	-1.8	-2.0	9.0	5.5	10.3	7.4	10.2	13.4
May	-24.7	-32.6	-16.8	-2.4	-1.3	10.6	4.7	9.3	6.9	10.0	11.0
June	-23.5	-30.4	-16.5	-2.6	0.5	10.0	1.9	10.1	8.5	10.8	11.1
July	-24.3	-31.3	-17.2	-3.6	-2.4	10.5	2.2	7.9	5.3	7.9	10.5
Aug.	-23.4	-32.1	-14.6	-8.7	-7.3	13.7	-5.1	3.7	0.1	4.0	6.9
Sep.	-26.0	-34.3	-17.7	-9.8	-10.2	14.7	-4.6	0.0	-3.2	0.9	2.5

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

- 1) Difference between the percentages of respondents giving positive and negative replies.
- 2) The economic sentiment indicator is composed of the industrial, services, consumer, construction and retail trade confidence indicators; the industrial confidence indicator has a weight of 40%, the services confidence indicator a weight of 30%, the consumer confidence indicator a weight of 20% and the two other indicators a weight of 5% each. Values for the economic sentiment indicator of above (below) 100 indicate above-average (below-average) economic sentiment, calculated for the period 1990 to 2010.
- 3) Data are collected in January, April, July and October each year. The quarterly figures shown are averages of two successive surveys. Annual data are derived from quarterly averages.
- 4) The confidence indicators are calculated as simple averages of the components shown; the assessments of stocks (columns 4 and 17) and unemployment (column 10) are used with inverted signs for the calculation of confidence indicators.

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

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

### 1. Employment in terms of persons employed

	Whole economy		By employment status		By economic activity					
	Total (millions)	Total	Employees	Self-employed	Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
% of total in 2010	100.0	100.0	85.5	14.5	3.7	16.0	6.9	25.4	16.6	31.4
	1	2	3	4	5	6	7	8	9	10
2008	149.721	0.8	1.0	-0.3	-1.7	-0.1	-2.0	1.1	2.2	1.2
2009	146.947	-1.9	-1.8	-2.3	-2.4	-5.2	-6.7	-1.8	-2.2	1.5
2010	146.273	-0.5	-0.4	-0.7	-0.6	-3.1	-3.7	-0.6	1.1	1.1
2010 Q3	146.257	-0.1	0.0	-0.7	-0.1	-2.2	-2.9	-0.4	1.7	0.9
Q4	146.427	0.2	0.3	-0.4	-0.7	-1.0	-3.5	0.2	1.8	0.9
2011 Q1	146.548	0.3	0.4	-0.4	-2.0	0.1	-3.3	0.4	2.5	0.2
Q2	146.996	0.5	0.6	-0.4	-1.8	0.2	-2.7	0.9	2.6	0.1
	<i>quarter-on-quarter percentage changes</i>									
2010 Q3	-0.026	0.0	0.0	-0.3	0.1	-0.2	-1.0	0.1	0.2	0.1
Q4	0.170	0.1	0.1	0.1	0.1	0.1	-1.0	0.2	0.3	0.2
2011 Q1	0.121	0.1	0.1	0.2	-1.3	0.3	-0.9	0.1	1.1	-0.2
Q2	0.448	0.3	0.4	-0.3	-0.7	0.1	0.1	0.5	1.0	0.1

### 2. Employment in terms of hours worked

	Whole economy		By employment status		By economic activity					
	Total (millions)	Total	Employees	Self-employed	Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
% of total in 2010	100.0	100.0	80.5	19.5	4.8	16.0	7.7	27.0	16.1	28.6
	1	2	3	4	5	6	7	8	9	10
2008	239,003.1	0.7	1.1	-0.9	-2.0	-0.6	-1.8	0.9	2.4	1.8
2009	230,626.4	-3.5	-3.6	-3.1	-2.3	-9.2	-8.6	-3.0	-3.5	0.9
2010	231,449.8	0.4	0.4	0.2	-1.2	-0.3	-3.4	0.3	1.7	1.4
2010 Q3	57,927.6	0.8	0.9	0.4	-0.8	1.1	-2.6	0.6	2.5	1.2
Q4	57,922.6	0.5	0.6	0.2	-1.7	1.3	-4.1	0.4	1.9	1.1
2011 Q1	58,120.3	0.8	0.8	0.6	-0.5	2.2	-2.3	0.3	2.7	0.4
Q2	58,009.1	0.1	0.2	-0.3	-2.9	1.1	-2.9	-0.2	1.5	0.5
	<i>quarter-on-quarter percentage changes</i>									
2010 Q3	-1.7	0.0	0.1	-0.3	-0.8	0.7	-1.2	-0.1	0.2	0.0
Q4	-4.9	0.0	-0.1	0.4	-0.2	0.1	-1.8	0.0	0.6	0.1
2011 Q1	197.7	0.3	0.4	0.2	-0.3	0.6	0.5	0.0	1.2	0.1
Q2	-111.2	-0.2	-0.1	-0.6	-1.7	-0.3	-0.4	0.0	-0.5	0.2

### 3. Hours worked per person employed

	Whole economy		By employment status		By economic activity					
	Total (thousands)	Total	Employees	Self-employed	Agriculture, hunting, forestry and fishing	Mining, manufacturing and energy	Construction	Trade, repairs, hotels and restaurants, transport and communication	Financial, real estate, renting and business services	Public administration, education, health and other services
	1	2	3	4	5	6	7	8	9	10
2008	1.596	0.0	0.2	-0.6	-0.3	-0.5	0.3	-0.3	0.2	0.6
2009	1.569	-1.7	-1.9	-0.7	0.1	-4.2	-2.1	-1.2	-1.3	-0.5
2010	1.582	0.8	0.8	0.9	-0.6	2.9	0.4	0.9	0.7	0.3
2010 Q3	0.396	0.9	0.9	1.1	-0.6	3.3	0.3	1.0	0.8	0.2
Q4	0.396	0.3	0.3	0.6	-1.0	2.3	-0.6	0.1	0.1	0.2
2011 Q1	0.397	0.5	0.4	1.0	1.5	2.2	1.0	-0.1	0.3	0.2
Q2	0.395	-0.3	-0.4	0.0	-1.1	0.9	-0.2	-1.1	-1.1	0.3

Source: ECB calculations based on Eurostat data.

1) Data for employment are based on the ESA 95.

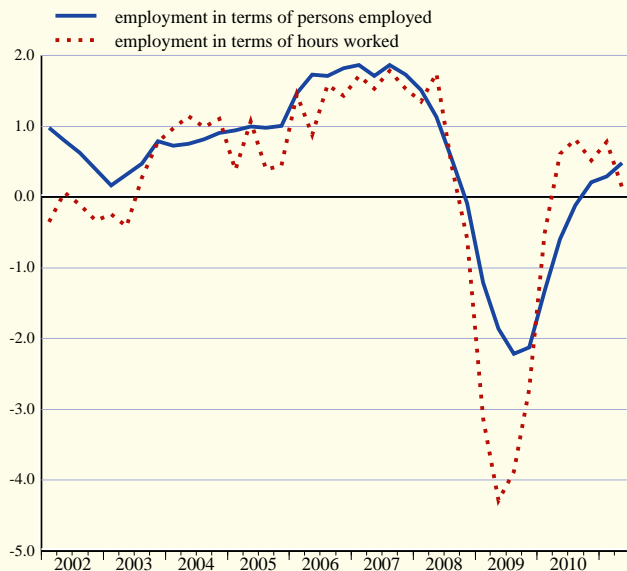
### 5.3 Labour markets

(seasonally adjusted, unless otherwise indicated)

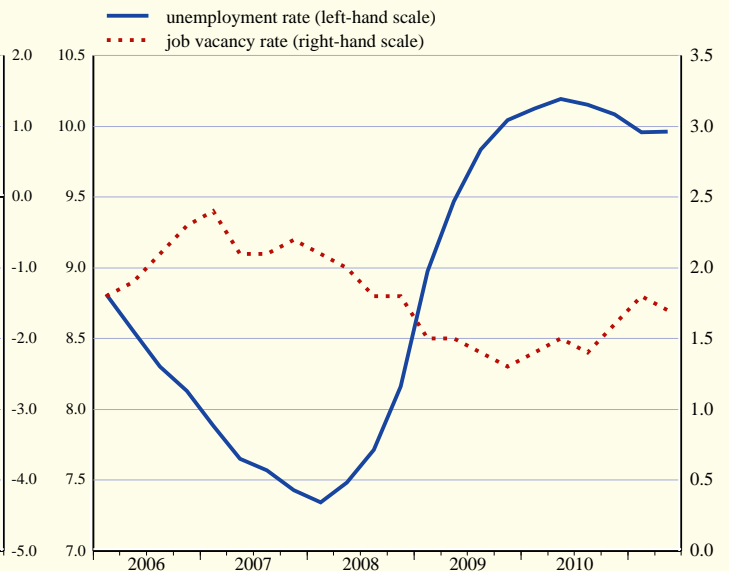
#### 4. Unemployment and job vacancies<sup>1)</sup>

	Unemployment										Job vacancy rate <sup>2)</sup>
	Total		By age <sup>3)</sup>				By gender <sup>4)</sup>				
	Millions	% of labour force	Adult		Youth		Male		Female		
			Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	
% of total in 2010	100.0		79.5		20.5		53.9		46.1		
	1	2	3	4	5	6	7	8	9	10	11
2007	11.818	7.6	9.211	6.7	2.608	15.5	5.838	6.8	5.981	8.7	2.2
2008	12.017	7.7	9.328	6.7	2.689	16.1	6.077	7.0	5.940	8.5	1.9
2009	15.033	9.6	11.754	8.4	3.279	20.2	8.120	9.4	6.913	9.8	1.4
2010	15.941	10.1	12.663	8.9	3.278	20.9	8.604	10.0	7.338	10.3	1.5
2010 Q2	16.029	10.2	12.714	9.0	3.315	21.1	8.682	10.1	7.347	10.4	1.5
Q3	15.963	10.2	12.717	9.0	3.246	20.9	8.583	10.0	7.380	10.4	1.4
Q4	15.861	10.1	12.651	8.9	3.211	20.7	8.493	9.9	7.369	10.4	1.6
2011 Q1	15.651	10.0	12.477	8.8	3.174	20.6	8.351	9.7	7.300	10.3	1.8
Q2	15.701	10.0	12.550	8.8	3.150	20.5	8.350	9.7	7.350	10.3	1.7
2011 Mar.	15.624	9.9	12.440	8.8	3.183	20.6	8.331	9.7	7.292	10.2	-
Apr.	15.657	9.9	12.507	8.8	3.150	20.4	8.335	9.7	7.321	10.3	-
May	15.719	10.0	12.558	8.8	3.161	20.5	8.368	9.7	7.351	10.3	-
June	15.726	10.0	12.586	8.8	3.140	20.5	8.347	9.7	7.379	10.3	-
July	15.777	10.0	12.634	8.9	3.143	20.5	8.358	9.7	7.419	10.3	-
Aug.	15.739	10.0	12.609	8.8	3.129	20.4	8.311	9.6	7.428	10.3	-

#### C28 Employment - persons employed and hours worked (annual percentage changes)



#### C29 Unemployment and job vacancy<sup>2)</sup> rates



Source: Eurostat.

- 1) Data for unemployment refer to persons and follow ILO recommendations.
- 2) Industry, construction and services (excluding households as employers and extra-territorial organisations and bodies); non-seasonally adjusted.
- 3) Adult: 25 years of age and over; youth: below 25 years of age; rates are expressed as a percentage of the labour force for the relevant age group.
- 4) Rates are expressed as a percentage of the labour force for the relevant gender.

# 6

## GOVERNMENT FINANCE

### 6.1 Revenue, expenditure and deficit/surplus <sup>1)</sup> (as a percentage of GDP)

#### 1. Euro area – revenue

	Current revenue											Capital revenue		Memo item: Fiscal burden <sup>2)</sup>
	Total	Direct taxes			Indirect taxes	Received by EU institutions	Social contributions			Sales	Capital taxes			
		Households	Corporations				Employers	Employees						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2002	45.1	44.8	11.8	9.2	2.5	13.5	0.4	15.6	8.1	4.6	2.1	0.3	0.3	41.2
2003	45.0	44.4	11.4	9.0	2.3	13.5	0.4	15.7	8.2	4.6	2.1	0.6	0.5	41.1
2004	44.5	44.0	11.3	8.7	2.5	13.5	0.3	15.5	8.1	4.5	2.1	0.5	0.4	40.7
2005	44.8	44.3	11.5	8.8	2.7	13.7	0.3	15.4	8.1	4.5	2.2	0.5	0.3	40.9
2006	45.3	45.0	12.1	8.9	3.0	13.8	0.3	15.3	8.0	4.5	2.1	0.3	0.3	41.5
2007	45.4	45.1	12.4	9.1	3.2	13.8	0.3	15.1	8.0	4.4	2.1	0.3	0.3	41.6
2008	45.1	44.8	12.2	9.3	2.8	13.3	0.3	15.3	8.1	4.5	2.2	0.2	0.3	41.1
2009	44.7	44.3	11.4	9.3	2.0	13.1	0.3	15.7	8.2	4.5	2.3	0.3	0.4	40.6
2010	44.6	44.3	11.3	9.1	2.1	13.3	0.3	15.6	8.1	4.5	2.3	0.3	0.3	40.5

#### 2. Euro area – expenditure

	Current expenditure									Capital expenditure			Memo item: Primary expenditure <sup>3)</sup>	
	Total	Compensation of employees	Intermediate consumption	Interest	Current transfers	Social payments		Subsidies	Paid by EU institutions	Investment	Capital transfers	Paid by EU institutions		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2002	47.7	43.9	10.4	4.9	3.5	25.1	22.2	1.9	0.5	3.8	2.4	1.4	0.1	44.2
2003	48.1	44.1	10.5	5.0	3.3	25.4	22.5	1.9	0.5	3.9	2.5	1.4	0.1	44.8
2004	47.5	43.5	10.4	5.0	3.1	25.0	22.3	1.7	0.5	3.9	2.4	1.5	0.1	44.4
2005	47.3	43.5	10.4	5.1	3.0	25.0	22.3	1.7	0.5	3.9	2.5	1.4	0.0	44.4
2006	46.7	42.9	10.2	5.0	2.9	24.8	22.0	1.7	0.5	3.9	2.5	1.4	0.0	43.8
2007	46.1	42.3	10.0	5.0	3.0	24.3	21.6	1.6	0.4	3.8	2.6	1.2	0.0	43.1
2008	47.1	43.2	10.1	5.2	3.0	24.9	22.1	1.6	0.4	3.9	2.6	1.3	0.0	44.1
2009	51.0	46.7	10.8	5.6	2.8	27.4	24.3	1.9	0.5	4.3	2.8	1.4	0.0	48.2
2010	50.5	46.4	10.6	5.6	2.8	27.4	24.3	1.8	0.4	4.1	2.5	1.7	0.0	47.8

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

	Deficit (-)/surplus (+)					Primary deficit (-)/surplus (+)	Government consumption <sup>4)</sup>							
	Total	Central gov.	State gov.	Local gov.	Social security funds		Total	Compensation of employees	Intermediate consumption	Transfers in kind via market producers	Consumption of fixed capital	Sales (minus)	Collective consumption	Individual consumption
2002	-2.6	-2.3	-0.5	-0.3	0.3	0.9	20.2	10.4	4.9	5.1	1.8	2.1	8.3	11.9
2003	-3.1	-2.4	-0.5	-0.2	0.1	0.2	20.5	10.5	5.0	5.2	1.9	2.1	8.4	12.1
2004	-3.0	-2.5	-0.4	-0.3	0.2	0.2	20.4	10.4	5.0	5.1	1.9	2.1	8.3	12.1
2005	-2.5	-2.3	-0.3	-0.2	0.3	0.4	20.4	10.4	5.1	5.1	1.9	2.2	8.2	12.2
2006	-1.4	-1.5	-0.1	-0.2	0.4	1.5	20.3	10.2	5.0	5.2	1.9	2.1	8.1	12.2
2007	-0.7	-1.2	0.0	-0.1	0.6	2.3	20.0	10.0	5.0	5.1	1.9	2.1	7.9	12.1
2008	-2.0	-2.2	-0.2	-0.2	0.6	1.0	20.5	10.1	5.2	5.3	2.0	2.2	8.1	12.4
2009	-6.3	-5.2	-0.5	-0.3	-0.4	-3.5	22.1	10.8	5.6	5.8	2.1	2.3	8.8	13.4
2010	-6.0	-4.9	-0.7	-0.3	-0.1	-3.2	21.9	10.6	5.6	5.8	2.0	2.3	8.6	13.3

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

	BE	DE	EE	IE	GR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2007	-0.3	0.3	2.5	0.1	-6.4	1.9	-2.7	-1.5	3.4	3.7	-2.4	0.2	-0.9	-3.1	-0.1	-1.8	5.2
2008	-1.3	0.1	-2.8	-7.3	-9.8	-4.2	-3.3	-2.7	0.9	3.0	-4.5	0.6	-0.9	-3.5	-1.8	-2.1	4.2
2009	-5.9	-3.0	-1.7	-14.3	-15.4	-11.1	-7.5	-5.4	-6.0	-0.9	-3.7	-5.5	-4.1	-10.1	-6.0	-8.0	-2.6
2010	-4.1	-3.3	0.1	-32.4	-10.5	-9.2	-7.0	-4.6	-5.3	-1.7	-3.6	-5.4	-4.6	-9.1	-5.6	-7.9	-2.5

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' deficit/surplus.

- 1) Data refer to the Euro 17. The concepts "revenue", "expenditure" and "deficit/surplus" are based on the ESA 95. Transactions involving the EU budget are included and consolidated. Transactions among Member States' governments are not consolidated.
- 2) The fiscal burden comprises taxes and social contributions.
- 3) Comprises total expenditure minus interest expenditure.
- 4) Corresponds to final consumption expenditure (P.3) of general government in the ESA 95.
- 5) Includes proceeds from the sale of UMTS licences and settlements under swaps and forward rate agreements.

## 6.2 Debt <sup>1)</sup>

(as a percentage of GDP)

### 1. Euro area – by financial instrument and sector of the holder

	Financial instruments					Holders				
	Total	Currency and deposits	Loans	Short-term securities	Long-term securities	Domestic creditors <sup>2)</sup>				Other creditors <sup>3)</sup>
						Total	MFIs	Other financial corporations	Other sectors	
1	2	3	4	5	6	7	8	9	10	
2001	68.1	2.8	12.4	4.0	48.9	42.4	20.8	11.2	10.4	25.7
2002	67.9	2.7	11.8	4.6	48.9	41.0	19.6	10.8	10.6	26.9
2003	69.1	2.1	12.4	5.0	49.6	40.2	19.8	11.3	9.1	28.8
2004	69.4	2.2	12.0	5.0	50.3	39.1	18.9	11.1	9.1	30.4
2005	70.3	2.4	12.1	4.7	51.1	37.4	18.1	11.2	8.0	32.9
2006	68.5	2.4	11.8	4.1	50.2	35.4	18.4	9.3	7.7	33.1
2007	66.3	2.2	11.2	4.2	48.7	33.1	17.1	8.6	7.4	33.1
2008	70.0	2.3	11.4	6.7	49.6	33.1	17.8	7.9	7.4	36.9
2009	79.5	2.5	12.5	8.6	56.0	37.1	20.6	8.9	7.6	42.4
2010	85.3	2.4	15.4	7.7	59.7	40.9	24.1	10.1	6.7	44.4

### 2. Euro area – by issuer, maturity and currency denomination

	Total	Issued by: <sup>4)</sup>				Original maturity			Residual maturity			Currencies	
		Central gov.	State gov.	Local gov.	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 currencies	Other currencies
2001	68.1	57.0	6.0	4.7	0.4	7.0	61.1	5.3	13.7	26.5	27.9	66.7	1.4
2002	67.9	56.6	6.2	4.7	0.4	7.6	60.3	5.2	15.5	25.3	27.2	66.8	1.2
2003	69.1	56.9	6.5	5.1	0.6	7.8	61.3	5.0	14.9	26.0	28.2	68.2	0.9
2004	69.4	57.3	6.6	5.1	0.4	7.8	61.6	4.6	14.8	26.2	28.5	68.6	0.8
2005	70.3	57.8	6.7	5.2	0.5	7.9	62.4	4.6	14.9	25.6	29.8	69.3	1.0
2006	68.5	56.2	6.5	5.4	0.5	7.5	61.1	4.3	14.4	24.1	30.0	68.0	0.5
2007	66.3	53.5	6.2	5.2	1.4	7.1	59.2	4.3	15.0	23.4	27.8	65.9	0.4
2008	70.0	56.8	6.6	5.2	1.3	9.9	60.1	4.9	18.7	23.1	28.2	69.3	0.7
2009	79.5	64.5	7.6	5.7	1.7	11.8	67.7	5.0	21.0	26.6	31.9	78.7	0.8
2010	85.3	69.4	8.3	5.8	1.9	12.8	72.4	5.4	22.2	28.7	34.4	84.5	0.8

### 3. Euro area countries

	BE	DE	EE	IE	GR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2007	84.2	64.9	3.7	25.0	105.4	36.1	63.9	103.6	58.3	6.7	62.0	45.3	60.7	68.3	23.1	29.6	35.2
2008	89.6	66.3	4.6	44.4	110.7	39.8	67.7	106.3	48.3	13.6	61.5	58.2	63.8	71.6	21.9	27.8	34.1
2009	96.2	73.5	7.2	65.6	127.1	53.3	78.3	116.1	58.0	14.6	67.6	60.8	69.6	83.0	35.2	35.4	43.8
2010	96.8	83.2	6.6	96.2	142.8	60.1	81.7	119.0	60.8	18.4	68.0	62.7	72.3	93.0	38.0	41.0	48.4

Sources: ECB for euro area aggregated data; European Commission for data relating to countries' debt.

- 1) Data refer to the Euro 17. Gross general government debt at nominal value and consolidated between sub-sectors of government. Holdings by non-resident governments are not consolidated. Intergovernmental lending in the context of the financial crisis is consolidated. Data are partially estimated.
- 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.

## 6.3 Change in debt <sup>1)</sup>

(as a percentage of GDP)

### 1. Euro area – by source, financial instrument and sector of the holder

	Total	Source of change			Financial instruments				Holders			Other creditors <sup>6)</sup>
		Borrowing requirement <sup>2)</sup>	Valuation effects <sup>3)</sup>	Other changes in volume <sup>4)</sup>	Currency and deposits	Loans	Short-term securities	Long-term securities	Domestic creditors <sup>5)</sup>	MFI	Other financial corporations	
	1	2	3	4	5	6	7	8	9	10	11	12
2002	2.1	2.7	-0.5	-0.1	0.0	-0.2	0.7	1.6	0.0	-0.5	0.0	2.1
2003	3.1	3.3	-0.2	0.0	-0.6	0.9	0.6	2.1	0.4	0.8	0.8	2.7
2004	3.1	3.2	-0.1	0.0	0.2	0.1	0.1	2.7	0.4	-0.2	0.3	2.7
2005	3.3	3.0	0.2	0.0	0.3	0.5	-0.1	2.6	-0.3	-0.1	0.5	3.6
2006	1.7	1.4	0.1	0.1	0.2	0.3	-0.3	1.5	-0.1	1.1	-1.3	1.8
2007	1.2	1.2	0.0	0.0	-0.1	0.0	0.3	1.1	-0.5	-0.3	-0.2	1.7
2008	5.3	5.1	0.1	0.0	0.1	0.5	2.6	2.0	0.7	1.1	-0.5	4.5
2009	7.2	7.4	-0.2	0.0	0.1	0.7	1.6	4.8	2.9	2.2	0.8	4.3
2010	7.8	7.9	-0.1	0.0	0.0	3.3	-0.6	5.1	4.7	4.0	1.5	3.1

### 2. Euro area – deficit-debt adjustment

	Change in debt	Deficit (-) / surplus (+) <sup>7)</sup>	Deficit-debt adjustment <sup>8)</sup>											Other <sup>9)</sup>
			Total	Transactions in main financial assets held by general government							Valuation effects	Exchange rate effects	Other changes in volume	
				Total	Currency and deposits	Loans	Securities <sup>10)</sup>	Shares and other equity	Privatisations	Equity injections				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2002	2.1	-2.6	-0.5	0.1	0.1	0.0	0.1	-0.1	-0.4	0.1	-0.5	-0.1	-0.1	-0.1
2003	3.1	-3.1	0.0	0.1	0.1	0.0	0.0	0.1	-0.2	0.1	-0.2	-0.1	0.0	0.1
2004	3.1	-3.0	0.2	0.2	0.2	0.0	0.1	0.0	-0.5	0.2	-0.1	0.0	0.0	0.1
2005	3.3	-2.5	0.7	0.6	0.3	0.1	0.1	0.1	-0.3	0.2	0.2	0.0	0.0	-0.1
2006	1.7	-1.4	0.3	0.3	0.3	-0.1	0.3	-0.2	-0.4	0.1	0.1	0.0	0.1	-0.3
2007	1.2	-0.7	0.5	0.6	0.2	0.0	0.2	0.1	-0.3	0.2	0.0	0.0	0.0	-0.1
2008	5.3	-2.0	3.2	3.0	0.8	0.7	0.7	0.9	-0.1	0.6	0.1	0.0	0.0	0.0
2009	7.2	-6.3	0.9	1.1	0.4	0.0	0.3	0.5	-0.3	0.5	-0.2	0.0	0.0	0.0
2010	7.8	-6.0	1.9	2.4	0.3	0.5	1.3	0.2	0.0	0.1	-0.1	0.0	0.0	-0.4

Source: ECB.

- 1) Data refer to the Euro 17 and are partially estimated. Annual change in gross nominal consolidated debt is expressed as a percentage of GDP, i.e.  $[\text{debt}(t) - \text{debt}(t-1)] \div \text{GDP}(t)$ . Intergovernmental lending in the context of the financial crisis is consolidated.
- 2) The borrowing requirement is by definition equal to transactions in debt.
- 3) Includes, in addition to the impact of foreign exchange movements, effects arising from measurement at nominal value (e.g. premia or discounts on securities issued).
- 4) Includes, in particular, the impact of the reclassification of units and certain types of debt assumption.
- 5) Holders resident in the country whose government has issued the debt.
- 6) Includes residents of euro area countries other than the country whose government has issued the debt.
- 7) Including proceeds from sales of UMTS licences.
- 8) The difference between the annual change in gross nominal consolidated debt and the deficit as a percentage of GDP.
- 9) Mainly composed of transactions in other assets and liabilities (trade credits, other receivables/payables and financial derivatives).
- 10) Excluding financial derivatives.



