EUROPEAN CENTRAL BANK

EUROSYSTEM

Economic Bulletin

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Contents

Update on economic and monetary developments

Summary

The information that has become available since the Governing Council's last meeting of the year 2017 confirms a robust pace of economic expansion, which accelerated more than expected in the second half of 2017.[1] The strong cyclical momentum, the ongoing reduction of economic slack and increasing capacity utilisation strengthened further the Governing Council's confidence that inflation will converge towards its inflation aim of below, but close to, 2%. The risks surrounding the euro area growth outlook are broadly balanced. On the one hand, the prevailing strong cyclical momentum could lead to further positive growth surprises in the near term. On the other hand, downside risks continue to relate primarily to global factors, including developments in foreign exchange markets.

The global economy is continuing to expand at a solid rate, with increasing signs of synchronisation. Activity is benefiting from favourable global financial conditions and strong sentiment. Rising oil prices have contributed to increasing global inflation, but inflation excluding food and energy prices has remained more stable.

Amid this improved economic sentiment, euro area yields and equities have risen since the Governing Council's meeting in December. In foreign exchange markets, the euro appreciated overall in trade-weighted terms, in particular against the US dollar. This recent volatility in the exchange rate represents a source of uncertainty which requires monitoring with regard to its possible implications for the medium-term outlook for price stability.

The economic analysis based on the latest economic data and survey results indicates continued strong and broad-based growth momentum at the turn of the year. Private consumption is supported by rising employment, which is also benefiting from past labour market reforms, and by growing household wealth. Business investment continues to strengthen on the back of very favourable financing conditions, rising corporate profitability and solid demand. Housing investment has improved further over recent quarters. In addition, the broad-based global expansion is providing impetus to euro area exports.

Euro area annual HICP inflation was 1.4% in December 2017, down from 1.5% in November, mainly reflecting developments in energy prices. Looking ahead, on the basis of current futures prices for oil, annual rates of headline inflation are likely to hover around current levels in the coming months. Measures of underlying inflation remain subdued – in part owing to special factors – and have yet to show convincing signs of a sustained upward trend. Looking forward, they are expected to rise

[1] Taking into account information available at the time of the Governing Council meeting of 25 January 2018.

gradually over the medium term, supported by the ECB's monetary policy measures, the continuing economic expansion, the corresponding absorption of economic slack and rising wage growth.

The monetary analysis confirms that broad money growth continued to expand at the robust pace generally witnessed since mid-2015. The recovery in loan growth to the private sector also continued. The euro area bank lending survey for the fourth quarter of 2017 shows that loan growth was still supported by increasing loan demand and the easing of credit standards for loans, in particular to households. Moreover, financing costs for euro area non-financial corporations (NFCs) have remained favourable, with bank lending rates for NFCs being close to their historical lows.

Considering the outcome of the economic analysis with the signals coming from the monetary analysis, the Governing Council confirmed the need for an ample degree of monetary accommodation to secure a sustained return of inflation rates towards levels that are below, but close to, 2%. While the Governing Council's confidence that inflation will converge towards its inflation aim has strengthened, domestic price pressures remain muted overall and have yet to show convincing signs of a sustained upward trend. Therefore, an ample degree of monetary stimulus remains necessary for underlying inflation pressures to continue to build up and support headline inflation developments over the medium term.

Accordingly, the Governing Council decided to keep the key ECB interest rates unchanged and continues to expect them to remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases. Regarding non-standard monetary policy measures, the Governing Council confirmed that the net asset purchases, at the new monthly pace of €30 billion in place since January, are intended to run until the end of September 2018, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim. Moreover, the Governing Council reconfirmed that if the outlook becomes less favourable, or if financial conditions become inconsistent with further progress towards a sustained adjustment in the path of inflation, the Governing Council stands ready to increase the asset purchase programme in terms of size and/or duration. Finally, the Governing Council reiterated that the Eurosystem will reinvest the principal payments from maturing securities purchased under the asset purchase programme for an extended period of time after the end of its net asset purchases, and in any case for as long as necessary.

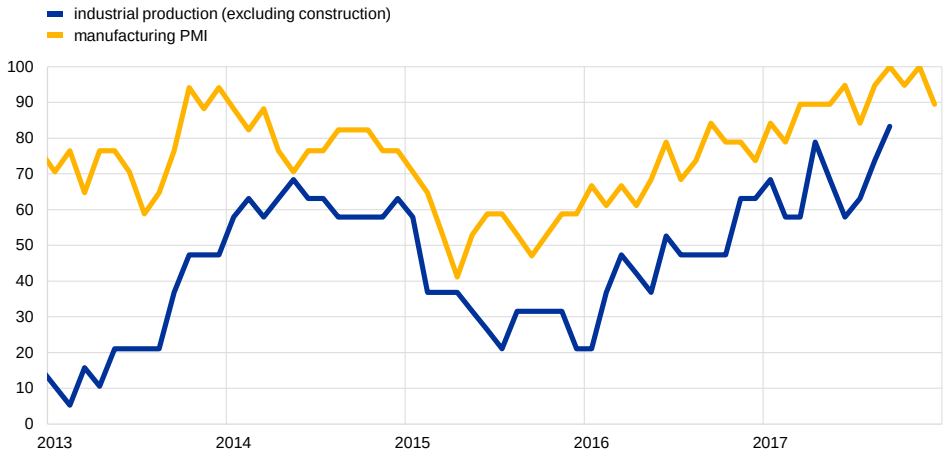
1 External environment

Global growth has continued to firm up. Following solid global GDP growth in the third quarter of 2017, survey indicators point to sustained global growth momentum in the final months of last year. The global composite output Purchasing Managers' Index (PMI) increased to 54.4 in December, from 54.0 in the previous month. The strong performance in December reflected ongoing robust expansion in advanced economies and a pick-up in emerging economies, driven by China and India in particular. The latest data are consistent with indications of an ongoing broad-based and synchronised global economic recovery (see Chart 1).

Chart 1

Industrial production and manufacturing PMI

(monthly data; percentage share of countries with rising growth in industrial production; percentage share of countries with a PMI manufacturing diffusion index above 50)



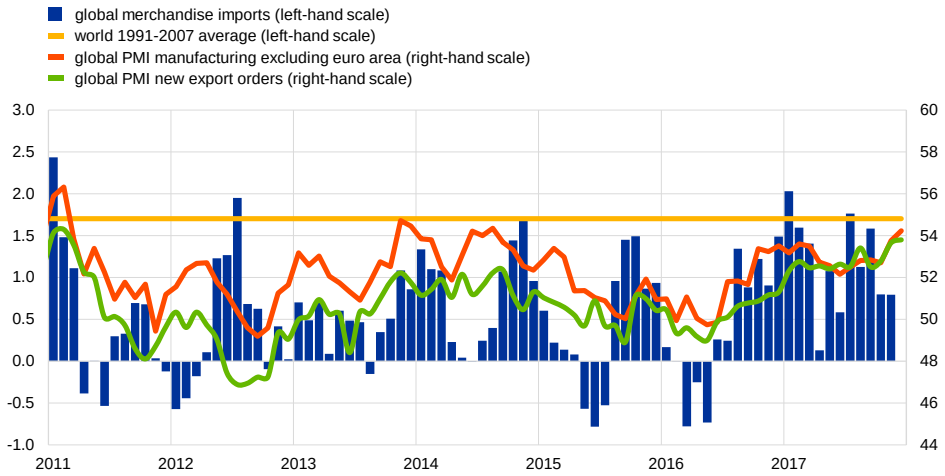
Sources: Markit, national sources, OECD and ECB calculations.
Notes: The latest observations are for September 2017 for industrial production and December 2017 for the manufacturing PMI. The chart comprises data for 19 advanced and emerging market economies. For industrial production, the line shows the share of countries where the three-month average annual change in industrial production is higher than the previous three-year average annual change.

Survey indicators point to continued strong global trade momentum in the final quarter of 2017. Global goods import growth slowed in the first months of the fourth quarter, with the volume of merchandise imports increasing by 0.8% in three-month-on-three-month terms in November, following growth of 1.6% in the third quarter (see Chart 2). The decline was driven by a moderation in imports in Asia and in a number of advanced economies. However, trade indicators have been more resilient, suggesting that in the fourth quarter world imports expanded at a pace similar to that seen in the third quarter. Global PMI new export orders rose to 53.8 in December, from 53.7 in the previous month, which is above its long-term average.

Chart 2

Global trade and surveys

(three-month-on-three-month percentage changes, left-hand scale; diffusion index, right-hand scale)



Sources: Markit, CPB Netherlands Bureau for Economic Policy Analysis and ECB calculations.
Note: The latest observations are for November 2017 for global merchandise imports and December 2017 for the PMIs.

Global inflation picked up in November. Annual consumer price inflation in the OECD area increased to 2.4% in November, from 2.2% in October, reflecting acceleration in energy and food prices. However, excluding food and energy, inflation remained stable at 1.9%.

Oil prices have continued to increase in recent weeks. Brent crude oil prices rose from around USD 64 per barrel in mid-December to over USD 69 per barrel. Higher oil prices during this period partly reflect supply disruptions, notably the closing of the Forties pipeline in the North Sea for repairs, and political unrest in the Middle East. Strong demand for crude oil imports in China and increased US refining activity that drew more crude from inventories were also factors driving the recent oil price rise. Non-oil commodity prices have also increased in recent weeks, driven particularly by increases in metal prices. Rising metal prices are related to supply disruptions in non-ferrous metal industries following the introduction of environmental regulation in China and to rising demand for iron ore.

The cyclical upswing has continued in the United States. After solid third-quarter GDP growth at an annualised rate of 3.2%, growth is expected to have remained robust in the fourth quarter of last year. Activity is supported by accommodative financial conditions and buoyant confidence as well as the temporary boost associated with the reconstruction efforts after the hurricanes in the autumn. In line with robust economic activity, the labour market continued to tighten, with a gain in non-farm payroll employment of 148,000 in December, while the unemployment rate stayed unchanged at 4.1%. Notwithstanding tight labour market conditions, annual wage growth remains subdued, with a slight increase to 2.5% in December. Annual headline CPI inflation declined to 2.1% in December on account of lower energy price inflation, but CPI inflation excluding food and energy firmed, rising to 1.8% on an annual basis in December, from 1.7% in the previous month. The Federal Open Market Committee (FOMC) continued its gradual removal of policy accommodation

by raising the target range for the federal funds rate to 1.25-1.50% in December. The US administration has also reached agreement on tax reform. The Tax Cuts and Jobs Act, which took effect on 1 January 2018, permanently lowers corporate taxes, provides relief to small businesses, temporarily lowers personal income taxes and broadens the tax base. The resulting revenue loss from lower taxes is expected to be partially offset by additional taxes charged on income earned abroad by US multinationals. Overall, the fiscal stimulus provided by the reform is likely to boost US economic activity, although it could also exacerbate fiscal imbalances.

In Japan, economic activity remains strong and the labour market continues to tighten. Real GDP grew by 0.6% quarter-on-quarter in the third quarter of 2017 and recent economic indicators continue to point to firm growth in the final quarter of last year. The labour market continues to tighten, with the unemployment rate falling to 2.7% in November, close to the levels of the early 1990s. Nonetheless, wage pressures remain modest, with total nominal cash earnings rising by 0.9% in year-on-year terms in November. Annual headline CPI inflation picked up in November to 0.6%, but inflation excluding food and energy remained close to zero. Moreover, the latest Tankan survey of inflation expectations suggests that firms remain cautious about further price increases.

In the United Kingdom, economic activity rebounded slightly, having slowed markedly in the first half of 2017. Real GDP growth slightly accelerated to 0.4% in the third quarter according to the final estimate. Recent indicators point to a continuation of growth at similar rates around the turn of the year. Survey indicators suggest a buoyant performance for export business, with the PMI Export Climate Index and data on new export orders from the manufacturing sector remaining at high levels in the final quarter of 2017. By contrast, indicators suggest that services activity growth has moderated. Annual CPI inflation marginally decelerated to 3.0% in December 2017, from 3.1% in November, but is expected to continue to weigh on disposable income.

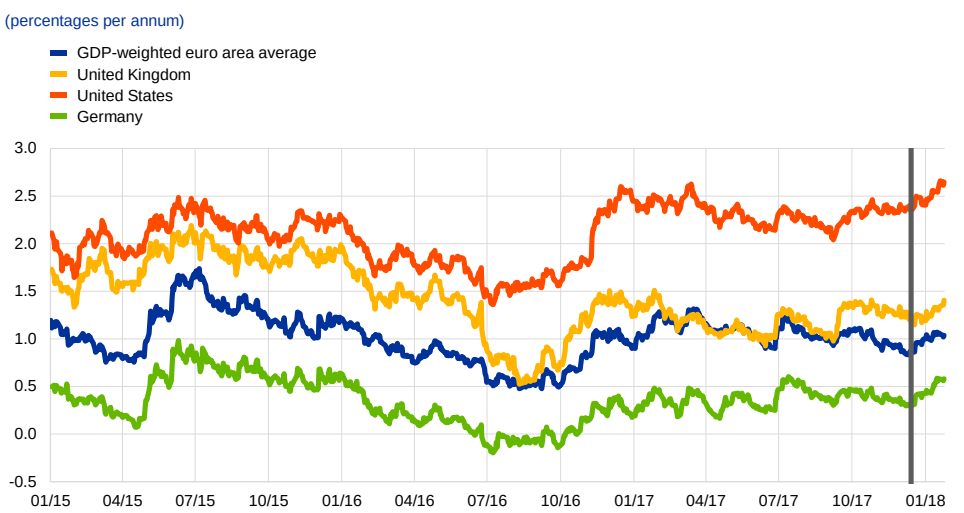
In China, economic activity indicators point to resilient growth. GDP expanded by 6.8% in year-on-year terms in the fourth quarter of the year. Overall in 2017, output was 6.9% higher than in the previous year, above the government's target of 6.5%. Consumer price inflation registered a slight increase in December, rising to 1.8% from 1.7% in the previous month. A fall in mining and raw material price inflation pushed producer price inflation down to 4.9% in December, from 5.8% in the previous month. The December Central Economic Work Conference, an annual meeting which sets the national agenda for the Chinese economy, confirmed that the authorities see high-quality growth, further supply-side reforms and mitigating financial risks as the main priorities for 2018.

2 Financial developments

Euro area government bond yields have risen since mid-December (see Chart 3). In the period under review (from 14 December to 24 January), the GDP-weighted euro area ten-year sovereign bond yield increased by 18 basis points to 1.04%. These developments reflect improving market expectations for euro area economic growth and markets' revisions to the future course of monetary policy. The euro area ten-year overnight index swap (OIS) rate increased by 21 basis points to currently stand at 0.8%. Thus the spread between the GDP-weighted yield and the OIS rate increased slightly during the review period. This development masks diverging movements in the yield curves of individual countries. For Germany, the ten-year yield spread vis-à-vis the risk-free OIS rate became somewhat less negative, possibly reflecting lower scarcity premia, while in Italy it widened amid market perceptions of increased political uncertainty. In contrast, the yield spreads on Portuguese and Spanish sovereign bonds continued their downward trajectory amid improvements in macroeconomic fundamentals. In the United Kingdom, the ten-year gilt yield increased by 23 basis points to stand at 1.41%, while in the United States the passage of the tax reform contributed to a 30 basis points increase in the 10-year Treasury yield to 2.66%.

Chart 3

Ten-year sovereign bond yields



Sources: Thomson Reuters and ECB calculations.
Notes: The vertical grey line denotes the start of the review period (14 December 2017). The latest observation is for 24 January 2018.

Yield spreads on bonds issued by non-financial corporations (NFCs) remained broadly stable during the period under review. Since mid-December, the spread on investment-grade NFC bonds relative to AAA-rated euro area bonds declined slightly by 5 basis points to 31 basis points. Spreads on financial sector debt with investment grade rating decreased slightly more, by 7 basis points. These developments are consistent with a strengthening of the economic expansion.

Broad indices of euro area equity prices rose over the review period. Equity prices of euro area NFCs increased by around 3.0%, while prices rose by 5.8% in

the case of euro area bank equities. Favourable corporate profit expectations and reduced equity risk compensation, both fuelled by the positive macro environment, more than compensated for the dampening effect stemming from higher yields. The equity prices of US NFCs and banks also increased over the review period, by 7.1% and 6.7% respectively. Market expectations of equity price volatility in the euro area remained constant, whereas they increased in the United States. Both are still quoted at levels (12.4% and 11.5% respectively) which are comparatively low from a historical perspective.