**6.4 Quarterly revenue, expenditure and deficit/surplus <sup>1)</sup>**  
(as a percentage of GDP)

**1. Euro area – quarterly revenue**

	Total		Current revenue					Capital revenue		Memo item: Fiscal burden <sup>2)</sup>
	1	2	Direct taxes	Indirect taxes	Social contributions	Sales	Property income	8	Capital taxes	
2005 Q1	42.4	41.9	10.0	13.0	15.3	2.1	0.6	0.5	0.3	38.5
2005 Q2	44.5	43.9	11.6	13.2	15.1	2.2	1.1	0.6	0.3	40.1
2005 Q3	43.6	42.9	11.1	13.0	15.1	2.1	0.7	0.7	0.3	39.6
2005 Q4	48.4	47.6	13.3	14.2	16.1	2.2	0.8	0.8	0.3	43.9
2006 Q1	42.8	42.4	10.3	13.3	15.1	2.1	0.8	0.4	0.3	39.0
2006 Q2	45.6	45.1	12.2	13.5	15.1	2.2	1.3	0.5	0.3	41.1
2006 Q3	43.8	43.3	11.6	12.9	15.1	2.1	0.8	0.5	0.3	39.9
2006 Q4	48.7	48.1	14.0	14.3	15.8	2.2	0.9	0.6	0.3	44.4
2007 Q1	42.5	42.2	10.3	13.5	14.7	2.0	0.9	0.4	0.3	38.7
2007 Q2	45.8	45.4	12.7	13.5	15.0	2.2	1.4	0.4	0.3	41.4
2007 Q3	43.8	43.3	12.2	12.8	14.8	2.1	0.7	0.5	0.3	40.0
2007 Q4	49.0	48.4	14.4	14.2	15.7	2.3	1.0	0.6	0.3	44.6
2008 Q1	42.7	42.4	10.7	12.9	14.8	2.1	1.1	0.3	0.2	38.7
2008 Q2	45.3	44.9	12.6	12.8	15.0	2.2	1.5	0.4	0.3	40.7
2008 Q3	43.3	43.0	11.9	12.4	15.0	2.1	0.8	0.4	0.3	39.6
2008 Q4	48.5	48.0	13.6	13.7	16.3	2.3	1.1	0.5	0.3	43.9
2009 Q1	42.6	42.5	10.3	12.5	15.5	2.3	1.1	0.2	0.2	38.5
2009 Q2	44.8	44.2	11.5	12.6	15.6	2.3	1.4	0.6	0.5	40.2
2009 Q3	42.7	42.4	11.0	12.3	15.4	2.2	0.7	0.3	0.3	39.0
2009 Q4	48.2	47.4	12.7	13.9	16.4	2.4	0.9	0.8	0.5	43.5
2010 Q1	42.2	42.0	10.1	12.4	15.4	2.3	0.9	0.2	0.3	38.2
2010 Q2	44.7	44.2	11.5	12.9	15.3	2.4	1.3	0.5	0.3	40.0
2010 Q3	43.1	42.8	10.9	12.9	15.2	2.2	0.7	0.3	0.3	39.3
2010 Q4	48.0	47.3	12.7	13.8	16.4	2.5	1.0	0.7	0.3	43.2
2011 Q1	42.4	42.2	10.3	12.7	15.2	2.3	0.9	0.2	0.3	38.5

**2. Euro area – quarterly expenditure and deficit/surplus**

	Total		Current expenditure						Capital expenditure			Deficit (-)/ surplus (+)	Primary deficit (-)/ surplus (+)
	1	2	Total	Compensation of employees	Intermediate consumption	Interest	Current transfers	Social benefits		Investment	Capital transfers		
								7	8				
2005 Q1	47.2	43.5	10.2	4.7	3.1	25.5	21.8	1.2	3.7	1.9	1.8	-4.8	-1.7
2005 Q2	46.3	43.0	10.2	5.0	3.2	24.7	21.4	1.1	3.4	2.3	1.1	-1.8	1.3
2005 Q3	45.7	42.3	9.9	4.8	3.0	24.7	21.4	1.2	3.4	2.5	1.0	-2.1	0.8
2005 Q4	49.9	45.1	11.1	5.8	2.7	25.4	21.8	1.3	4.8	3.1	1.7	-1.5	1.2
2006 Q1	45.8	42.6	10.0	4.6	3.0	25.1	21.6	1.1	3.2	1.9	1.3	-3.0	0.0
2006 Q2	45.7	42.5	10.2	4.9	3.1	24.2	21.2	1.1	3.2	2.3	1.0	-0.1	3.0
2006 Q3	45.3	41.9	9.8	4.7	2.9	24.5	21.1	1.2	3.4	2.5	1.0	-1.5	1.4
2006 Q4	49.8	44.4	10.7	5.8	2.7	25.2	21.5	1.4	5.4	3.2	2.2	-1.1	1.6
2007 Q1	44.7	41.5	9.8	4.5	2.9	24.3	20.9	1.1	3.2	2.0	1.2	-2.2	0.8
2007 Q2	44.9	41.7	9.9	4.9	3.2	23.7	20.8	1.1	3.2	2.3	0.9	0.9	4.1
2007 Q3	44.6	41.2	9.5	4.8	3.0	24.0	20.8	1.2	3.4	2.5	0.9	-0.9	2.1
2007 Q4	49.6	44.5	10.7	5.8	2.8	25.2	21.4	1.5	5.1	3.4	1.7	-0.7	2.1
2008 Q1	45.2	41.9	9.7	4.7	3.0	24.5	20.9	1.2	3.2	2.0	1.2	-2.4	0.6
2008 Q2	45.7	42.3	10.1	5.0	3.2	24.0	20.9	1.1	3.4	2.4	1.0	-0.4	2.8
2008 Q3	45.7	42.1	9.6	4.8	3.1	24.5	21.3	1.2	3.6	2.5	1.0	-2.3	0.8
2008 Q4	51.5	46.4	11.0	6.2	2.8	26.4	22.4	1.4	5.2	3.5	1.7	-3.1	-0.3
2009 Q1	49.1	45.7	10.5	5.3	2.9	26.9	23.0	1.3	3.5	2.2	1.2	-6.5	-3.6
2009 Q2	50.5	46.4	10.9	5.5	3.0	27.0	23.4	1.3	4.1	2.8	1.3	-5.7	-2.7
2009 Q3	49.6	45.7	10.3	5.3	2.9	27.2	23.6	1.4	3.9	2.7	1.2	-6.8	-4.0
2009 Q4	54.4	49.0	11.6	6.5	2.6	28.4	24.1	1.5	5.4	3.4	1.9	-6.3	-3.7
2010 Q1	50.2	46.6	10.6	5.2	2.8	28.1	23.8	1.4	3.6	2.0	1.5	-8.0	-5.2
2010 Q2	49.3	45.9	10.7	5.5	2.9	26.8	23.3	1.3	3.4	2.4	1.2	-4.7	-1.8
2010 Q3	49.2	45.1	10.1	5.2	2.8	27.0	23.3	1.3	4.1	2.4	1.7	-6.2	-3.4
2010 Q4	53.2	48.0	11.2	6.4	2.7	27.8	23.8	1.5	5.2	3.1	2.1	-5.2	-2.5
2011 Q1	48.2	45.4	10.2	5.1	2.9	27.3	23.2	1.3	2.8	1.9	0.9	-5.8	-3.0

Sources: ECB calculations based on Eurostat and national data.

- 1) Data refer to the Euro 17. The concepts "revenue", "expenditure" and "deficit/surplus" are based on the ESA 95. Transactions between the EU budget and entities outside the government sector are not included. Otherwise, except for different data transmission deadlines, the quarterly data are consistent with the annual data. The data are not seasonally adjusted.
- 2) The fiscal burden comprises taxes and social contributions.

## 6.5 Quarterly debt and change in debt <sup>1)</sup>

(as a percentage of GDP)

### 1. Euro area – Maastricht debt by financial instrument <sup>2)</sup>

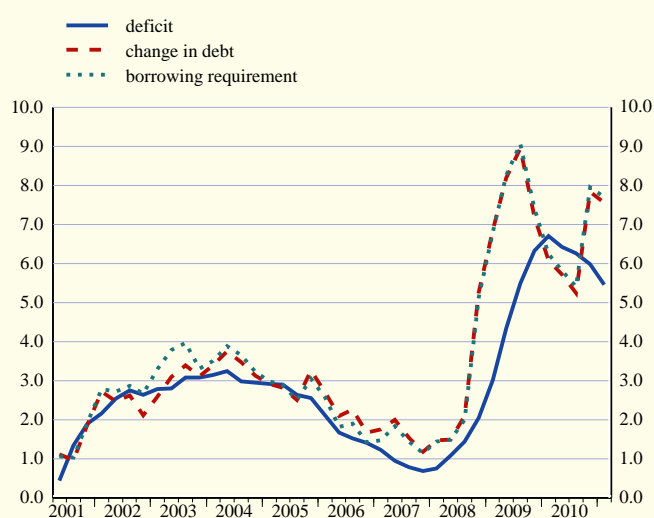
	Total 1	Financial instruments			
		Currency and deposits 2	Loans 3	Short-term securities 4	Long-term securities 5
2008 Q2	67.5	2.2	11.4	4.9	49.0
Q3	67.6	2.1	11.3	5.5	48.7
Q4	70.0	2.3	11.4	6.7	49.6
2009 Q1	73.7	2.3	11.7	7.9	51.8
Q2	76.8	2.4	12.1	8.4	53.9
Q3	78.6	2.4	12.3	9.2	54.8
Q4	79.5	2.5	12.5	8.6	56.0
2010 Q1	81.2	2.4	12.7	8.4	57.7
Q2	82.5	2.4	13.2	8.1	58.8
Q3	82.6	2.4	13.2	8.2	58.9
Q4	85.3	2.4	15.4	7.7	59.7
2011 Q1	86.2	2.4	15.5	7.7	60.7

### 2. Euro area – deficit-debt adjustment

	Change in debt 1	Deficit (-)/ surplus (+) 2	Deficit-debt adjustment							Memo item: Borrowing requirement 11	
			Total 3	Transactions in main financial assets held by general government				Valuation effects and other changes in volume 9	Other 10		
				Total 4	Currency and deposits 5	Loans 6	Securities 7				Shares and other equity 8
2008 Q2	3.8	-0.4	3.3	4.0	1.9	0.3	1.3	0.5	0.1	-0.7	3.7
Q3	2.0	-2.3	-0.3	-0.7	-1.5	0.0	0.3	0.5	0.4	0.0	1.6
Q4	9.1	-3.1	6.1	5.5	0.6	2.5	0.4	2.1	0.1	0.4	9.0
2009 Q1	12.8	-6.5	6.3	6.8	5.2	-0.1	1.0	0.8	-0.5	0.0	13.3
Q2	9.1	-5.7	3.3	3.2	2.3	-0.6	0.3	1.2	-0.4	0.5	9.4
Q3	4.9	-6.8	-2.0	-2.8	-3.2	0.6	0.0	-0.2	0.2	0.6	4.6
Q4	2.3	-6.3	-3.9	-2.5	-2.7	-0.1	0.1	0.2	-0.2	-1.2	2.6
2010 Q1	8.2	-8.0	0.2	0.8	0.9	0.0	-0.3	0.3	-0.3	-0.3	8.5
Q2	7.6	-4.7	2.9	3.2	1.9	1.1	-0.2	0.4	-0.1	-0.3	7.7
Q3	3.0	-6.2	-3.2	-2.9	-2.3	-0.6	-0.1	0.1	0.0	-0.3	3.0
Q4	12.4	-5.2	7.2	8.0	0.8	1.6	5.7	-0.1	0.0	-0.8	12.4
2011 Q1	7.1	-5.8	1.3	0.9	2.2	-0.6	-0.4	-0.3	-0.4	0.8	7.5

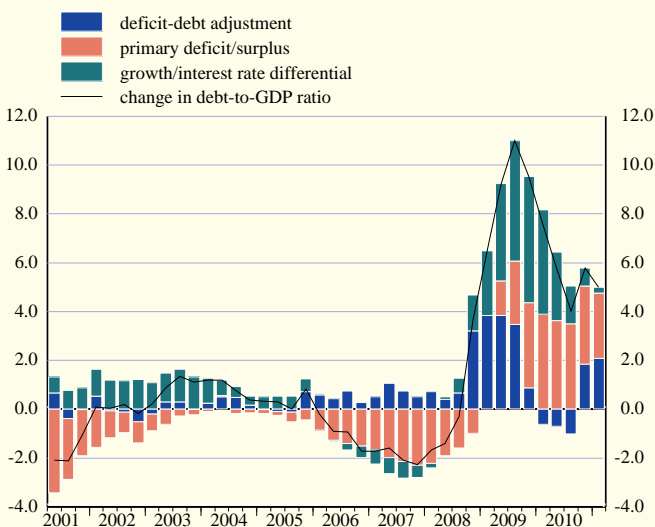
### C30 Deficit, borrowing requirement and change in debt

(four-quarter moving sum as a percentage of GDP)



### C31 Maastricht debt

(annual change in the debt-to-GDP ratio and underlying factors)



Sources: ECB calculations based on Eurostat and national data.

1) Data refer to the Euro 17. Intergovernmental lending in the context of the financial crisis is consolidated.

2) The stock data in quarter t are expressed as a percentage of the sum of GDP in t and the previous three quarters.



## EXTERNAL TRANSACTIONS AND POSITIONS

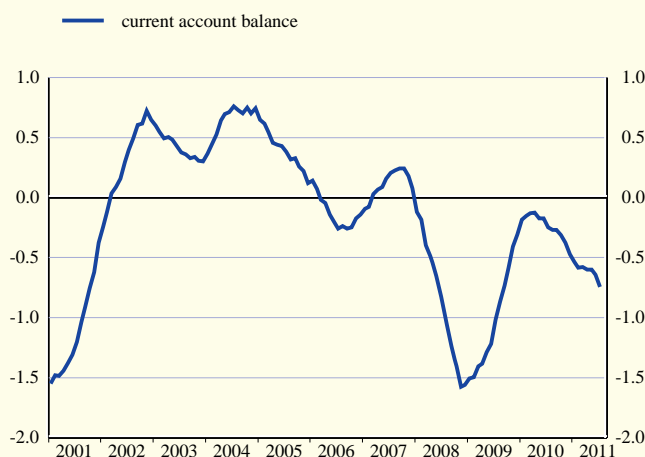
### 7.1 Summary balance of payments <sup>1)</sup>

(EUR billions; net transactions)

	Current account					Capital account	Net lending/borrowing to/from rest of the world (columns 1+6)	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	14
2008	-142.4	-22.5	41.1	-63.3	-97.7	9.2	-133.2	141.5	-236.0	283.3	-82.9	180.5	-3.4	-8.3
2009	-25.7	37.5	33.8	-6.4	-90.6	6.6	-19.1	10.0	-109.4	270.7	37.2	-193.1	4.6	9.2
2010	-40.4	19.5	41.1	-0.5	-100.6	6.6	-33.8	46.6	-46.6	135.2	8.7	-40.6	-10.2	-12.8
2010 Q2	-18.6	3.3	11.7	-14.8	-18.8	1.7	-16.9	25.4	-29.8	93.7	1.9	-41.4	1.0	-8.5
Q3	-6.2	8.2	14.6	1.4	-30.4	1.0	-5.1	3.9	-30.8	-17.1	2.4	54.3	-5.0	1.3
Q4	2.2	6.4	10.4	1.7	-16.3	1.4	3.6	1.3	59.2	33.6	1.7	-91.7	-1.6	-4.9
2011 Q1	-30.9	-12.5	7.0	9.2	-34.6	3.0	-27.9	12.8	-11.5	133.3	-4.0	-93.9	-11.1	15.1
Q2	-28.3	-1.6	13.9	-20.1	-20.4	0.9	-27.4	26.9	-25.7	187.0	5.4	-144.2	4.3	0.5
2010 July	5.5	7.2	5.4	2.3	-9.4	1.4	6.9	0.4	-0.6	-25.1	-1.4	30.7	-3.1	-7.4
Aug.	-7.1	-3.8	4.0	2.5	-9.8	0.3	-6.8	2.3	-26.9	0.3	4.7	25.8	-1.6	4.6
Sep.	-4.6	4.8	5.2	-3.4	-11.2	-0.7	-5.2	1.2	-3.2	7.8	-1.0	-2.2	-0.2	4.1
Oct.	3.1	6.0	2.9	2.9	-8.7	-1.2	1.9	1.3	-9.0	12.3	-4.8	3.1	-0.2	-3.2
Nov.	-5.1	-0.5	3.4	-1.9	-6.1	0.6	-4.5	15.5	52.0	11.9	1.6	-50.0	0.0	-11.0
Dec.	4.2	0.9	4.1	0.8	-1.5	2.0	6.2	-15.6	16.3	9.4	5.0	-44.9	-1.3	9.3
2011 Jan.	-20.3	-14.3	2.7	0.3	-9.0	1.0	-19.2	14.4	15.4	-33.4	2.7	35.6	-5.9	4.8
Feb.	-10.2	-1.1	2.6	3.5	-15.1	2.2	-8.0	-1.0	-35.4	98.6	-3.2	-62.0	1.0	9.0
Mar.	-0.5	2.9	1.7	5.4	-10.5	-0.1	-0.6	-0.7	8.5	68.1	-3.6	-67.6	-6.1	1.3
Apr.	-6.5	-3.5	3.0	0.5	-6.5	0.1	-6.4	2.0	-27.8	47.8	0.7	-24.6	5.9	4.4
May	-18.7	1.0	4.7	-18.2	-6.2	0.5	-18.2	18.6	-3.8	55.8	1.7	-31.8	-3.1	-0.4
June	-3.1	0.9	6.2	-2.4	-7.8	0.4	-2.7	6.2	5.9	83.5	3.0	-87.7	1.5	-3.5
July	-3.2	3.3	5.2	-1.4	-10.3	0.5	-2.7	3.5	2.4	-18.4	-4.6	25.0	-0.9	-0.8
<i>12-month cumulated transactions</i>														
2011 July	-71.8	-3.4	45.7	-11.5	-102.6	5.4	-66.4	47.8	-5.6	343.5	2.2	-281.2	-11.0	18.5
<i>12-month cumulated transactions as a percentage of GDP</i>														
2011 July	-0.8	0.0	0.5	-0.1	-1.1	0.1	-0.7	0.5	-0.1	3.7	0.0	-3.0	-0.1	0.2

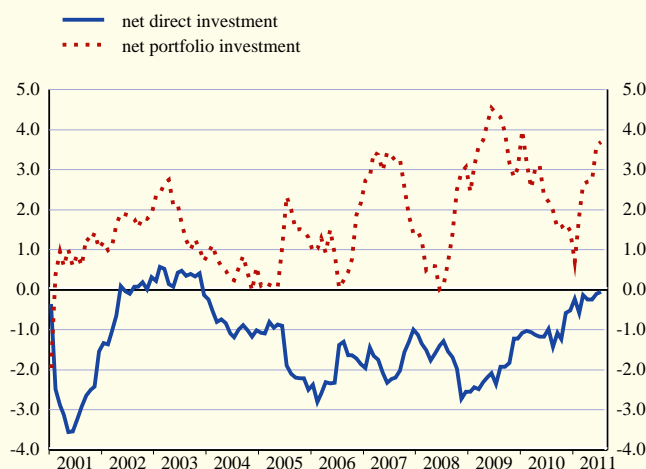
### C32 Euro area b.o.p.: current account

(seasonally adjusted; 12-month cumulated transactions as a percentage of GDP)



### C33 Euro area b.o.p.: direct and portfolio investment

(12-month cumulated transactions as a percentage of GDP)



Source: ECB.

1) The sign convention is explained in the General Notes.

## 7.2 Current and capital accounts

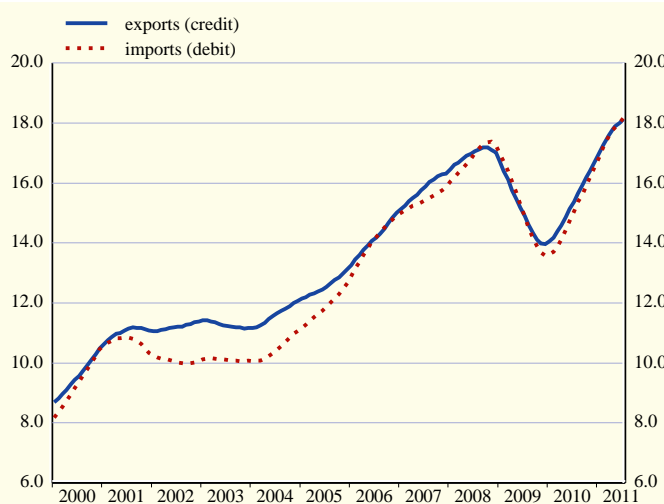
(EUR billions; transactions)

### 1. Summary current and capital accounts

	Current account											Capital account			
	Total			Goods		Services		Income		Current transfers			Credit	Debit	
	Credit	Debit	Net	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit				
											Workers' remittances	Workers' remittances			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2008	2,720.2	2,862.6	-142.4	1,590.2	1,612.8	514.4	473.3	524.3	587.6	91.2	6.9	188.9	21.5	24.5	15.2
2009	2,292.9	2,318.6	-25.7	1,303.6	1,266.0	473.9	440.2	421.5	427.9	93.9	6.4	184.5	22.5	20.6	14.0
2010	2,597.7	2,638.2	-40.4	1,564.1	1,544.6	516.1	474.9	430.2	430.7	87.3	6.3	188.0	22.0	22.3	15.7
2010 Q2	647.3	665.8	-18.6	388.7	385.4	128.9	117.2	110.8	125.5	18.9	1.7	37.7	5.2	4.8	3.1
Q3	661.2	667.3	-6.2	403.2	395.0	138.5	123.9	103.9	102.5	15.6	1.7	46.0	5.8	4.8	3.8
Q4	700.7	698.5	2.2	422.1	415.7	135.4	125.0	112.1	110.4	31.1	1.6	47.5	6.0	7.2	5.7
2011 Q1	680.5	711.5	-30.9	424.0	436.5	123.0	116.0	108.9	99.7	24.7	1.5	59.3	5.5	5.7	2.7
Q2	707.9	736.2	-28.3	438.4	440.0	131.8	117.9	119.1	139.2	18.6	.	39.1	.	3.8	2.9
2011 May	243.8	262.5	-18.7	151.4	150.3	44.8	40.1	40.6	58.8	7.1	.	13.3	.	1.4	0.9
June	239.5	242.6	-3.1	145.6	144.7	46.1	39.9	42.2	44.6	5.6	.	13.3	.	1.3	1.0
July	236.0	239.2	-3.2	147.8	144.4	47.2	41.9	35.8	37.2	5.3	.	15.6	.	1.4	1.0
	<i>Seasonally adjusted</i>														
2010 Q4	673.1	690.7	-17.6	408.7	409.6	131.8	121.2	109.3	112.8	23.3	.	47.1	.	.	.
2011 Q1	700.4	716.4	-15.9	431.8	437.9	134.0	121.4	111.5	109.0	23.0	.	48.0	.	.	.
Q2	705.0	723.1	-18.1	438.3	438.5	131.7	119.7	114.4	117.2	20.6	.	47.7	.	.	.
2011 May	237.0	242.6	-5.6	147.5	144.4	44.3	40.1	38.8	42.9	6.5	.	15.3	.	.	.
June	232.8	239.9	-7.1	143.9	143.4	43.9	39.3	38.7	40.3	6.3	.	16.9	.	.	.
July	232.2	245.2	-12.9	144.0	147.5	43.7	40.4	37.2	40.7	7.3	.	16.5	.	.	.
	<i>12-month cumulated transactions</i>														
2011 July	2,750.7	2,820.0	-69.3	1,690.2	1,693.8	527.9	481.8	443.3	453.2	89.3	.	191.3	.	.	.
	<i>12-month cumulated transactions as a percentage of GDP</i>														
2011 July	29.5	30.3	-0.7	18.1	18.2	5.7	5.2	4.8	4.9	1.0	.	2.1	.	.	.

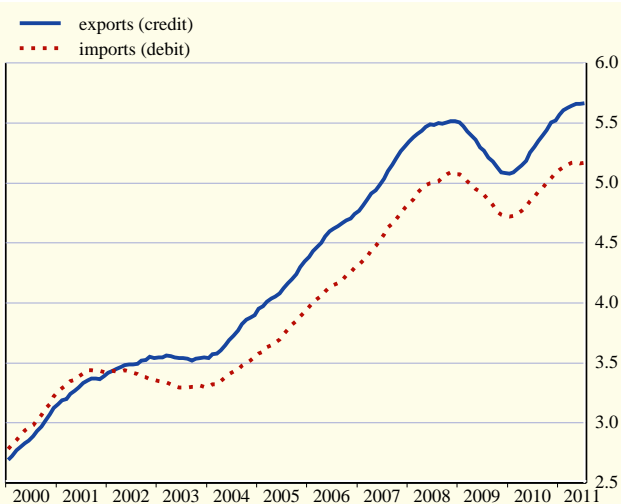
### C34 Euro area b.o.p.: goods

(seasonally adjusted; 12-month cumulated transactions as a percentage of GDP)



### C35 Euro area b.o.p.: services

(seasonally adjusted; 12-month cumulated transactions as a percentage of GDP)



Source: ECB.

## 7.2 Current and capital accounts

(EUR billions)

### 2. Income account

(transactions)

	Compensation of employees		Investment income													
	Credit	Debit	Total		Direct investment						Portfolio investment				Other investment	
			Credit	Debit	Equity			Debt			Equity		Debt		Credit	Debit
	Credit	Debit			Reinv. earnings	Reinv. earnings	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit		
			1	2											3	4
2008	21.1	13.1	503.2	574.5	141.1	-5.2	115.8	17.8	31.3	26.7	39.3	111.1	119.1	128.5	172.4	192.3
2009	21.9	13.8	399.6	414.1	145.6	16.2	98.6	12.0	24.9	24.2	27.4	77.2	98.7	120.8	102.9	93.4
2010	23.2	14.0	407.0	416.6	173.8	-3.0	117.2	17.6	22.8	20.1	29.9	86.1	97.7	122.8	82.8	70.6
2010 Q1	5.8	2.7	97.6	89.6	42.6	2.7	25.9	5.8	5.5	4.4	6.0	12.3	23.1	30.2	20.5	16.8
Q2	5.5	3.3	105.3	122.3	44.9	-8.9	28.7	-3.5	5.8	5.2	9.8	39.5	24.3	31.7	20.5	17.2
Q3	5.5	3.9	98.4	98.5	40.8	9.5	28.8	7.9	5.3	4.7	7.6	17.0	24.9	31.3	19.8	16.7
Q4	6.3	4.1	105.7	106.2	45.5	-6.3	33.7	7.4	6.3	5.8	6.6	17.4	25.4	29.6	22.0	19.8
2011 Q1	5.9	2.7	103.0	97.0	43.8	7.6	29.6	17.5	6.0	4.2	7.0	14.5	25.2	30.3	21.0	18.4

### 3. Geographical breakdown

(cumulated transactions)

	Total	EU Member States outside the euro area						Brazil	Canada	China	India	Japan	Russia	Switzerland	United States	Other
		Total	Denmark	Sweden	United Kingdom	Other EU countries	EU institutions									
2010 Q2 to 2011 Q1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Credits																
<b>Current account</b>	2,689.7	888.8	49.4	83.0	415.8	280.3	60.4	49.5	36.1	125.4	38.6	57.3	98.5	202.7	353.3	839.6
Goods	1,638.0	522.2	31.8	55.5	214.8	219.9	0.2	27.9	19.0	102.6	28.6	36.2	73.0	106.5	190.9	531.1
Services	525.8	165.1	10.6	14.0	104.7	29.5	6.4	8.4	7.9	16.3	7.4	12.9	16.9	53.1	77.3	160.5
Income	435.7	140.0	6.4	11.9	86.1	27.3	8.3	12.9	8.3	6.0	2.3	7.3	8.0	35.0	79.4	136.3
Investment income	412.4	133.3	6.3	11.8	84.6	26.6	4.0	12.9	8.2	6.0	2.3	7.2	8.0	24.2	77.6	132.7
Current transfers	90.3	61.4	0.6	1.5	10.2	3.6	45.5	0.3	0.8	0.4	0.3	0.9	0.6	8.0	5.7	11.7
<b>Capital account</b>	22.5	19.3	0.0	0.0	1.2	0.9	17.1	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.4	2.0
Debits																
<b>Current account</b>	2,743.1	837.1	42.9	79.0	361.6	253.7	99.7	-	31.1	-	-	95.3	-	176.2	355.6	-
Goods	1,632.6	450.6	28.2	49.1	168.2	205.0	0.0	27.8	13.5	210.9	25.0	52.5	114.5	89.4	137.9	510.6
Services	482.1	137.4	7.8	12.0	84.3	33.2	0.2	5.1	6.5	12.9	5.4	10.1	10.7	43.7	100.8	149.6
Income	438.1	136.5	6.3	16.5	97.4	11.2	5.2	-	9.2	-	-	32.2	-	35.1	110.0	-
Investment income	424.0	128.5	6.2	16.4	96.0	4.7	5.2	-	9.1	-	-	32.0	-	34.7	109.0	-
Current transfers	190.4	112.6	0.6	1.5	11.8	4.5	94.3	1.5	1.9	3.3	0.7	0.6	0.8	7.9	6.8	54.4
<b>Capital account</b>	15.3	2.1	0.0	0.1	1.1	0.3	0.6	0.2	0.1	0.2	0.2	0.1	0.1	0.5	1.4	10.3
Net																
<b>Current account</b>	-53.4	51.7	6.4	3.9	54.2	26.6	-39.4	-	5.0	-	-	-38.0	-	26.5	-2.3	-
Goods	5.4	71.7	3.5	6.4	46.6	14.9	0.2	0.1	5.6	-108.2	3.6	-16.3	-41.5	17.0	52.9	20.4
Services	43.7	27.7	2.8	2.0	20.4	-3.7	6.2	3.3	1.4	3.4	2.0	2.8	6.2	9.4	-23.5	10.9
Income	-2.4	3.5	0.1	-4.6	-11.3	16.1	3.1	-	-0.9	-	-	-24.9	-	-0.1	-30.6	-
Investment income	-11.6	4.8	0.1	-4.6	-11.4	21.9	-1.2	-	-0.8	-	-	-24.8	-	-10.5	-31.4	-
Current transfers	-100.1	-51.2	0.0	0.1	-1.6	-0.8	-48.9	-1.1	-1.1	-2.8	-0.5	0.3	-0.1	0.2	-1.1	-42.7
<b>Capital account</b>	7.2	17.2	0.0	-0.1	0.1	0.7	16.5	-0.2	-0.1	-0.2	-0.2	0.0	0.0	-0.1	-0.9	-8.4

Source: ECB.

## 7.3 Financial account

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions and other changes during period)

### 1. Summary financial account

	Total <sup>1)</sup>			Total as a % of GDP			Direct investment		Portfolio investment		Net financial derivatives	Other investment		Reserve assets
	Assets	Liabilities	Net	Assets	Liabilities	Net	Assets	Liabilities	Assets	Liabilities		Assets	Liabilities	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Outstanding amounts (international investment position)</b>														
2007	13,992.8	15,266.8	-1,274.0	154.9	169.0	-14.1	3,726.7	3,221.9	4,631.1	6,538.1	-28.9	5,316.7	5,506.8	347.2
2008	13,331.7	14,983.0	-1,651.3	144.1	162.0	-17.9	3,889.7	3,320.2	3,727.6	5,938.3	-29.8	5,370.1	5,724.4	374.2
2009	13,733.3	15,203.2	-1,469.9	153.6	170.0	-16.4	4,262.0	3,478.6	4,226.3	6,737.2	-45.4	4,830.9	4,987.5	459.6
2010 Q3	14,747.4	16,124.8	-1,377.4	161.8	177.0	-15.1	4,556.9	3,573.6	4,641.8	7,277.0	-55.4	5,051.8	5,274.3	552.2
2010 Q4	15,167.6	16,355.1	-1,187.4	165.3	178.2	-12.9	4,698.0	3,723.2	4,839.7	7,369.5	-45.1	5,083.9	5,262.3	591.2
2011 Q1	15,093.2	16,316.5	-1,223.4	163.0	176.2	-13.2	4,668.4	3,720.6	4,805.8	7,463.7	-22.8	5,065.2	5,132.3	576.6
<b>Changes to outstanding amounts</b>														
2006	1,545.9	1,845.3	-299.4	18.0	21.5	-3.5	363.3	284.6	485.1	889.8	0.6	691.2	670.9	5.7
2007	1,608.0	1,858.8	-250.9	17.8	20.6	-2.8	572.8	486.8	258.7	591.3	-8.1	763.3	780.7	21.4
2008	-661.1	-283.8	-377.3	-7.1	-3.1	-4.1	163.0	98.3	-903.5	-599.7	-0.9	53.3	217.6	27.0
2009	401.6	220.2	181.4	4.5	2.5	2.0	372.4	158.3	498.7	798.8	-15.6	-539.2	-737.0	85.4
2010 Q4	420.2	230.2	190.0	17.6	9.7	8.0	141.1	149.7	197.9	92.5	10.2	32.0	-12.0	39.0
2011 Q1	-74.5	-38.5	-36.0	-3.2	-1.7	-1.6	-29.5	-2.7	-34.0	94.1	22.3	-18.7	-130.0	-14.6
<b>Transactions</b>														
2007	1,940.3	1,943.2	-3.0	21.5	21.5	0.0	512.9	422.5	439.5	566.3	66.9	915.8	954.4	5.1
2008	406.6	548.1	-141.5	4.4	5.9	-1.5	328.8	92.8	-7.2	276.1	82.9	-1.2	179.3	3.4
2009	-166.8	-156.8	-10.0	-1.9	-1.8	-0.1	325.3	215.9	84.3	355.0	-37.2	-534.6	-727.7	-4.6
2010	429.4	475.9	-46.6	4.7	5.2	-0.5	141.0	94.4	138.0	273.1	-8.7	148.9	108.4	10.2
2010 Q4	39.8	41.0	-1.3	1.7	1.7	-0.1	-18.4	40.8	40.1	73.8	-1.7	18.2	-73.5	1.6
2011 Q1	166.2	178.9	-12.8	7.2	7.8	-0.6	65.9	54.4	23.9	157.1	4.0	61.3	-32.6	11.1
2011 Q2	162.7	189.6	-26.9	6.9	8.0	-1.1	42.8	17.1	-14.9	172.2	-5.4	144.6	0.4	-4.3
2011 Mar.	-28.0	-28.7	0.7	.	.	.	24.1	32.6	-19.0	49.0	3.6	-42.8	-110.3	6.1
Apr.	149.7	151.7	-2.0	.	.	.	41.3	13.6	-5.0	42.8	-0.7	119.9	95.3	-5.9
May	132.8	151.4	-18.6	.	.	.	8.1	4.3	11.9	67.6	-1.7	111.3	79.5	3.1
June	-119.7	-113.5	-6.2	.	.	.	-6.7	-0.7	-21.8	61.7	-3.0	-86.7	-174.5	-1.5
July	-5.2	-1.8	-3.5	.	.	.	10.7	13.1	-5.9	-24.3	4.6	-15.5	9.5	0.9
<b>Other changes</b>														
2006	-182.3	123.3	-305.6	-2.1	1.4	-3.6	-54.7	26.2	-35.2	183.4	0.0	-96.9	-86.3	4.4
2007	-332.3	-84.4	-247.9	-3.7	-0.9	-2.7	59.9	64.3	-180.8	25.1	-75.1	-152.6	-173.8	16.3
2008	-1,067.7	-831.9	-235.8	-11.5	-9.0	-2.5	-165.8	5.5	-896.3	-875.8	-83.8	54.5	38.3	23.7
2009	568.4	377.0	191.4	6.4	4.2	2.1	47.1	-57.6	414.4	443.9	21.6	-4.6	-9.3	89.9
<b>Other changes due to exchange rate changes</b>														
2006	-333.9	-258.4	-75.5	-3.9	-3.0	-0.9	-63.5	-8.1	-149.7	-129.0	.	-106.8	-121.4	-13.9
2007	-522.0	-339.7	-182.3	-5.8	-3.8	-2.0	-104.2	-17.1	-217.4	-146.8	.	-186.6	-175.8	-13.7
2008	-39.8	55.6	-95.3	-0.4	0.6	-1.0	-19.9	-9.6	6.7	47.9	.	-35.8	17.3	9.2
2009	-45.6	-50.1	4.5	-0.5	-0.6	0.1	-4.8	1.7	-28.5	-28.0	.	-9.8	-23.9	-2.5
<b>Other changes due to price changes</b>														
2006	292.1	322.6	-30.5	3.4	3.8	-0.4	44.6	19.5	230.1	303.1	0.0	.	.	17.4
2007	78.7	113.4	-34.6	0.9	1.3	-0.4	45.2	5.8	77.3	107.6	-75.1	.	.	31.3
2008	-1,030.0	-1,024.1	-5.9	-11.1	-11.1	-0.1	-154.4	-95.1	-813.4	-929.1	-83.8	.	.	21.5
2009	608.2	502.4	105.8	6.8	5.6	1.2	138.1	44.6	402.5	457.8	21.6	.	.	46.0
<b>Other changes due to other adjustments</b>														
2006	-140.5	59.1	-199.7	-1.6	0.7	-2.3	-35.8	14.7	-115.5	9.3	.	9.9	35.1	0.9
2007	110.9	142.0	-31.0	1.2	1.6	-0.3	118.8	75.6	-40.7	64.3	.	34.1	2.0	-1.3
2008	2.1	136.6	-134.5	0.0	1.5	-1.5	8.5	110.2	-89.7	5.4	.	90.4	21.0	-7.1
2009	5.9	-75.2	81.1	0.1	-0.8	0.9	-86.2	-103.9	40.4	14.1	.	5.2	14.6	46.4
<b>Growth rates of outstanding amounts</b>														
2006	16.1	14.8	-	.	.	.	15.1	10.6	13.6	13.7	.	20.5	18.8	0.3
2007	15.6	14.3	-	.	.	.	15.8	15.1	10.0	9.4	.	20.2	20.2	1.6
2008	2.9	3.6	-	.	.	.	8.9	2.9	-0.5	4.4	.	-0.1	3.3	1.0
2009	-1.3	-1.1	-	.	.	.	8.4	6.6	2.2	5.9	.	-10.0	-12.6	-1.2
2010 Q4	3.1	3.1	-	.	.	.	3.2	2.7	3.1	3.9	.	3.1	2.1	2.0
2011 Q1	2.7	2.8	-	.	.	.	3.5	4.1	2.1	4.8	.	2.6	-0.9	2.8
2011 Q2	3.0	3.1	-	.	.	.	2.5	3.0	2.2	6.1	.	4.4	-1.1	2.3

Source: ECB.

1) Net financial derivatives are included in assets.

**7.3 Financial account**

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period, transactions during period)

**2. Direct investment**

	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	Non-MFIs	Total	MFIs	Non-MFIs		Total	Into MFIs	Into non-MFIs	Total	To MFIs	To non-MFIs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Outstanding amounts (international investment position)</b>														
2008	3,889.7	3,016.6	214.5	2,802.2	873.0	13.1	859.9	3,320.2	2,360.4	67.1	2,293.2	959.8	19.0	940.8
2009	4,262.0	3,291.0	228.5	3,062.4	971.1	14.7	956.4	3,478.6	2,531.3	78.2	2,453.1	947.3	18.5	928.8
2010 Q4	4,698.0	3,624.0	268.0	3,356.0	1,073.9	16.4	1,057.5	3,723.2	2,817.4	85.6	2,731.8	905.9	13.7	892.1
2011 Q1	4,668.4	3,606.6	262.8	3,343.8	1,061.8	15.7	1,046.1	3,720.6	2,815.2	86.3	2,728.9	905.4	11.0	894.4
<b>Transactions</b>														
2008	328.8	195.4	9.3	186.1	133.4	-0.3	133.7	92.8	57.7	-8.2	65.9	35.0	1.6	33.5
2009	325.3	234.1	18.2	215.9	91.1	2.4	88.8	215.9	216.4	8.6	207.8	-0.5	-0.6	0.1
2010	141.0	34.6	7.1	27.5	106.3	1.3	105.1	94.4	140.3	7.9	132.4	-45.9	-7.5	-38.4
2010 Q4	-18.4	-45.0	0.4	-45.4	26.6	0.3	26.3	40.8	-5.1	1.9	-7.0	45.9	-4.9	50.8
2011 Q1	65.9	57.9	4.0	53.9	8.0	-0.1	8.1	54.4	40.6	0.8	39.8	13.8	-1.5	15.3
2011 Q2	42.8	45.2	9.0	36.3	-2.5	-2.6	0.2	17.1	10.9	1.3	9.6	6.3	-0.1	6.4
2011 Mar.	24.1	12.0	4.6	7.4	12.1	-0.1	12.1	32.6	26.5	-0.1	26.6	6.1	-0.8	7.0
2011 Apr.	41.3	37.1	5.8	31.3	4.2	0.7	3.5	13.6	6.8	0.4	6.4	6.8	0.0	6.8
2011 May	8.1	2.9	1.5	1.3	5.2	0.4	4.8	4.3	3.6	0.5	3.1	0.6	0.4	0.2
2011 June	-6.7	5.2	1.6	3.6	-11.9	-3.7	-8.2	-0.7	0.4	0.3	0.1	-1.1	-0.5	-0.6
2011 July	10.7	9.7	-0.3	10.0	1.0	-1.6	2.6	13.1	17.0	0.8	16.2	-3.9	-0.2	-3.7
<b>Growth rates</b>														
2008	8.9	6.6	4.1	6.9	17.9	-1.2	18.2	2.9	2.4	-13.1	2.8	4.3	8.5	4.2
2009	8.4	7.7	8.5	7.7	10.5	18.3	10.3	6.6	9.3	12.8	9.2	-0.1	-3.1	0.0
2010 Q4	3.2	1.0	3.1	0.9	10.9	8.6	10.9	2.7	5.5	10.1	5.4	-4.8	-40.4	-4.0
2011 Q1	3.5	2.1	1.8	2.2	8.2	6.2	8.2	4.1	4.3	9.2	4.1	3.6	-46.9	4.8
2011 Q2	2.5	2.5	5.5	2.3	2.4	-14.3	2.7	3.0	2.9	7.9	2.7	3.6	-39.3	4.4

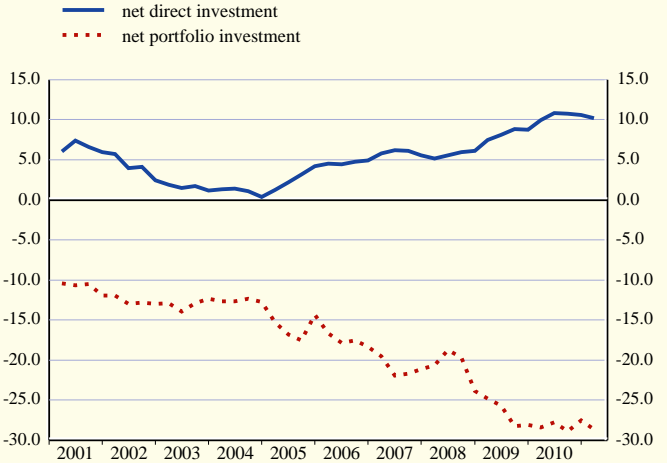
**C36 Euro area international investment position**

(outstanding amounts at end of period; as a percentage of GDP)



**C37 Euro area direct and portfolio investment position**

(outstanding amounts at end of period; as a percentage of GDP)



Source: ECB.



## 7.3 Financial account

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

### 3. Portfolio investment assets

	3. Portfolio investment assets															
	Total	Equity					Debt instruments									
		Total	MFIs		Non-MFIs		Bonds and notes					Money market instruments				
				Euro-system	General government		General government	Total	MFIs	Non-MFIs		General government	Total	MFIs	Non-MFIs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	Outstanding amounts (international investment position)															
2008	3,727.6	1,128.6	68.4	3.0	1,060.2	27.1	2,164.2	964.8	20.3	1,199.4	18.6	434.8	358.1	61.7	76.7	1.3
2009	4,226.3	1,488.7	76.2	3.4	1,412.5	34.4	2,339.5	917.5	17.1	1,422.0	36.5	398.1	327.3	44.9	70.8	2.0
2010 Q4	4,839.7	1,908.9	93.3	3.6	1,815.6	47.6	2,529.7	806.7	15.6	1,723.0	77.0	401.2	314.8	41.7	86.3	0.2
2011 Q1	4,805.8	1,854.2	90.0	3.1	1,764.2	44.8	2,536.6	769.6	17.1	1,767.0	97.9	415.0	323.8	40.0	91.2	0.9
	Transactions															
2008	-7.2	-98.0	-35.7	0.6	-62.3	0.0	80.7	-41.0	3.2	39.7	2.6	10.1	34.9	14.9	-24.8	0.4
2009	84.3	46.8	-3.2	0.0	50.0	1.5	30.2	-98.3	-3.8	128.5	17.5	7.2	11.8	-12.8	-4.5	0.9
2010	138.0	77.0	8.7	-0.2	68.3	1.2	104.7	-122.3	-1.2	227.0	51.4	-43.8	-56.4	-10.8	12.6	-1.9
2010 Q4	40.1	38.8	3.2	0.0	35.6	-1.4	1.1	-96.1	-0.5	97.1	53.4	0.3	-13.0	-9.5	13.3	-0.3
2011 Q1	23.9	-3.4	0.0	-0.4	-3.4	-1.8	4.3	-13.1	1.7	17.4	0.2	23.0	16.8	1.5	6.2	0.7
2011 Q2	-14.9	13.8	0.2	-0.1	13.6	.	0.6	-22.6	1.7	23.2	.	-29.2	-34.7	4.2	5.5	.
2011 Mar.	-19.0	-1.5	1.3	-0.1	-2.8	.	-19.0	-15.9	0.4	-3.1	.	1.5	0.0	0.0	1.5	.
Apr.	-5.0	13.6	3.6	0.0	9.9	.	-6.4	-11.0	0.2	4.6	.	-12.1	-15.9	-2.6	3.8	.
May	11.9	8.0	1.4	-0.1	6.6	.	9.4	-0.7	0.9	10.0	.	-5.5	-10.0	3.6	4.5	.
June	-21.8	-7.7	-4.9	0.0	-2.9	.	-2.4	-11.0	0.6	8.6	.	-11.6	-8.8	3.2	-2.8	.
July	-5.9	1.7	1.3	0.0	0.4	.	-6.2	-10.5	0.2	4.3	.	-1.3	-5.4	-3.9	4.1	.
	Growth rates															
2008	-0.5	-5.9	-27.6	24.6	-4.2	-0.1	3.6	4.2	20.1	3.1	15.4	2.7	11.9	41.1	-27.7	65.9
2009	2.2	3.4	-5.1	-0.7	3.9	5.4	1.3	-10.0	-18.9	10.5	93.7	1.1	2.6	-22.1	-6.0	68.4
2010 Q4	3.1	4.9	11.3	-5.2	4.5	3.5	4.3	-13.3	-6.8	15.2	121.3	-10.3	-16.0	-23.6	18.4	-91.3
2011 Q1	2.1	2.2	-1.2	-16.4	2.4	-3.5	2.3	-15.0	2.4	12.7	124.5	0.1	-6.2	-8.5	31.5	65.4
2011 Q2	2.2	3.5	5.9	-12.9	3.4	.	2.6	-14.2	17.7	11.9	.	-5.6	-11.8	7.9	19.8	.

### 4. Portfolio investment liabilities

	4. Portfolio investment liabilities															
	Total	Equity			Debt instruments											
		Total	MFIs		Non-MFIs		Bonds and notes					Money market instruments				
					General government		General government	Total	MFIs	Non-MFIs		General government	Total	MFIs	Non-MFIs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	Outstanding amounts (international investment position)															
2008	5,938.3	2,185.3	616.9	1,568.4	3,372.6	1,198.8	2,173.8	1,426.8	380.4	62.0	318.4	269.9				
2009	6,737.2	2,751.8	686.6	2,065.1	3,460.8	1,132.1	2,328.7	1,477.1	524.6	67.7	456.9	422.3				
2010 Q4	7,369.5	3,175.0	657.5	2,517.5	3,718.0	1,148.3	2,569.7	1,676.1	476.5	81.5	395.0	354.9				
2011 Q1	7,463.7	3,234.6	650.0	2,584.7	3,715.6	1,089.1	2,626.5	1,749.2	513.5	113.7	399.7	362.9				
	Transactions															
2008	276.1	-84.6	84.5	-169.1	177.8	6.8	171.0	154.3	182.9	-33.1	216.0	192.8				
2009	355.0	111.8	2.2	109.6	123.3	7.7	115.5	93.4	119.9	-13.5	133.3	155.5				
2010	273.1	124.6	-3.4	128.1	145.3	44.4	100.8	183.9	3.3	46.7	-43.4	-33.4				
2010 Q4	73.8	54.2	-7.0	61.1	44.1	25.3	18.8	33.3	-24.5	-1.9	-22.6	-16.7				
2011 Q1	157.1	90.5	7.2	83.3	15.9	29.7	-13.7	32.1	50.7	38.8	11.9	21.4				
2011 Q2	172.2	-38.6	-3.8	-34.8	180.4	47.4	133.0	.	30.4	39.2	-8.7	.				
2011 Mar.	49.0	28.1	-1.8	29.9	12.2	-17.0	29.2	.	8.7	11.3	-2.5	.				
Apr.	42.8	-28.2	3.7	-31.9	71.4	13.4	57.9	.	-0.4	15.0	-15.3	.				
May	67.6	-13.7	0.5	-14.2	49.5	16.2	33.3	.	31.9	21.6	10.3	.				
June	61.7	3.3	-8.0	11.3	59.6	17.8	41.8	.	-1.1	2.5	-3.7	.				
July	-24.3	6.7	-15.8	22.5	-29.2	3.3	-32.5	.	-1.7	-1.7	0.0	.				
	Growth rates															
2008	4.4	-3.7	14.9	-8.1	5.9	0.7	9.2	13.8	78.0	-24.7	218.2	269.4				
2009	5.9	4.8	0.4	6.6	3.6	0.7	5.3	6.6	31.8	-28.6	41.8	58.1				
2010 Q4	3.9	4.4	-0.5	6.0	4.1	3.8	4.3	12.2	0.7	73.3	-9.6	-8.1				
2011 Q1	4.8	6.9	2.8	8.1	2.5	5.4	1.2	8.4	9.5	64.2	-0.5	2.2				
2011 Q2	6.1	5.0	1.8	5.8	5.5	10.8	3.1	.	19.3	152.5	-2.2	.				

Source: ECB.

### 7.3 Financial account

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

#### 5. Other investment assets

	Total	Eurosysteem			MFIs (excluding Eurosystem)			General government			Other sectors				
		Total	Loans/ currency and deposits	Other assets	Total	Loans/ currency and deposits	Other assets	Trade credits	Loans/currency and deposits	Currency and deposits	Trade credits	Loans/currency and deposits	Currency and deposits		
														1	2
Outstanding amounts (international investment position)															
2008	5,370.1	28.8	27.8	1.0	3,272.5	3,213.2	59.2	90.8	12.3	42.6	8.8	1,977.9	188.9	1,595.6	431.7
2009	4,830.9	30.2	29.8	0.4	2,835.9	2,805.4	30.5	109.2	8.4	63.6	11.4	1,855.6	192.4	1,478.8	398.1
2010 Q4	5,083.9	32.6	32.0	0.7	2,972.3	2,939.8	32.4	166.2	7.6	117.7	21.0	1,912.8	218.2	1,540.9	454.5
2011 Q1	5,065.2	35.3	35.1	0.2	2,962.1	2,921.9	40.2	151.1	7.6	103.0	15.0	1,916.8	225.7	1,538.8	451.3
Transactions															
2008	-1.2	-9.4	-9.5	0.0	-42.6	-59.2	16.6	-5.7	-1.1	-5.9	-4.7	56.6	-0.3	48.3	-21.9
2009	-534.6	0.1	0.0	0.1	-421.7	-401.2	-20.5	10.7	-0.4	9.3	1.2	-123.7	1.0	-129.3	-50.8
2010	148.9	-2.9	-2.9	0.0	7.5	-1.3	8.8	39.5	-0.2	38.8	4.8	104.8	12.7	82.2	29.8
2010 Q4	18.2	6.1	6.0	0.1	-28.9	-28.4	-0.6	34.5	0.0	34.6	4.8	6.5	3.0	-1.3	-6.1
2011 Q1	61.3	3.6	3.6	0.0	61.9	53.8	8.1	-7.7	-0.1	-8.2	-4.2	3.5	6.2	-5.8	-3.7
2011 Q2	144.6	4.6	.	.	90.1	.	.	0.8	.	.	1.8	49.0	.	.	8.1
2011 Mar.	-42.8	0.0	.	.	-37.8	.	.	-2.5	.	.	-2.2	-2.5	.	.	-5.5
Apr.	119.9	5.6	.	.	95.4	.	.	1.7	.	.	-0.3	17.2	.	.	4.5
May	111.3	-1.5	.	.	86.5	.	.	-2.1	.	.	-0.4	28.4	.	.	3.5
June	-86.7	0.6	.	.	-91.9	.	.	1.2	.	.	2.5	3.4	.	.	0.1
July	-15.5	-0.1	.	.	-19.5	.	.	-5.3	.	.	-1.7	9.4	.	.	5.6
Growth rates															
2008	-0.1	-26.2	-26.9	1.0	-1.3	-1.8	23.6	-6.0	-8.8	-12.3	-35.8	3.1	-0.2	3.2	-5.9
2009	-10.0	-0.3	-1.4	24.1	-12.8	-12.4	-36.9	11.2	-3.5	18.9	12.0	-6.5	0.5	-8.4	-13.1
2010 Q4	3.1	-13.1	-12.9	-9.9	0.3	0.0	27.7	35.4	-2.7	59.2	41.5	5.6	6.3	5.6	7.6
2011 Q1	2.6	26.4	27.4	-10.9	0.4	0.0	44.4	36.8	-2.8	65.0	68.2	3.6	10.5	3.1	4.8
2011 Q2	4.4	65.7	.	.	3.6	.	.	20.4	.	.	5.7	3.9	.	.	2.2

#### 6. Other investment liabilities

	Total	Eurosysteem			MFIs (excluding Eurosystem)			General government			Other sectors				
		Total	Loans/ currency and deposits	Other liabilities	Total	Loans/ currency and deposits	Other liabilities	Total	Trade credits	Loans	Other liabilities	Total	Trade credits	Loans	Other liabilities
Outstanding amounts (international investment position)															
2008	5,724.4	482.9	482.6	0.3	3,762.9	3,708.8	54.1	62.3	0.0	58.0	4.3	1,416.3	178.2	1,059.7	178.4
2009	4,987.5	252.0	251.6	0.4	3,398.9	3,360.4	38.6	71.6	0.0	67.3	4.4	1,264.9	175.1	911.3	178.5
2010 Q4	5,262.3	268.9	265.8	3.0	3,506.2	3,460.6	45.5	152.6	0.0	145.9	6.6	1,334.6	192.6	1,000.9	141.1
2011 Q1	5,132.3	272.3	271.8	0.5	3,354.2	3,299.3	55.0	180.5	0.0	174.1	6.3	1,325.3	197.4	983.9	144.0
Transactions															
2008	179.3	281.0	280.9	0.1	-174.7	-186.0	11.3	9.3	0.0	10.6	-1.3	63.7	9.0	46.7	8.0
2009	-727.7	-233.1	-233.3	0.2	-353.2	-341.9	-11.4	12.5	0.0	12.4	0.1	-153.8	-5.5	-125.7	-22.6
2010	108.4	8.9	6.3	2.6	2.0	-4.0	6.0	65.6	0.0	65.0	0.6	31.8	11.3	3.3	17.2
2010 Q4	-73.5	17.3	16.0	1.3	-100.1	-102.9	2.8	47.0	0.0	46.8	0.2	-37.8	3.6	-36.0	-5.4
2011 Q1	-32.6	9.6	12.1	-2.6	-72.0	-82.9	10.8	27.9	0.0	28.7	-0.8	1.9	2.4	-4.7	4.2
2011 Q2	0.4	7.2	.	.	-10.8	.	.	12.2	.	.	.	-8.3	.	.	.
2011 Mar.	-110.3	-2.1	.	.	-122.7	.	.	7.5	.	.	.	7.0	.	.	.
Apr.	95.3	0.6	.	.	103.7	.	.	-1.8	.	.	.	-7.1	.	.	.
May	79.5	5.3	.	.	56.2	.	.	10.8	.	.	.	7.2	.	.	.
June	-174.5	1.3	.	.	-170.7	.	.	3.2	.	.	.	-8.3	.	.	.
July	9.5	14.2	.	.	-24.3	.	.	6.9	.	.	.	12.7	.	.	.
Growth rates															
2008	3.3	141.1	141.2	.	-4.4	-4.7	18.2	17.7	.	22.5	-23.2	4.8	5.3	4.6	5.9
2009	-12.6	-48.0	-48.1	.	-9.4	-9.2	-20.3	19.8	.	21.0	1.9	-10.8	-3.4	-11.8	-11.8
2010 Q4	2.1	3.4	2.4	.	0.1	0.0	15.7	89.5	.	95.4	9.0	2.4	6.4	0.2	9.6
2011 Q1	-0.9	9.4	9.6	.	-4.8	-5.2	26.7	111.0	.	118.0	6.1	1.2	7.3	-1.0	7.1
2011 Q2	-1.1	12.6	.	.	-5.0	.	.	102.1	.	.	.	0.1	.	.	.