The euro overnight index average (EONIA) stood at an average of -36 basis points. Excess liquidity declined by around €9 billion to around €1,871 billion, as growth in net autonomous factors was greater than the amount of liquidity provided through ongoing purchases under the Eurosystem's asset purchase programme.

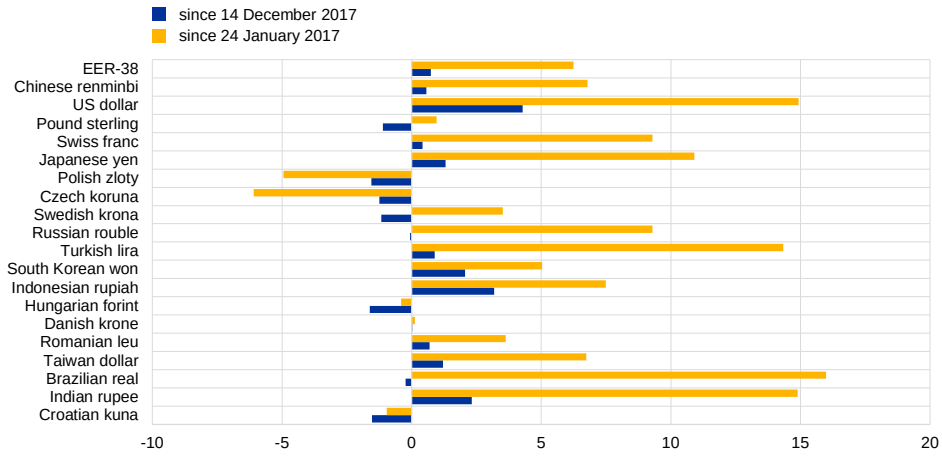
The EONIA forward curve shifted upwards over the review period, in particular for medium-term horizons. Market sentiment regarding the course of monetary policy in 2018 remained unchanged. Beyond that horizon, market participants increased their interest rate expectations.

In foreign exchange markets, the euro appreciated overall in trade-weighted terms (Chart 4). Over the period under review, the effective exchange rate of the euro appreciated by 0.7%. In bilateral terms, the euro appreciated vis-à-vis the currencies of most advanced economies, including the US dollar in particular (by 4.3%), but also the Japanese yen (by 1.3%) and the Swiss franc (by 0.4%). The euro also mostly strengthened against the currencies of emerging economies, including, most notably, the Chinese renminbi (by 0.6%), as well as currencies of other major trading partners in Asia. This broad-based appreciation was only partly offset by a weakening of the euro against the currencies of other EU Member States, including the pound sterling against which it weakened 1.1%.

Chart 4

Changes in the exchange rate of the euro vis-à-vis selected currencies

(percentage changes)



Source: ECB.
Notes: "EER-38" is the nominal effective exchange rate of the euro against the currencies of 38 of the euro area's most important trading partners. All changes have been calculated using the foreign exchange rates prevailing on 24 January 2018.

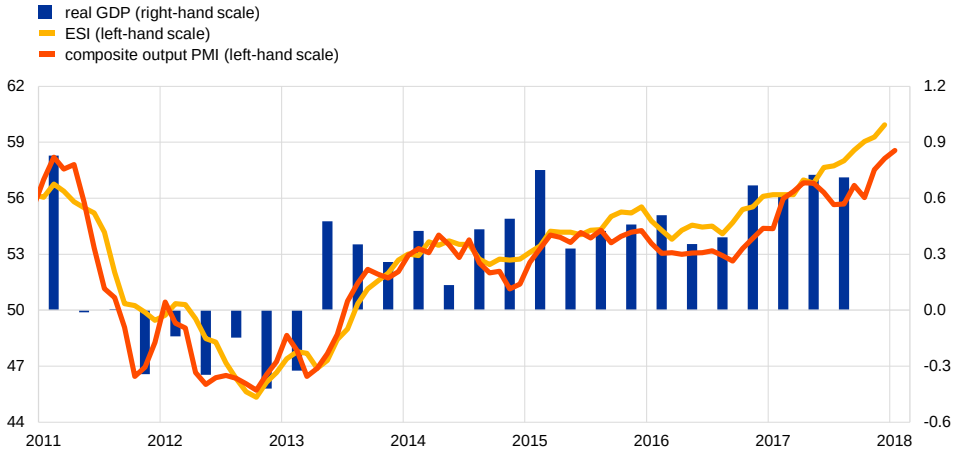
3 Economic activity

The broad-based and solid economic expansion in the euro area is continuing. Real GDP increased by 0.7%, quarter on quarter, in the third quarter of 2017, following a rise of the same magnitude in the previous quarter (see Chart 5), on the back of positive contributions from domestic demand and net trade. At the same time, changes in inventories made a neutral contribution to GDP growth in the third quarter. The latest economic indicators, both hard data and survey results, remain elevated and confirm the expectation of continued robust growth around the turn of the year at rates similar to those observed in the previous two quarters.

Chart 5

Euro area real GDP, the Economic Sentiment Indicator and the composite output Purchasing Managers' Index

(quarter-on-quarter percentage growth; diffusion index)



Sources: Eurostat, European Commission, Markit and ECB.
Notes: The Economic Sentiment Indicator (ESI) is standardised to have the same mean and standard deviation as the Purchasing Managers' Index (PMI). The latest observations are for the third quarter of 2017 for real GDP, December 2017 for the ESI and January 2018 for the PMI.

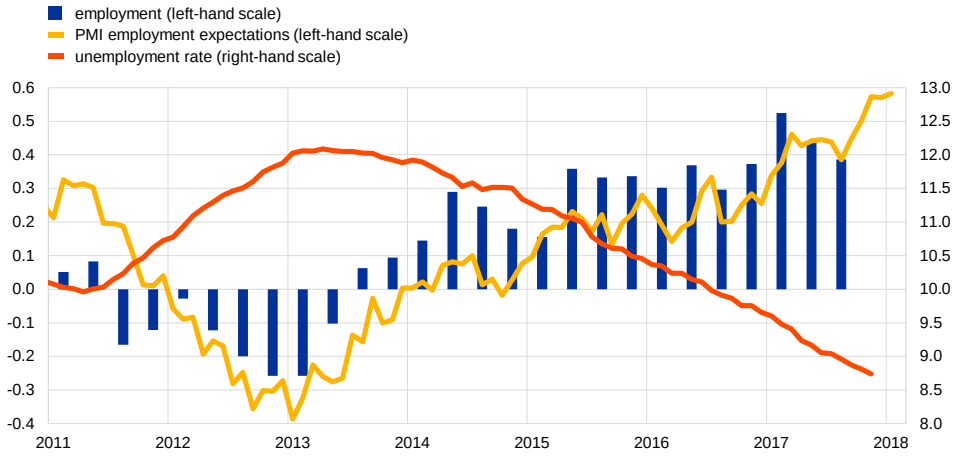
Consumer spending has risen further, thus continuing to play its key role in supporting the ongoing economic expansion. Private consumption rose by 0.4%, quarter on quarter, in the third quarter of 2017, following a somewhat higher rate of increase in the previous quarter. This slowdown largely reflects lower goods consumption growth, whereas services consumption appears to have risen at broadly the same rate in the third quarter as in the second quarter. However, growth in durable goods consumption continues to outpace growth in semi-durable and non-durable goods consumption (see Box 2). On an annual basis, consumption rose by 1.9% in the third quarter of 2017, the same rate as in the second quarter. This stable pattern contrasts with a rise in the growth of households' real disposable income to 1.6%, year on year, in the third quarter, from 1.3% in the previous quarter. Consistent with the unchanged consumption growth and higher income growth in the third quarter of 2017, the annual rate of change in savings increased in the third quarter. However, the saving ratio (expressed as a four-quarter moving average) declined to a new record low of 12% in the third quarter.

Euro area labour markets continue to improve, thus underpinning household income and consumer spending. Employment rose further, by 0.4% quarter on quarter in the third quarter of 2017, which led to an annual increase of 1.7%. Employment currently stands 1.2% above its pre-crisis peak in the first quarter of 2008. The unemployment rate in the euro area stood at 8.7% in November 2017, down from 8.8% in October and 3.3 percentage points below the post-crisis peak in April 2013 (see Chart 6). This decline has been broad-based across age and gender groups. Long-term unemployment (i.e. the number of people who have been unemployed for at least 12 months expressed as a percentage of the labour force) also continues to decline, but remains above its pre-crisis level. Survey information points to continued employment growth in the period ahead, and in some countries and sectors there are increasing signs of labour shortages.

Chart 6

Euro area employment, PMI employment expectations and unemployment

(quarter-on-quarter percentage changes; diffusion index; percentage of labour force)



Sources: Eurostat, Markit and ECB calculations.
Notes: The PMI is expressed as a deviation from 50 divided by 10. The latest observations are for the third quarter of 2017 for employment, January 2018 for the PMI and November 2017 for the unemployment rate.

Consumption is expected to remain resilient and continue to increase. Recent data on retail trade and new passenger car registrations point to a broadly unchanged consumer spending growth pattern in the fourth quarter of 2017 compared with the third quarter. Other indicators support the picture of continued robust consumption dynamics. The latest survey indicators point to further labour market improvements, which – via employment gains – should continue to boost aggregate income and thus consumer spending. Moreover, households' net worth continued to increase at robust rates, thus lending further support to consumer spending. These factors may partly explain why consumer confidence improved further in the fourth quarter, with the December 2017 reading standing at the highest level since January 2001.

Following a strong second quarter, business investment contracted in the third quarter of 2017. However, this weak outcome is largely technical in nature and relates mainly to the introduction of Irish data into the euro area national accounts and the associated impact from investment in intellectual property products and

leasing-related aircraft purchases. As a result, non-construction investment in the euro area declined by 1.2% quarter on quarter in the third quarter of 2017. As regards the fourth quarter, continued favourable conditions in the capital goods sector, such as increasing capacity utilisation, rising orders, as well as stronger confidence and demand, signal overall a continuation of the dynamic investment momentum. Monthly data on capital goods production up to November also suggest rising business investment in the near term. With regard to construction investment, monthly construction production data until November point to somewhat slower growth in the fourth quarter of 2017 compared with the third quarter. However, survey indicators on the demand situation and the assessment of order books in the sector, as well as the number of building permits issued, are in line with positive growth momentum around the turn of the year. In some countries, however, there are growing indications of capacity constraints in construction related to labour shortages.

Investment is expected to remain an important contributor to output growth in the period ahead. Investment should continue to be supported by very strong business confidence and lower uncertainty, higher capacity utilisation, accommodative financing conditions, stronger corporate profits and the widespread need to modernise the capital stock. According to the euro area sectoral accounts, the corporate gross operating surplus increased in the third quarter of 2017 at a higher year-on-year rate than in the previous quarter. Furthermore, earnings expectations for listed companies in the euro area continue to register high levels. As regards construction investment, features such as households' rising disposable income and very favourable lending conditions should underpin demand in the construction sector. At the same time, some factors are expected to continue to weigh on the outlook for investment, including expectations of weaker growth over the medium term.

Export growth remained strong in the third quarter of 2017 and trade indicators point to sustained momentum going forward. Total euro area exports rose by 1.5% in the third quarter on account of strong goods exports, continuing the robust growth pattern seen earlier in 2017. Monthly trade in goods data up to November suggest that extra-euro area exports will continue to show positive growth in the fourth quarter of 2017, in line with the recovery in foreign demand. Exports in October seem to have been supported mainly by demand from outside the EU, with positive contributions also from EU economies.[2] Leading indicators, such as surveys, continue to signal ongoing improvements in euro area exports and foreign demand, while new manufacturing export orders from outside the euro area have risen further.

The latest economic indicators point to a continuation of the recent robust growth pattern in the short term. Industrial production (excluding construction) displayed a strong increase in November. As a result, production stood on average in October and November 1.0% above the level in the third quarter of 2017, when it rose by 1.2% on a quarterly basis. More timely survey data also signal solid growth

[2] The export volume split into intra-EU and extra-EU destinations for November was not available before the cut-off date for data in this issue of the Economic Bulletin.

dynamics in the near term. The composite output Purchasing Managers' Index averaged 57.2 in the fourth quarter of 2017, compared with 56.0 in the third quarter, before rising further to 58.6 in January 2018. Meanwhile, the European Commission's Economic Sentiment Indicator rose to 114.9 in the fourth quarter from 112.1 in the third quarter (see Chart 5). Both the ESI and the PMI stand well above their respective long-term averages.

The ongoing broad and solid economic expansion is expected to continue beyond the near term. The ECB's monetary policy measures, which have facilitated the deleveraging process, continue to underpin domestic demand. Private consumption is supported by rising employment, which is also benefiting from past labour market reforms, and by growing household wealth. Business investment continues to strengthen on the back of very favourable financing conditions, rising corporate profitability and solid demand. Housing investment has improved further over recent quarters. In addition, the broad-based global expansion is providing impetus to euro area exports. The results of the latest round of the ECB Survey of Professional Forecasters, conducted in early January, show that private sector GDP growth forecasts were revised upwards for 2018 and 2019 in comparison with the previous round conducted in early October.

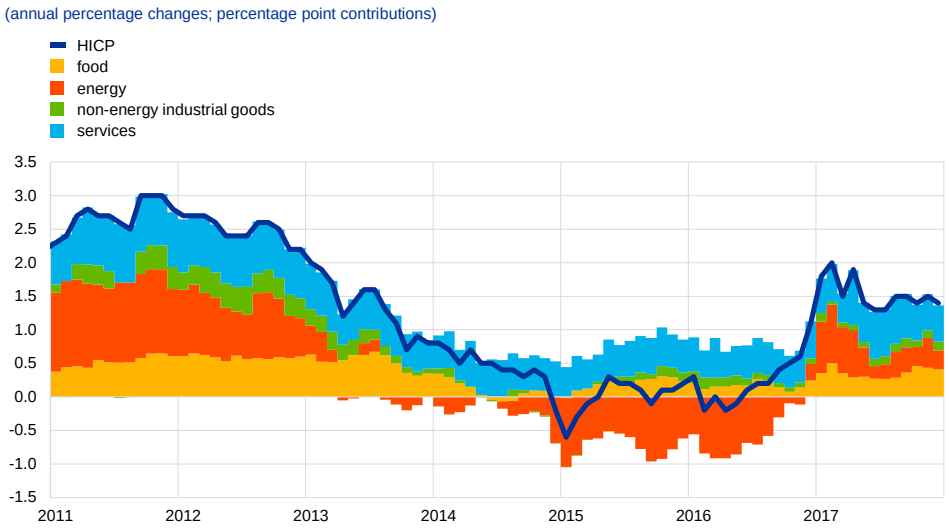
The risks surrounding the euro area growth outlook are assessed as broadly balanced. On the one hand, the prevailing strong cyclical momentum could lead to further positive growth surprises in the near term. On the other hand, downside risks continue to relate primarily to global factors, including developments in foreign exchange markets.

4 Prices and costs

Headline HICP inflation was 1.4% in December 2017, down from 1.5% in November (see Chart 7). The decrease mainly reflected lower energy inflation and, to a small extent, lower food inflation. HICP inflation excluding energy and food was 0.9% in December 2017, unchanged from November and October.

Chart 7

Contributions of components of euro area headline HICP inflation



Sources: Eurostat and ECB calculations.
Note: The latest observations are for December 2017.

Measures of underlying inflation remain subdued, in part owing to special factors. Following the recent moderation, which partly reflected the impact of large declines in inflation for a number of services items, HICP inflation excluding energy and food returned to levels close to those in early 2017. The same finding broadly holds when also excluding travel-related and clothing items, which tend to be influenced by calendar effects and by the timing of sales periods, respectively. Overall, measures of underlying inflation have not yet shown convincing signs of a sustained upward trend. Yet, looking forward, they are expected to rise gradually over the medium term, supported by the ECB's monetary policy measures, the continuing economic expansion, the corresponding absorption of economic slack and rising wage growth.