Source: ECB.

## 7.3 Financial account

(EUR billions and annual growth rates; outstanding amounts and growth rates at end of period; transactions during period)

### 7. Reserve assets <sup>1)</sup>

	Reserve assets													Memo items			
	Total	Monetary gold		SDR holdings	Reserve position in the IMF	Foreign exchange							Other claims	Other foreign currency assets	Pre-determined short-term net drains on foreign currency	SDR allocations	
		In EUR billions	In fine troy ounces (millions)			Total	Currency and deposits		Securities								Financial derivatives
							With monetary authorities and the BIS	With banks	Total	Equity	Bonds and notes	Money market instruments					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Outstanding amounts (international investment position)																	
2007	347.2	201.0	353.688	4.6	3.6	138.0	7.2	22.0	108.5	0.4	87.8	20.3	0.3	0.0	44.3	-38.5	5.3
2008	374.2	217.0	349.207	4.7	7.3	145.1	7.6	8.1	129.5	0.6	111.3	17.6	0.0	0.0	262.8	-245.7	5.5
2009	462.4	266.1	347.180	50.8	10.5	134.9	11.7	8.1	115.2	0.5	92.0	22.7	-0.1	0.0	32.1	-24.2	51.2
2010 Q3	552.2	332.3	346.994	53.3	15.3	151.3	7.9	15.7	127.2	0.5	106.9	19.8	0.4	0.0	26.2	-22.6	53.7
2010 Q4	591.2	366.2	346.962	54.2	15.8	155.0	7.7	16.1	131.3	0.5	111.2	19.5	0.0	0.0	26.3	-24.4	54.5
2011 Q1	576.6	351.5	346.988	51.1	21.6	152.4	5.6	18.2	128.2	0.5	108.6	19.0	0.4	0.0	21.3	-24.5	52.6
2011 July	621.6	396.3	346.988	51.3	24.1	149.9	5.2	15.2	129.5	-	-	-	0.0	0.0	22.0	-20.7	52.8
Aug.	656.4	435.5	346.989	51.0	24.0	146.0	5.1	11.0	129.7	-	-	-	0.1	0.0	25.9	-21.1	52.5
Transactions																	
2007	5.1	-3.2	-	0.3	-0.9	8.8	1.0	1.6	6.2	0.0	14.5	-8.3	0.0	0.0	-	-	-
2008	3.4	-2.7	-	-0.1	3.8	2.4	5.0	-15.7	11.8	0.1	15.8	-4.1	1.3	0.0	-	-	-
2009	-4.6	-2.0	-	0.5	3.4	-6.4	3.1	-1.2	-9.5	0.0	-14.1	4.6	1.2	0.0	-	-	-
2010 Q4	1.6	0.0	-	0.1	0.1	1.3	-0.4	-0.5	2.1	0.0	3.2	-1.1	0.1	0.0	-	-	-
2011 Q1	11.1	0.0	-	-1.2	6.2	6.1	-1.8	3.1	4.8	0.0	4.0	0.7	0.0	0.0	-	-	-
Q2	-4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth rates																	
2008	1.0	-1.3	-	-2.5	105.6	1.7	67.7	-68.9	10.8	28.0	17.9	-20.6	-	-	-	-	-
2009	-1.2	-0.9	-	-2.6	45.5	-4.4	41.1	-21.3	-7.3	1.0	-12.8	25.3	-	-	-	-	-
2010	2.0	0.0	-	-0.1	45.4	3.6	-43.3	76.2	3.4	-5.2	10.3	-25.5	-	-	-	-	-
2010 Q4	2.0	0.0	-	-0.1	45.4	3.6	-43.3	76.2	3.4	-5.2	10.3	-25.5	-	-	-	-	-
2011 Q1	2.8	0.0	-	-1.9	72.7	5.2	-44.7	68.6	3.9	-4.3	11.9	-28.0	-	-	-	-	-
Q2	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### 8. Gross external debt

	Total	By instrument					By sector (excluding direct investment)				
		Loans, currency and deposits	Money market instruments	Bonds and notes	Trade credits	Other debt liabilities	Direct investment: inter-company lending	General government	Eurosysteem	MFIs (excluding Eurosystem)	Other sectors
Outstanding amounts (international investment position)											
2007	9,991.0	5,144.6	240.5	2,996.3	172.6	189.6	1,247.3	1,235.4	202.1	5,228.6	2,077.6
2008	10,916.9	5,309.2	380.4	3,372.6	178.2	237.0	1,439.4	1,759.0	482.9	5,023.7	2,211.8
2009	10,413.3	4,590.5	524.6	3,460.8	175.1	221.8	1,440.4	1,971.0	252.0	4,598.7	2,151.1
2010 Q3	10,982.6	4,841.4	523.9	3,810.1	185.5	247.4	1,374.3	2,210.6	249.2	4,880.0	2,268.6
Q4	10,903.6	4,873.3	476.5	3,718.0	192.7	196.3	1,446.7	2,183.6	268.9	4,736.0	2,268.4
2011 Q1	10,808.7	4,729.1	513.5	3,715.6	197.5	205.8	1,447.3	2,292.6	272.3	4,557.1	2,239.4
Outstanding amounts as a percentage of GDP											
2007	110.5	56.9	2.7	33.1	1.9	2.1	13.8	13.7	2.2	57.8	23.0
2008	118.1	57.4	4.1	36.5	1.9	2.6	15.6	19.0	5.2	54.4	23.9
2009	116.5	51.4	5.9	38.7	2.0	2.5	16.1	22.1	2.8	51.4	24.1
2010 Q3	120.7	53.2	5.8	41.9	2.0	2.7	15.1	24.3	2.7	53.6	24.9
Q4	118.9	53.2	5.2	40.6	2.1	2.1	15.8	23.8	2.9	51.7	24.7
2011 Q1	116.8	51.1	5.6	40.2	2.1	2.2	15.6	24.8	2.9	49.3	24.2

Source: ECB.

1) Data refer to the changing composition of the euro area, in line with the approach adopted for the reserve assets of the Eurosystem. For further information, see the General Notes.

### 7.3 Financial account

(EUR billions; outstanding amounts at end of period; transactions during period)

#### 9. Geographical breakdown

	Total	EU Member States outside the euro area						Canada	China	Japan	Switzer-land	United States	Offshore financial centres	Interna-tional organisa-tions	Other countries
		Total	Denmark	Sweden	United Kingdom	Other EU countries	EU institutions								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>2009</b>	Outstanding amounts (international investment position)														
<b>Direct investment</b>	783.5	116.5	2.3	-17.4	-125.6	257.6	-0.3	45.6	44.2	-28.9	129.7	-42.2	77.4	-0.3	441.4
Abroad	4,262.0	1,428.3	34.5	123.7	988.9	281.1	0.0	119.6	48.3	77.7	423.5	784.3	540.9	0.0	839.4
Equity/reinvested earnings	3,291.0	1,073.8	29.1	79.8	735.3	229.5	0.0	95.2	39.1	58.9	349.5	559.7	484.7	0.0	630.1
Other capital	971.1	354.5	5.3	43.9	253.7	51.6	0.0	24.4	9.1	18.8	74.1	224.6	56.2	0.0	209.3
In the euro area	3,478.6	1,311.8	32.2	141.1	1,114.5	23.6	0.3	73.9	4.1	106.6	293.9	826.4	463.5	0.4	398.0
Equity/reinvested earnings	2,531.3	1,077.5	22.7	124.7	922.7	7.2	0.3	61.0	1.1	85.5	201.0	613.4	245.4	0.2	246.4
Other capital	947.3	234.3	9.5	16.5	191.9	16.4	0.1	13.0	3.0	21.1	92.9	213.0	218.1	0.2	151.6
<b>Portfolio investment assets</b>	4,226.3	1,424.7	79.0	156.5	1,000.9	89.1	99.2	95.4	47.5	182.0	107.0	1,349.2	434.2	29.3	557.0
Equity	1,488.7	296.8	8.8	28.8	245.3	13.2	0.6	28.6	45.3	85.7	92.4	469.0	193.3	1.5	275.9
Debt instruments	2,737.6	1,127.9	70.2	127.7	755.6	75.9	98.5	66.8	2.2	96.2	14.6	880.2	240.8	27.8	281.1
Bonds and notes	2,339.5	979.1	62.9	108.0	635.5	74.2	98.4	63.3	1.5	38.1	10.6	739.6	225.5	27.2	254.7
Money market instruments	398.1	148.8	7.3	19.6	120.0	1.7	0.1	3.5	0.7	58.1	4.0	140.7	15.4	0.6	26.3
<b>Other investment</b>	-156.6	-107.3	49.4	6.8	-96.5	92.2	-159.3	0.3	-8.7	17.0	-118.6	-106.5	-12.4	14.1	165.6
Assets	4,830.9	2,246.0	108.6	85.4	1,847.6	187.9	16.5	26.8	31.6	95.0	238.8	687.3	591.7	61.3	852.4
General government	109.2	23.3	0.1	5.4	6.8	0.2	10.6	0.0	3.1	0.2	0.2	3.5	1.9	27.3	49.7
MFIs	2,866.1	1,539.2	91.0	51.0	1,240.6	154.0	2.6	15.2	9.3	64.4	125.5	353.0	329.8	20.4	409.4
Other sectors	1,855.6	683.6	17.5	28.9	600.2	33.7	3.3	11.6	19.1	30.4	113.2	330.8	260.0	13.6	393.3
Liabilities	4,987.5	2,353.3	59.2	78.5	1,944.1	95.6	175.8	26.6	40.3	78.0	357.4	793.8	604.1	47.2	686.8
General government	71.6	29.4	0.1	0.4	4.4	0.0	24.5	0.1	0.1	0.5	0.2	22.1	0.3	16.9	2.2
MFIs	3,650.9	1,746.4	47.7	44.2	1,486.4	71.6	96.6	19.4	19.1	45.6	270.3	500.3	499.4	27.6	522.9
Other sectors	1,264.9	577.5	11.4	34.0	453.3	24.0	54.8	7.1	21.2	32.0	86.9	271.4	104.5	2.6	161.8
<b>2010 Q2 to 2011 Q1</b>	Cumulated transactions														
<b>Direct investment</b>	12.8	31.6	-0.2	2.5	6.5	22.8	0.0	-19.2	6.2	-6.3	-23.7	-10.4	-8.8	-0.1	43.5
Abroad	159.3	77.5	1.7	5.4	40.6	29.9	0.0	-0.1	6.0	-5.6	-12.2	3.5	21.5	0.0	68.8
Equity/reinvested earnings	76.6	53.4	1.5	4.3	19.6	28.1	0.0	-1.0	3.9	-4.6	-16.1	-9.2	3.1	0.0	47.1
Other capital	82.7	24.1	0.2	1.1	21.0	1.8	0.0	0.8	2.0	-1.0	3.9	12.7	18.4	0.0	21.7
In the euro area	146.5	46.0	2.0	2.9	34.1	7.1	0.0	19.0	-0.2	0.6	11.5	13.9	30.3	0.1	25.3
Equity/reinvested earnings	115.0	34.4	0.9	6.2	25.1	2.1	0.0	22.2	0.4	1.9	0.2	16.0	22.8	0.0	17.2
Other capital	31.5	11.6	1.0	-3.4	9.0	5.0	0.0	-3.2	-0.6	-1.2	11.3	-2.0	7.5	0.1	8.1
<b>Portfolio investment assets</b>	97.6	-11.5	-1.1	6.3	-30.9	5.1	9.1	-3.9	7.8	-10.1	5.7	48.1	-20.6	0.3	81.7
Equity	37.9	7.2	1.5	5.5	-1.1	1.1	0.1	4.8	7.3	-3.6	-1.0	11.7	-2.7	-0.5	14.7
Debt instruments	59.7	-18.7	-2.6	0.9	-29.8	4.0	9.0	-8.6	0.5	-6.6	6.6	36.5	-17.9	0.8	67.0
Bonds and notes	59.3	-0.9	-0.3	1.3	-13.8	3.1	8.7	-8.6	0.7	0.6	1.8	20.5	-15.3	1.3	59.3
Money market instruments	0.4	-17.8	-2.3	-0.5	-16.1	0.9	0.2	0.0	-0.1	-7.2	4.9	15.9	-2.6	-0.6	7.7
<b>Other investment</b>	172.7	114.2	10.9	-6.4	112.7	9.8	-12.8	-4.4	5.2	6.0	49.1	13.4	61.2	-28.1	-44.0
Assets	128.7	53.1	3.9	16.5	18.5	13.4	0.7	-1.5	9.1	19.1	19.6	-1.1	23.9	-10.4	16.9
General government	38.0	16.1	0.9	1.1	12.1	1.8	0.2	1.6	0.0	2.3	0.7	11.2	1.6	0.7	3.7
MFIs	21.5	-14.9	0.3	11.5	-37.9	11.7	-0.5	-3.5	6.6	11.7	9.8	4.2	11.6	-11.2	7.1
Other sectors	69.1	51.8	2.7	3.9	44.3	0.0	0.9	0.5	2.4	5.1	9.1	-16.5	10.6	0.0	6.1
Liabilities	-44.1	-61.1	-6.9	23.0	-94.2	3.6	13.4	2.9	3.9	13.1	-29.5	-14.4	-37.3	17.6	60.8
General government	89.1	42.5	0.0	0.0	39.7	0.0	2.7	0.1	0.0	-0.2	0.1	17.2	1.2	14.0	14.2
MFIs	-150.0	-119.9	-6.1	19.6	-141.4	2.7	5.4	1.5	0.9	12.4	-29.2	-11.0	-40.3	3.5	32.0
Other sectors	16.9	16.3	-0.8	3.3	7.6	0.9	5.3	1.3	3.0	0.8	-0.4	-20.6	1.8	0.1	14.6

Source: ECB.

## 7.4 Monetary presentation of the balance of payments <sup>1)</sup>

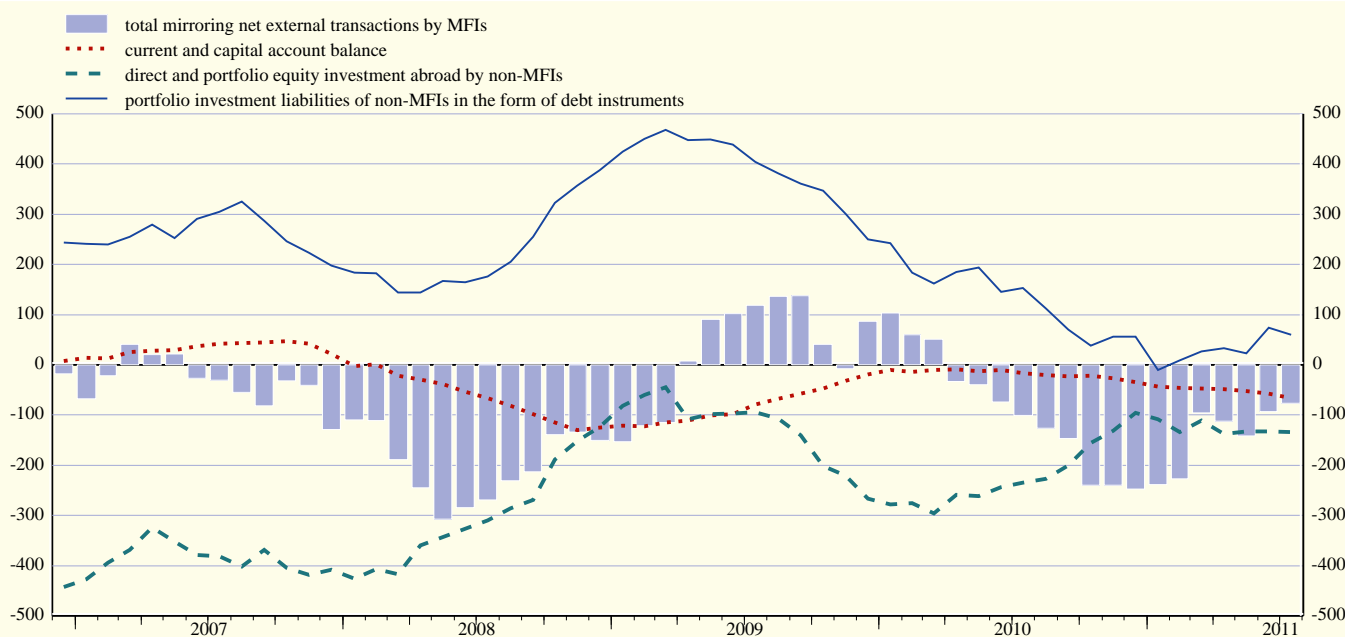
(EUR billions; transactions)

### B.o.p. items mirroring net transactions by MFIs

	Total	Current and capital account balance	Transactions by non-MFIs								Financial derivatives	Errors and omissions
			Direct investment		Portfolio investment				Other investment			
			By resident units abroad	By non-resident units in euro area	Assets		Liabilities		Assets	Liabilities		
					Equity	Debt instruments	Equity	Debt instruments				
1	2	3	4	5	6	7	8	9	10	11	12	
2008	-150.2	-124.8	-320.1	99.3	62.1	-14.5	-169.3	387.7	-51.3	73.3	-82.8	-9.9
2009	86.1	-19.5	-304.6	207.9	-50.0	-124.0	109.7	249.3	113.1	-141.1	37.2	8.1
2010	-247.6	-34.5	-132.7	93.9	-68.1	-239.6	128.2	56.6	-143.5	97.4	8.7	-13.9
2010 Q2	-43.2	-16.9	-83.7	54.0	2.3	-41.0	16.3	76.9	-58.8	14.7	1.9	-8.9
Q3	-65.7	-5.3	-26.9	-5.1	-8.8	-44.1	24.0	-43.6	-11.4	52.1	2.3	1.0
Q4	-57.8	3.2	18.9	43.9	-35.6	-110.5	61.2	-4.3	-40.4	9.3	1.7	-5.1
2011 Q1	71.6	-27.9	-62.0	55.2	3.4	-23.6	83.3	-1.8	4.2	29.8	-4.0	15.1
Q2	-40.7	-27.4	-36.4	16.0	-13.6	-28.7	-34.8	124.3	-49.8	3.9	5.4	0.5
2010 July	-27.9	6.9	-11.7	11.1	3.3	-28.7	-6.1	-17.4	-4.1	27.6	-1.4	-7.5
Aug.	-9.1	-6.9	-8.7	-18.9	-4.2	0.4	23.3	-25.3	15.0	6.9	4.7	4.5
Sep.	-28.7	-5.3	-6.5	2.7	-7.9	-15.7	6.7	-0.9	-22.3	17.5	-1.0	4.1
Oct.	-80.7	1.7	6.4	-17.5	-15.1	-85.8	45.9	11.5	-21.1	1.5	-4.8	-3.4
Nov.	-10.7	-4.6	8.2	42.4	-9.5	-24.9	-19.4	29.0	-25.5	3.1	1.6	-11.1
Dec.	33.6	6.1	4.3	18.9	-11.0	0.2	34.8	-44.8	6.1	4.6	4.9	9.4
2011 Jan.	-18.0	-19.2	-25.3	37.0	5.0	-13.2	7.1	-39.8	-15.6	38.5	2.7	4.8
Feb.	-2.0	-8.0	-17.1	-15.4	-4.4	-12.0	46.4	11.3	14.8	-23.2	-3.2	9.0
Mar.	91.6	-0.6	-19.5	33.6	2.8	1.6	29.9	26.7	5.0	14.5	-3.6	1.3
Apr.	-58.4	-6.4	-34.8	13.2	-9.9	-8.3	-31.9	42.6	-18.9	-8.9	0.7	4.4
May	-19.9	-18.2	-6.2	3.3	-6.6	-14.5	-14.2	43.6	-26.4	18.0	1.7	-0.4
June	37.6	-2.7	4.5	-0.6	2.9	-5.8	11.3	38.1	-4.6	-5.1	3.0	-3.5
July	-11.4	-2.7	-12.5	12.4	-0.4	-8.4	22.5	-32.5	-4.0	19.6	-4.6	-0.8
<i>12-month cumulated transactions</i>												
2011 July	-76.1	-66.9	-107.3	111.2	-58.3	-186.5	162.2	59.4	-97.5	87.1	2.2	18.2

### C38 Main b.o.p. items mirroring developments in MFI net external transactions <sup>1)</sup>

(EUR billions; 12-month cumulated transactions)



Source: ECB.

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

## 7.5 Trade in goods

### 1. Values and volumes by product group <sup>1)</sup>

(seasonally adjusted, unless otherwise indicated)

	Total (n.s.a.)		Exports (f.o.b.)				Imports (c.i.f.)						
	Exports	Imports	Total			Memo item: Manufacturing	Total			Memo items:			
			Intermediate	Capital	Consumption		Intermediate	Capital	Consumption	Manufacturing	Oil		
	1	2	3	4	5	6	7	8	9	10	11	12	13
Values (EUR billions; annual percentage changes for columns 1 and 2)													
2009	-18.0	-21.8	1,279.8	628.0	264.3	355.4	1,063.2	1,266.4	734.4	193.8	316.7	840.8	182.1
2010	20.1	22.8	1,533.8	765.6	309.2	420.1	1,270.1	1,549.3	947.8	227.9	348.1	1,018.5	247.2
2010 Q3	22.8	27.4	397.9	198.0	80.4	108.4	330.5	402.8	246.6	60.1	89.7	268.1	62.9
2010 Q4	22.2	25.9	404.4	202.1	83.3	109.6	333.2	407.3	254.0	58.6	89.4	265.7	66.4
2011 Q1	21.6	23.8	427.3	214.4	85.9	116.0	350.0	434.6	275.2	59.4	91.5	276.4	74.3
2011 Q2	12.7	12.3	428.4	214.9	86.1	115.8	349.8	434.9	278.8	57.9	89.5	274.2	76.7
2011 Feb.	22.4	26.1	142.5	71.4	28.9	38.6	117.4	144.8	91.2	19.5	30.5	92.4	22.9
2011 Mar.	16.5	16.9	144.2	72.8	29.5	39.2	118.5	145.6	93.1	19.3	30.9	93.3	26.2
2011 Apr.	14.5	17.5	143.9	72.0	28.2	39.2	115.9	146.7	94.0	20.1	29.7	91.6	26.9
2011 May	21.5	17.1	145.9	73.1	30.0	40.0	120.8	147.1	93.9	19.4	30.4	93.6	25.0
2011 June	3.1	3.4	138.6	69.7	27.9	36.6	113.0	141.1	90.9	18.4	29.4	89.0	24.7
2011 July	5.3	5.8	141.3	.	.	.	115.1	143.8	.	.	.	89.3	.
Volume indices (2000 = 100; annual percentage changes for columns 1 and 2)													
2009	-16.5	-13.7	119.5	114.9	119.0	128.0	116.0	109.6	101.0	115.7	136.3	110.9	101.7
2010	14.8	10.9	136.7	132.5	137.5	143.5	133.9	121.0	113.2	130.0	143.3	127.9	100.6
2010 Q3	16.0	12.9	140.1	135.2	142.7	145.8	137.6	122.7	114.8	133.5	143.9	131.3	101.1
2010 Q4	15.0	10.6	142.4	137.5	148.0	148.2	139.4	123.8	116.6	133.1	145.1	131.8	102.9
2011 Q1	13.5	7.5	146.0	141.1	149.1	152.3	143.0	124.9	117.6	132.0	144.5	133.2	96.9
2011 Q2	7.8	2.4	146.3	140.0	150.7	153.5	143.5	123.6	116.0	132.0	143.2	133.8	91.8
2011 Jan.	18.6	12.8	144.7	139.9	143.6	150.3	140.1	125.2	118.3	136.3	142.1	130.6	103.4
2011 Feb.	14.3	9.8	146.0	140.7	150.2	152.1	143.6	125.7	117.8	131.2	145.0	134.0	91.7
2011 Mar.	9.0	1.3	147.2	142.8	153.4	154.4	145.1	123.8	116.8	128.6	146.5	134.9	95.7
2011 Apr.	8.1	4.5	147.2	140.3	148.8	155.3	142.5	124.3	116.4	137.4	142.2	133.9	95.0
2011 May	16.4	7.5	149.6	143.2	157.5	158.8	148.6	126.6	118.5	134.4	146.8	138.0	89.7
2011 June	-0.1	-4.5	142.1	136.5	145.8	146.3	139.3	119.9	113.1	124.3	140.6	129.6	90.8

### 2. Prices <sup>2)</sup>

(annual percentage changes, unless otherwise indicated)

	Industrial producer export prices (f.o.b.) <sup>3)</sup>							Industrial import prices (c.i.f.)						
	Total (index: 2005 = 100)	Total				Memo item: Manufacturing	Total (index: 2005 = 100)	Total				Memo item: Manufacturing		
		Intermediate goods	Capital goods	Consumer goods	Energy			Intermediate goods	Capital goods	Consumer goods	Energy			
% of total	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2009	101.5	-2.7	-4.0	0.5	0.5	-23.7	-2.6	100.1	-8.7	-4.8	1.8	1.0	-28.3	-2.6
2010	105.4	3.9	4.8	1.1	2.2	26.3	3.8	109.8	9.8	9.7	1.4	2.9	27.5	5.8
2010 Q4	106.6	5.1	7.1	2.0	2.9	21.5	5.0	112.4	11.5	13.2	2.3	5.5	25.8	7.9
2011 Q1	109.1	5.9	8.5	2.0	2.9	25.8	5.8	118.3	12.2	11.3	0.7	6.0	31.8	7.0
2011 Q2	110.2	4.1	6.0	0.8	1.8	22.0	4.0	118.8	7.5	3.9	-3.0	3.2	27.8	2.0
2011 Mar.	109.7	5.7	8.3	1.6	2.8	26.3	5.6	119.7	11.8	9.8	-0.4	5.7	32.4	6.2
2011 Apr.	110.3	5.0	7.1	1.1	2.6	25.1	4.9	120.0	9.7	6.9	-1.9	4.7	30.4	4.1
2011 May	110.2	4.0	5.9	0.8	1.6	22.0	3.9	118.5	7.1	2.4	-3.0	3.0	28.3	1.2
2011 June	110.0	3.4	5.1	0.6	1.2	18.9	3.3	117.8	5.9	2.6	-4.2	2.0	24.8	0.7
2011 July	110.4	4.0	5.2	0.8	1.7	25.9	3.9	119.0	7.4	3.5	-4.0	2.6	29.4	1.5
2011 Aug.	110.3	3.8	4.9	0.8	1.8	23.3	3.7	119.7	7.7	4.2	-2.7	2.8	26.0	2.3

Source: Eurostat.