Non-energy industrial goods price pressures remained stable, with emerging signs of weakening pressure at the early stages of the pricing chain. Import price inflation for non-food consumer goods declined further in November, to −0.6% from −0.4% in October, while import price inflation for intermediate goods also declined, to 2.7% in November from 3.6% in October. The downward pressure from the impact of the euro appreciation more than offset a rise in global producer price inflation that was mainly due to stronger annual oil price inflation in euro terms. However, further along the pricing chain, annual producer price inflation for intermediate goods decreased only modestly to 3.2% in November, while annual

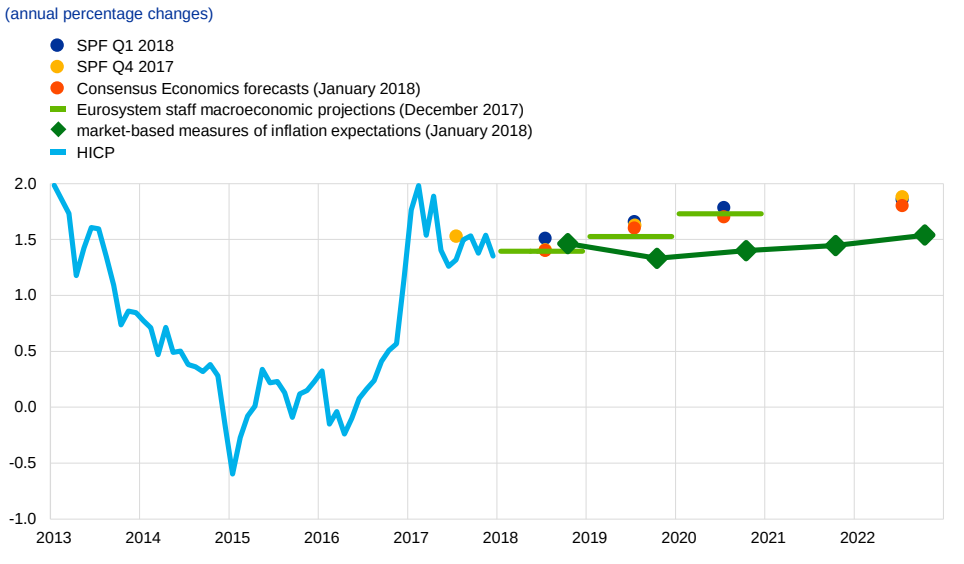
producer price inflation for non-food consumer goods remained broadly stable at 0.3%.

Recent data confirm the upward shift in wage growth from its low in the second quarter of 2016. Annual growth in compensation per employee was 1.7% in the third quarter of 2017, unchanged from the previous quarter but up from a low of 1.1% in the second quarter of 2016. The increase since then stems mainly from higher contributions from wage drift, which usually reacts to cyclical developments with a shorter lag than negotiated wages. Annual growth in negotiated wages increased slightly from 1.5% in September 2017 (which was also the average of the third quarter) to 1.6% in October 2017. While recent developments in wage growth are in line with improving labour market conditions, they may still be weighed down by factors such as past low inflation, weak productivity growth and the ongoing impact of labour market reforms implemented in certain countries during the crisis.

Market-based measures of long-term inflation expectations increased slightly, while survey-based measures remained broadly stable (see Chart 8). On 24 January 2018, the five-year inflation-linked swap rate five years ahead stood at 1.76%. The forward profile of market-based measures of inflation expectations continues to signal a very gradual return to inflation levels below, but close to, 2%. Such market-based measures continue to suggest that deflation risk remains well contained. According to the ECB Survey of Professional Forecasters for the first quarter of 2018, longer-term inflation expectations for the euro area remained stable at 1.9%.

Chart 8

Market and survey-based measures of inflation expectations



Sources: ECB Survey of Professional Forecasters (SPF), Thomson Reuters, Consensus Economics, Eurosystem staff macroeconomic projections and ECB calculations.
Notes: Realised HICP data are included up to December 2017. The Consensus Economics projections for 2020 and 2022 are taken from its October 2017 forecast. The market-based measures of inflation expectations are derived from HICPx (euro area HICP excluding tobacco) zero coupon inflation-linked swaps. The latest observations are for 24 January 2018.

Residential property prices in the euro area accelerated further in the third quarter of 2017. According to the ECB's residential property price indicator, the

prices of houses and flats in the euro area increased by 4.4% year on year in the third quarter of last year, up from 3.9% in the previous quarter, confirming a further strengthening and broadening of the house price cycle. The recent acceleration in house prices implies a slight deterioration in affordability for most house buyers (see the box entitled “Recent house price increases and housing affordability” in this issue of the Economic Bulletin).

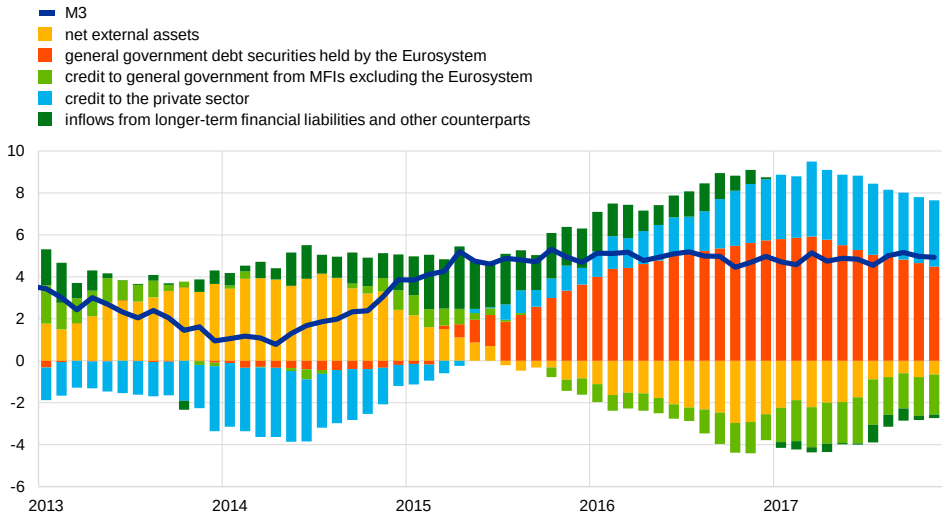
5 Money and credit

Broad money growth continued to expand at a robust pace. The annual growth rate of M3 remained broadly unchanged at 4.9% in November 2017, fluctuating around the level observed since mid-2015 (see Chart 9). The low opportunity cost of holding liquid deposits in an environment of very low interest rates and the impact of the ECB's monetary policy measures again lent support to M3 growth. The most liquid components remained the main contributor to broad money growth, with the annual growth rate of M1 standing at 9.1% in November (compared with 9.4% in October).

Chart 9

M3 and its counterparts

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



Source: ECB.
Notes: Credit to the private sector includes MFI (monetary financial institution) loans to the private sector and MFI holdings of securities issued by the euro area private non-MFI sector. It thus includes the Eurosystem's holdings of debt securities in the context of the corporate sector purchase programme. The latest observation is for November 2017.

Domestic counterparts of M3 remained the main driver of broad money growth. From a counterpart perspective, the Eurosystem's purchases of government bonds (see the red parts of Chart 9), conducted mainly in the context of the public sector purchase programme (PSPP), had a positive effect on M3 growth. In addition, the ongoing recovery in credit to the private sector (see the blue parts of Chart 9) continued to support M3 growth. This includes both MFI loans to the private sector and MFI holdings of securities issued by the euro area private non-MFI sector. As such, it also covers the Eurosystem's purchases of non-MFI debt securities under the corporate sector purchase programme. The persistent contraction in MFIs' longer-term financial liabilities (excluding capital and reserves), presented together with other counterparts (see the dark green parts of Chart 9), again made a positive contribution to M3 growth. The annual rate of change of such liabilities has been negative since the second quarter of 2012, partly owing to the impact of the ECB's targeted longer-term refinancing operations, which may have acted as a substitute for longer-term market-based funding. Finally, the impact of the PSPP on M3 growth was dampened because some of the Eurosystem's government bond purchases

were made from euro area MFIs, which in turn contributed to a negative annual growth of credit to general government by MFIs excluding the Eurosystem (see the light green parts of Chart 9).

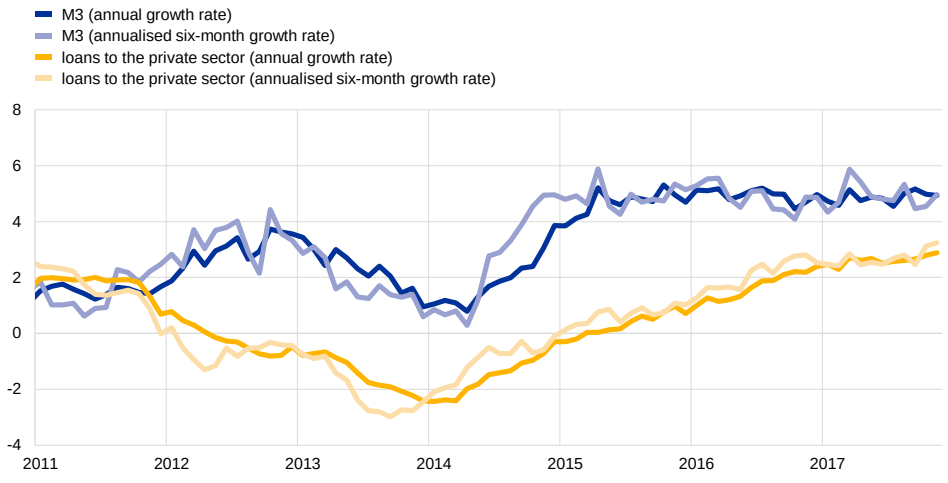
MFIs' net external assets again weighed on annual M3 growth (see the yellow parts of Chart 9). Although the annual flow of net external assets remained negative in November 2017, capital outflows from the euro area, which are partly explained by PSPP-related sales of euro area government bonds by non-residents, have declined over recent months. This has helped to ease the related downward pressure on M3 growth. Non-residents, while still among the main sellers of securities eligible for the asset purchase programme, may have moderated the rebalancing of their portfolios away from other euro area assets.

The gradual recovery in loan growth continued. The annual growth rate of MFI loans to the private sector (adjusted for loan sales, securitisation and notional cash pooling) increased to 2.9% in November (see Chart 10). Across sectors, the annual growth rate of loans to non-financial corporations rose to 3.1% in November (from 2.9% in October). Meanwhile, the annual growth rate of loans to households stood at 2.8% (compared with 2.7% in October). The significant decrease in bank lending rates seen across the euro area since mid-2014 (notably owing to the ECB's non-standard monetary policy measures) and overall improvements in the supply of, and demand for, bank loans have supported these trends. In addition, banks have made progress in consolidating their balance sheets, although the level of non-performing loans remains high in some countries and may constrain financial intermediation.[3]

Chart 10

M3 and loans to the private sector

(annual growth rate and annualised six-month growth rate)



Source: ECB.
Notes: Loans are adjusted for loan sales, securitisation and notional cash pooling. The latest observation is for November 2017.

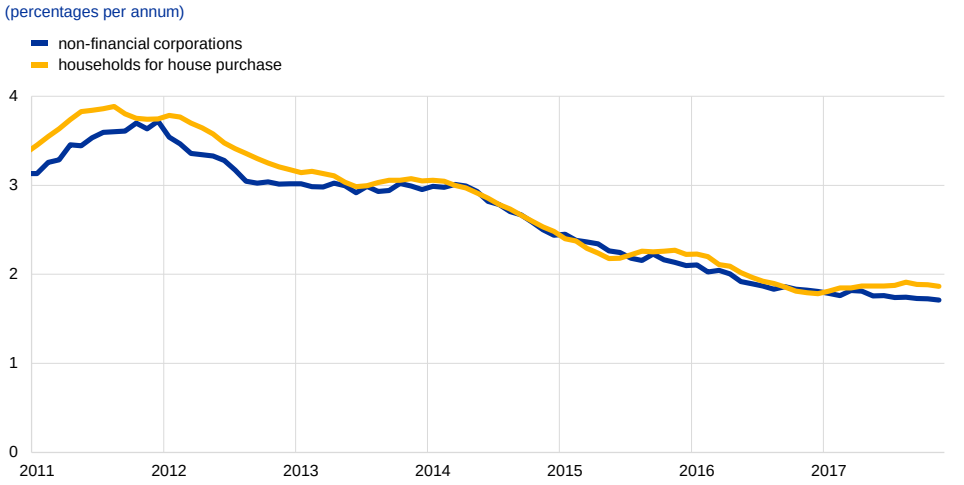
[3] See also Section 3 of the *Financial Stability Review*, ECB, November 2017.

The January 2018 euro area bank lending survey **suggests that loan growth continued to be supported by increasing loan demand by enterprises and households, and easing credit standards for loans to households.** In the fourth quarter of 2017, credit standards for loans to households for house purchase eased while they remained unchanged for loans to enterprises. Competitive pressure and reduced risk perceptions related to the improving economic outlook were important factors behind these developments. Banks also reported increasing net loan demand across all loan categories. Growth in fixed investment, merger and acquisition activity, the low general level of interest rates and favourable housing market prospects were significant drivers of loan demand. In addition, euro area banks continued to respond to regulatory/supervisory actions in the second half of 2017 by further strengthening their capital positions. Euro area banks also reported a broadly neutral impact of these measures on credit standards across all loan categories, except in the case of consumer credit and other lending to households, where a slight tightening effect was observed.

Bank lending rates for NFCs and households remained at or close to their historical lows. In November 2017 the composite bank lending rate for loans to NFCs reached a new historical low of 1.71%. The composite bank lending rate for housing loans remained broadly unchanged at 1.87% in November, which compares with the historical low of 1.78% reached in December 2016 (see Chart 11). Composite bank lending rates for loans to NFCs and households have decreased by more than market reference rates since the ECB's credit easing measures were announced in June 2014. Between May 2014 and November 2017, the composite lending rates for loans to NFCs and households fell by 122 and 105 basis points, respectively. The reduction in bank lending rates on NFC loans was particularly strong in vulnerable euro area countries, indicating a more homogeneous transmission of monetary policy to such rates across the euro area. Over the same period, the spread between interest rates charged on very small loans (loans of up to €0.25 million) and those charged on large loans (loans of above €1 million) in the euro area narrowed substantially. This indicates that small and medium-sized enterprises have generally benefitted to a greater extent from the decline in bank lending rates than large companies.

Chart 11

Composite bank lending rates for NFCs and households



Source: ECB.
Notes: Composite bank lending rates are calculated by aggregating short and long-term rates using a 24-month moving average of new business volumes. The latest observation is for November 2017.

Net issuance of debt securities by euro area NFCs is estimated to have declined slightly in the fourth quarter of 2017. The latest ECB data indicate that, on a net basis, the total flow of debt securities issued by NFCs in October and November was marginally lower than during the third quarter of 2017. Furthermore, according to market data, debt securities issuance activity weakened considerably in December 2017, in line with historical regularities. Net issuance of listed shares by NFCs was again in positive territory, with the strengthening of October and November reversing the negative trend of the third quarter of 2017.

Financing costs for euro area NFCs remained favourable. The overall nominal cost of external financing for NFCs, comprising bank lending, debt issuance in the market and equity finance, is estimated to have stabilised at around 4.4% in the last quarter of 2017 and stayed at the same level in the first half of January 2018. The cost of financing thus now stands some 34 basis points above the historical low of July 2016, but it is still considerably below the levels observed in summer 2014 and in line with the ECB's monetary policy stance. Recent developments in the overall nominal cost of financing reflect the fact that a slight increase in the cost of market-based debt is being offset by further declines in the estimated cost of bank lending. Consequently, the cost of debt, expressed as the weighted average of the cost of bank lending and the cost of market-based debt, continues to fluctuate around its historical low of November 2017. The cost of equity has remained broadly stable since October 2017.

Boxes

1 The macroeconomic impact of the US tax reform

By Ursel Baumann and Allan Gloe Dizioli

Following the passing of legislation on the US tax reform towards the end of last year, this box summarises its main features and assesses the channels via which the reform may affect the US macroeconomy. It also discusses possible spillovers and implications from a European perspective.

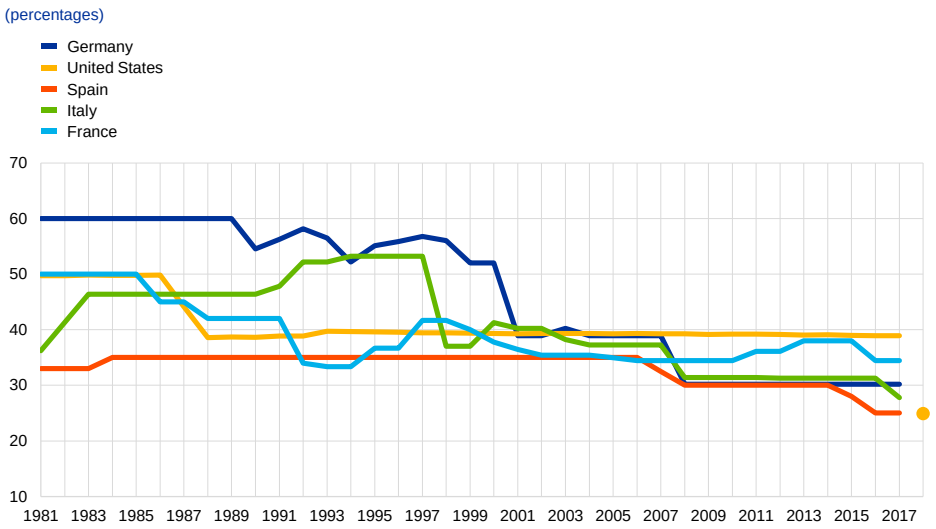
In a major legislative achievement, US President Donald Trump signed into law the Tax Cuts and Jobs Act on 22 December 2017. This tax reform, which took effect on 1 January 2018, entails a major overhaul of the US tax system. The reform involves a large number of changes, with some of its main provisions being:[4] (i) a permanent reduction in the corporate tax rate from 35% to 21%, while allowing the full deduction of investment from the corporate tax base for five years, after which this will be phased out; (ii) a temporary simplification of and reduction in individual income taxes, as well as an increase in the child tax credit; (iii) lower income taxation for small business owners; and (iv) elimination of the taxation of most foreign corporate income of US corporate shareholders, implying a move to a "hybrid" territorial system with a one-time transition tax on untaxed profits of 15.5% on liquid and 8% on non-liquid assets. The territorial system is complemented by base erosion measures and a minimum tax on some of the foreign operations of US companies.

The tax burden on US corporate income will fall significantly to a level close to that in a number of euro area economies. Chart A shows the corporate tax rate (combined for central and sub-central governments) of the United States before and after the reform as compared to the large euro area economies. Prior to the reform, the US corporate tax rate stood above the rates of all large euro area countries, while, after the reform, it is closer to the lower end of rates in those countries.

4 The Tax Policy Center provides a detailed table overview of the main changes entailed in the tax reform compared with the 2017 status quo.

Chart A

Comparison of combined central and sub-central government corporate tax rates

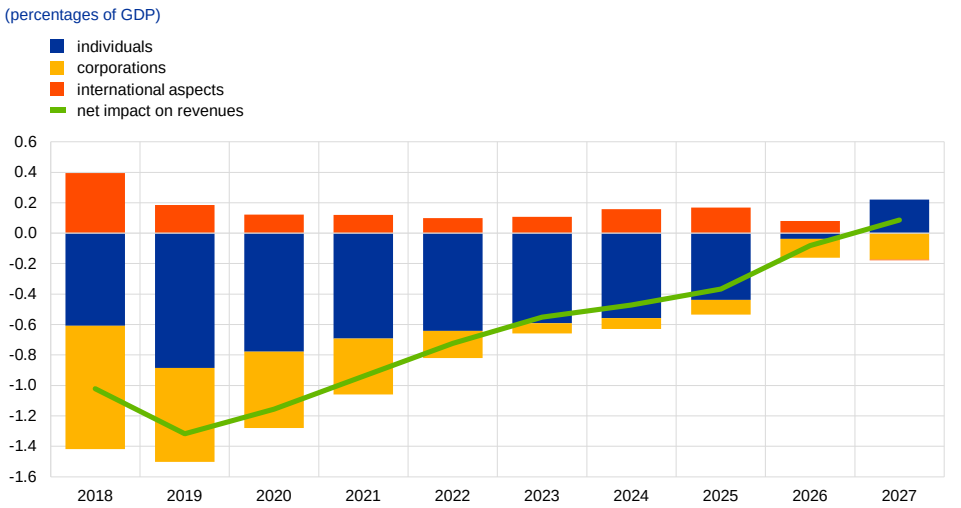


Source: Organisation for Economic Co-operation and Development and ECB staff calculations.
Notes: The combined corporate income tax rate shows the basic combined central and sub-central (statutory) corporate income tax rate given by the central government rate (less deductions for sub-national taxes) plus the sub-central rate. The dot for 2018 is the calculated rate after the reform in the United States.

Overall, the reform will provide a significant fiscal stimulus to the US economy over the next decade. The Joint Committee on Taxation estimates the static net fiscal stimulus for individuals and corporations at around USD 1.46 trillion over ten years, or 0.7% of GDP per year on average (see Chart B). The largest revenue effects occur in the period up to 2025, largely because most of the provisions affecting individuals expire after 2025. The revenue effects from the provisions affecting domestic corporations also diminish over time, partly owing to the gradual phasing out of bonus depreciation for investment. The main direct revenue generator of the reform stems from the one-off tax on foreign income of US multinationals on which tax payments had been deferred until repatriation to the United States.

Chart B

Static net fiscal revenue impact of the tax reform, 2018 to 2027



Sources: Joint Committee on Taxation, Congressional Budget Office and ECB staff calculations.
Note: Fiscal revenue estimates are converted into calendar year estimates and divided by nominal GDP as estimated by the Congressional Budget Office.

The reform is expected to boost US domestic demand and raise US real GDP in the near term. Lower individual income tax rates will raise household disposable income and boost consumption, especially among liquidity-constrained households. Part of the increase in after-tax income will also raise savings, in particular for wealthier individuals. In addition, lower corporate taxes should boost household wealth via higher asset prices and dividends, thereby also raising consumption and savings. Higher corporate profits may also lead to higher wages as workers bargain for a share of the increased profits,[5] which will in turn raise consumption. Finally, cuts in corporate taxes and the full deductibility of investment for five years will lower the after-tax cost of investment, thereby raising demand as a result of increased incentives to invest.

In addition, some positive impact on the economy's production capacity can be expected. Income tax cuts for individuals increase the after-tax rate of return on labour, which may strengthen incentives for workers to increase their participation in the labour market.[6] Moreover, by increasing the after-tax rate of return on capital, lower corporate taxes and the full deductibility of investment should increase investment and the economy's capital stock. A higher capital stock should, in turn, increase the economy's potential output and boost labour productivity. Some simplification of the tax code and the elimination of tax distortions for different corporates' financing strategies might also raise productivity by reallocating capital to more efficient sectors.

However, in a mature stage of the business cycle, fiscal multipliers tend to be smaller than when there is a large output gap. A common finding in the literature

5 See Arulampalam, W., Devereux, M.P. and Maffini, G., "The direct incidence of corporate income tax on wages", *European Economic Review*, Vol. 56, No 6, August 2012, pp. 1038-1054.

6 Labour supply would increase as long as the substitution effect is larger than the income effect.

is that fiscal multipliers (i.e. the additional growth effect generated by a change in fiscal revenues as a percentage of GDP resulting from the policy change) are lower if the economy is close to or above its potential output.[7] [8] Moreover, tax multipliers tend to be smaller than government spending multipliers, which also implies a rather limited positive demand effect from the tax reform.[9]

Available estimates suggest that the impact of the tax reform on US GDP will be positive in the short term, while the long-term effects are much more uncertain. A number of institutions have performed model simulations of the macroeconomic effect of the tax reform (see Table A). A common finding across these institutions is that the reform will lead to a moderate boost in the level of US real GDP in the range of 0.5 to 1.3% over the next three years. However, the wide-ranging estimates of the impact by 2027 suggest that the long-term effects on the US economy are highly uncertain.[10] The long-term effects depend to a large extent on how the tax reform will be financed and the impact of a higher deficit on sovereign debt costs. The lower cost of capital due to the tax reform should initially raise investment and the capital stock, thereby positively influencing the supply side of the economy. However, if the reform is assumed to be deficit-financed, the growing fiscal deficit could eventually lead to higher long-term interest rates, thereby raising the cost of capital and counterbalancing some of the positive supply-side effects. By contrast, the overall impact on the capacity of the US economy can be expected to be more positive if the tax reform is financed by reduced spending or by raising other less distortionary taxes.

Table A

Estimates of the macroeconomic impact of the tax reform on the level of GDP

(percentages)

	2018	2019	2020	2027
Tax Foundation	0.4	0.9	1.3	2.9
Tax Policy Center	0.8	0.7	0.5	0
Penn Wharton Budget Model	n/a	n/a	n/a	0.6 - 1.1
Joint Committee on Taxation[1]	0.8-0.9	0.8-0.9	0.8-0.9	0.1-0.2

Sources: Tax Foundation, Tax Policy Center, Penn Wharton Budget Model and Joint Committee on Taxation.
1) According to the Joint Committee on Taxation, the average impact on the level of GDP in the ten-year period is 0.7%. It is in the range of 0.8-0.9% for most of the ten-year budget window, falling to 0.1-0.2% by the end of the period.

From a euro area perspective, the reform could have implications in terms of macroeconomic spillovers. The more expansionary US fiscal policy will boost US

7 See Gechert, S. and Rannenberg, A., "Are Fiscal Multipliers Regime-Dependent? A Meta Regression Analysis", *IMK Working Papers*, No 139-2014, IMK, 2014.

8 For an explanation of why this may be the case, see Reichling, F. and Whalen, C., "The Fiscal Multiplier and Economic Policy Analysis in the United States", *Working Paper Series*, No 2015-02, Congressional Budget Office, February 2015.

9 See Coenen, G. et al., "Effects of Fiscal Stimulus in Structural Models", *American Economic Journal: Macroeconomics*, Vol. 4, No 1, pp. 22-68, January 2012, which provides evidence that multipliers are higher for expenditure-related fiscal measures based on a number of structural models.

10 Moreover, some of the boost in demand is reversed after 2025 owing to the temporary nature of the individual income tax cuts.

domestic demand. This could raise the demand for euro area goods and services, but the overall size of the effect is likely to be rather small.

The euro area will also be affected by the changes in the international tax landscape, the consequences of which are highly uncertain and complex. First, lower US corporate taxes raise the tax attractiveness of the United States relative to other countries, which will influence corporations' incentives to invest. A study by the Centre for European Economic Research (*Zentrum für Europäische Wirtschaftsforschung* – ZEW)[11] finds that the tax reform will lead to a rise in inbound foreign direct investment (FDI) into the United States originating from the European Union which outweighs an increase in US outbound FDI into the EU. Second, the reform will affect tax planning strategies of multinational enterprises. In particular, through the US move to a territorial system and through the differences in tax rates between the United States and some high-tax EU countries after the reform, the incentives for profit shifting are changed. Some aspects of the reform also provide incentives to relocate intellectual property to the United States. More generally, the reform risks intensifying tax competition worldwide, entailing a possible erosion of tax bases in EU countries. Third, it has been pointed out that some of the international provisions of the US tax reform may not be in accordance with World Trade Organization rules and double taxation treaties.

[11] See Heinemann, F., Pfeiffer, O., Schwab, T., Spengel, C., Olbert, M. and Stutzenberger, K., *Analysis of US Corporate Tax Reform Proposals and their Effects for Europe and Germany*, Centre for European Economic Research, Mannheim, 11 December 2017.

2 Consumption of durable goods in the ongoing economic expansion

By Maarten Dossche and Lorena Saiz

Household spending on durable goods is the part of private consumption that is most sensitive to the business cycle. Private consumption encompasses services, non-durable goods, semi-durable goods and durable goods. Durable goods typically have an expected lifetime of more than three years, whereas semi-durables and non-durables have a shorter lifetime.[12] Households do not derive utility directly from spending on durable goods in the current period, but rather from the flow of services they provide over their lifetime. As a result, the consumption of durable goods is more sensitive to the business cycle. Households may temporarily reduce these purchases when their income falls, without any great reduction in utility in the short term. When their income recovers, they can then resume their purchases again in order to offset earlier losses in their stock of durables.[13] In addition, durable goods also have a greater tendency to be financed using credit, owing to their high unit value and their longer lifetime. The high unit value of durable goods means that current income may not be sufficient, so households may need credit to finance them. Moreover, owing to their longer lifetime, some durable goods can be used as collateral, which makes them easier to finance using credit. However, as credit standards are usually tighter during economic downturns and looser during expansions, this also makes them more sensitive to the business cycle.[14] As a result, even though durable goods only account for around 10% of total consumption, they explain up to 20% of total variation in consumption growth owing to their greater variability.

Growth in the consumption of durable goods has been very strong in recent years. During the financial crisis, durable goods consumption contracted sharply (see Chart A), although the car scrappage schemes in several euro area countries provided some relief by encouraging purchases of new cars (e.g. in 2009). Since 2013, durable goods consumption has again grown vigorously, pushing up growth in overall consumption. The recovery observed in real disposable incomes and the easing of financing conditions have both boosted households' appetite for durable goods, particularly in those euro area countries that were more affected by the financial crisis.

12 See the box entitled "Recent developments in the consumption of durable goods", *Economic Bulletin*, Issue 3, ECB, 2015.

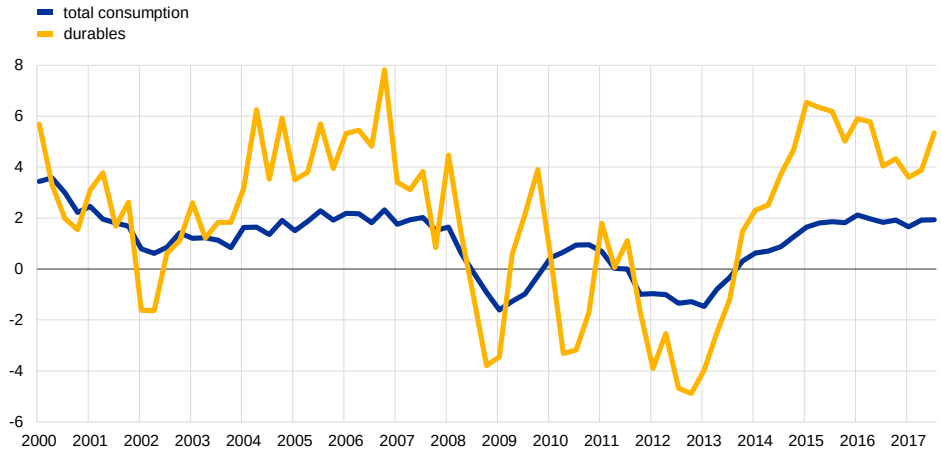
13 See Browning, M. and Crossley, T., "Shocks, Stocks, and Socks: Smoothing Consumption Over a Temporary Income Loss", *Journal of the European Economic Association*, Vol. 7, Issue 6, 2009, pp. 1169-1192.

14 See Chah, E., Ramey, V. and Starr, R., "Liquidity Constraints and Intertemporal Optimisation: Theory and Evidence from Durable Goods", *Journal of Money, Credit and Banking*, Vol. 27, Issue 1, 1995, pp. 272-287.

Chart A

Euro area private consumption

(annual percentage changes)



Sources: Eurostat and ECB calculations.
Notes: Total consumption relates to households and non-profit institutions serving households. Durables relate to households and are approximated using available data for all euro area countries except Belgium and Ireland. The latest observation is for the third quarter of 2017.

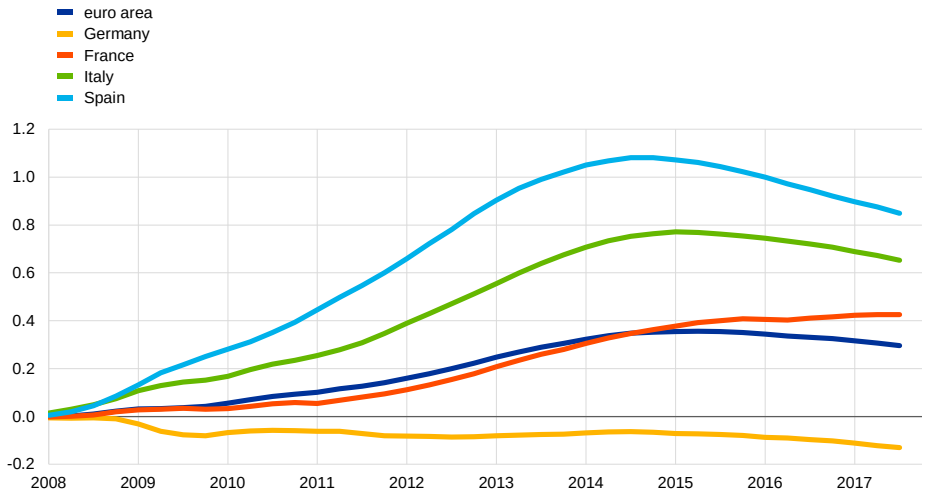
Another factor supporting durable goods consumption is pent-up demand. The sharp drop in durable goods consumption during the crisis also resulted in a decline in the effective stock of durables and a commensurate increase in its average age (see Chart B). In the countries that were more affected by the financial crisis (e.g. Italy and Spain), the increase in the average age of the stock of durable goods was much stronger, which gave rise to pent-up demand as soon as economic conditions improved. As the economic recovery has progressed, households have been able to increase spending on durable goods and offset earlier losses in their stock of durables. Consequently, the average age of the stock of durable goods has been falling since 2015 and the upward impact of pent-up demand for durables has been declining. This is also confirmed by model-based evidence from Spain.[15] Following a long catch-up phase for private consumption, this can be regarded as a normalisation.