- Product groups as classified in the Broad Economic Categories. Unlike the product groups shown in Table 2, intermediate and consumption product groups include agricultural and energy products.
- Product groups as classified in the Main Industrial Groupings. Unlike the product groups shown in Table 1, intermediate and consumer goods do not include energy products, and agricultural goods are not covered. Manufacturing has a different composition compared with the data shown in columns 7 and 12 of Table 1. Data shown are price indices which follow the pure price change for a basket of products and are not simple ratios of the value and volume data shown in Table 1, which are affected by changes in the composition and quality of traded goods. These indices differ from the GDP deflators for imports and exports (shown in Table 3 in Section 5.1), mainly because those deflators include all goods and services and cover cross-border trade within the euro area.
- Industrial producer export prices refer to direct transactions between domestic producers and non-domestic customers. Contrary to the data shown for values and volumes in Table 1, exports from wholesalers and re-exports are not covered.

## 7.5 Trade in goods

(EUR billions, unless otherwise indicated; seasonally adjusted)

### 3. Geographical breakdown

	Total	EU Member States outside the euro area				Russia	Switzerland	Turkey	United States	Asia		Africa	Latin America	Other countries	
		Denmark	Sweden	United Kingdom	Other EU countries					China	Japan				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Exports (f.o.b.)</b>															
2009	1,279.8	27.3	41.5	175.3	174.6	50.1	78.9	34.8	152.4	284.4	69.0	28.6	92.0	54.3	29.4
2010	1,533.8	30.2	52.7	195.3	209.2	63.4	93.0	47.3	180.3	354.7	94.7	34.5	104.8	73.3	18.9
2010 Q1	352.3	7.0	11.9	46.3	47.6	13.6	21.3	10.5	41.3	81.4	21.8	8.0	24.9	16.7	5.7
Q2	379.2	7.4	13.3	48.0	51.3	15.3	22.9	11.4	45.1	88.3	23.5	8.7	25.6	18.5	5.4
Q3	397.9	7.6	13.5	50.5	54.2	17.2	24.1	12.1	47.7	91.7	23.9	8.9	26.8	19.0	4.0
Q4	404.4	8.2	14.0	50.6	56.1	17.3	24.7	13.2	46.2	93.3	25.4	9.0	27.5	19.1	3.7
2011 Q1	427.3	8.1	15.0	53.3	59.1	18.7	25.8	15.3	49.9	99.1	28.7	9.3	28.1	20.1	1.0
Q2	428.4	8.2	15.3	52.0	60.2	20.1	26.4	14.3	48.0	98.0	27.2	9.5	27.0	21.0	3.6
2011 Feb.	142.5	2.7	4.9	17.5	19.8	6.3	8.5	5.1	16.7	33.4	9.6	3.1	9.2	7.0	0.0
Mar.	144.2	2.7	5.2	18.1	20.1	6.4	9.0	5.4	16.7	33.5	9.7	3.1	9.4	6.8	-1.0
Apr.	143.9	2.7	5.0	16.9	19.8	6.4	8.9	4.9	16.2	32.3	8.8	3.2	9.2	7.0	3.3
May	145.9	2.8	5.3	18.0	20.5	7.1	9.3	4.8	16.3	33.7	9.5	3.2	9.1	7.3	-0.3
June	138.6	2.7	5.0	17.1	20.0	6.5	8.3	4.5	15.5	31.9	8.9	3.0	8.7	6.6	0.7
July	141.3	.	.	.	.	6.6	8.5	4.5	15.5	32.8	9.1	3.2	8.8	6.9	.
<b>Percentage share of total exports</b>															
2010	100.0	2.0	3.4	12.7	13.6	4.1	6.1	3.1	11.7	23.1	6.2	2.3	6.8	4.8	1.3
<b>Imports (c.i.f.)</b>															
2009	1,266.4	27.1	38.2	127.1	161.9	84.3	65.2	26.5	116.2	380.1	157.7	44.0	94.8	59.5	-25.2
2010	1,549.3	27.6	47.8	149.3	197.1	111.2	74.3	30.9	129.5	494.3	209.0	51.2	118.8	75.0	-48.5
2010 Q1	353.1	6.6	10.4	35.0	44.9	25.7	17.1	7.3	29.3	110.7	46.0	11.8	26.9	16.6	-10.3
Q2	386.1	6.9	11.9	36.7	48.8	28.3	19.5	7.6	31.9	125.1	53.2	12.8	29.8	18.1	-14.5
Q3	402.8	7.1	12.6	38.3	50.6	27.6	19.2	7.8	34.2	130.8	55.9	13.4	29.6	19.4	-9.8
Q4	407.3	7.1	12.8	39.2	52.9	29.6	18.6	8.2	34.0	127.7	53.9	13.1	32.4	20.9	-13.9
2011 Q1	434.6	7.3	13.1	41.7	55.6	34.7	19.3	9.0	35.3	135.2	54.6	13.7	35.6	21.4	-17.4
Q2	434.9	7.4	13.3	41.2	56.3	34.5	19.9	8.8	34.0	138.5	55.9	12.7	30.7	21.8	-15.0
2011 Feb.	144.8	2.5	4.4	13.9	18.5	10.4	6.4	3.0	11.8	44.8	18.1	4.5	12.2	7.1	-3.6
Mar.	145.6	2.5	4.6	14.0	18.9	13.0	6.5	3.0	11.7	46.3	18.7	4.8	11.2	7.2	-9.3
Apr.	146.7	2.4	4.3	13.8	18.5	12.1	6.5	3.0	11.6	46.6	18.7	4.4	10.3	7.3	-5.0
May	147.1	2.6	4.7	13.9	19.0	12.6	6.8	3.0	11.4	46.4	18.7	4.3	9.8	7.4	-5.9
June	141.1	2.4	4.3	13.5	18.7	9.8	6.6	2.9	11.0	45.5	18.5	4.1	10.7	7.1	-4.1
July	143.8	.	.	.	.	11.6	6.7	2.8	10.7	45.9	18.2	4.3	9.6	7.6	.
<b>Percentage share of total imports</b>															
2010	100.0	1.8	3.1	9.6	12.7	7.2	4.8	2.0	8.4	31.9	13.5	3.3	7.7	4.8	-3.1
<b>Balance</b>															
2009	13.4	0.2	3.3	48.2	12.7	-34.2	13.8	8.3	36.2	-95.7	-88.7	-15.4	-2.8	-5.2	54.6
2010	-15.5	2.6	5.0	46.0	12.1	-47.8	18.7	16.4	50.8	-139.6	-114.3	-16.6	-13.9	-1.7	67.3
2010 Q1	-0.8	0.4	1.5	11.3	2.7	-12.2	4.2	3.3	12.0	-29.3	-24.2	-3.8	-2.0	0.1	16.0
Q2	-6.9	0.5	1.3	11.2	2.6	-13.0	3.4	3.8	13.2	-36.8	-29.7	-4.2	-4.2	0.4	19.9
Q3	-4.9	0.6	0.9	12.1	3.6	-10.4	4.9	4.4	13.4	-39.1	-32.0	-4.6	-2.8	-0.4	13.8
Q4	-2.9	1.1	1.2	11.3	3.2	-12.2	6.2	5.0	12.2	-34.4	-28.5	-4.1	-5.0	-1.8	17.6
2011 Q1	-7.3	0.8	1.8	11.5	3.5	-16.0	6.5	6.4	14.5	-36.2	-25.9	-4.4	-7.6	-1.3	18.4
Q2	-6.5	0.8	2.1	10.7	4.0	-14.4	6.5	5.4	14.0	-40.5	-28.7	-3.2	-3.7	-0.8	18.6
2011 Feb.	-2.3	0.1	0.5	3.6	1.3	-4.1	2.1	2.1	4.9	-11.4	-8.5	-1.4	-3.0	-0.1	3.6
Mar.	-1.4	0.3	0.6	4.2	1.2	-6.7	2.5	2.4	5.0	-12.8	-9.0	-1.7	-1.8	-0.3	8.3
Apr.	-2.8	0.3	0.7	3.1	1.2	-5.7	2.3	1.9	4.6	-14.3	-9.8	-1.2	-1.1	-0.3	8.2
May	-1.2	0.1	0.6	4.1	1.4	-5.5	2.5	1.9	4.9	-12.6	-9.2	-1.0	-0.7	-0.1	5.6
June	-2.5	0.3	0.7	3.5	1.3	-3.3	1.6	1.7	4.5	-13.6	-9.7	-1.0	-1.9	-0.5	4.7
July	-2.5	.	.	.	.	-5.0	1.9	1.7	4.8	-13.1	-9.0	-1.1	-0.8	-0.7	.

Source: Eurostat.





## EXCHANGE RATES

### 8.1 Effective exchange rates <sup>1)</sup>

(period averages; index: 1999 Q1=100)

	EER-20						EER-40		
	Nominal	Real CPI	Real PPI	Real GDP deflator	Real ULCM	Real ULCT	Nominal	Real CPI	
	1	2	3	4	5	6	7	8	
2008	110.4	109.9	108.2	105.1	115.4	104.1	117.9	107.1	
2009	111.7	110.6	105.5	106.1	120.4	106.0	120.6	108.0	
2010	104.6	103.0	99.3	98.4	109.6	98.0	112.3	99.3	
2010 Q3	102.3	100.8	97.5	96.5	106.9	95.4	109.8	97.2	
Q4	104.4	102.4	99.2	97.7	108.7	97.7	112.1	98.7	
2011 Q1	103.7	101.5	98.3	96.9	107.0	96.4	111.6	97.9	
Q2	106.4	104.2	100.3	99.5	109.4	99.2	114.5	100.5	
Q3	104.6	102.1	98.4	.	.	.	113.3	99.0	
2010 Sep.	102.5	100.8	97.7	-	-	-	110.0	97.2	
Oct.	106.0	104.1	101.0	-	-	-	113.8	100.3	
Nov.	104.7	102.7	99.5	-	-	-	112.5	99.0	
Dec.	102.6	100.6	97.3	-	-	-	110.1	96.8	
2011 Jan.	102.4	100.3	97.2	-	-	-	110.1	96.7	
Feb.	103.4	101.1	98.2	-	-	-	111.4	97.6	
Mar.	105.2	103.1	99.6	-	-	-	113.2	99.4	
Apr.	107.0	104.9	101.1	-	-	-	115.0	101.1	
May	106.0	103.8	99.8	-	-	-	114.1	100.1	
June	106.1	104.0	100.0	-	-	-	114.4	100.3	
July	105.2	102.7	99.0	-	-	-	113.4	99.1	
Aug.	104.9	102.3	98.7	-	-	-	113.8	99.4	
Sep.	103.8	101.1	97.4	-	-	-	112.8	98.4	
	<i>Percentage change versus previous month</i>								
2011 Sep.	-1.1	-1.2	-1.3	-	-	-	-0.9	-1.0	
	<i>Percentage change versus previous year</i>								
2011 Sep.	1.3	0.4	-0.3	-	-	-	2.6	1.2	

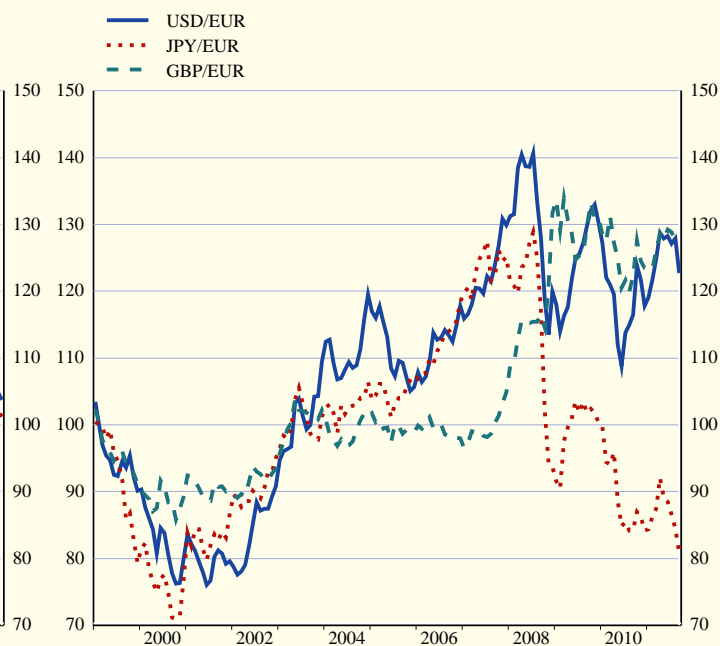
### C39 Effective exchange rates

(monthly averages; index: 1999 Q1=100)



### C40 Bilateral exchange rates

(monthly averages; index: 1999 Q1=100)



Source: ECB.

1) For a definition of the trading partner groups and other information, please refer to the General Notes.

## 8.2 Bilateral exchange rates

(period averages; units of national currency per euro)

	Bulgarian lev	Czech koruna	Danish krone	Latvian lats	Lithuanian litas	Hungarian forint	Polish zloty	New Romanian leu	Swedish krona	Pound sterling	Croatian kuna	New Turkish lira
	1	2	3	4	5	6	7	8	9	10	11	12
2008	1.9558	24.946	7.4560	0.7027	3.4528	251.51	3.5121	3.6826	9.6152	0.79628	7.2239	1.9064
2009	1.9558	26.435	7.4462	0.7057	3.4528	280.33	4.3276	4.2399	10.6191	0.89094	7.3400	2.1631
2010	1.9558	25.284	7.4473	0.7087	3.4528	275.48	3.9947	4.2122	9.5373	0.85784	7.2891	1.9965
2011 Q1	1.9558	24.375	7.4550	0.7049	3.4528	272.43	3.9460	4.2212	8.8642	0.85386	7.4018	2.1591
Q2	1.9558	24.324	7.4573	0.7092	3.4528	266.42	3.9596	4.1378	9.0153	0.88274	7.3932	2.2579
Q3	1.9558	24.387	7.4506	0.7093	3.4528	275.10	4.1527	4.2587	9.1451	0.87760	7.4629	2.4535
2011 Mar.	1.9558	24.393	7.4574	0.7072	3.4528	270.89	4.0145	4.1621	8.8864	0.86653	7.3915	2.2108
Apr.	1.9558	24.301	7.4574	0.7092	3.4528	265.29	3.9694	4.1004	8.9702	0.88291	7.3639	2.1975
May	1.9558	24.381	7.4566	0.7093	3.4528	266.96	3.9404	4.1142	8.9571	0.87788	7.4052	2.2603
June	1.9558	24.286	7.4579	0.7091	3.4528	266.87	3.9702	4.1937	9.1125	0.88745	7.4065	2.3077
July	1.9558	24.335	7.4560	0.7092	3.4528	267.68	3.9951	4.2413	9.1340	0.88476	7.4316	2.3654
Aug.	1.9558	24.273	7.4498	0.7093	3.4528	272.37	4.1195	4.2505	9.1655	0.87668	7.4620	2.5147
Sep.	1.9558	24.556	7.4462	0.7093	3.4528	285.05	4.3379	4.2838	9.1343	0.87172	7.4936	2.4736
<i>Percentage change versus previous month</i>												
2011 Sep.	0.0	1.2	0.0	0.0	0.0	4.7	5.3	0.8	-0.3	-0.6	0.4	-1.6
<i>Percentage change versus previous year</i>												
2011 Sep.	0.0	-0.4	0.0	0.0	0.0	1.0	9.7	0.4	-1.0	3.8	2.8	26.7
	Australian dollar	Brazilian real	Canadian dollar	Chinese yuan renminbi	Hong Kong dollar	Icelandic krona <sup>1)</sup>	Indian rupee <sup>2)</sup>	Indonesian rupiah	Israeli shekel	Japanese yen	Malaysian ringgit	
	13	14	15	16	17	18	19	20	21	22	23	
2008	1.7416	2.6737	1.5594	10.2236	11.4541	143.83	63.6143	14,165.16	5.2561	152.45	4.8893	
2009	1.7727	2.7674	1.5850	9.5277	10.8114	-	67.3611	14,443.74	5.4668	130.34	4.9079	
2010	1.4423	2.3314	1.3651	8.9712	10.2994	-	60.5878	12,041.70	4.9457	116.24	4.2668	
2011 Q1	1.3614	2.2799	1.3484	9.0028	10.6535	-	61.9255	12,171.85	4.9247	112.57	4.1668	
Q2	1.3550	2.2960	1.3932	9.3509	11.1932	-	64.3809	12,364.41	4.9490	117.41	4.3451	
Q3	1.3459	2.3063	1.3841	9.0653	11.0105	-	64.7000	12,181.09	5.0174	109.77	4.2666	
2011 Mar.	1.3854	2.3220	1.3672	9.1902	10.9093	-	62.9526	12,263.18	4.9867	114.40	4.2483	
Apr.	1.3662	2.2889	1.3834	9.4274	11.2269	-	64.1128	12,493.48	4.9573	120.42	4.3502	
May	1.3437	2.3131	1.3885	9.3198	11.1551	-	64.4735	12,290.33	4.9740	116.47	4.3272	
June	1.3567	2.2850	1.4063	9.3161	11.2021	-	64.5200	12,327.02	4.9169	115.75	4.3585	
July	1.3249	2.2329	1.3638	9.2121	11.1104	-	63.3537	12,171.27	4.8801	113.26	4.2716	
Aug.	1.3651	2.2888	1.4071	9.1857	11.1846	-	65.0717	12,249.95	5.0841	110.43	4.2822	
Sep.	1.3458	2.3946	1.3794	8.7994	10.7333	-	65.5964	12,118.49	5.0788	105.75	4.2456	
<i>Percentage change versus previous month</i>												
2011 Sep.	-1.4	4.6	-2.0	-4.2	-4.0	-	0.8	-1.1	-0.1	-4.2	-0.9	
<i>Percentage change versus previous year</i>												
2011 Sep.	-3.5	6.5	2.1	-0.1	5.8	-	9.2	3.4	4.1	-4.1	4.6	
	Mexican peso	New Zealand dollar	Norwegian krone	Philippine peso	Russian rouble	Singapore dollar	South African rand	South Korean won	Swiss franc	Thai baht	US dollar	
	24	25	26	27	28	29	30	31	32	33	34	
2008	16.2911	2.0770	8.2237	65.172	36.4207	2.0762	12.0590	1,606.09	1.5874	48.475	1.4708	
2009	18.7989	2.2121	8.7278	66.338	44.1376	2.0241	11.6737	1,772.90	1.5100	47.804	1.3948	
2010	16.7373	1.8377	8.0043	59.739	40.2629	1.8055	9.6984	1,531.82	1.3803	42.014	1.3257	
2011 Q1	16.5007	1.8107	7.8236	59.876	39.9976	1.7467	9.5875	1,530.79	1.2871	41.771	1.3680	
Q2	16.8752	1.7992	7.8259	62.256	40.2750	1.7842	9.7852	1,559.23	1.2514	43.592	1.4391	
Q3	17.3908	1.6976	7.7652	60.371	41.1734	1.7309	10.0898	1,532.60	1.1649	42.574	1.4127	
2011 Mar.	16.8063	1.8877	7.8295	60.870	39.8061	1.7757	9.6862	1,568.05	1.2867	42.506	1.3999	
Apr.	16.9211	1.8331	7.8065	62.361	40.5363	1.8024	9.7200	1,567.52	1.2977	43.434	1.4442	
May	16.7177	1.8024	7.8384	61.953	40.0573	1.7763	9.8461	1,555.99	1.2537	43.398	1.4349	
June	16.9931	1.7666	7.8302	62.468	40.2670	1.7763	9.7807	1,555.32	1.2092	43.923	1.4388	
July	16.6491	1.6877	7.7829	60.961	39.8343	1.7359	9.7000	1,510.29	1.1766	42.949	1.4264	
Aug.	17.5456	1.7108	7.7882	60.836	41.2954	1.7340	10.1532	1,542.01	1.1203	42.875	1.4343	
Sep.	17.9370	1.6932	7.7243	59.322	42.3239	1.7229	10.3956	1,544.04	1.2005	41.902	1.3770	
<i>Percentage change versus previous month</i>												
2011 Sep.	2.2	-1.0	-0.8	-2.5	2.5	-0.6	2.4	0.1	7.2	-2.3	-4.0	
<i>Percentage change versus previous year</i>												
2011 Sep.	7.2	-5.7	-2.4	2.7	5.1	-1.2	11.5	1.8	-8.3	4.1	5.4	

Source: ECB.

1) The most recent rate for the Icelandic krona refers to 3 December 2008.

2) For this currency the ECB computes and publishes euro reference exchange rates as from 1 January 2009. Previous data are indicative.



## DEVELOPMENTS OUTSIDE THE EURO AREA

### 9.1 Economic and financial developments in other EU Member States

(annual percentage changes, unless otherwise indicated)

	Bulgaria	Czech Republic	Denmark	Latvia	Lithuania	Hungary	Poland	Romania	Sweden	United Kingdom
	1	2	3	4	5	6	7	8	9	10
<b>HICP</b>										
2009	2.5	0.6	1.1	3.3	4.2	4.0	4.0	5.6	1.9	2.2
2010	3.0	1.2	2.2	-1.2	1.2	4.7	2.7	6.1	1.9	3.3
2011 Q1	4.5	1.9	2.6	3.8	3.2	4.3	3.6	7.5	1.3	4.1
Q2	3.4	1.8	2.9	4.6	4.7	3.9	4.0	8.3	1.7	4.4
2011 June	3.5	1.9	2.9	4.7	4.8	3.5	3.7	8.0	1.5	4.2
July	3.4	1.9	3.0	4.2	4.6	3.1	3.6	4.9	1.6	4.4
Aug.	3.1	2.1	2.4	4.6	4.4	3.5	4.0	4.3	1.6	4.5
<b>General government deficit (-)/surplus (+) as a percentage of GDP</b>										
2008	1.7	-2.7	3.2	-4.2	-3.3	-3.7	-3.7	-5.7	2.2	-5.0
2009	-4.7	-5.9	-2.7	-9.7	-9.5	-4.5	-7.3	-8.5	-0.7	-11.4
2010	-3.2	-4.7	-2.7	-7.7	-7.1	-4.2	-7.9	-6.4	0.0	-10.4
<b>General government gross debt as a percentage of GDP</b>										
2008	13.7	30.0	34.5	19.7	15.6	72.3	47.1	13.4	38.8	54.4
2009	14.6	35.3	41.8	36.7	29.5	78.4	50.9	23.6	42.8	69.6
2010	16.2	38.5	43.6	44.7	38.2	80.2	55.0	30.8	39.8	80.0
<b>Long-term government bond yield as a percentage per annum; period average</b>										
2011 Mar.	5.38	4.05	3.29	6.49	5.15	7.29	6.27	7.31	3.35	3.78
Apr.	5.33	4.05	3.42	6.47	5.12	7.05	6.14	7.30	3.30	3.78
May	5.39	3.89	3.13	6.36	5.05	7.11	6.06	7.26	3.01	3.49
June	5.39	3.77	2.96	5.87	5.05	7.22	5.88	7.09	2.89	3.09
July	5.36	3.79	3.02	5.67	5.05	7.35	5.81	7.30	2.75	2.88
Aug.	5.32	3.40	2.49	5.60	5.05	7.49	5.70	7.38	2.17	2.37
<b>3-month interest rate as a percentage per annum; period average</b>										
2011 Mar.	3.90	1.21	1.31	0.85	1.40	6.64	4.18	5.85	2.38	0.81
Apr.	3.79	1.21	1.41	0.79	1.52	6.08	4.27	5.47	2.41	0.82
May	3.77	1.22	1.46	0.78	1.65	6.88	4.40	5.26	2.46	0.82
June	3.74	1.20	1.51	0.74	1.69	6.27	4.61	5.25	2.46	0.83
July	3.75	1.19	1.66	0.82	1.81	6.74	4.70	5.11	2.56	0.83
Aug.	3.74	1.19	1.60	0.83	1.86	7.12	4.72	5.60	2.58	0.86
<b>Real GDP</b>										
2009	-5.5	-4.1	-5.2	-17.7	-14.7	-6.7	1.6	-7.1	-5.2	-4.9
2010	0.2	2.3	1.7	-0.3	1.3	1.2	3.8	-1.3	5.6	1.4
2010 Q4	3.7	2.7	2.6	3.0	4.6	2.4	3.9	0.2	7.2	1.5
2011 Q1	3.3	2.8	1.5	2.9	6.8	1.7	4.4	0.8	6.1	1.6
Q2	2.0	2.2	1.7	5.0	6.2	1.2	4.5	0.8	4.9	0.7
<b>Current and capital account balance as a percentage of GDP</b>										
2009	-7.6	-1.0	3.5	11.1	7.8	1.0	-2.2	-3.6	6.9	-1.5
2010	-0.5	-2.3	5.3	4.9	4.2	2.9	-2.8	-3.8	6.5	-3.0
2010 Q4	-7.2	-1.0	6.1	0.3	6.5	1.4	-3.4	-1.5	5.9	-2.8
2011 Q1	2.0	2.5	4.9	1.2	2.1	3.7	-1.7	-2.6	7.9	-2.9
Q2	1.5	-5.2	9.2	1.3	-2.2	4.1	-2.2	-6.3	6.7	.
<b>Gross external debt as a percentage of GDP</b>										
2008	104.9	50.6	177.7	130.0	71.3	122.2	57.0	56.0	205.7	441.4
2009	107.9	53.2	189.8	156.5	87.2	142.3	59.6	69.0	210.7	416.6
2010 Q3	103.6	55.7	201.3	162.4	89.4	143.4	66.2	74.8	198.3	431.1
Q4	101.8	57.4	192.0	165.4	86.0	141.4	65.9	75.9	191.6	419.4
2011 Q1	98.5	56.9	187.1	158.1	84.7	135.1	67.8	73.5	187.1	417.5
<b>Unit labour costs</b>										
2009	12.7	3.5	4.7	-7.9	-2.8	1.9	2.2	-1.3	4.6	6.1
2010	0.8	0.6	-1.1	-10.2	-7.6	-1.1	4.8	0.8	-1.7	2.2
2010 Q4	-1.9	1.3	-0.9	1.8	-3.2	-2.0	5.7	-3.9	-1.7	1.1
2011 Q1	1.7	0.1	0.1	2.6	-1.5	0.9	2.7	-1.3	-2.9	0.0
Q2	5.3	0.2	-1.1	2.3	1.0	.	0.5	9.4	-0.7	.
<b>Standardised unemployment rate as a percentage of labour force (s.a.)</b>										
2009	6.8	6.7	6.0	17.2	13.7	10.0	8.2	6.9	8.3	7.6
2010	10.2	7.3	7.4	18.6	17.8	11.1	9.6	7.3	8.4	7.8
2011 Q1	11.1	6.9	7.6	16.2	16.5	11.0	9.3	7.1	7.7	7.7
Q2	11.3	6.9	7.3	16.2	15.6	10.9	9.5	7.4	7.5	7.9
2011 June	11.5	6.8	7.3	16.2	15.6	10.9	9.5	7.3	7.4	8.0
July	11.6	6.8	7.1	.	.	10.6	9.4	7.3	7.3	.
Aug.	11.7	6.7	7.1	.	.	10.3	9.4	7.3	7.4	.