15 "Reabsorption of the pent-up demand for consumer durables", *Economic Bulletin*, Issue 4/2017, Banco de España, 2017.

Chart B

Change in the average age of the stock of durable goods

(years; cumulative change since Q4 2007)



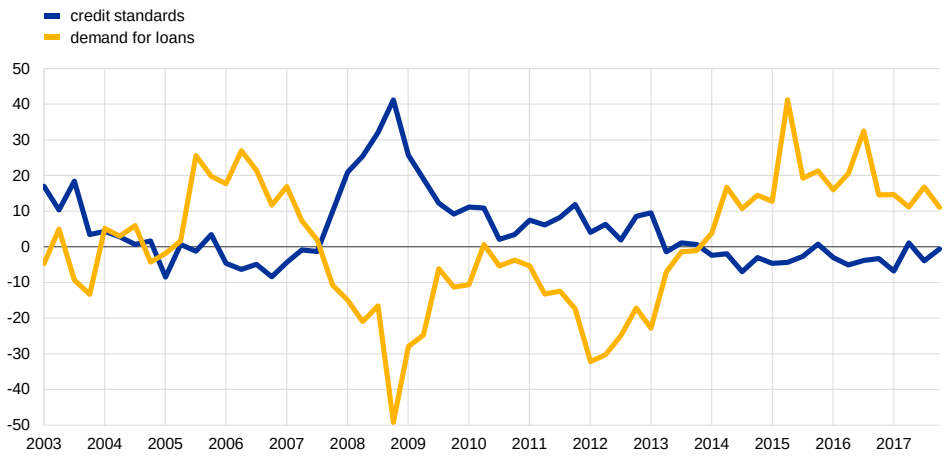
Source: ECB calculations.
Notes: The average age of the stock of durables can be estimated using the depreciation rate and the service life of durables. A decrease in the average age implies that current spending on durable goods exceeds the depreciation of the stock. The latest observation is for the third quarter of 2017.

Favourable credit conditions are continuing to support the consumption of durable goods. According to the euro area bank lending survey, banks' credit standards for consumer credit have been easing since 2014 (see Chart C). This reflects the credit-easing measures that the ECB put in place in order to repair the monetary policy transmission mechanism. At the same time, survey respondents report that demand for consumer credit has increased in recent years, supported by very low lending rates (see also Section 5).

Chart C

Supply of and demand for consumer credit in the euro area

(weighted net percentages)

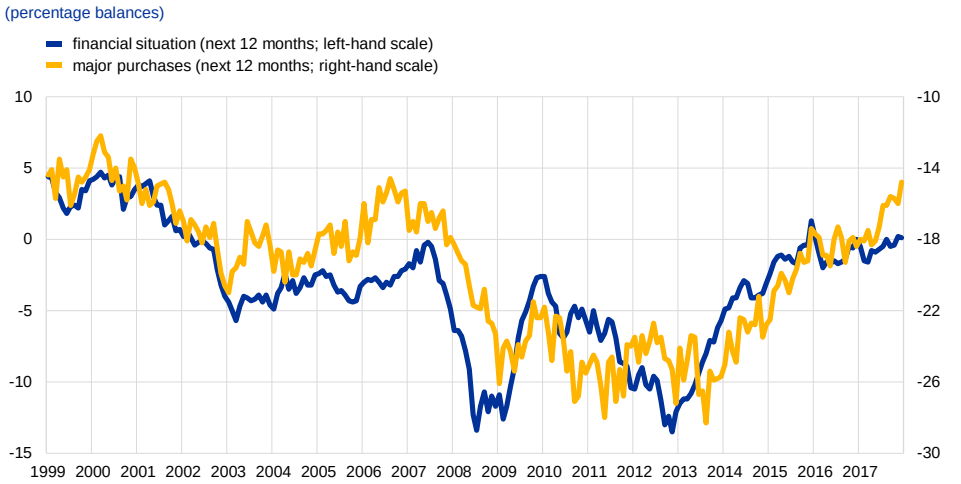


Source: ECB.
Notes: The bank lending survey asks banks how the credit standards applied to the approval of loans to households for consumer credit have changed over the past three months. Similarly, banks are also asked how demand for these loans has changed over the past three months. The latest observation is for the fourth quarter of 2017.

Going forward, household spending on durable goods should continue to grow on the back of robust income developments. The European Commission's latest consumer survey indicates an increase in the number of households that expect to spend more on major purchases over the next 12 months (see Chart D). Similarly, the number of households that expect their financial situation to improve over the coming year has also increased. This largely reflects further growth in employment and wages as the labour market improves (see also Section 3), as well as increases in net worth as asset prices rise.

Chart D

Households' financial situation and intentions to make major purchases



Source: European Commission.
Note: The latest observation is for December 2017.

3 Recent house price increases and housing affordability

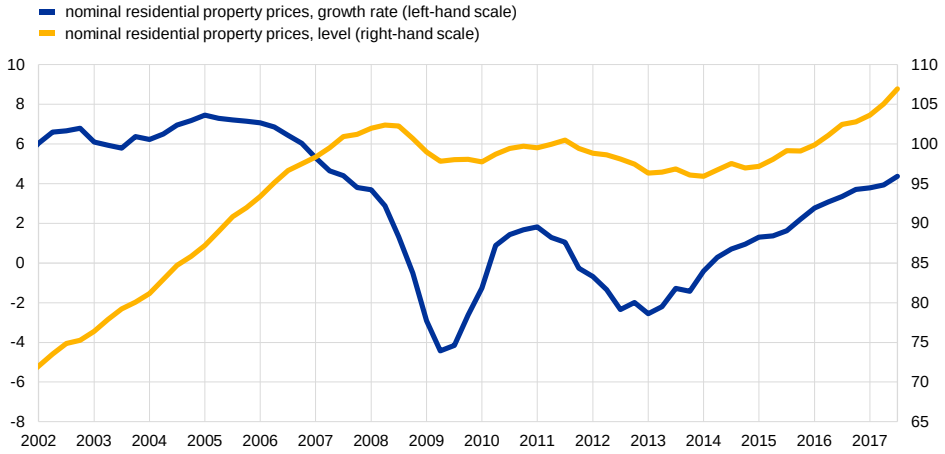
By Julien Le Roux and Moreno Roma

Euro area residential property price dynamics gained further momentum in 2017. In the third quarter, the annual rate of change in the ECB's residential property price indicator was 4.4%, up from 3.9% in the previous quarter (see Chart A). This acceleration is fairly broad based across euro area countries, albeit at different levels of house price growth, with two countries still exhibiting negative annual rates of change in the third quarter and another two with rates of more than 10%. The house price increases over the past few years may have implications for housing affordability. This box discusses some selected indicators of affordability.

Chart A

Euro area nominal residential property prices

(year-on-year percentage changes, index: 2007=100)



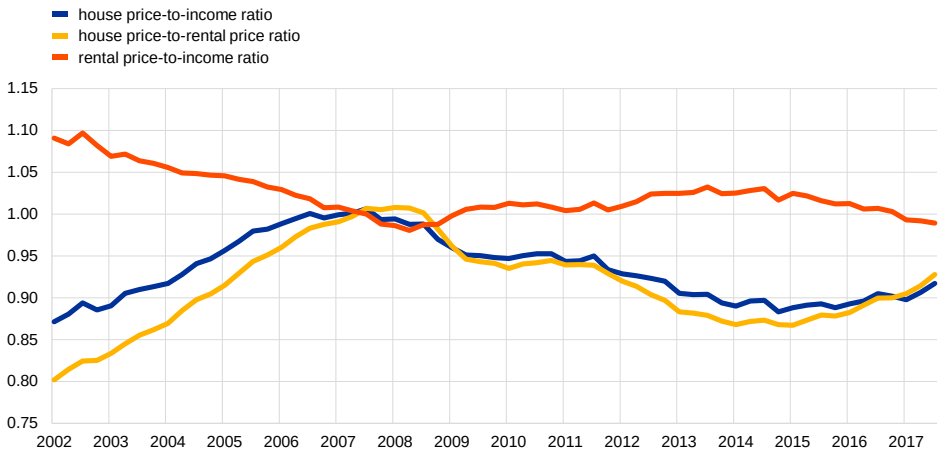
Source: ECB calculations based on national data.

The notion of affordability varies for different groups of households. Affordability essentially concerns housing costs relative to income. Whether these costs are affected by house price increases typically depends on how a household describes itself, be it as a buyer, an owner, or a tenant. At the aggregate level, house prices have recently increased slightly faster than household disposable income, suggesting a worsening of average affordability (see Chart B). However, this would apply in the first instance to those who have recently bought, or plan to buy, a house or a flat at the higher prices.

Chart B

Euro area aggregate affordability indicators

(indices, 2007=1)



Sources: Eurostat and ECB calculations.
Notes: Income refers to household gross disposable income. The latest observations are for the third quarter of 2017.

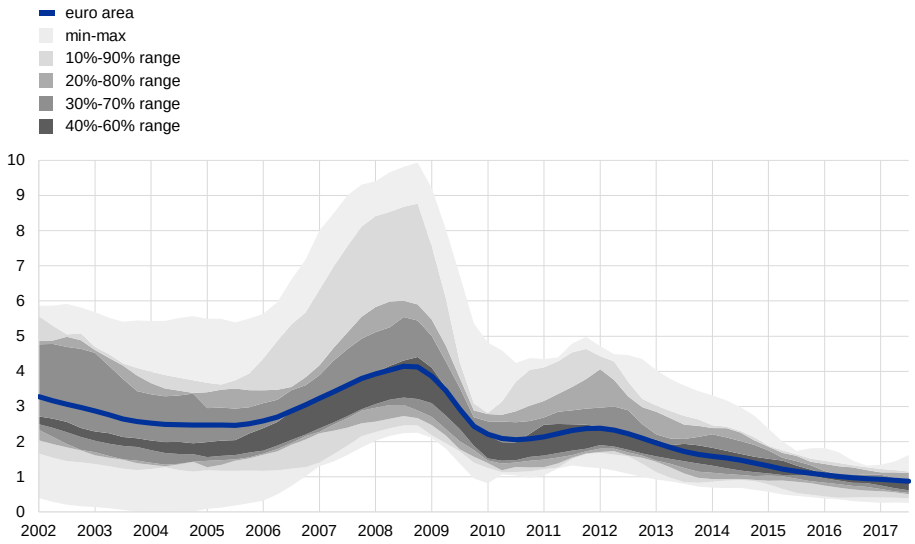
Affordability for homeowners depends to a large extent on whether they have debt servicing obligations. At the aggregate level, the debt servicing burden can be gauged by the ratio of interest payments to disposable income.[16] Reflecting low interest rates, this ratio has gradually decreased in the past few years across euro area countries (see Chart C). The effect of higher house prices has thus been alleviated by lower interest burdens. For households that already own a home, the rise in house prices may even have increased affordability if the higher collateral value of the property reduces borrowing costs when housing loans are renegotiated.

16 The ratio of interest payments to disposable income disregards subsidies and tax allowances, which can have the effect of reducing the cost of housing.

Chart C

Euro area interest payment burden on household debt

(annual percentage of household gross disposable income)



Sources: Eurostat and ECB calculations.
Notes: Shaded areas denote the deciles of interest payment burden by country, over one year. The deciles are based on the interest payment burden in the last four quarters. This chart depicts the interest payment on household debt, since the breakdown of interest payment by loan purposes (housing, consumption, others) is unavailable in the national accounts. No data are available for Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia. The latest observations are for the third quarter of 2017.

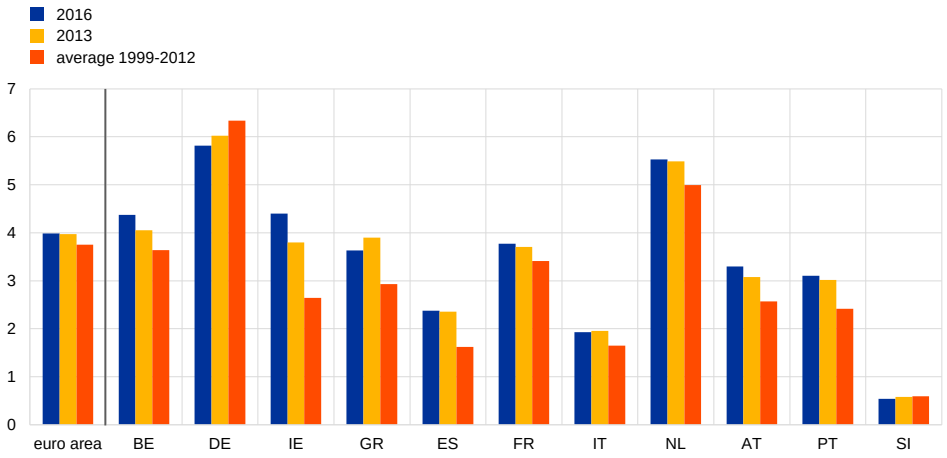
How much of an impact the increase in house prices has on tenants depends on whether there are spillovers to rental prices. House price increases do not generally fully pass through to rents.[17] At the aggregate level, rental prices have increased to a lesser extent than house prices and disposable income in recent years (see Chart B for the house price-to-rental price ratio and rental price-to-income ratio). This suggests that, thus far, tenants have on balance experienced an improvement in housing affordability. However, over time, owners who have bought their houses and flats for letting out will want to recover the higher purchase price or the higher costs for repair and maintenance that may arise in a tightening housing market. The recent increase in house prices may hence yet negatively impact the housing affordability of tenants when they enter into a new tenancy agreement or their existing leases are renegotiated. Furthermore, euro area housing affordability for tenants, measured by the share of income devoted to rental expenditures, hovered around 4% between 2013 and 2016 (see Chart D). This stability, at a time when the rental price-to-income ratio declined (see Chart B), indicates the effects of higher demand, reflecting a greater share of tenants in the population.

17 For a more in-depth discussion, see the box entitled "House prices and the rent component of the HICP in the euro area", *Monthly Bulletin*, ECB, August 2014. A more muted response could, for instance, be explained by a relatively large share of euro area households who rent at reduced prices – for instance households in social housing (accounting for around 10% of all households, according to microdata from EU Statistics on Income and Living Conditions – EU-SILC).

Chart D

Rental expenditures-to-disposable income ratio, in selected euro area countries

(percentage of household gross disposable income)



Sources: Eurostat and ECB calculations.
Notes: Data are available only for the 11 countries contained in the chart. The rental expenditures presented above are based on actual rents.

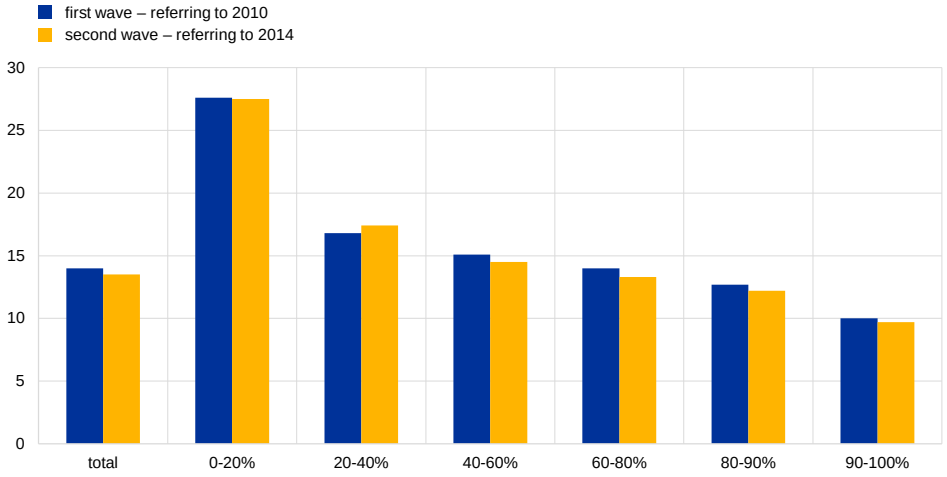
Affordability is ultimately better assessed by means of individual household data. Aggregate data, as presented above, can thus only provide likely average trends, while more in-depth assessments need to be based on microdata. For example, whereas the ratio of aggregate interest payments to aggregate income for the euro area in Chart C has declined to 0.9%, microdata from the 2016 Household Finance and Consumption Survey[18] for households that actually hold debt suggest a much higher debt service-to-income ratio. Half of the indebted households exhibited a debt service-to-income ratio higher than 14% (see "total" in Chart E). The median ratio was above 27% for households with an income in the bottom quintile of the distribution and around 10% for the highest decile group. This ratio declined somewhat for most income deciles compared with the previous wave of the survey.

[18] Results from the second wave of the Household Finance and Consumption Survey were published in 2016, and refer to the year 2014.

Chart E

Debt service-to-income ratio, among households with debt payments – breakdown by income percentile

(y-axis: median ratio in percentage, x-axis: income percentile)



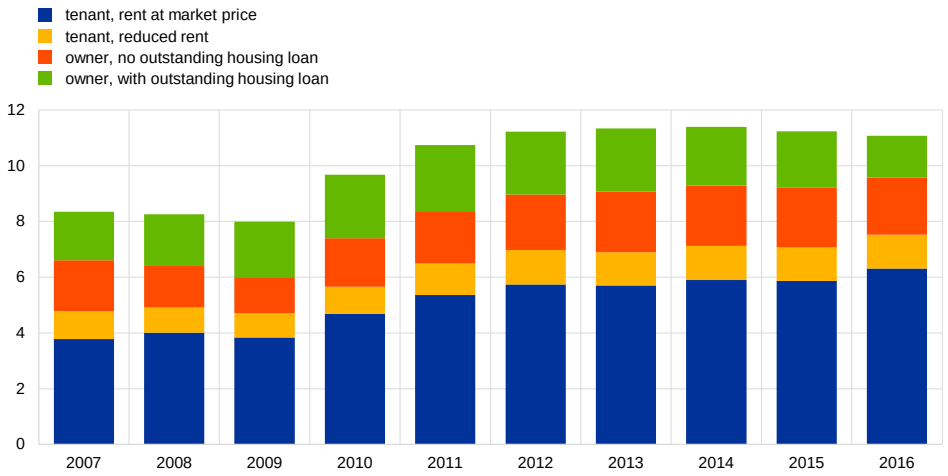
Sources: Eurosystem Household Finance and Consumption Survey (HFCS) and ECB calculations.
Notes: The debt service is the set of payments, including the principal amount and interest, to be made by the debtor over the life of a debt. The household disposable income includes the income from its activity (after deduction of social security contributions), the income from its assets, the transfers from other households, and social benefits, net of direct tax.

Microdata from EU Statistics on Income and Living Conditions point to minimal changes in households described as "overburdened" by housing costs. In the statistics available, households are considered "overburdened" if their costs ("net" of housing allowances) for rentals, mortgage interest payments and the cost of utilities amount to more than 40% of their disposable income. The share of households falling into this category has remained around 11% (see Chart F). The "overburden rate" is somewhat higher and slightly increasing for tenants (especially when they rent at market price) than for owners. This is likely to be related to a slightly increasing proportion of tenants in segments of the population with the lowest incomes.

Chart F

Housing cost overburden rate by tenure status

(percentage of households)



Source: Eurostat, EU Statistics on Income and Living Conditions (EU-SILC).

In conclusion, aggregate data suggest that the recent acceleration in euro area house prices currently implies a slight worsening of housing affordability for buyers. For owners, whose debt servicing burdens have declined, the opposite is true. For tenants, rental prices have remained relatively subdued and, to date, have not significantly changed affordability. The latest available microdata do not point to increases in the share of households “overburdened” by housing costs. This offers another perspective that affordability may, thus far, have been little affected.

Article

1 Labour supply and employment growth

By Katalin Bodnár

This article examines the main factors behind the recent changes in euro area labour supply and how they have influenced employment developments. It finds that the increasing supply from older people and women, as well as immigration, have had a significant influence on employment growth during the economic recovery. Both migration and the numbers of older people and women in or seeking work have been driven by long-term trends and structural changes, while migration has also been affected by several cyclical factors. In the medium to longer term, labour supply is expected to decline as the population ages. This calls for policies to support labour force and employment growth, for example by helping the long-term unemployed, migrants and other groups whose participation rates remain low, to enter or return to the labour market, or find jobs that better match their skills.

1 Introduction

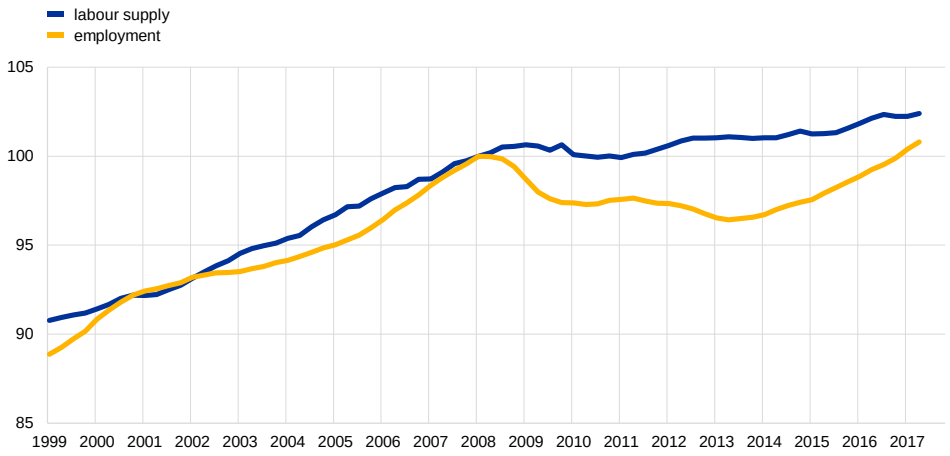
Labour supply in the euro area has been increasing and its composition changing. Although labour supply growth in the euro area slowed down after the start of the financial crisis, the labour force is now 2% larger than before the crisis (see Chart 1). Three main factors have contributed to the increase in the euro area labour supply in the last few decades: an increasing number of older people and women seeking or in work, and immigration.[19] These changes have been influenced by several structural factors, for example the rising pension age, the increasing educational level of the population and the opening of the labour markets to migrants, coupled with strong labour demand in some euro area countries.

[19] See the box entitled “Recent developments in euro area labour supply”, *Economic Bulletin*, Issue 6, ECB, 2017.

Chart 1

The development of labour supply and employment in the euro area

(index: Q1 2008=100)



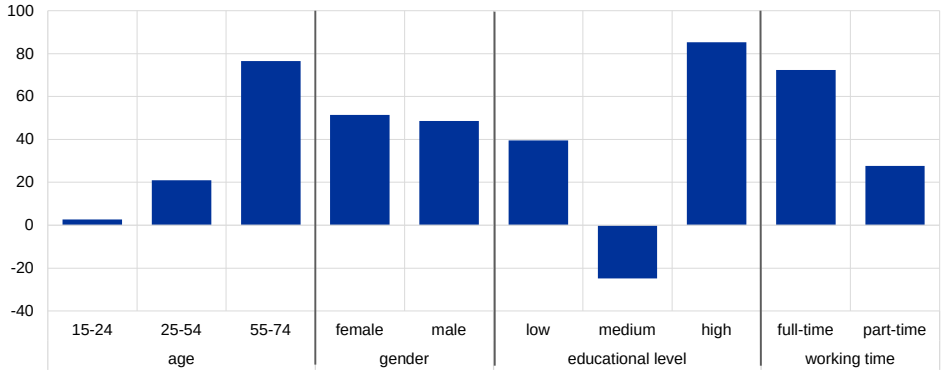
Sources: Eurostat (national accounts and European Union labour force survey).

The changes are also reflected in the composition of recent euro area employment growth. Over the recovery, which has created a significant increase in employment, three-quarters of the employment growth in the euro area has been provided by older workers. As far as the gender composition is concerned, more than half of the employment growth is accounted for by women. In some countries, immigration has also provided a considerable proportion of employment growth. These changes in the composition of employment coincide with a strong reliance on part-time contracts[20] and increasing employment of the highly skilled (see Chart 2).

Chart 2

Composition of the cumulative increase in the euro area employment over the economic recovery period

(percentages of total employment growth between the second quarter of 2013 and the second quarter of 2017)



Source: Eurostat (European Union labour force survey).

[20] The terms part-time and full-time employment are used on the basis of the EU labour force survey concepts. The distinction between full-time and part-time work is generally based on a spontaneous response by the respondent, except in the Netherlands where a 35-hour threshold is applied. For more details see the survey's methodological page.

This article considers the degree to which the developments in employment are driven by labour supply. A better understanding of the linkages between labour supply and employment is important for assessing employment growth over the recovery period, while it can also help in projecting future employment developments. The remainder of the article is organised as follows. Section 2 focuses on the reasons behind the increasing share of older workers among the employed, as well as the characteristics of the older workers. Section 3 describes the differences between male and female employment and the driving factors. A box explores the channels through which the changing composition of employment affects wage developments. Section 4 focuses on the drivers of part-time employment, which is linked to both ageing and gender issues. This is followed by an examination of recent trends in migration in the euro area and the conclusions.

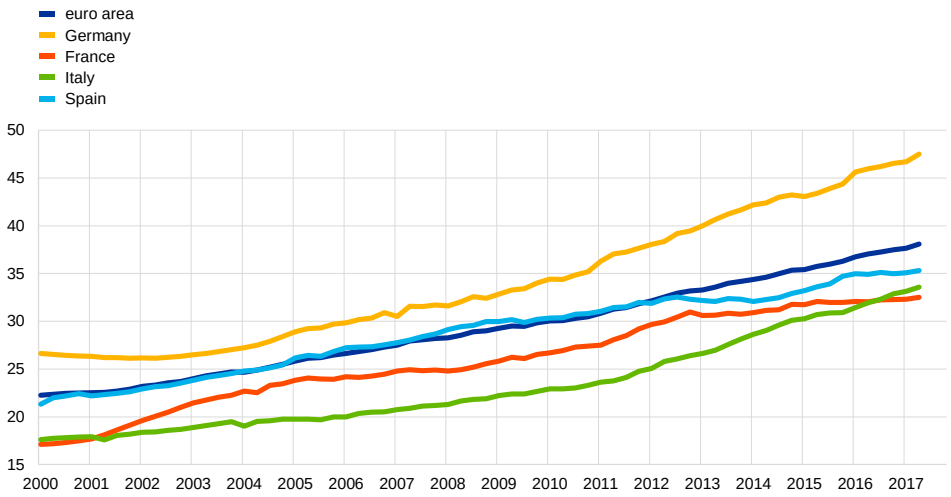
2 Older workers

The composition of the working age population is changing, with the share of people over 55 rising. As life expectancy is increasing and fertility rates are very low, the share of older people in the overall population is growing. The number of those already in retirement is on the rise – as reflected in increasing old age dependency ratios, i.e. the ratio of people over 65 to those of active age. In the working age population too, the share of older people (those who are above 55) has been increasing in all euro area countries as the baby boom generations have entered this category.[21]

Chart 3

Participation rates of the 55-74 age group in the euro area and its largest member countries

(percentages of the population aged 55-74)



Source: European Union labour force survey.

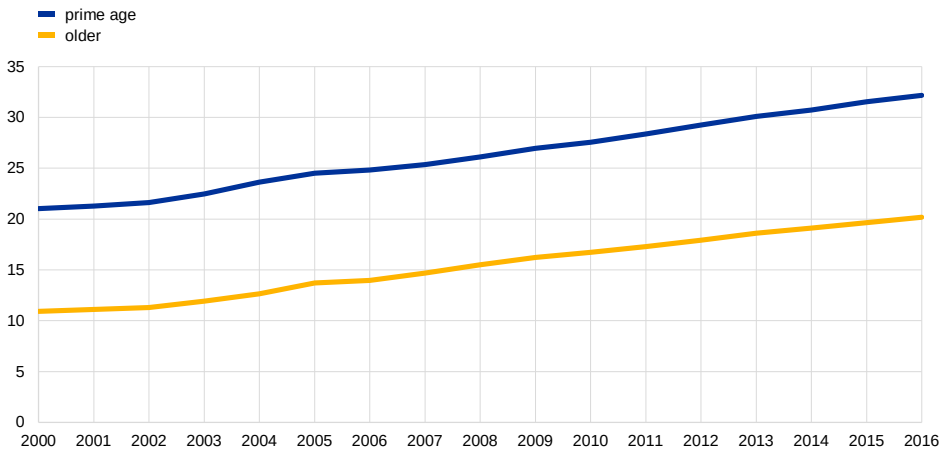
[21] See also "Population structure and ageing", *Eurostat Statistics Explained*, June 2017.

The labour market participation rate of older people is also increasing very strongly.[22] The participation rate of those above 55 is following a steady upward trend (see Chart 3). Increasing life expectancy as well as sustainability considerations after the start of the financial crisis led pension reforms to be implemented in several euro area countries: Germany and France before the crisis, and Italy and Spain after the crisis.[23] These reforms increased the statutory pension age or made early retirement difficult and thus had an upward impact on the participation rates of older people.[24] Increasing life expectancy also influences the length of active life through other factors, as people may decide to stay longer in work to avoid very long inactive periods and protect themselves against the risk of poverty in old age. Finally, participation rates are increasing with the level of education. As the share of older people with higher education is rising, compositional effects are also playing a role in driving up the participation rate of older people (see Chart 4).

Chart 4

The share of the population with tertiary education by age category in the euro area

(percentages of the respective population)



Source: European Union labour force survey.
Note: Prime age: 25-54 years, older: 55-74 years.

Rising participation rates and demographic changes are the primary drivers of increasing employment among the older population. For those aged 55 and over, the increasing participation rate explains most of the employment increase both before and after the crisis; a further, considerable portion of the increase is due to population changes (see Charts 5 and 6). However, the employment to labour force ratio is still below its pre-crisis level in most age groups, including the over 55s,

22 The participation rate is defined as the sum of the employed and the unemployed divided by the working age population.

23 See "The 2018 Ageing Report: Underlying Assumptions & Projection Methodologies", *Institutional Paper*, No 065, European Commission, 2017. In addition, Beetsma, R., Romp, W. and van Maurik, R., "Drivers of pension reform measures in the OECD", VOX, 13 November 2017 shows that pension reforms are linked more closely to the cyclical position of the economy than to projected demographic developments.

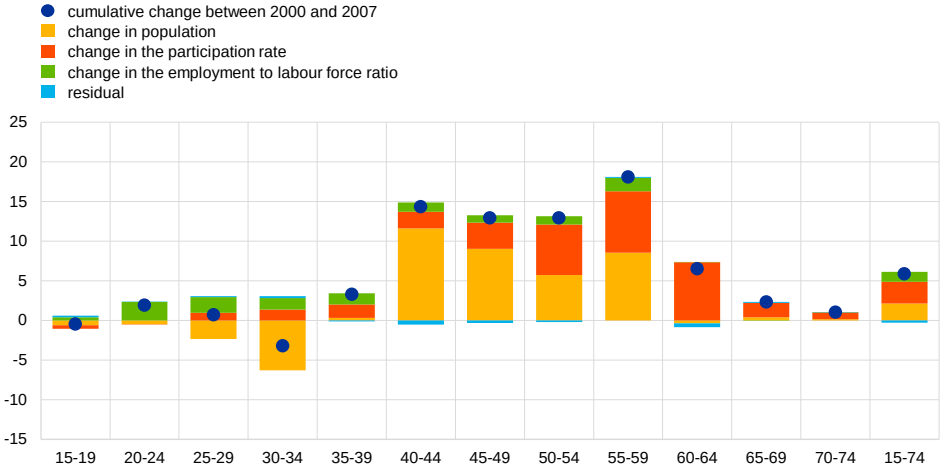
24 The statutory pension age has increased in all of the largest euro area countries. The effective pension age, however, has only increased significantly in Germany, from 59 years in 1996 to 62.7 years in 2014 (OECD statistics).

despite a general increase since 2013. To sum up, pension reforms, the increasing educational level among older people and the growing number of older people are the main explanatory factors behind the strong rise in employment in this age group. These results do not necessarily mean, however, that employment of the older population is driven exclusively by increasing labour supply, as the participation rate, at least, may also increase as a response to rising labour demand.

Chart 5

Composition of the change in employment by age category, 2000-07

(percentages of the respective population in 2000 and percentage point contributions)

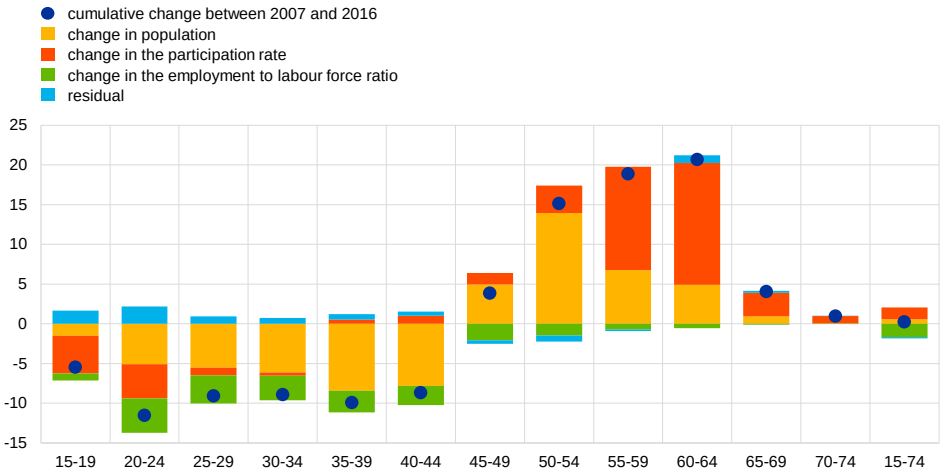


Sources: Eurostat and ECB calculations.