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

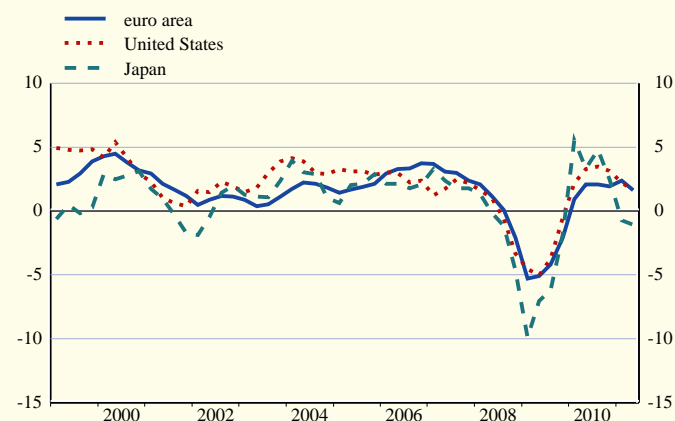
## 9.2 Economic and financial developments in the United States and Japan

(annual percentage changes, unless otherwise indicated)

	Consumer price index	Unit labour costs <sup>1)</sup>	Real GDP	Industrial production index (manufacturing)	Unemployment rate as a % of labour force (s.a.)	Broad money <sup>2)</sup>	3-month interbank deposit rate <sup>3)</sup>	10-year zero coupon government bond yield; <sup>3)</sup> end of period	Exchange rate <sup>4)</sup> as national currency per euro	Fiscal deficit (-)/surplus (+) as a % of GDP	Gross public debt <sup>5)</sup> as a % of GDP
	1	2	3	4	5	6	7	8	9	10	11
United States											
2007	2.9	2.5	1.9	3.1	4.6	6.3	5.30	4.81	1.3705	-2.9	48.5
2008	3.8	2.8	-0.3	-4.7	5.8	7.1	2.93	2.70	1.4708	-6.6	57.0
2009	-0.4	-0.6	-3.5	-13.5	9.3	7.9	0.69	4.17	1.3948	-11.6	69.4
2010	1.6	-2.0	3.0	5.9	9.6	2.3	0.34	3.57	1.3257	-10.7	78.2
2010 Q3	1.2	-1.5	3.5	7.2	9.6	2.5	0.39	2.69	1.2910	-10.3	76.2
Q4	1.3	-0.9	3.1	6.6	9.6	3.2	0.29	3.57	1.3583	-10.5	78.2
2011 Q1	2.1	1.3	2.2	6.6	8.9	4.5	0.31	3.76	1.3680	-9.9	79.1
Q2	3.4	1.9	1.6	4.4	9.1	5.5	0.26	3.46	1.4391	-10.2	79.0
Q3	.	.	.	.	.	.	0.30	2.18	1.4127	.	.
2011 May	3.6	-	-	4.0	9.1	5.3	0.26	3.33	1.4349	-	-
June	3.6	-	-	4.2	9.2	6.0	0.25	3.46	1.4388	-	-
July	3.6	-	-	3.9	9.1	8.2	0.25	3.08	1.4264	-	-
Aug.	3.8	-	-	4.2	9.1	10.3	0.29	2.51	1.4343	-	-
Sep.	.	-	-	.	.	.	0.35	2.18	1.3770	-	-
Japan											
2007	0.1	-2.3	2.3	2.8	3.8	1.6	0.79	1.70	161.25	-2.4	156.2
2008	1.4	1.4	-1.2	-3.4	4.0	2.1	0.93	1.21	152.45	-2.2	162.0
2009	-1.3	2.7	-6.3	-21.9	5.1	2.7	0.47	1.42	130.34	-8.7	180.4
2010	-0.7	-2.7	4.0	16.6	5.1	2.8	0.23	1.18	116.24	.	.
2010 Q3	-1.0	-3.4	4.8	14.0	5.0	2.7	0.24	1.03	110.68	.	.
Q4	-0.3	-1.3	2.5	6.0	5.0	2.5	0.19	1.18	112.10	.	.
2011 Q1	-0.5	1.1	-0.7	-2.6	4.7	2.5	0.19	1.33	112.57	.	.
Q2	-0.4	.	-1.1	-6.9	4.6	2.8	0.20	1.18	117.41	.	.
Q3	.	.	.	.	.	.	0.19	1.04	109.77	.	.
2011 May	-0.4	-	-	-5.5	4.5	2.7	0.20	1.22	116.47	-	-
June	-0.4	-	-	-1.8	4.6	2.8	0.20	1.18	115.75	-	-
July	0.2	-	-	-3.0	4.7	3.0	0.20	1.09	113.26	-	-
Aug.	.	-	-	0.6	.	2.7	0.19	1.05	110.43	-	-
Sep.	.	-	-	.	.	.	0.19	1.04	105.75	-	-

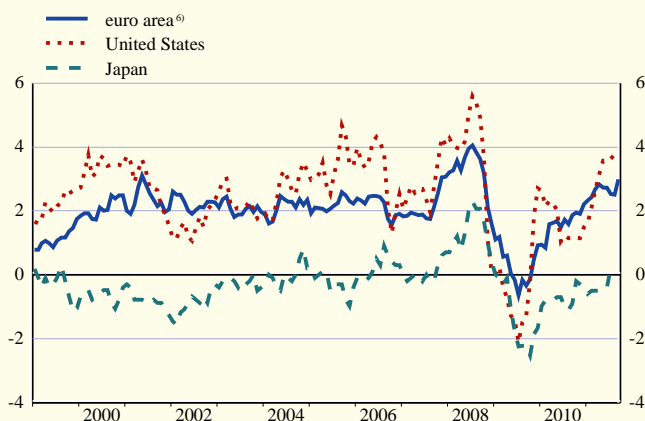
### C41 Real gross domestic product

(annual percentage changes; quarterly data)



### C42 Consumer price indices

(annual percentage changes; monthly data)



Sources: National data (columns 1, 2 (United States), 3, 4, 5 (United States), 6, 9 and 10); OECD (column 2 (Japan)); Eurostat (column 5 (Japan), euro area chart data); Thomson Reuters (columns 7 and 8); ECB calculations (column 11).

- 1) Seasonally adjusted. The data for the United States refer to the private non-agricultural business sector.
- 2) Period averages; M2 for the United States, M2+CDs for Japan.
- 3) Percentages per annum. For further information on the three-month interbank deposit rate, see Section 4.6.
- 4) For more information, see Section 8.2.
- 5) Gross consolidated general government debt (end of period).
- 6) Data refer to the changing composition of the euro area. For further information, see the General Notes.



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## TECHNICAL NOTES

### EURO AREA OVERVIEW

#### CALCULATION OF GROWTH RATES FOR MONETARY DEVELOPMENTS

The average growth rate for the quarter ending in month  $t$  is calculated as:

$$a) \left( \frac{0.5I_t + \sum_{i=1}^2 I_{t-i} + 0.5I_{t-3}}{0.5I_{t-12} + \sum_{i=1}^2 I_{t-i-12} + 0.5I_{t-15}} - 1 \right) \times 100$$

where  $I_t$  is the index of adjusted outstanding amounts as at month  $t$  (see also below). Likewise, for the year ending in month  $t$ , the average growth rate is calculated as:

$$b) \left( \frac{0.5I_t + \sum_{i=1}^{11} I_{t-i} + 0.5I_{t-12}}{0.5I_{t-12} + \sum_{i=1}^{11} I_{t-i-12} + 0.5I_{t-24}} - 1 \right) \times 100$$

### SECTION 1.3

#### CALCULATION OF INTEREST RATES ON INDEXED LONGER-TERM REFINANCING OPERATIONS

The interest rate on an indexed longer-term refinancing operation (LTRO) is equal to the average of the minimum bid rates on the main refinancing operations (MROs) over the life of that LTRO. According to this definition, if an LTRO is outstanding for  $D$  number of days and the minimum bid rates prevailing in MROs are  $R_{1, MRO}$  (over  $D_1$  days),  $R_{2, MRO}$  (over  $D_2$  days), etc., until  $R_{i, MRO}$  (over  $D_i$  days), where  $D_1 + D_2 + \dots + D_i = D$ , the applicable annualised rate ( $R_{LTRO}$ ) is calculated as:

$$c) R_{LTRO} = \frac{D_1 R_{1, MRO} + D_2 R_{2, MRO} + \dots + D_i R_{i, MRO}}{D}$$

### SECTIONS 2.1 TO 2.6

#### CALCULATION OF TRANSACTIONS

Monthly transactions are calculated from monthly differences in outstanding amounts adjusted for reclassifications, other revaluations, exchange rate variations and any other changes which do not arise from transactions.

If  $L_t$  represents the outstanding amount at the end of month  $t$ ,  $C_t^M$  the reclassification adjustment in month  $t$ ,  $E_t^M$  the exchange rate adjustment and  $V_t^M$  the other revaluation adjustments, the transactions  $F_t^M$  in month  $t$  are defined as:

$$d) F_t^M = (L_t - L_{t-1}) - C_t^M - E_t^M - V_t^M$$

Similarly, the quarterly transactions  $F_t^Q$  for the quarter ending in month  $t$  are defined as:

$$e) F_t^Q = (L_t - L_{t-3}) - C_t^Q - E_t^Q - V_t^Q$$

where  $L_{t-3}$  is the amount outstanding at the end of month  $t-3$  (the end of the previous quarter) and, for example,  $C_t^Q$  is the reclassification adjustment in the quarter ending in month  $t$ .

For those quarterly series for which monthly observations are now available (see below), the quarterly transactions can be derived as the sum of the three monthly transactions in the quarter.

#### CALCULATION OF GROWTH RATES FOR MONTHLY SERIES

Growth rates can be calculated from transactions or from the index of adjusted outstanding amounts. If  $F_t^M$  and  $L_t$  are defined as above, the index  $I_t$  of adjusted outstanding amounts in month  $t$  is defined as:

$$f) I_t = I_{t-1} \times \left( 1 + \frac{F_t^M}{L_{t-1}} \right)$$



The base of the index (for the non-seasonally adjusted series) is currently set as December 2008 = 100. Time series for the index of adjusted outstanding amounts are available on the ECB's website ([www.ecb.europa.eu](http://www.ecb.europa.eu)) in the "Monetary and financial statistics" sub-section of the "Statistics" section.

The annual growth rate  $a_t$  for month  $t$  – i.e. the change in the 12 months ending in month  $t$  – can be calculated using either of the following two formulae:

$$g) \quad a_t = \left[ \prod_{i=0}^{11} \left( 1 + \frac{F_{t-i}^M}{L_{t-1-i}} \right) - 1 \right] \times 100$$

$$h) \quad a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

Unless otherwise indicated, the annual growth rates refer to the end of the indicated period. For example, the annual percentage change for the year 2002 is calculated in h) by dividing the index for December 2002 by the index for December 2001.

Growth rates for intra-annual periods can be derived by adapting formula h). For example, the month-on-month growth rate  $a_t^M$  can be calculated as:

$$i) \quad a_t^M = \left( \frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

Finally, the three-month moving average (centred) for the annual growth rate of M3 is obtained as  $(a_{t+1} + a_t + a_{t-1})/3$ , where  $a_t$  is defined as in g) or h) above.

#### CALCULATION OF GROWTH RATES FOR QUARTERLY SERIES

If  $F_t^Q$  and  $L_{t-3}$  are defined as above, the index  $I_t$  of adjusted outstanding amounts for the quarter ending in month  $t$  is defined as:

$$j) \quad I_t = I_{t-3} \times \left( 1 + \frac{F_t^Q}{L_{t-3}} \right)$$

The annual growth rate in the four quarters ending in month  $t$  (i.e.  $a_t$ ) can be calculated using formula h).

#### SEASONAL ADJUSTMENT OF THE EURO AREA MONETARY STATISTICS<sup>1</sup>

The approach used is based on multiplicative decomposition using X-12-ARIMA.<sup>2</sup> The seasonal adjustment may include a day-of-the-week adjustment, and for some series it is carried out indirectly by means of a linear combination of components. This is the case for M3, which is derived by aggregating the seasonally adjusted series for M1, M2 less M1, and M3 less M2.

The seasonal adjustment procedures are first applied to the index of adjusted outstanding amounts.<sup>3</sup> The resulting estimates of seasonal factors are then applied to the levels and to the adjustments arising from reclassifications and revaluations, in turn yielding seasonally adjusted transactions. Seasonal (and trading day) factors are revised at annual intervals or as required.

1 For details, see "Seasonal adjustment of monetary aggregates and HICP for the euro area", ECB (August 2000) and the "Monetary and financial statistics" sub-section of the "Statistics" section of the ECB's website ([www.ecb.europa.eu](http://www.ecb.europa.eu)).

2 For details, see Findley, D., Monsell, B., Bell, W., Otto, M. and Chen, B. C. (1998), "New Capabilities and Methods of the X-12-ARIMA Seasonal Adjustment Program", *Journal of Business and Economic Statistics*, 16, 2, pp.127-152, or "X-12-ARIMA Reference Manual", Time Series Staff, Bureau of the Census, Washington, D.C.

For internal purposes, the model-based approach of TRAMO-SEATS is also used. For details of TRAMO-SEATS, see Gomez, V. and Maravall, A. (1996), "Programs TRAMO and SEATS: Instructions for the User", Banco de España, Working Paper No 9628, Madrid.

3 It follows that for the seasonally adjusted series, the level of the index for the base period (i.e. December 2008) generally differs from 100, reflecting the seasonality of that month.

## SECTIONS 3.1 TO 3.5

### EQUALITY OF USES AND RESOURCES

In Section 3.1 the data conform to a basic accounting identity. For non-financial transactions, total uses equal total resources for each transaction category. This accounting identity is also reflected in the financial account – i.e. for each financial instrument category, total transactions in financial assets equal total transactions in liabilities. In the other changes in assets account and the financial balance sheets, total financial assets equal total liabilities for each financial instrument category, with the exception of monetary gold and special drawing rights, which are by definition not a liability of any sector.

### CALCULATION OF BALANCING ITEMS

The balancing items at the end of each account in Sections 3.1, 3.2 and 3.3 are computed as follows.

The trade balance equals euro area imports minus exports vis-à-vis the rest of the world for goods and services.

Net operating surplus and mixed income is defined for resident sectors only and is calculated as gross value added (gross domestic product at market prices for the euro area) minus compensation of employees (uses) minus other taxes less subsidies on production (uses) minus consumption of fixed capital (uses).

Net national income is defined for resident sectors only and is computed as net operating surplus and mixed income plus compensation of employees (resources) plus taxes less subsidies on production (resources) plus net property income (resources minus uses).

Net disposable income is also defined only for resident sectors and equals net national income plus net current taxes on income and

wealth (resources minus uses) plus net social contributions (resources minus uses) plus net social benefits other than social transfers in kind (resources minus uses) plus net other current transfers (resources minus uses).

Net saving is defined for resident sectors and is calculated as net disposable income plus the net adjustment for the change in the net equity of households in pension fund reserves (resources minus uses) minus final consumption expenditure (uses). For the rest of the world, the current external account is compiled as the trade balance plus all net income (resources minus uses).

Net lending/net borrowing is computed from the capital account as net saving plus net capital transfers (resources minus uses) minus gross capital formation (uses) minus acquisitions less disposals of non-produced non-financial assets (uses) plus consumption of fixed capital (resources). It can also be calculated in the financial account as total transactions in financial assets minus total transactions in liabilities (also known as changes in net financial worth (wealth) due to transactions). For the household and non-financial corporation sectors, there is a statistical discrepancy between the balancing items computed from the capital account and the financial account.

Changes in net financial worth (wealth) due to transactions are computed as total transactions in financial assets minus total transactions in liabilities, whereas other changes in net financial worth (wealth) are calculated as (total) other changes in financial assets minus (total) other changes in liabilities.

Net financial worth (wealth) is calculated as total financial assets minus total liabilities, whereas changes in net financial worth (wealth) are equal to the sum of changes in net financial worth (wealth) due to transactions (lending/net borrowing from the financial account) and other changes in net financial worth (wealth).

Changes in net worth (wealth) are calculated as changes in net worth (wealth) due to savings and capital transfers plus other changes in net financial worth (wealth) and other changes in non-financial assets.

The net worth (wealth) of households is calculated as the sum of the non-financial assets and net financial worth (wealth) of households.

## SECTIONS 4.3 AND 4.4

### CALCULATION OF GROWTH RATES FOR DEBT SECURITIES AND QUOTED SHARES

Growth rates are calculated on the basis of financial transactions and therefore exclude reclassifications, revaluations, exchange rate variations and any other changes which do not arise from transactions. They can be calculated from transactions or from the index of notional stocks. If  $N_t^M$  represents the transactions (net issues) in month  $t$  and  $L_t$  the level outstanding at the end of month  $t$ , the index  $I_t$  of notional stocks in month  $t$  is defined as:

$$k) \quad I_t = I_{t-1} \times \left( 1 + \frac{N_t^M}{L_{t-1}} \right)$$

As a base, the index is set equal to 100 in December 2008. The growth rate  $a_t$  for month  $t$ , corresponding to the change in the 12 months ending in month  $t$ , can be calculated using either of the following two formulae:

$$l) \quad a_t = \left[ \prod_{i=0}^{11} \left( 1 + \frac{N_{t-i}^M}{L_{t-1-i}} \right) - 1 \right] \times 100$$

$$m) \quad a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

The method used to calculate the growth rates for securities other than shares is the same as that used for the monetary aggregates, the only difference being that an “N” is used instead of an “F”. This is to show that the method used to obtain “net issues” for securities issues statistics

differs from that used to calculate equivalent “transactions” for the monetary aggregates.

The average growth rate for the quarter ending in month  $t$  is calculated as:

$$n) \quad \left( \frac{0.5I_t + \sum_{i=1}^2 I_{t-i} + 0.5I_{t-3}}{0.5I_{t-12} + \sum_{i=1}^2 I_{t-i-12} + 0.5I_{t-15}} - 1 \right) \times 100$$

where  $I_t$  is the index of notional stocks as at month  $t$ . Likewise, for the year ending in month  $t$ , the average growth rate is calculated as:

$$o) \quad \left( \frac{0.5I_t + \sum_{i=1}^{11} I_{t-i} + 0.5I_{t-12}}{0.5I_{t-12} + \sum_{i=1}^{11} I_{t-i-12} + 0.5I_{t-24}} - 1 \right) \times 100$$

The calculation formula used for Section 4.3 is also used for Section 4.4 and is likewise based on that used for the monetary aggregates. Section 4.4 is based on market values, and the calculations are based on financial transactions, which exclude reclassifications, revaluations and any other changes that do not arise from transactions. Exchange rate variations are not included, as all quoted shares covered are denominated in euro.

### SEASONAL ADJUSTMENT OF SECURITIES ISSUES STATISTICS<sup>4</sup>

The approach used is based on multiplicative decomposition using X-12-ARIMA. The seasonal adjustment of total securities issues is carried out indirectly by means of a linear combination of sector and maturity component breakdowns.

The seasonal adjustment procedures are applied to the index of notional stocks. The resulting estimates of seasonal factors are then applied to the outstanding amounts, from which seasonally

<sup>4</sup> For details, see “Seasonal adjustment of monetary aggregates and HICP for the euro area”, ECB (August 2000) and the “Monetary and financial statistics” sub-section of the “Statistics” section of the ECB’s website ([www.ecb.europa.eu](http://www.ecb.europa.eu)).

adjusted net issues are derived. Seasonal factors are revised at annual intervals or as required.

As in formulae l) and m), the growth rate  $a_t$  for month  $t$ , corresponding to the change in the six months ending in month  $t$ , can be calculated using either of the following two formulae:

$$p) \quad a_t = \left[ \prod_{i=0}^5 \left( 1 + \frac{N_{t-i}^M}{L_{t-1-i}} \right) - 1 \right] \times 100$$

$$q) \quad a_t = \left( \frac{I_t}{I_{t-6}} - 1 \right) \times 100$$

#### TABLE 1 IN SECTION 5.1

##### SEASONAL ADJUSTMENT OF THE HICP<sup>4</sup>

The approach used is based on multiplicative decomposition using X-12-ARIMA (see footnote 2 on page S78). The seasonal adjustment of the overall HICP for the euro area is carried out indirectly by aggregating the seasonally adjusted euro area series for processed food, unprocessed food, industrial goods excluding energy, and services. Energy is added without adjustment, since there is no statistical evidence of seasonality. Seasonal factors are revised at annual intervals or as required.

#### TABLE 2 IN SECTION 7.1

##### SEASONAL ADJUSTMENT OF THE BALANCE OF PAYMENTS CURRENT ACCOUNT

The approach used is based on multiplicative decomposition, using X-12-ARIMA or TRAMO-SEATS depending on the item. The raw data for goods, services, income and current transfers are pre-adjusted in order to take into account significant working day effects. The working day adjustment for goods and services takes account of national public holidays. The seasonal adjustment of these items is carried

out using these pre-adjusted series. The seasonal adjustment of the total current account is carried out by aggregating the seasonally adjusted euro area series for goods, services, income and current transfers. Seasonal (and trading day) factors are revised at biannual intervals or as required.

#### SECTION 7.3

##### CALCULATION OF GROWTH RATES FOR THE QUARTERLY AND ANNUAL SERIES

The annual growth rate for quarter  $t$  is calculated on the basis of quarterly transactions ( $F_t$ ) and positions ( $L_t$ ) as follows:

$$r) \quad a_t = \left( \prod_{i=t-3}^t \left( 1 + \frac{F_i}{L_{i-1}} \right) - 1 \right) \times 100$$

The growth rate for the annual series is equal to the growth rate in the last quarter of the year.





## GENERAL NOTES

The “Euro area statistics” section of the Monthly Bulletin focuses on statistics for the euro area as a whole. More detailed and longer runs of data, with further explanatory notes, are available in the “Statistics” section of the ECB’s website ([www.ecb.europa.eu](http://www.ecb.europa.eu)). This allows user-friendly access to data via the ECB’s Statistical Data Warehouse (<http://sdw.ecb.europa.eu>), which includes search and download facilities. Further services available in the “Data services” sub-section include subscriptions to different datasets and a repository of compressed Comma Separated Value (CSV) files. For further information, please contact us at: [statistics@ecb.europa.eu](mailto:statistics@ecb.europa.eu).

In general, the cut-off date for the statistics included in the Monthly Bulletin is the day preceding the Governing Council of the ECB’s first meeting of the month. For this issue, the cut-off date was 5 October 2011.

Unless otherwise indicated, all data series including observations for 2011 relate to the “Euro 17” (i.e. the euro area including Estonia) for the whole time series. For interest rates, monetary statistics, the HICP and reserve assets (and, for consistency reasons, the components and counterparts of M3 and the components of the HICP), euro area statistical series take into account the changing composition of the euro area.

The composition of the euro area has changed a number of times over the years. When the euro was introduced in 1999, the euro area comprised the following 11 countries (the Euro 11): Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland. Greece then joined in 2001, forming the Euro 12. Slovenia joined in 2007, forming the Euro 13; Cyprus and Malta joined in 2008, forming the Euro 15; and Slovakia joined in 2009, forming the Euro 16. Finally, Estonia joined in 2011, bringing the number of euro area countries to 17.

### EURO AREA SERIES WITH A FIXED COMPOSITION

Aggregated statistical series for fixed compositions of the euro area relate to a given fixed composition for the whole time series, regardless of the composition at the time to which the statistics relate. For example, aggregated series are calculated for the Euro 17 (i.e. aggregating the data of all 17 countries currently in the euro area) for all years, despite the fact that the euro area has only had this composition since 1 January 2011. Unless otherwise indicated, the ECB’s Monthly Bulletin provides statistical series for the current composition.

### EURO AREA SERIES WITH A CHANGING COMPOSITION

Aggregated statistical series with a changing composition take into account the composition of the euro area at the time to which the statistics relate. For example, euro area statistical series with a changing composition aggregate the data of the Euro 11 for the period up to the end of 2000, the Euro 12 for the period from 2001 to the end of 2006, and so on. With this approach, each individual statistical series covers all of the various compositions of the euro area.

For the HICP, as well as monetary aggregates and their counterparts, annual rates of change are compiled from chain-linked indices, with joining countries’ series linked to the euro area series in the December index. Thus, if a country joins the euro area in January of a given year, annual rates of change relate to the previous composition of the euro area up to and including December of the previous year, and the enlarged composition of the euro area thereafter. Percentage changes are calculated on the basis of a chain-linked index, taking account of the changing composition of the euro area. Absolute changes for monetary aggregates

and their counterparts (transactions) refer to the composition of the euro area at the time to which the statistics relate.

Given that the composition of the European currency unit (ECU) does not coincide with the former currencies of the countries that have adopted the single currency, pre-1999 amounts originally expressed in the participating currencies and converted into ECU at current ECU exchange rates are affected by movements in the currencies of EU Member States that have not adopted the euro. To avoid this effect on the monetary statistics, pre-1999 data<sup>1</sup> are expressed in units converted from national currencies at the irrevocable euro exchange rates established on 31 December 1998. Unless otherwise indicated, price and cost statistics before 1999 are based on data expressed in national currency terms.

Methods of aggregation and/or consolidation (including cross-country consolidation) have been used where appropriate.

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

The group “Other EU Member States” comprises Bulgaria, the Czech Republic, Denmark, Latvia, Lithuania, Hungary, Poland, Romania, Sweden and the United Kingdom.

In most cases, the terminology used within the tables follows international standards, such as those contained in the European System of Accounts 1995 and the IMF Balance of Payments Manual. Transactions refer to voluntary exchanges (measured directly or derived), while flows also encompass changes in outstanding amounts owing to price and exchange rate changes, write-offs and other changes.

In the tables, the wording “up to (x) years” means “up to and including (x) years”.

## OVERVIEW

Developments in key indicators for the euro area are summarised in an overview table.

## MONETARY POLICY STATISTICS

Section 1.4 shows statistics on minimum reserve and liquidity factors. Maintenance periods for minimum reserve requirements start every month on the settlement day of the main refinancing operation (MRO) following the Governing Council meeting for which the monthly assessment of the monetary policy stance is scheduled. They end on the day preceding the corresponding settlement day in the following month. Annual/quarterly observations refer to averages for the last reserve maintenance period of the year/quarter.

Table 1 in Section 1.4 shows the components of the reserve base of credit institutions subject to reserve requirements. 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. When a credit institution cannot provide evidence of the amount of its issues of debt securities with a maturity of up to two years which are held by the institutions mentioned above, it may deduct a certain percentage of these liabilities from its reserve base. The percentage used to calculate the reserve base was 10% until November 1999 and has been 30% since that date.

Table 2 in Section 1.4 contains average data for completed maintenance periods. First, the reserve requirement of each individual credit institution is calculated by applying the

<sup>1</sup> Data on monetary statistics in Sections 2.1 to 2.8 are available for periods prior to January 1999 on the ECB’s website (<http://www.ecb.europa.eu/stats/services/downloads/html/index.en.html>) and in the SDW (<http://sdw.ecb.europa.eu/browse.do?node=2018811>).



reserve ratios for the corresponding categories of liability to the eligible liabilities, using the balance sheet data from the end of each calendar month. Subsequently, each credit institution deducts from this figure a lump-sum allowance of €100,000. The resulting required reserves are then aggregated at the euro area level (column 1). Current account holdings (column 2) are the aggregate average daily current account holdings of credit institutions, including those that serve to fulfil reserve requirements. Excess reserves (column 3) are the average current account holdings over the maintenance period in excess of the required reserves. Deficiencies (column 4) are defined as the average shortfalls of current account holdings from required reserves over the maintenance period, computed on the basis of those credit institutions that have not fulfilled their reserve requirements. The interest rate on minimum reserves (column 5) is equal to the average, over the maintenance period, of the ECB's rate (weighted according to the number of calendar days) on the Eurosystem's MROs (see Section 1.3).

Table 3 in Section 1.4 shows the banking system's liquidity position, which is defined as euro area credit institutions' current account holdings with the Eurosystem in euro. All amounts are derived from the consolidated financial statement of the Eurosystem. Other liquidity-absorbing operations (column 7) exclude the issuance of debt certificates initiated by NCBs in Stage Two of EMU. Net other factors (column 10) represent the netted remaining items in the consolidated financial statement of the Eurosystem. Credit institutions' current accounts (column 11) are equal to the difference between the sum of liquidity-providing factors (columns 1 to 5) and the sum of liquidity-absorbing factors (columns 6 to 10). Base money (column 12) is calculated as the sum of the deposit facility (column 6), banknotes in circulation (column 8) and credit institutions' current account holdings (column 11).

## MONEY, BANKING AND OTHER FINANCIAL CORPORATIONS

Chapter 2 shows balance sheet statistics for MFIs and other financial corporations. Other financial corporations comprise investment funds (other than money market funds, which are part of the MFI sector), financial vehicle corporations, insurance corporations and pension funds.