Chart 6

Composition of the change in employment by age category, 2007-16

(percentages of the respective population in 2007 and percentage point contributions)



Sources: Eurostat and ECB calculations.

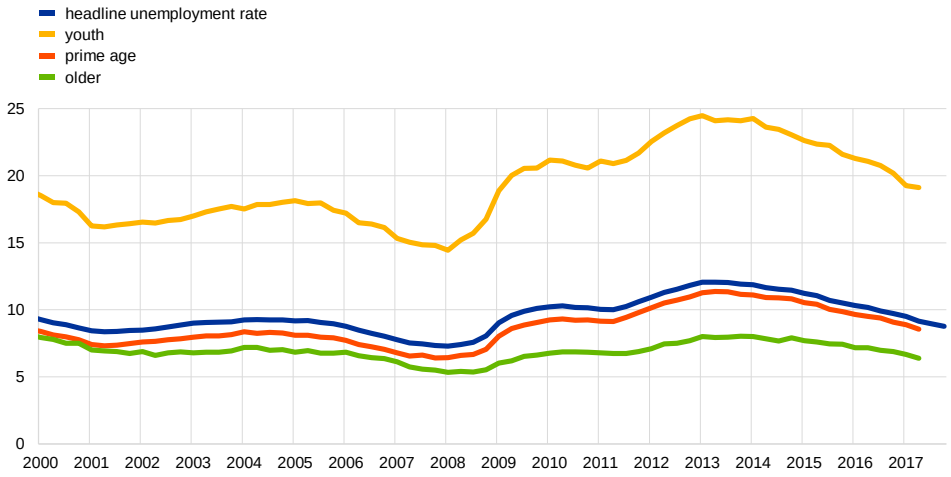
Despite the increasing labour supply in older age groups, their unemployment rate has remained low, even during the financial crisis (see Chart 7). The unemployment rates of prime-age, i.e. 25-54 year-olds, and older persons were relatively close before the crisis. Since then, however, they have developed

differently. Patterns have differed from country to country. In Germany, the unemployment rate of older people was well above the prime-age unemployment rate before the crisis, but the gap between the two rates had started to decline at the end of the 1990s and has closed in recent quarters. The unemployment rate of older people was kept high in part by the generous benefit system, while its decline has reflected the impact of several pension and labour market reforms.[25] In other large euro area countries, the unemployment rate among older people was well below that of the prime-age group before the crisis. One explanation for the generally low unemployment rates of older people relative to other groups is that older people tend to move between employment and inactivity rather than employment and unemployment. As a consequence, labour supply and employment move even more closely together in this age group than in others.[26]

Chart 7

Unemployment rate by age category in the euro area

(percentages of the respective labour force)



Source: European Union labour force survey.
Note: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years, headline unemployment rate: 15-74 years.

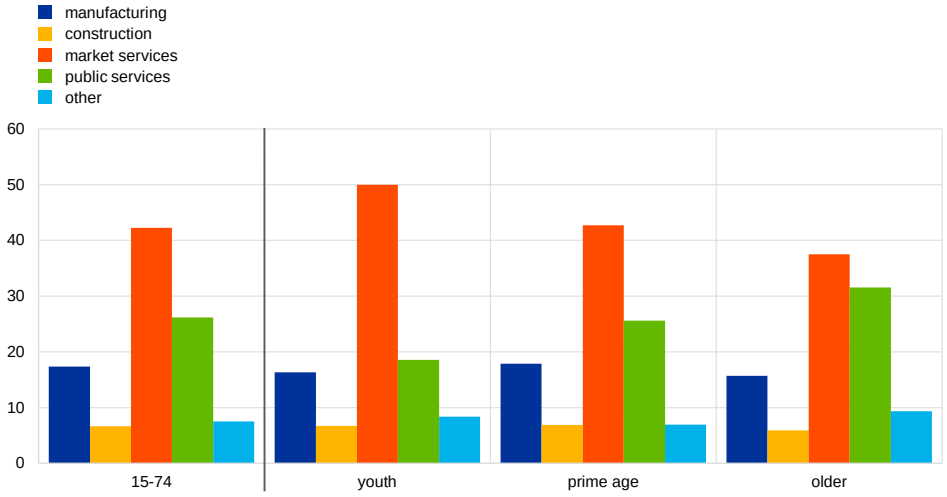
25 Steiner, V., "The labor market for older workers in Germany", *Journal for Labour Market Research*, Vol. 50, No 1, August 2017, pp. 1-14.

26 The low unemployment rate among older people has meant that their increasing population share has also contributed to the decline in the economy-wide unemployment rate. Barnichon R. and Mesters, G., "How Tight Is the U.S. Labor Market?", FRBSF Economic Letter, 20 March 2017 shows that changes in the composition of the labour force have influenced the dynamics of the unemployment rate in the United States as the share of groups with a high (low) unemployment rate is declining (increasing).

Chart 8

Sectoral composition of employment by age category in the second quarter of 2017

(percentages of the employed population in the respective age category)



Source: Eurostat.
Note: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years, headline unemployment rate: 15-74 years.

Older workers are more likely to be employed in less cyclical sectors and positions than others. The older generations are more concentrated in public services, particularly in health and social services and in public administration, and are represented to a lesser extent in most market services sectors, than prime-age workers (see Chart 8). At the same time, the share of older workers increased in all of the sectors in the last decade. Older workers, especially women, are more likely to work in part-time positions than prime-age workers (see Chart 9), and they account for the bulk of the increase in part-time employment over the recovery period (see also Section 4).Temporary employment[27] is less likely for older than for prime-age workers, and employment growth in the older age category over the recovery has been primarily driven by permanent contracts. Together these factors suggest that older workers are more likely to work in less cyclical sectors and positions than other workers. Furthermore, some of the differences may also be related to the skills demanded: in some fast-growing services sectors the need for skills in up-to-date technologies is greater than in public services. An important question here is the relationship between the increasing employment of older workers and the employment of younger ones. There is no evidence that older workers crowd out younger workers in the longer term, while the employment of older workers may help to replace the declining labour supply in the younger age groups.[28] Moreover, the

27 Temporary employment means work under a fixed-term contract, as against permanent work, where there is no end date.

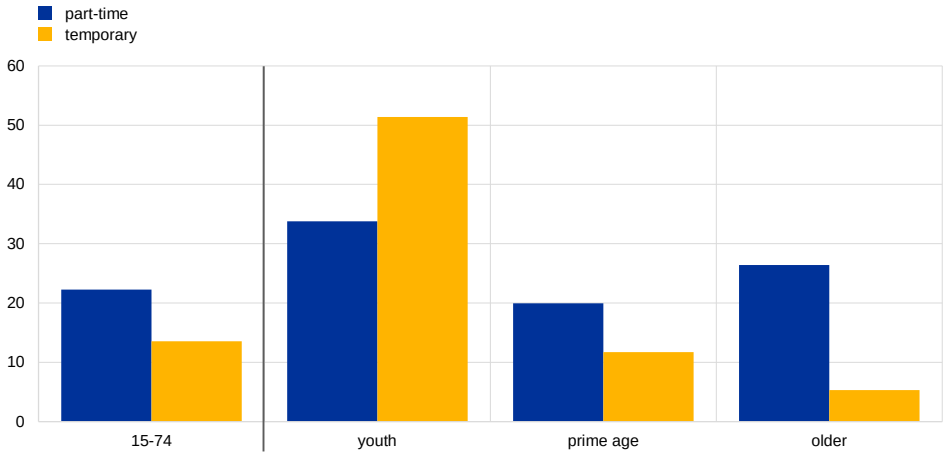
28 The empirical literature finds no evidence of older workers crowding out younger workers in the longer term. See for example the box entitled "The lump of labour fallacy: a reassessment for the euro area", in "Comparisons and contrasts of the impact of the crisis on euro area labour markets", *Occasional Paper Series*, No 159, ECB, February 2015; Banks, J., Blundell, R., Bozio, A. and Emmerson, C., "Releasing Jobs for the Young? Early Retirement and Youth Unemployment in the United Kingdom", in Gruber, J. and Wise, D.A. (eds.), *Social Security Programs and Retirement around the World: The Relationship to Youth Employment*, University of Chicago Press, 2010; Jousten, A., Lefebvre, M., Perelman, S., Pestieau, P., "The Effects of Early Retirement on Youth Unemployment: The Case of Belgium", IMF Working Paper No 08/30, 2008.

ageing of the population has an indirect upward impact on overall employment growth through an increasing demand for services.[29] Finally, it is very likely that, with working lives becoming longer, older workers are staying longer in their positions than previously. Policy measures also support this in some countries. This may also have important implications for the wage development of this age group, as those entering a new position at older ages have different wage levels, wage growth and wage bargaining power from those who remain in their positions. See also the box entitled “Changes in employment composition and their impact on wage growth: an example based on age groups” in the next section.

Chart 9

Part-time and temporary employment by age category in the second quarter of 2017

(percentages of total employment in the respective age group)



Sources: Eurostat and ECB calculations.
Note: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years, headline unemployment rate: 15-74 years.

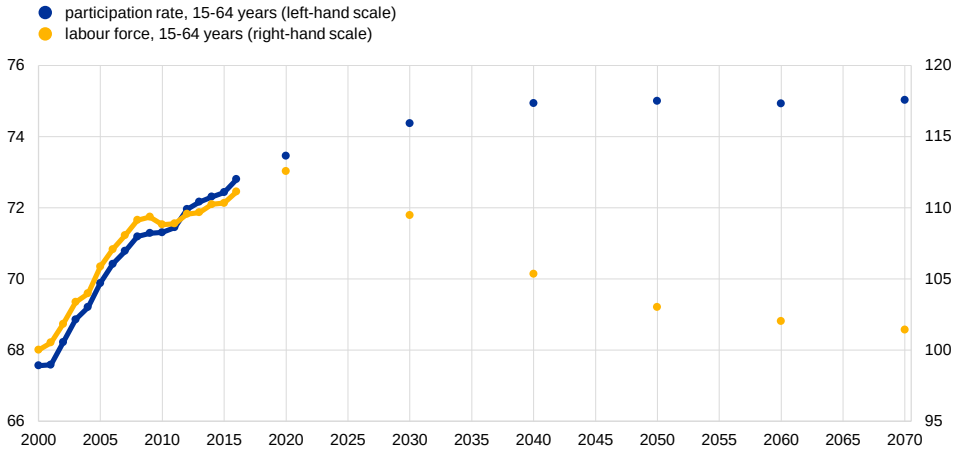
Looking ahead, the changing age composition of the euro area population will imply a decline in the labour supply. While until now increasing participation rates have been able to counterbalance the declining numbers entering the labour force, this will not be the case in the future. Labour supply is projected to decline in the medium term (see Chart 10). This, together with the increasing share of the population already retired, will be a major challenge. While there is room for further policy measures to help groups still with low participation rates to enter or stay in the labour market, these may also primarily be the older age groups, which may result in a further increase in the share of older people in the labour supply.

[29] See Bobeica, E., Lis, E., Nickel, C., Sun, Y., “Demographics and inflation”, Working Paper Series, No 2006, ECB, January 2017.

Chart 10

Projections for the euro area labour force and participation rate

(participation rate: percentage of the labour force; labour force: index: 2000=100)



Source: European Commission (2018 Ageing Report).

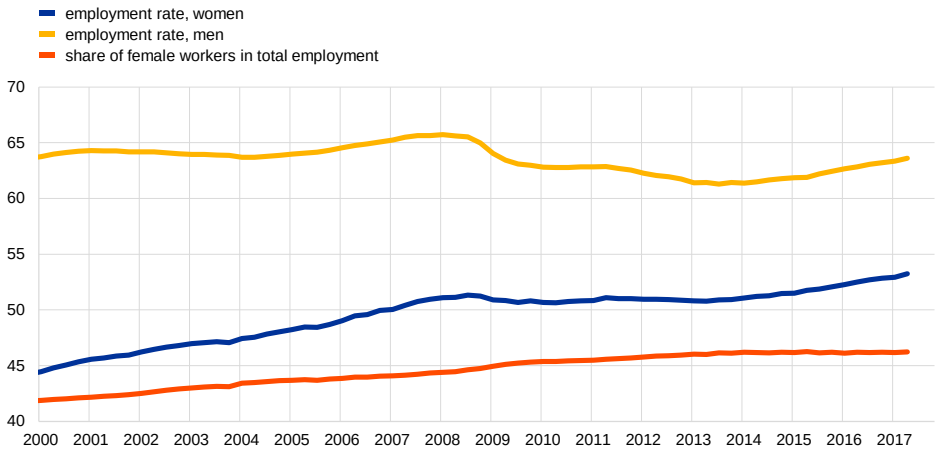
3 Gender composition of recent employment growth

The share of female workers in the euro area has risen to a historically high level. The gap between male and female employment rates (the ratio of the employed to the working age population) has narrowed considerably in the last two decades. This was driven primarily by a strong increase in the female employment rate (the ratio of employed women to the female working age population), and to a smaller extent by a declining employment rate for men (the ratio of employed men to the male working age population) over the crisis period (see Chart 11). As a consequence, the share of women in total employment is now close to 50%.

Chart 11

Female and male employment rates and the share of female workers in total employment in the euro area

(employment rates: employment as a percentage of the respective working age population; share of female workers in total employment: percentages)



Source: Eurostat.
Note: Refers to the age group 15-74.

Female employment is influenced by several structural factors. The increasing employment of women is closely linked to their rising labour market participation over the last few decades. This, in turn, reflects the strongly increasing educational level of women, policy measures to increase female employment as well as the greater role played by part-time employment, which is discussed in the next section. Policies that have been found to be related to the participation of women include providing childcare services to working parents with small children, tax changes and leave policies.[30] Female participation rates are also influenced by cyclical factors, namely discouragement (i.e. when the unemployed give up searching for work because they think that they will not find any) and the "added worker" effect (the tendency for women to enter the labour market when their male partner loses his job or withdraws from participation), but these have had a smaller impact on female labour supply and employment in the euro area than structural factors.

Cyclical factors have a larger influence on male employment. The male participation rate is already very high at 70% in the euro area, compared with 59% for women, and has remained broadly flat at that level in the last two decades with only a minor impact overall from the crisis.[31] The dynamics of male employment are thus influenced primarily by demographics – the increasing number of older male workers and declining number of younger workers – and cyclical labour demand (as measured by the ratio of employment to the labour force), to a larger degree than the employment of women (see Chart 12).

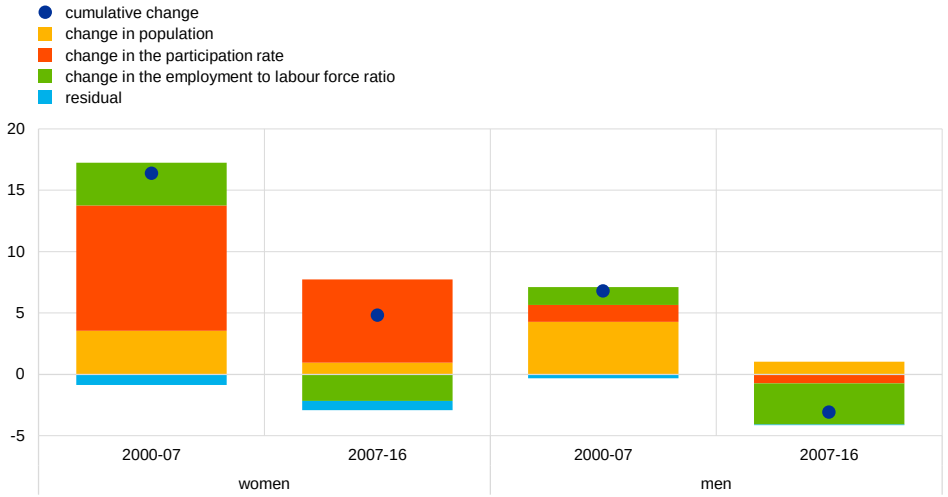
30 See Thévenon, O., "Drivers of Female Labour Force Participation in the OECD", *OECD Social, Employment and Migration Working Papers*, No 145, OECD, 2013.