Section 2.1 shows the aggregated balance sheet of the MFI sector, i.e. the sum of the harmonised balance sheets of all MFIs resident in the euro area. MFIs comprise central banks, credit institutions as defined under EU law, money market funds and other institutions whose business it is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or make investments in securities. A complete list of MFIs is published on the ECB's website.

Section 2.2 shows the consolidated balance sheet of the MFI sector, which is obtained by netting the aggregated balance sheet positions of MFIs in the euro area. Owing to a small amount of heterogeneity in recording practices, the sum of the inter-MFI positions is not necessarily zero; the balance is shown in column 10 of the liabilities side of Section 2.2. Section 2.3 sets out the euro area monetary aggregates and counterparts. These are derived from the consolidated MFI balance sheet and include positions of non-MFIs resident in the euro area held with MFIs resident in the euro area; they also take account of some monetary assets/liabilities of central government. Statistics on monetary aggregates and counterparts are adjusted for seasonal and trading day effects. The external liabilities item in Sections 2.1 and 2.2 shows the holdings by non-euro area residents of: (i) shares/units issued by money market funds located in the euro area; and (ii) debt securities issued with a maturity of up



to two years by MFIs located in the euro area. In Section 2.3, however, these holdings are excluded from the monetary aggregates and contribute to the item “net external assets”.

Section 2.4 provides analysis, broken down by sector, type and original maturity, of loans granted by MFIs other than the Eurosystem (i.e. the banking system) resident in the euro area. Section 2.5 provides analysis, broken down by sector and instrument, of deposits held with the euro area banking system. Section 2.6 shows the securities held by the euro area banking system, broken down by type of issuer. Section 2.7 shows a quarterly currency breakdown for selected MFI balance sheet items.

Sections 2.2 to 2.6 also provide growth rates based on those transactions in the form of annual percentage changes.

Since 1 January 1999 statistical information has been collected and compiled on the basis of various ECB regulations concerning the balance sheet of the monetary financial institution sector. Since July 2010 this has been carried out on the basis of Regulation ECB/2008/32<sup>2</sup>. Detailed sector definitions are set out in the third edition of the “Monetary financial institutions and markets statistics sector manual – Guidance for the statistical classification of customers” (ECB, March 2007).

Section 2.8 shows outstanding amounts and transactions on the balance sheet of euro area investment funds (other than money market funds, which are included in the MFI balance sheet statistics). An investment fund is a collective investment undertaking that invests capital raised from the public in financial and/or non-financial assets. A complete list of euro area investment funds is published on the ECB’s website. The balance sheet is aggregated, so investment funds’ assets include their holdings of shares/units issued by other investment funds. Shares/units issued by investment funds are also broken down by investment policy (i.e. into bond funds, equity funds, mixed funds, real estate funds, hedge funds and other

funds) and by type (i.e. into open-end funds and closed-end funds). Section 2.9 provides further details on the main types of asset held by euro area investment funds. This section contains a geographical breakdown of the issuers of securities held by investment funds, as well as breaking issuers down by economic sector where they are resident in the euro area.

Since December 2008 harmonised statistical information has been collected and compiled on the basis of Regulation ECB/2007/8<sup>3</sup> concerning statistics on the assets and liabilities of investment funds. Further information on these investment fund statistics can be found in the “Manual on investment fund statistics” (ECB, May 2009).

Section 2.10 shows the aggregated balance sheet of financial vehicle corporations (FVCs) resident in the euro area. FVCs are entities which are set up in order to carry out securitisation transactions. Securitisation generally involves the transfer of an asset or pool of assets to an FVC, with such assets reported on the FVC’s balance sheet as securitised loans, securities other than shares, or other securitised assets. Alternatively, the credit risk relating to an asset or pool of assets may be transferred to an FVC through credit default swaps, guarantees or other such mechanisms. Collateral held by the FVC against these exposures is typically a deposit held with an MFI or invested in securities other than shares. FVCs typically securitise loans which have been originated by the MFI sector. FVCs must report such loans on their statistical balance sheet, regardless of whether the relevant accounting rules allow the MFI to derecognise the loans. Data on loans which are securitised by FVCs but remain on the balance sheet of the relevant MFI (and thus remain in the MFI statistics) are provided separately. These quarterly data are collected under Regulation ECB/2008/30<sup>4</sup> as of December 2009.

2 OJ L 15, 20.01.2009, p. 14.

3 OJ L 211, 11.08.2007, p. 8.

4 OJ L 15, 20.01.2009, p. 1.

Section 2.11 shows the aggregated balance sheet of insurance corporations and pension funds resident in the euro area. Insurance corporations cover both the insurance and reinsurance sectors, while pension funds include entities which have autonomy in terms of decision-making and keep a complete set of accounts (i.e. autonomous pension funds). This section also contains a geographical and sectoral breakdown of issuing counterparties for securities other than shares held by insurance corporations and pension funds.

## EURO AREA ACCOUNTS

Section 3.1 shows quarterly integrated euro area accounts data, which provide comprehensive information on the economic activities of households (including non-profit institutions serving households), non-financial corporations, financial corporations and general government, as well as on the interaction between these sectors and both the euro area and the rest of the world. Non-seasonally adjusted data at current prices are displayed for the last available quarter, following a simplified sequence of accounts in accordance with the methodological framework of the European System of Accounts 1995.

In short, the sequence of accounts (transactions) comprises: (1) the generation of income account, which shows how production activity translates into various categories of income; (2) the allocation of primary income account, which records receipts and expenses relating to various forms of property income (for the economy as a whole; the balancing item of the primary income account is national income); (3) the secondary distribution of income account, which shows how the national income of an institutional sector changes because of current transfers; (4) the use of income account, which shows how disposable income is spent on consumption or saved; (5) the capital account, which shows how savings and net capital transfers are spent in the acquisition of non-financial assets (the balancing item of the capital account is net lending/

net borrowing); and (6) the financial account, which records the net acquisitions of financial assets and the net incurrence of liabilities. As each non-financial transaction is mirrored by a financial transaction, the balancing item of the financial account conceptually also equals net lending/net borrowing as calculated from the capital account.

In addition, opening and closing financial balance sheets are presented, which provide a picture of the financial wealth of each individual sector at a given point in time. Finally, other changes in financial assets and liabilities (e.g. those resulting from the impact of changes in asset prices) are also shown.

The sectoral coverage of the financial account and the financial balance sheets is more detailed for the financial corporation sector, which is broken down into MFIs, other financial intermediaries (including financial auxiliaries), and insurance corporations and pension funds.

Section 3.2 shows four-quarter cumulated flows (transactions) for the “non-financial accounts” of the euro area (i.e. accounts (1) to (5) above), also following the simplified sequence of accounts.

Section 3.3 shows four-quarter cumulated flows (transactions and other changes) for households’ income, expenditure and accumulation accounts, as well as outstanding amounts in the financial and non-financial balance sheet accounts, presenting data in a more analytical manner. Sector-specific transactions and balancing items are arranged in a way that more clearly depicts the financing and investment decisions of households, while respecting the accounting identities presented in Sections 3.1 and 3.2.

Section 3.4 displays four-quarter cumulated flows (transactions) for non-financial corporations’ income and accumulation accounts, as well as outstanding amounts for the financial balance sheet accounts, presenting data in a more analytical manner.

Section 3.5 shows four-quarter cumulated financial flows (transactions and other changes) and outstanding amounts for the financial balance sheets of insurance corporations and pension funds.

## FINANCIAL MARKETS

The series on financial market statistics for the euro area cover those EU Member States that had adopted the euro at the time to which the statistics relate (i.e. a changing composition), with the exception of statistics on securities issues (Sections 4.1 to 4.4), which relate to the Euro 16 for the whole time series (i.e. a fixed composition).

Statistics on securities other than shares and statistics on quoted shares (Sections 4.1 to 4.4) are produced by the ECB using data from the ESCB and the BIS. Section 4.5 presents MFI interest rates on euro-denominated deposits from and loans to euro area residents. Statistics on money market interest rates, long-term government bond yields and stock market indices (Sections 4.6 to 4.8) are produced by the ECB using data from wire services.

Statistics on securities issues cover: (i) securities other than shares, excluding financial derivatives; and (ii) quoted shares. The former are presented in Sections 4.1, 4.2 and 4.3, while the latter are presented in Section 4.4. Debt securities are broken down into short-term and long-term securities. “Short-term” means securities with an original maturity of one year or less (in exceptional cases, two years or less). Securities with (i) a longer maturity, (ii) optional maturity dates, the latest of which is more than one year away, or (iii) indefinite maturity dates are classified as “long-term”. Long-term debt securities issued by euro area residents are broken down further into fixed and variable rate issues. Fixed rate issues consist of issues where the coupon rate does not change during the life of the issue. Variable rate issues comprise all issues where the coupon is periodically refixed with reference to an independent interest rate

or index. The euro-denominated securities indicated in Sections 4.1, 4.2 and 4.3 also include items expressed in national denominations of the euro.

Section 4.1 shows securities other than shares, broken down by original maturity, residency of the issuer and currency. It presents outstanding amounts, gross issues and net issues of securities other than shares, broken down into: (i) issues denominated in euro and issues in all currencies; (ii) issues by euro area residents and total issues; and (iii) total and long-term maturities. Net issues differ from the changes in outstanding amounts owing to valuation changes, reclassifications and other adjustments. This section also presents seasonally adjusted statistics, including six-month annualised seasonally adjusted growth rates for total and long-term debt securities. Seasonally adjusted data are derived from the index of notional stocks, from which the seasonal effects have been removed. See the Technical Notes for details.

Section 4.2 contains a sectoral breakdown of outstanding amounts, gross issues and net issues for issuers resident in the euro area in line with the ESA 95. The ECB is included in the Eurosystem.

The total outstanding amounts for total and long-term debt securities in column 1 of Table 1 in Section 4.2 correspond to the data on outstanding amounts for total and long-term debt securities issued by euro area residents in column 7 of Section 4.1. The outstanding amounts for total and long-term debt securities issued by MFIs in column 2 of Table 1 in Section 4.2 are broadly comparable with the data on debt securities issued on the liabilities side of the aggregated MFI balance sheet in column 8 of Table 2 in Section 2.1. The total net issues for total debt securities in column 1 of Table 2 in Section 4.2 correspond to the data on total net issues by euro area residents in column 9 of Section 4.1. The residual difference between long-term debt securities and total fixed and variable rate long-term debt securities in Table 1 of Section 4.2 consists of zero coupon bonds and revaluation effects.

Section 4.3 shows seasonally adjusted and non-seasonally adjusted growth rates for debt securities issued by euro area residents (broken down by maturity, type of instrument, sector of the issuer and currency), which are based on financial transactions that occur when an institutional unit incurs or redeems liabilities. The growth rates therefore exclude reclassifications, revaluations, exchange rate variations and any other changes that do not arise from transactions. The seasonally adjusted growth rates have been annualised for presentational purposes. See the Technical Notes for details.

Columns 1, 4, 6 and 8 in Table 1 of Section 4.4 show the outstanding amounts of quoted shares issued by euro area residents broken down by issuing sector. The monthly data for quoted shares issued by non-financial corporations correspond to the quarterly series shown in Section 3.4 (financial balance sheet; quoted shares).

Columns 3, 5, 7 and 9 in Table 1 of Section 4.4 show annual growth rates for quoted shares issued by euro area residents (broken down by the sector of the issuer), which are based on financial transactions that occur when an issuer issues or redeems shares for cash, excluding investments in the issuer's own shares. The calculation of annual growth rates excludes reclassifications, revaluations and any other changes that do not arise from transactions.

Section 4.5 presents statistics on all the interest rates that MFIs resident in the euro area apply to euro-denominated deposits and loans vis-à-vis households and non-financial corporations resident in the euro area. Euro area MFI interest rates are calculated as a weighted average (by corresponding business volume) of the euro area countries' interest rates for each category.

MFI interest rate statistics are broken down by type of business coverage, sector, instrument category and maturity, period of notice or initial period of interest rate fixation. These MFI

interest rate statistics replaced the ten transitional statistical series on euro area retail interest rates that had been published in the Monthly Bulletin as of January 1999.

Section 4.6 presents money market interest rates for the euro area, the United States and Japan. For the euro area, a broad spectrum of money market interest rates is covered, ranging from interest rates on overnight deposits to those on twelve-month deposits. Before January 1999, synthetic euro area interest rates were calculated on the basis of national rates weighted by GDP. With the exception of the overnight rate prior to January 1999, monthly, quarterly and yearly values are period averages. Overnight deposits are represented by end-of-period interbank deposit bid rates up to and including December 1998 and period averages for the euro overnight index average (EONIA) thereafter. As of January 1999, euro area interest rates on one, three, six and twelve-month deposits are euro interbank offered rates (EURIBOR); prior to that date, they are London interbank offered rates (LIBOR) where available. For the United States and Japan, interest rates on three-month deposits are represented by LIBOR.

Section 4.7 shows end-of-period rates estimated from nominal spot yield curves based on AAA-rated euro-denominated bonds issued by euro area central governments. The yield curves are estimated using the Svensson model<sup>5</sup>. Spreads between the ten-year rates and the three-month and two-year rates are also released. Additional yield curves (daily releases, including charts and tables) and the corresponding methodological information are available at: <http://www.ecb.europa.eu/stats/money/yc/html/index.en.html>. Daily data can also be downloaded.

Section 4.8 shows stock market indices for the euro area, the United States and Japan.

<sup>5</sup> Svensson, L.E., "Estimating and Interpreting Forward Interest Rates: Sweden 1992-1994", *CEPR Discussion Papers*, No 1051. Centre for Economic Policy Research, London, 1994.

## PRICES, OUTPUT, DEMAND AND LABOUR MARKETS

Most of the data described in this section are produced by the European Commission (mainly Eurostat) and national statistical authorities. Euro area results are obtained by aggregating data for individual countries. As far as possible, the data are harmonised and comparable. Statistics on labour costs indices, GDP and expenditure components, value added by economic activity, industrial production, retail sales passenger car registrations and employment in terms of hours worked are working day-adjusted.

The Harmonised Index of Consumer Prices (HICP) for the euro area (Table 1 in Section 5.1) is available from 1995 onwards. It is based on national HICPs, which follow the same methodology in all euro area countries. The breakdown into goods and services components is derived from the classification of individual consumption by purpose (Coicop/HICP). The HICP covers monetary expenditure by households on final consumption in the economic territory of the euro area. The table includes seasonally adjusted HICP data and experimental HICP-based estimates of administered prices, which are compiled by the ECB.

Industrial producer prices (Table 2 in Section 5.1), industrial production, industrial new orders, industrial turnover and retail sales (Section 5.2) are covered by Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term statistics<sup>6</sup>. Since January 2009 the revised classification of economic activities (NACE Revision 2), as covered by Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90, as well as certain EC Regulations on specific statistical domains<sup>7</sup>, has been applied in the production of short-term statistics. The breakdown by end use of product for industrial producer prices and industrial production is the harmonised sub-division of industry excluding construction (NACE

Revision 2, sections B to E) into Main Industrial Groupings (MIGs) as defined by Commission Regulation (EC) No 656/2007 of 14 June 2007<sup>8</sup>. Industrial producer prices reflect the ex-factory gate prices of producers. They include indirect taxes except VAT and other deductible taxes. Industrial production reflects the value added of the industries concerned.

The two non-energy commodity price indices shown in Table 3 in Section 5.1 are compiled with the same commodity coverage, but using two different weighting schemes: one based on the respective commodity imports of the euro area (columns 2-4), and the other (columns 5-7) based on estimated euro area domestic demand, or “use”, taking into account information on imports, exports and the domestic production of each commodity (ignoring, for the sake of simplicity, inventories, which are assumed to be relatively stable over the observed period). The import-weighted commodity price index is appropriate for analysing external developments, while the use-weighted index is suitable for the specific purpose of analysing international commodity price pressures on euro area inflation. The use-weighted commodity price indices are experimental data. For more details as regards the compilation of the ECB commodity price indices, see Box 1 in the December 2008 issue of the Monthly Bulletin.

The labour cost indices (Table 5 in Section 5.1) measure the changes in labour costs per hour worked in industry (including construction) and market services. Their methodology is laid down in Regulation (EC) No 450/2003 of the European Parliament and of the Council of 27 February 2003 concerning the labour cost index<sup>9</sup> and in the implementing Commission Regulation (EC) No 1216/2003 of 7 July 2003<sup>10</sup>. A breakdown of the labour cost indices for the euro area is available by labour cost component (wages and salaries, and employers’ social

6 OJ L 162, 5.6.1998, p. 1.

7 OJ L 393, 30.12.2006, p. 1.

8 OJ L 155, 15.6.2007, p. 3.

9 OJ L 69, 13.3.2003, p. 1.

10 OJ L 169, 8.7.2003, p. 37.



contributions plus employment-related taxes paid by the employer less subsidies received by the employer) and by economic activity. The ECB calculates the indicator of negotiated wages (memo item in Table 3 of Section 5.1) on the basis of non-harmonised, national-definition data.

Unit labour cost components (Table 4 in Section 5.1), GDP and its components (Tables 1 and 2 in Section 5.2), GDP deflators (Table 3 in Section 5.1) and employment statistics (Tables 1, 2 and 3 in Section 5.3) are derived from the ESA 95 quarterly national accounts.

Industrial new orders (Table 4 in Section 5.2) measure the orders received during the reference period and cover industries working mainly on the basis of orders – in particular the textile, pulp and paper, chemical, metal, capital goods and durable consumer goods industries. The data are calculated on the basis of current prices.

Indices for turnover in industry and for the retail trade (Table 4 in Section 5.2) measure the turnover, including all duties and taxes (with the exception of VAT), invoiced during the reference period. Retail trade turnover covers all retail trade (excluding sales of motor vehicles and motorcycles), except automotive fuel. New passenger car registrations cover registrations of both private and commercial passenger cars.

Qualitative business and consumer survey data (Table 5 in Section 5.2) draw on the European Commission Business and Consumer Surveys.

Unemployment rates (Table 4 in Section 5.3) conform to International Labour Organization guidelines. They refer to persons actively seeking work as a share of the labour force, using harmonised criteria and definitions. The labour force estimates underlying the unemployment rate are different from the sum of the employment and unemployment levels published in Section 5.3.

## GOVERNMENT FINANCE

Sections 6.1 to 6.5 show the general government fiscal position in the euro area. The data are mainly consolidated and are based on the ESA 95 methodology. The annual euro area aggregates in Sections 6.1 to 6.3 are compiled by the ECB on the basis of harmonised data provided by the NCBs, which are regularly updated. The deficit and debt data for the euro area countries may therefore differ from those used by the European Commission within the excessive deficit procedure. The quarterly euro area aggregates in Sections 6.4 and 6.5 are compiled by the ECB on the basis of Eurostat and national data.

Section 6.1 presents annual figures on general government revenue and expenditure on the basis of definitions laid down in Commission Regulation (EC) No 1500/2000 of 10 July 2000<sup>11</sup> amending the ESA 95. Section 6.2 shows details of general government gross consolidated debt at nominal value in line with the Treaty provisions on the excessive deficit procedure. Sections 6.1 and 6.2 include summary data for the individual euro area countries owing to their importance within the framework of the Stability and Growth Pact. The deficits/surpluses presented for the individual euro area countries correspond to excessive deficit procedure B.9, as defined by Council Regulation (EC) No 479/2009 as regards references to the ESA 95. Section 6.3 presents changes in general government debt. The difference between the change in the government debt and the government deficit – the deficit-debt adjustment – is mainly explained by government transactions in financial assets and by foreign exchange valuation effects. Section 6.4 presents quarterly figures on general government revenue and expenditure on the basis of definitions laid down in Regulation (EC) No 1221/2002 of the European Parliament and of the Council of

<sup>11</sup> OJ L 172, 12.7.2000, p. 3.

10 June 2002 on quarterly non-financial accounts for general government<sup>12</sup>. Section 6.5 presents quarterly figures on gross consolidated government debt, the deficit-debt adjustment and the government borrowing requirement. These figures are compiled using data provided by the Member States under Regulation (EC) No 501/2004 and Regulation (EC) No 222/2004 and data provided by the NCBs.

## EXTERNAL TRANSACTIONS AND POSITIONS

The concepts and definitions used in balance of payments and international investment position (i.i.p.) statistics (Sections 7.1 to 7.4) are generally in line with the IMF Balance of Payments Manual (fifth edition, October 1993), the ECB Guideline of 16 July 2004 on the statistical reporting requirements of the ECB (ECB/2004/15)<sup>13</sup> and the amending ECB Guideline of 31 May 2007 (ECB/2007/3)<sup>14</sup>. Additional information regarding the methodologies and sources used in the euro area b.o.p. and i.i.p. statistics can be found in the ECB publication entitled “European Union balance of payments/international investment position statistical methods” (May 2007) and in the reports of the Task Force on Portfolio Investment Collection Systems (June 2002), the Task Force on Portfolio Investment Income (August 2003) and the Task Force on Foreign Direct Investment (March 2004), all of which can be downloaded from the ECB’s website. In addition, a report by the ECB/European Commission (Eurostat) Task Force on Quality looking at balance of payments and international investment position statistics (June 2004) is available on the website of the Committee on Monetary, Financial and Balance of Payments Statistics ([www.cmbf.org](http://www.cmbf.org)). The annual quality report on the euro area b.o.p./i.i.p., which is based on the Task Force’s recommendations and follows the basic principles of the ECB Statistics Quality Framework published in April 2008, is available on the ECB’s website.

The tables in Sections 7.1 and 7.4 follow the sign convention in the IMF Balance of

Payments Manual – i.e. surpluses in the current account and the capital account have a plus sign, while in the financial account a plus sign denotes an increase in liabilities or a decrease in assets. In the tables in Section 7.2, both credit and debit transactions are presented with a plus sign. Furthermore, as of the February 2008 issue of the Monthly Bulletin, the tables in Section 7.3 have been restructured in order to allow the data on the balance of payments, the international investment position and related growth rates to be presented together; in the new tables, transactions in assets and liabilities that correspond to increases in positions are shown with a plus sign.

The euro area b.o.p. is compiled by the ECB. Recent monthly figures should be regarded as provisional. Data are revised when figures for the following month and/or the detailed quarterly b.o.p. are published. Earlier data are revised periodically or as a result of methodological changes in the compilation of the source data.

Table 1 in Section 7.2 also contains seasonally adjusted data for the current account. Where appropriate, the adjustment also covers working day, leap year and/or Easter-related effects. Table 3 in Section 7.2 and Table 9 in Section 7.3 present a breakdown of the euro area b.o.p. and i.i.p. vis-à-vis major partner countries, both individually and as a group, distinguishing between EU Member States outside the euro area and countries or areas outside the European Union. The breakdown also shows transactions and positions vis-à-vis EU institutions (which, with the exception of the ECB, are considered to be outside the euro area for statistical purposes, regardless of their physical location) and, for some purposes, offshore centres and international organisations. The breakdown does not cover transactions or positions in portfolio investment liabilities, financial derivatives or international reserves. In addition, separate data are not provided for investment income payable to Brazil, mainland China, India or Russia.

<sup>12</sup> OJ L 179, 9.7.2002, p. 1.

<sup>13</sup> OJ L 354, 30.11.2004, p. 34.

<sup>14</sup> OJ L 159, 20.6.2007, p. 48.



The geographical breakdown is described in the article entitled “Euro area balance of payments and international investment position vis-à-vis main counterparts” in the February 2005 issue of the Monthly Bulletin.

The data on the euro area b.o.p. financial account and i.i.p. in Section 7.3 are based on transactions and positions vis-à-vis non-residents of the euro area, regarding the euro area as a single economic entity (see also Box 9 in the December 2002 issue of the Monthly Bulletin, Box 5 in the January 2007 issue of the Monthly Bulletin and Box 6 in the January 2008 issue of the Monthly Bulletin). The i.i.p. is valued at current market prices, with the exception of direct investment, where book values are used for unquoted shares, and other investments (e.g. loans and deposits). The quarterly i.i.p. is compiled on the basis of the same methodological framework as the annual i.i.p. As some data sources are not available on a quarterly basis (or are available with a delay), the quarterly i.i.p. is partly estimated on the basis of financial transactions, asset prices and foreign exchange developments.

Table 1 in Section 7.3 summarises the i.i.p. and financial transactions in the euro area b.o.p. The breakdown of the change in the annual i.i.p. is obtained by applying a statistical model to i.i.p. changes other than transactions, using information from the geographical breakdown and currency composition of assets and liabilities, as well as price indices for different financial assets. In this table, columns 5 and 6 refer to direct investment by resident units abroad and direct investment by non-resident units in the euro area.

In Table 5 in Section 7.3, the breakdown into “loans” and “currency and deposits” is based on the sector of the non-resident counterpart – i.e. assets vis-à-vis non-resident banks are classified as deposits, whereas assets vis-à-vis other non-resident sectors are classified as loans. This breakdown follows the distinction made in other statistics, such as the MFI consolidated

balance sheet, and conforms to the IMF Balance of Payments Manual.

The outstanding amounts for the Eurosystem’s international reserves and related assets and liabilities are shown in Table 7 of Section 7.3. These figures are not fully comparable with those in the Eurosystem’s weekly financial statement owing to differences in coverage and valuation. The data in Table 7 are in line with the recommendations for the template on international reserves and foreign currency liquidity. By definition, the assets included in the Eurosystem’s international reserves take account of the changing composition of the euro area. Before countries join the euro area, the assets of their national central banks are included in portfolio investment (in the case of securities) or other investment (in the case of other assets). Changes in the gold holdings of the Eurosystem (column 3) are due to transactions in gold within the terms of the Central Bank Gold Agreement of 26 September 1999, which was updated on 27 September 2009. More information on the statistical treatment of the Eurosystem’s international reserves can be found in a publication entitled “Statistical treatment of the Eurosystem’s international reserves” (October 2000), which can be downloaded from the ECB’s website. The website also contains more comprehensive data in accordance with the template on international reserves and foreign currency liquidity.

The euro area’s gross external debt statistics in Table 8 of Section 7.3 represent outstanding actual (rather than contingent) liabilities vis-à-vis non-euro area residents that require the payment of principal and/or interest by the debtor at one or more points in the future. Table 8 shows a breakdown of gross external debt by instrument and institutional sector.

Section 7.4 contains a monetary presentation of the euro area balance of payments, showing the transactions by non-MFIs that mirror the net external transactions by MFIs. Included in the transactions by non-MFIs are b.o.p. transactions

for which a sectoral breakdown is not available. These concern the current and capital accounts (column 2) and financial derivatives (column 11). An up-to-date methodological note on the monetary presentation of the euro area balance of payments is available in the “Statistics” section of the ECB’s website. See also Box 1 in the June 2003 issue of the Monthly Bulletin.

Section 7.5 shows data on euro area external trade in goods. The source is Eurostat. Value data and volume indices are seasonally and working day-adjusted. The breakdown by product group in columns 4 to 6 and 9 to 11 of Table 1 in Section 7.5 is in line with the classification contained in the Broad Economic Categories and corresponds to the basic classes of goods in the System of National Accounts. Manufactured goods (columns 7 and 12) and oil (column 13) are in line with the SITC Rev. 4 definition. The geographical breakdown (Table 3 in Section 7.5) shows major trading partners both individually and in regional groups. China excludes Hong Kong. On account of differences in definitions, classification, coverage and time of recording, external trade data, in particular for imports, are not fully comparable with the goods item in the b.o.p. statistics (Sections 7.1 and 7.2). Part of the difference arises from the inclusion of insurance and freight services in the recording of imported goods in external trade data.

Industrial import prices and industrial producer export prices (or industrial output prices for the non-domestic market) shown in Table 2 in Section 7.5 were introduced by Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 amending Council Regulation (EC) No 1165/98, which is the principal legal basis for short-term statistics. The industrial import price index covers industrial products imported from outside the euro area under sections B to E of the Statistical Classification of Products by Activity in the European Economic Community (CPA) and all institutional import sectors except households, governments and non-profit institutions. It reflects the cost, insurance and freight price

excluding import duties and taxes, and refers to actual transactions in euro recorded at the point when ownership of the goods is transferred. The industrial producer export prices cover all industrial products exported directly by euro area producers to the extra-euro area market under sections B to E of NACE Revision 2. Exports from wholesalers and re-exports are not covered. The indices reflect the free on board price expressed in euro and calculated at the euro area frontier, including any indirect taxes except VAT and other deductible taxes. Industrial import prices and industrial producer export prices are available by Main Industrial Grouping as defined by Commission Regulation (EC) No 656/2007 of 14 June 2007. For more details, see Box 11 in the December 2008 issue of the Monthly Bulletin.

## EXCHANGE RATES

Section 8.1 shows nominal and real effective exchange rate indices for the euro, which are calculated by the ECB on the basis of weighted averages of the euro’s bilateral exchange rates against the currencies of the selected trading partners of the euro area. A positive change denotes an appreciation of the euro. Weights are based on trade in manufactured goods with those trading partners in the periods 1995-1997, 1998-2000, 2001-2003 and 2004-2006, and are calculated to account for third-market effects. The EER indices are obtained by chain-linking the indicators based on each of these four sets of trade weights at the end of each three-year period. The base period of the resulting EER index is the first quarter of 1999. The EER-20 group of trading partners is composed of the 10 non-euro area EU Member States plus Australia, Canada, China, Hong Kong, Japan, Norway, Singapore, South Korea, Switzerland and the United States. The EER-40 group comprises the EER-20 plus the following countries: Algeria, Argentina, Brazil, Chile, Croatia, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, the Philippines, Russia, South Africa, Taiwan, Thailand, Turkey and

Venezuela. Real EERs are calculated using consumer price indices, producer price indices, gross domestic product deflators and unit labour costs, both for the manufacturing sector and for the total economy.

For more detailed information on the calculation of the EERs, see the relevant methodological note and ECB Occasional Paper No 2 (“The effective exchange rates of the euro” by Luca Buldorini, Stelios Makrydakis and Christian Thimann, February 2002), which can be downloaded from the ECB’s website.

The bilateral rates shown in Section 8.2 are monthly averages of those published daily as reference rates for these currencies.

#### **DEVELOPMENTS OUTSIDE THE EURO AREA**

Statistics on other EU Member States (Section 9.1) follow the same principles as data relating to the euro area. As a result, data on current and capital accounts and gross external debt include special-purpose vehicles. The data for the United States and Japan contained in Section 9.2 are obtained from national sources.



## ANNEXES

# CHRONOLOGY OF MONETARY POLICY MEASURES OF THE EUROSYSTEM<sup>1</sup>



### 15 JANUARY 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 2.00%, starting from the operations to be settled on 21 January 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 3.00% and 1.00% respectively, with effect from 21 January 2009, in line with the decision of 18 December 2008.

### 5 FEBRUARY 2009

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 2.00%, 3.00% and 1.00% respectively.

### 5 MARCH 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 50 basis points to 1.50%, starting from the operations to be settled on 11 March 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 2.50% and 0.50% respectively, with effect from 11 March 2009.

Moreover, the Governing Council decides to continue the fixed rate tender procedure with full allotment for all main refinancing operations, special-term refinancing operations and supplementary and regular longer-term refinancing operations for as long as needed, and in any case beyond the end of 2009. In addition, the Governing Council decides to continue with the current frequency and maturity profile of supplementary longer-term refinancing operations and special-term refinancing operations for as long as needed, and in any case beyond the end of 2009.

### 2 APRIL 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 25 basis points to 1.25%, starting from the operations to be settled on 8 April 2009. In addition, it decides that the interest rates on the marginal lending and the deposit facility will be 2.25% and 0.25% respectively, with effect from 8 April 2009.

### 7 MAY 2009

The Governing Council of the ECB decides to decrease the interest rate on the main refinancing operations by 25 basis points to 1.00%, starting from the operation to be settled on 13 May 2009. In addition, it decides to decrease the interest rate on the marginal lending facility by 50 basis points to 1.75% with effect from 13 May 2009, and to leave the interest rate on the deposit facility unchanged at 0.25%. In addition, the Governing Council of the ECB decides to proceed with its enhanced credit support approach. In particular, it decides that the Eurosystem will conduct liquidity-providing longer-term refinancing operations with a maturity of one year as fixed rate tender procedures with full allotment. In addition, it decides in principle that the Eurosystem will purchase euro-denominated covered bonds issued in the euro area.

### 4 JUNE 2009

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. In addition, the Governing Council of the ECB decides upon the technical modalities related to the purchase of euro-denominated covered bonds issued in the euro area decided on 7 May 2009.

<sup>1</sup> The chronology of monetary policy measures taken by the Eurosystem between 1999 and 2008 can be found in the ECB's Annual Report for the respective years.

**2 JULY, 6 AUGUST, 3 SEPTEMBER, 8 OCTOBER  
AND 5 NOVEMBER 2009**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

**3 DECEMBER 2009**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 13 April 2010.

**14 JANUARY AND 4 FEBRUARY 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

**4 MARCH 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 12 October 2010, including a return to variable rate tender procedures in the regular three-month longer-term refinancing operations, starting with the operation to be allotted on 28 April 2010.

**8 APRIL AND 6 MAY 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

**10 MAY 2010**

The Governing Council of the ECB decides on several measures to address severe tensions in financial markets. In particular, it decides to conduct interventions in the euro area public and private debt securities markets (Securities Markets Programme) and to adopt a fixed rate tender procedure with full allotment in the regular three-month longer-term refinancing operations in May and June 2010.

**10 JUNE 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. In addition, it decides to adopt a fixed rate tender procedure with full allotment in the regular three-month longer-term refinancing operations to be allotted during the third quarter of 2010.

**8 JULY AND 5 AUGUST 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

**2 SEPTEMBER 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing

operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 11 January 2011, notably the adoption of a fixed rate tender procedure with full allotment in the three-month longer-term refinancing operations.

#### **7 OCTOBER AND 4 NOVEMBER 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

#### **2 DECEMBER 2010**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 12 April 2011, notably to continue its fixed rate tender procedures with full allotment.

#### **13 JANUARY AND 3 FEBRUARY 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively.

#### **3 MARCH 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing

operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.00%, 1.75% and 0.25% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 12 July 2011, notably to continue its fixed rate tender procedures with full allotment.

#### **7 APRIL 2011**

The Governing Council of the ECB decides to increase the interest rate on the main refinancing operations by 25 basis points to 1.25%, starting from the operation to be settled on 13 April 2011. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 2.00% and 0.50% respectively, both with effect from 13 April 2011.

#### **5 MAY 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.25%, 2.00% and 0.50% respectively.

#### **9 JUNE 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.25%, 2.00% and 0.50% respectively. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 11 October 2011, notably to continue its fixed rate tender procedures with full allotment.



#### **7 JULY 2011**

The Governing Council of the ECB decides to increase the interest rate on the main refinancing operations by 25 basis points to 1.50%, starting from the operation to be settled on 13 July 2011. In addition, it decides to increase the interest rates on both the marginal lending facility and the deposit facility by 25 basis points, to 2.25% and 0.75% respectively, both with effect from 13 July 2011.

#### **4 AUGUST 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.50%, 2.25% and 0.75% respectively. It also decides on several measures to address renewed tensions in some financial markets. In particular, it decides that the Eurosystem will conduct a liquidity-providing supplementary longer-term refinancing operation with a maturity of approximately six months as a fixed rate tender procedure with full allotment. It also decides on the details as regards the tender procedures and modalities to be applied in its refinancing operations up to 17 January 2012, notably to continue its fixed rate tender procedures with full allotment.

#### **8 SEPTEMBER 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 1.50%, 2.25% and 0.75% respectively.

#### **6 OCTOBER 2011**

The Governing Council of the ECB decides that the interest rate on the main refinancing operations and the interest rates on the marginal

lending facility and the deposit facility will remain unchanged at 1.50%, 2.25% and 0.75% respectively. It also decides on the details of its refinancing operations from October 2011 to 10 July 2012, notably to conduct two longer-term refinancing operations – one with a maturity of approximately 12 months in October 2011, and another with a maturity of approximately 13 months in December 2011 – and to continue to apply fixed rate tender procedures with full allotment in all of its refinancing operations. In addition, the Governing Council decides to launch a new covered bond purchase programme in November 2011.



## **PUBLICATIONS PRODUCED BY THE EUROPEAN CENTRAL BANK**

The ECB produces a number of publications which provide information about its core activities: monetary policy, statistics, payment and securities settlement systems, financial stability and supervision, international and European cooperation, and legal matters. These include the following:

### **STATUTORY PUBLICATIONS**

- Annual Report
- Convergence Report
- Monthly Bulletin

### **RESEARCH PAPERS**

- Legal Working Paper Series
- Occasional Paper Series
- Research Bulletin
- Working Paper Series

### **OTHER/TASK-RELATED PUBLICATIONS**

- Enhancing monetary analysis
- Financial integration in Europe
- Financial Stability Review
- Statistics Pocket Book
- The European Central Bank: history, role and functions
- The international role of the euro
- The implementation of monetary policy in the euro area (“General Documentation”)
- The monetary policy of the ECB
- The payment system

The ECB also publishes brochures and information materials on a variety of topics, such as the euro banknotes and coins, as well as seminar and conference proceedings.

For a complete list of documents (in PDF format) published by the ECB and the European Monetary Institute, the ECB’s forerunner from 1994 to 1998, please visit the ECB’s website at <http://www.ecb.europa.eu/pub/>. Language codes indicate the languages in which each publication is available.

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## GLOSSARY

This glossary contains selected items that are frequently used in the Monthly Bulletin. A more comprehensive and detailed glossary can be found on the ECB's website ([www.ecb.europa.eu/home/glossary/html/index.en.html](http://www.ecb.europa.eu/home/glossary/html/index.en.html)).

**Autonomous liquidity factors:** liquidity factors that do not normally stem from the use of monetary policy instruments. Such factors are, for example, banknotes in circulation, government deposits with the central bank and the net foreign assets of the central bank.

**Balance of payments (b.o.p.):** a statistical statement that summarises, for a specific period of time, the economic transactions of an economy with the rest of the world.

**Bank lending survey (BLS):** a quarterly survey on lending policies that has been conducted by the Eurosystem since January 2003. It addresses qualitative questions on developments in credit standards, terms and conditions of loans and loan demand for both enterprises and households to a predefined sample group of banks in the euro area.

**Borrowing requirement (general government):** net incurrence of debt by the general government.

**Break-even inflation rate:** the spread between the yield on a nominal bond and that on an inflation-linked bond of the same (or as similar as possible) maturity.

**Capital account:** a b.o.p. account that covers all capital transfers and acquisitions/disposals of non-produced, non-financial assets between residents and non-residents.

**Capital accounts:** part of the system of national (or euro area) accounts consisting of the change in net worth that is due to net saving, net capital transfers and net acquisitions of non-financial assets.

**Central parity (or central rate):** the exchange rate of each ERM II member currency vis-à-vis the euro, around which the ERM II fluctuation margins are defined.

**Compensation per employee or per hour worked:** the total remuneration, in cash or in kind, that is payable by employers to employees, i.e. gross wages and salaries, as well as bonuses, overtime payments and employers' social security contributions, divided by the total number of employees or by the total number of employees' hours worked.

**Consolidated balance sheet of the MFI sector:** a balance sheet obtained by netting out inter-MFI positions (e.g. inter-MFI loans and deposits) in the aggregated MFI balance sheet. It provides statistical information on the MFI sector's assets and liabilities vis-à-vis residents of the euro area not belonging to this sector (i.e. the general government and other euro area residents) and vis-à-vis non-euro area residents. It is the main statistical source for the calculation of monetary aggregates, and it provides the basis for the regular analysis of the counterparts of M3.

**Collateral:** assets pledged or transferred in some form as a guarantee for the repayment of loans, as well as assets sold under repurchase agreements. Collateral used in Eurosystem reverse transactions must fulfil certain eligibility criteria.

**Current account:** a b.o.p. account that covers all transactions in goods and services, income and current transfers between residents and non-residents.

**Debt (financial accounts):** loans taken out by households, as well as the loans, debt securities and pension fund reserves (resulting from employers' direct pension commitments on behalf of their employees) of non-financial corporations, valued at market prices at the end of the period.

**Debt (general government):** the gross debt (currency and deposits, loans and debt securities) at nominal value outstanding at the end of the year and consolidated between and within the sectors of general government.

**Debt security:** a promise on the part of the issuer (i.e. the borrower) to make one or more payment(s) to the holder (the lender) on a specified future date or dates. Such securities usually carry a specific rate of interest (the coupon) and/or are sold at a discount to the amount that will be repaid at maturity. Debt securities issued with an original maturity of more than one year are classified as long-term.

**Debt-to-GDP ratio (general government):** the ratio of general government debt to GDP at current market prices. It is the subject of one of the fiscal criteria laid down in Article 126(2) of the Treaty on the Functioning of the European Union to define the existence of an excessive deficit.

**Deficit (general government):** the general government's net borrowing, i.e. the difference between total government revenue and total government expenditure.

**Deficit-debt adjustment (general government):** the difference between the general government deficit and the change in general government debt.

**Deficit ratio (general government):** the ratio of the general government deficit to GDP at current market prices. It is the subject of one of the fiscal criteria laid down in Article 126(2) of the Treaty on the Functioning of the European Union to define the existence of an excessive deficit. It is also referred to as the budget deficit ratio or the fiscal deficit ratio.

**Deflation:** a generalised, persistent and self-reinforcing decline in a broad set of prices that results from a drop in aggregate demand and becomes entrenched in expectations.

**Deposit facility:** a standing facility of the Eurosystem enabling eligible counterparties to make, on their own initiative, overnight deposits with the NCB in their respective jurisdiction. Deposits are remunerated at a pre-specified rate that normally provides a floor for overnight market interest rates.

**Disinflation:** a process of decelerating inflation that may lead to negative inflation rates of a temporary nature.

**Direct investment:** cross-border investment for the purpose of obtaining a lasting interest in an enterprise resident in another economy (assumed, in practice, for ownership of at least 10% of the ordinary shares or voting power). Included are equity capital, reinvested earnings and other capital associated with inter-company operations. The direct investment account records net transactions/positions in assets abroad by euro area residents (as "direct investment abroad") and net transactions/positions in euro area assets by non-residents (as "direct investment in the euro area").

**Effective exchange rates (EERs) of the euro (nominal/real):** weighted averages of bilateral euro exchange rates against the currencies of the euro area's main trading partners. The EER

indices of the euro are calculated against different groups of trading partners: the EER-20 comprises the 10 non-euro area EU Member States and 10 trading partners outside the EU, and the EER-40 encompasses the EER-20 and 20 additional countries. The weights used reflect the share of each partner country in the euro area's trade in manufactured goods and account for competition in third markets. Real EERs are nominal EERs deflated by a weighted average of foreign, relative to domestic, prices or costs. They are thus measures of price and cost competitiveness.

**Enhanced credit support:** the non-standard measures taken by the ECB/Eurosystem during the financial crisis with a view to supporting financing conditions and credit flows above and beyond what could be achieved through reductions in key ECB interest rates alone.

**EONIA (euro overnight index average):** a measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

**Equities:** securities representing ownership of a stake in a corporation, e.g. shares traded on stock exchanges (quoted shares), unquoted shares and other forms of equity. Equities usually produce income in the form of dividends.

**ERM II (exchange rate mechanism II):** the exchange rate arrangement that provides the framework for exchange rate policy cooperation between the euro area countries and the EU Member States not participating in Stage Three of EMU.

**EURIBOR (euro interbank offered rate):** the rate at which what is known as a prime bank is willing to lend funds (denominated in euro) to another prime bank. The EURIBOR is computed daily, based on the rates of a sample of selected banks, for different maturities of up to 12 months.

**Euro area:** the area formed by those EU Member States in which the euro has been adopted as the single currency in accordance with the Treaty on the Functioning of the European Union.

**European Commission surveys:** harmonised surveys of business and/or consumer sentiment conducted on behalf of the European Commission in each of the EU Member States. Such questionnaire-based surveys are addressed to managers in the manufacturing, construction, retail and services industries, as well as to consumers. From each monthly survey, composite indicators are calculated that summarise the replies to a number of different questions in a single indicator (confidence indicators).

**Eurosystem:** the central banking system made up of the ECB and the NCBs of those EU Member States whose currency is the euro.

**Eurozone Purchasing Managers' Surveys:** surveys of business conditions in manufacturing and in services industries conducted for a number of countries in the euro area and used to compile indices. The Eurozone Manufacturing Purchasing Managers' Index (PMI) is a weighted indicator calculated from indices of output, new orders, employment, suppliers' delivery times and stocks of purchases. The services sector survey asks questions on business activity, expectations of future business activity, the amount of business outstanding, incoming new business, employment, input prices and prices charged. The Eurozone Composite Index is calculated by combining the results from the manufacturing and services sector surveys.

**External trade in goods:** exports and imports of goods with countries outside the euro area, measured in terms of value and as indices of volume and unit value. External trade statistics are not comparable with the exports and imports recorded in the national accounts, as the latter include both intra-euro area and extra-euro area transactions, and also combine goods and services. Nor are they fully comparable with the goods item in b.o.p. statistics. Besides methodological adjustments, the main difference is that imports in external trade statistics are recorded including insurance and freight services, whereas they are recorded free on board in the goods item in the b.o.p. statistics.

**Financial account:** a b.o.p. account that covers transactions between residents and non-residents in direct investment, portfolio investment, other investment, financial derivatives and reserve assets.

**Financial accounts:** part of the system of national (or euro area) accounts showing the financial positions (stocks or balance sheets), financial transactions and other changes of the different institutional sectors of an economy by type of financial asset.

**Financial vehicle corporation (FVC):** an entity whose principal activity is to carry out securitisation transactions. An FVC typically issues marketable securities that are offered for sale to the general public, or sold in the form of private placements. In some cases, an FVC simply holds the securitised assets and issues the securities through another entity, often an FVC itself.

**Fixed rate tender:** a tender procedure in which the interest rate is specified in advance by the central bank and in which participating counterparties bid the amount of money they wish to transact at the fixed interest rate.

**Fixed rate full-allotment tender procedure:** a tender procedure in which the interest rate is pre-specified by the central bank (fixed rate) and in which counterparties bid the amount of money they want to transact at that rate, knowing in advance that all their bids will be satisfied (full allotment).

**General government:** a sector defined in the ESA 95 as comprising resident entities that are engaged primarily in the production of non-market goods and services intended for individual and collective consumption and/or in the redistribution of national income and wealth. Included are central, regional and local government authorities as well as social security funds. Excluded are government-owned entities that conduct commercial operations, such as public enterprises.

**Gross domestic product (GDP):** the value of an economy's total output of goods and services less intermediate consumption, plus net taxes on products and imports. GDP can be broken down by output, expenditure or income components. The main expenditure aggregates that make up GDP are household final consumption, government final consumption, gross fixed capital formation, changes in inventories, and imports and exports of goods and services (including intra-euro area trade).

**Gross external debt:** the outstanding amount of an economy's actual (i.e. non-contingent) current liabilities that require payment of principal and/or interest to non-residents at some point in the future.

**Harmonised Index of Consumer Prices (HICP):** a measure of the development of consumer prices that is compiled by Eurostat and harmonised for all EU Member States.



**Hourly labour cost index:** a measure of labour costs, including gross wages and salaries (in cash and in kind, including bonuses) and other labour costs (employers' social contributions plus employment-related taxes paid by the employer minus subsidies received by the employer), per hour actually worked (including overtime).

**Implied volatility:** the expected volatility (i.e. standard deviation) in the rates of change of the price of an asset (e.g. a share or a bond). It can be derived from the asset's price, maturity date and exercise price of its options, as well as from a riskless rate of return, using an option pricing model such as the Black-Scholes model.

**Index of negotiated wages:** a measure of the direct outcome of collective bargaining in terms of basic pay (i.e. excluding bonuses) at the euro area level. It refers to the implied average change in monthly wages and salaries.

**Industrial producer prices:** factory-gate prices (transportation costs are not included) of all products sold by industry, excluding construction, on the domestic markets of the euro area countries, excluding imports.

**Industrial production:** the gross value added created by industry at constant prices.

**Inflation:** an increase in the general price level, e.g. in the consumer price index.

**Inflation-indexed government bonds:** debt securities issued by the general government, the coupon payments and principal of which are linked to a specific consumer price index.

**Insurance corporations and pension funds:** a sector defined in the ESA 95 as comprising all financial corporations and quasi-corporations that are engaged primarily in financial intermediation as the consequence of the pooling of risks.

**International investment position (i.i.p.):** the value and composition of an economy's outstanding net financial claims on (or financial liabilities to) the rest of the world.

**International reserves:** external assets readily available to and controlled by monetary authorities for directly financing or regulating the magnitude of payment imbalances through intervention in exchange markets. The international reserves of the euro area comprise non-euro-denominated claims on non-euro area residents, gold, special drawing rights and the reserve positions in the IMF which are held by the Eurosystem.

**Investment funds (except money market funds):** financial institutions that pool capital raised from the public and invest it in financial and non-financial assets. See also MFIs.

**Job vacancies:** a collective term covering newly created jobs, unoccupied jobs or jobs about to become vacant in the near future, for which the employer has recently taken active steps to find a suitable candidate.

**Key ECB interest rates:** the interest rates, set by the Governing Council, which reflect the monetary policy stance of the ECB. They are the rates at the main refinancing operations, on the marginal lending facility and on the deposit facility.

**Labour force:** the sum total of persons in employment and the number of unemployed.

**Labour productivity:** the output that can be produced with a given input of labour. It can be measured in several ways, but is commonly measured as GDP (volume) divided by either total employment or total hours worked.

**Liquidity-absorbing operation:** an operation through which the Eurosystem absorbs liquidity in order to reduce excess liquidity, or to create a shortage of liquidity. Such operations can be conducted by issuing debt certificates or fixed-term deposits.

**Longer-term refinancing operation (LTRO):** an open market operation with a maturity of more than one week that is executed by the Eurosystem in the form of a reverse transaction. The regular monthly operations have a maturity of three months. During the financial market turmoil that started in August 2007, supplementary operations with maturities ranging from one maintenance period to one year were conducted, the frequency of which varied.

**M1:** a narrow monetary aggregate that comprises currency in circulation plus overnight deposits held with MFIs and central government (e.g. at the post office or treasury).

**M2:** an intermediate monetary aggregate that comprises M1 plus deposits redeemable at a period of notice of up to and including three months (i.e. short-term savings deposits) and deposits with an agreed maturity of up to and including two years (i.e. short-term time deposits) held with MFIs and central government.

**M3:** a broad monetary aggregate that comprises M2 plus marketable instruments, in particular repurchase agreements, money market fund shares and units, and debt securities with a maturity of up to and including two years issued by MFIs.

**Main refinancing operation (MRO):** a regular open market operation executed by the Eurosystem in the form of reverse transactions. Such operations are carried out through a weekly standard tender and normally have a maturity of one week.

**Marginal lending facility:** a standing facility of the Eurosystem enabling eligible counterparties, on their own initiative, to receive overnight credit from the NCB in their jurisdiction at a pre-specified rate in the form of a reverse transaction. The rate on loans extended within the scope of the marginal lending facility normally provides an upper bound for overnight market interest rates.

**MFI credit to euro area residents:** MFI loans granted to non-MFI euro area residents (including general government and the private sector) and MFI holdings of securities (shares, other equity and debt securities) issued by non-MFI euro area residents.

**MFI interest rates:** the interest rates that are applied by resident credit institutions and other MFIs, excluding central banks and money market funds, to euro-denominated deposits and loans vis-à-vis households and non-financial corporations resident in the euro area.

**MFI longer-term financial liabilities:** deposits with an agreed maturity of over two years, deposits redeemable at a period of notice of over three months, debt securities issued by euro area MFIs with an original maturity of more than two years and the capital and reserves of the euro area MFI sector.

**MFI net external assets:** the external assets of the euro area MFI sector (such as gold, foreign currency banknotes and coins, securities issued by non-euro area residents and loans granted to non-euro area residents) minus the external liabilities of the euro area MFI sector (such as non-euro area residents' deposits and repurchase agreements, as well as their holdings of money market fund shares/units and debt securities issued by MFIs with a maturity of up to and including two years).

**MFIs (monetary financial institutions):** financial institutions which together form the money-issuing sector of the euro area. These include the Eurosystem, resident credit institutions (as defined in Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The latter group consists predominantly of money market funds, i.e. funds that invest in short-term and low-risk instruments usually with a maturity of one year or less.

**Minimum bid rate:** the lower limit to the interest rates at which counterparties may submit bids in the variable tenders.

**Open market operation:** a financial market operation executed on the initiative of the central bank. These operations include reverse transactions, outright transactions as well as the issuance of fixed-term deposits or debt certificates or foreign exchange swaps. The open market operations can be liquidity providing or liquidity absorbing.

**Other investment:** an item in the b.o.p. and the i.i.p. that covers the financial transactions/positions with non-residents in trade credits, deposits and loans, and other accounts receivable and payable.

**Portfolio investment:** euro area residents' net transactions and/or positions in securities issued by non-residents of the euro area ("assets") and non-residents' net transactions and/or positions in securities issued by euro area residents ("liabilities"). Included are equity securities and debt securities (bonds and notes, and money market instruments). Transactions are recorded at the effective price paid or received, less commissions and expenses. To be regarded as a portfolio asset, ownership in an enterprise must be equivalent to less than 10% of the ordinary shares or voting power.

**Price stability:** as defined by the Governing Council, a year-on-year increase in the HICP for the euro area of below 2%. The Governing Council has also made it clear that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term.

**Purchasing power parity (PPP):** the rate at which one currency is converted into another so as to equalise the purchasing power of the two currencies by eliminating the differences in the price levels prevailing in the countries concerned. In their simplest form, PPPs show the ratio of the prices in national currency of the same good or service in different countries.

**Reference value for M3 growth:** the annual growth rate of M3 that is deemed to be compatible with price stability over the medium term.

**Reserve requirement:** the requirement for institutions to hold minimum reserves with the central bank over a maintenance period. Compliance with the requirement is determined on the basis of the average of the daily balances in the reserve accounts over the maintenance period.

**Reverse transaction:** an operation whereby the NCB buys or sells assets under a repurchase agreement or conducts credit operations against collateral.

**Securitisation:** a transaction or scheme whereby an asset or a pool of cash flow-producing assets, often consisting of loans (mortgages, consumer loans, etc.), is transferred from an originator (usually a credit institution) to a financial vehicle corporation (FVC). The FVC effectively converts these assets into marketable securities by issuing debt instruments with principal and interest serviced through the cash flows produced by the asset pool.

**Survey of Professional Forecasters (SPF):** a quarterly survey that has been conducted by the ECB since 1999 to collect macroeconomic forecasts on euro area inflation, real GDP growth and unemployment from a panel of experts affiliated to financial and non-financial organisations based in the EU.

**Unit labour costs:** a measure of total labour costs per unit of output calculated for the euro area as the ratio of total compensation per employee to labour productivity (defined as GDP (volume) per person employed).

**Variable rate tender:** a tender procedure where the counterparties bid both the amount of money they wish to transact with the central bank and the interest rate at which they wish to enter into the transaction.

**Volatility:** the degree of fluctuation in a given variable.

**Write-down:** a downward adjustment to the value of loans recorded in the balance sheets of MFIs when it is recognised that the loans have become partly unrecoverable.

**Write-off:** the removal of the value of loans from the balance sheets of MFIs when the loans are considered to be totally unrecoverable.

**Yield curve:** a graphical representation of the relationship between the interest rate or yield and the residual maturity at a given point in time for sufficiently homogenous debt securities with different maturity dates. The slope of the yield curve can be measured as the difference between the interest rates or yield at two selected maturities.

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