31 This is different from the developments seen in the United States, where the participation rate of prime-age men has declined in the last six decades. This is found to be explained by reductions in the demand for labour, mainly for the low-skilled. See *The long-term decline in prime-age male labor force participation*, Executive Office of the President of the United States, June 2016.

Chart 12

Composition of the change in employment by gender before and after the crisis

(percentages of the working age population by gender in 2000 and 2007 and percentage point contributions)



Sources: Eurostat and ECB calculations.
Note: Refers to the age group 15-74.

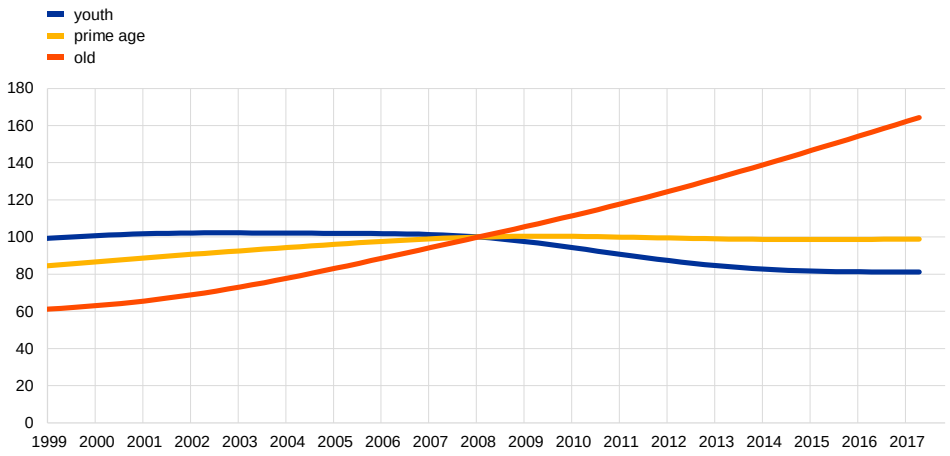
Looking ahead, the older generations are likely to continue to be the main source of further employment growth for both genders. A trend-cycle decomposition of employment levels by gender suggests that the trend component for older female workers has been increasing much more steeply than that for older male workers (see Charts 13 and 14).[32] This is due to differences in educational level: the level of education is increasing more steeply for older women than for older men; thus, labour market participation and employment are also increasing faster for women. The rise in prime-age female employment has already come to a halt, however, so further increases in female employment may come primarily from older women in the future.

[32] The trend components of employment by age and gender were calculated using a Hodrick-Prescott filter, using a lambda of 1600. The filtering techniques imply end-point uncertainties.

Chart 13

Trend component of female employment by age category

(index: Q1 2008=100)

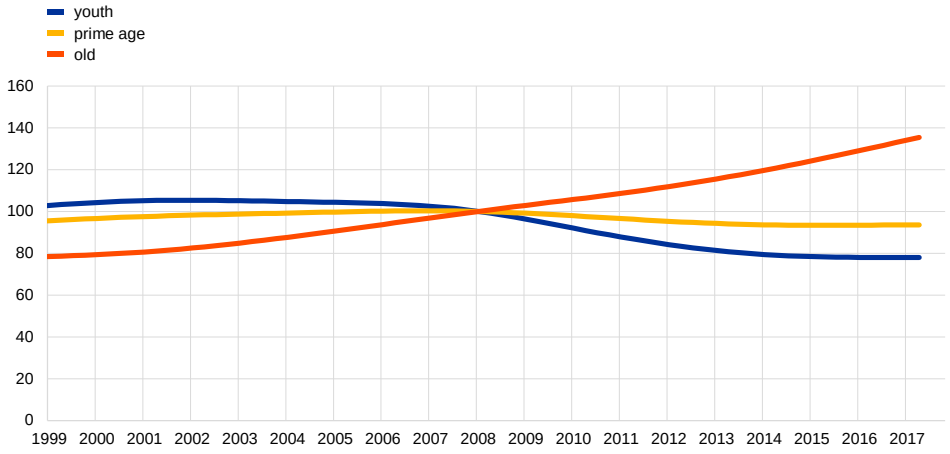


Sources: Eurostat and ECB calculations.
Notes: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years. Trend components calculated using a Hodrick-Prescott filter.

Chart 14

Trend component of male employment by age category

(index: 2008=100)



Sources: Eurostat and ECB calculations.
Notes: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years. Trend components calculated using a Hodrick-Prescott filter.

Box 1

Changes in employment composition and their impact on wage growth: an example based on age groups

By Maarten Dossche and Gerrit Koester

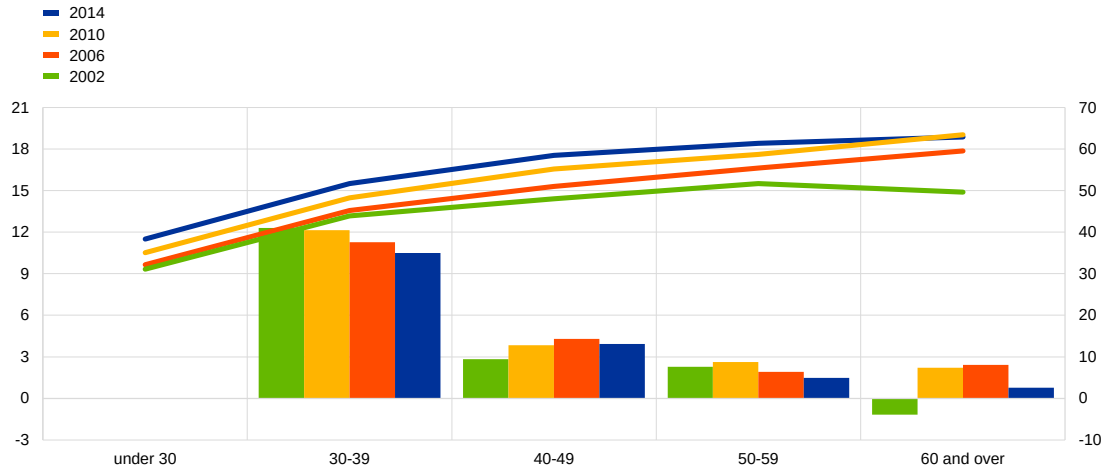
Changes in the composition of employment can have knock-on effects on average wage growth. This is most evident in case of sectoral shifts, which change the employment shares of sectors that have different wage levels and/or dynamics. For example, in some services sectors wages tend to be lower and to grow more slowly than in industry. But other compositional changes, such as those related to the personal characteristics of employees, can also have an effect.

One important factor for wage growth is the age composition of the workforce. Data from the structure of earnings survey[33] show that wages tend – on average – to be higher for older employees, and to increase particularly strongly in the early years of a career, and less so in the later phases. Different vintages of the survey indicate that this relationship between age and salary has been relatively stable over the last 15 years. Changes in the age structure of employment can therefore have substantial effects on wage growth. The main channel for such effects seems to be the different wage levels, given that the average hourly wage of an employee who is 60 or older (see Chart A) is more than 50% higher than that of an employee under 30. The fact that wage growth tends to decrease with age works in the opposite direction. However, this effect tends to be more gradual and is therefore often less important – especially in times of large cyclical fluctuations in participation rates or employment across age groups.

Chart A

Mean hourly earnings by age group

(left-hand scale: wage levels in euro; right-hand scale: percentage changes versus the preceding age group)



Sources: Eurostat (structure of earnings survey) and ECB calculations.
Notes: The lines refer to the left-hand scale and show hourly earnings (in euro) for different age groups across different vintages (2002, 2006, 2010 and 2014) of the structure of earnings survey. The bars refer to the right-hand scale and reflect the percentage difference in hourly earnings versus the preceding age bracket across the different vintages of the survey.

In the euro area, the steady increase in the share of older employees before and after the crisis has supported average wage growth. The ageing of the baby boom generation and the strong increase in the participation rates of older people (see the discussion in Section 2 of the main text) have pushed up the share of older workers in employment, and, as these are typically in higher wage categories, average wage growth as well. However, especially in recent years, the upward effect of an increase in the share of employees above 50 has been more muted as it has to a large extent reflected just the ageing of employees previously in the 40-49 age group (see Chart 6 in the main text), which has a wage level very similar to those of the age groups above 50.[34]

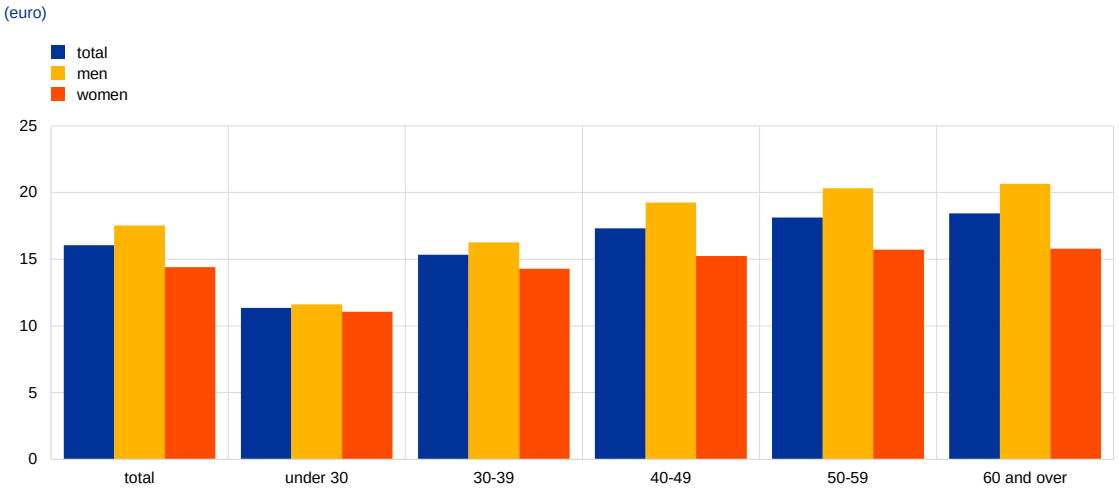
33 The structure of earnings survey is a four-yearly enterprise survey on the structure of earnings in the EU (2002, 2006, 2010 and 2014). It provides information on the link between the level of gross earnings and the individual characteristics of employees (gender, age, occupation, educational level). It also includes information about employers (economic activity, size of the enterprise, etc.). Gross earnings refer to the gross wages and salaries earned by full-time and part-time employees per hour in the reference month (October).

34 For evidence from the United States on this aspect, see Rich, R., Tracy, J. and Fu, E., "U.S. Real Wage Growth: Slowing Down With Age", *Liberty Street Economics*, Federal Reserve Bank of New York, 2016.

Additionally, there was a cyclical decrease in the share of younger employees during the crisis. This initially had an upward effect on wage growth: during the crisis the young and typically less well-paid workers were the first to be laid off – which pushed up average wages. In countries such as Spain this effect was relatively pronounced. Since 2013, however, the reduction in employment of the younger age groups in the euro area has been reversed (see Chart 7 in the main text), leading to negative effects on average wage growth. This downward impact on wage growth is likely to persist for some time as the share of young people in employment can be expected to rise further.

Chart B

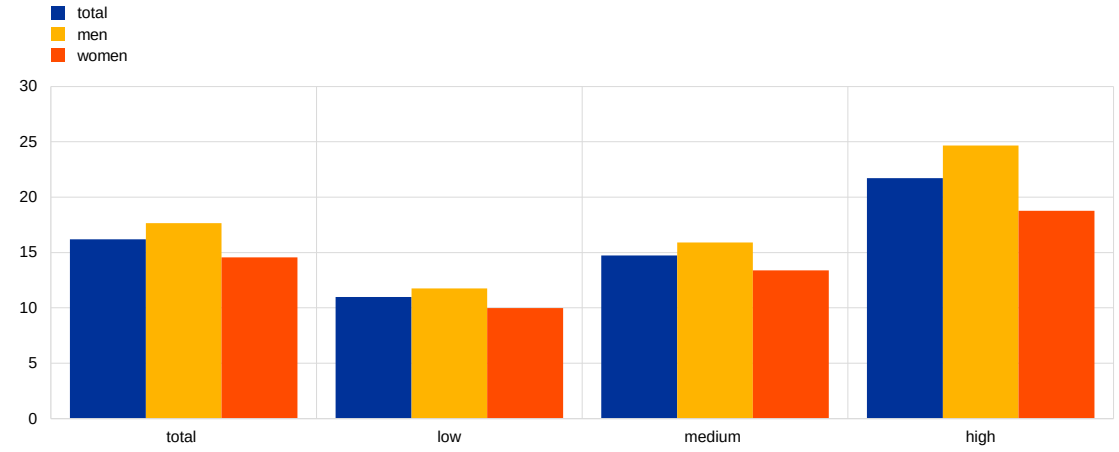
Mean hourly earnings by age and gender



Sources: Eurostat (structure of earnings survey) and ECB calculations.
Note: Data from the 2014 vintage of the structure of earnings survey.

Chart C

Mean hourly earnings by gender and educational attainment



Sources: Eurostat (structure of earnings survey) and ECB calculations.
Note: Data from the 2014 vintage of the structure of earnings survey.

However, an assessment of the effects of employment composition on wages must take a broad range of characteristics into account. These include not only age but also the level of

education, skills, gender, nationality and type of employment, which all have an influence on individual wages. This requires granular data and is complicated by the fact that the distributions of these characteristics are often correlated. This can be illustrated, for example, by the fact that the wage gap between men and women tends to increase with age (see Chart B). It also increases with education (see Chart C). To avoid a biased assessment of the total compositional effect of employment on wage growth requires an econometric estimation of the marginal effect of each of these different characteristics.[35] In the literature, one important approach aimed at making a comprehensive assessment of compositional effects is based on micro data, such as the EU statistics on income and living conditions, which allows the link between a broad range of personal characteristics and wage developments to be analysed.[36]

4 Labour supply factors behind part-time employment

One-fifth of employment in the euro area is now part-time. Part-time employment is following a long-term upward trend, which did not stop during the crisis but moderated somewhat in the subsequent recovery (see Chart 15). Increases have been seen in virtually all euro area countries, for both genders and all broad age groups. This change is also reflected in the declining trend of average hours worked.[37] Over the recovery, almost a third of employment growth has come from part-time positions, contributing to the strong dynamics of headcount employment. To better understand developments in headcount employment as well as changes in hours worked, it is important to examine the factors behind the dynamics of part-time employment.

35 See for instance Oaxaca, R., "Male-Female Wage Differentials in Urban Labour Markets", *International Economic Review*, Vol. 14, 1973, pp. 693-709.

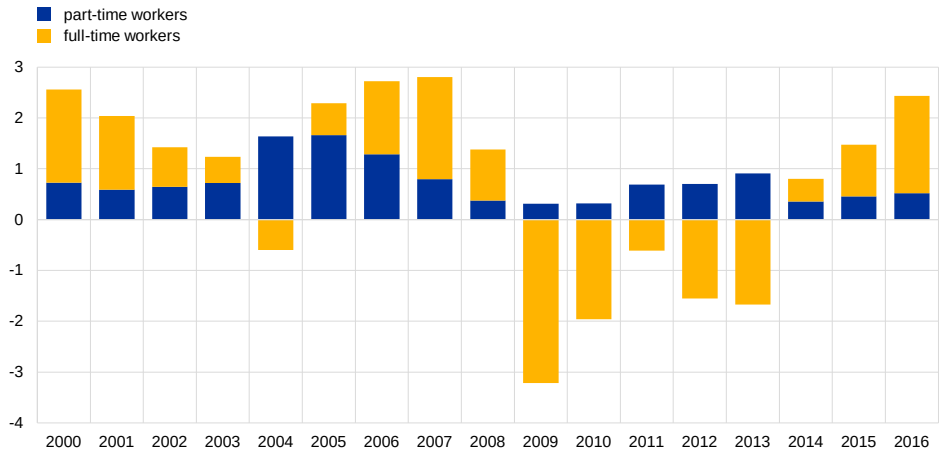
36 See for example Verdugo, G., "Real wage cyclicality in the Eurozone before and during the Great Recession: Evidence from micro data", *European Economic Review*, Vol. 82, 2016, pp. 46-69. These micro data are only available with a considerable time lag, however.

37 See the box entitled "Factors behind developments in average hours worked per person employed since 2008", *Economic Bulletin*, Issue 6, ECB, 2016.

Chart 15

Full-time and part-time employment in the euro area

(annual changes, millions)



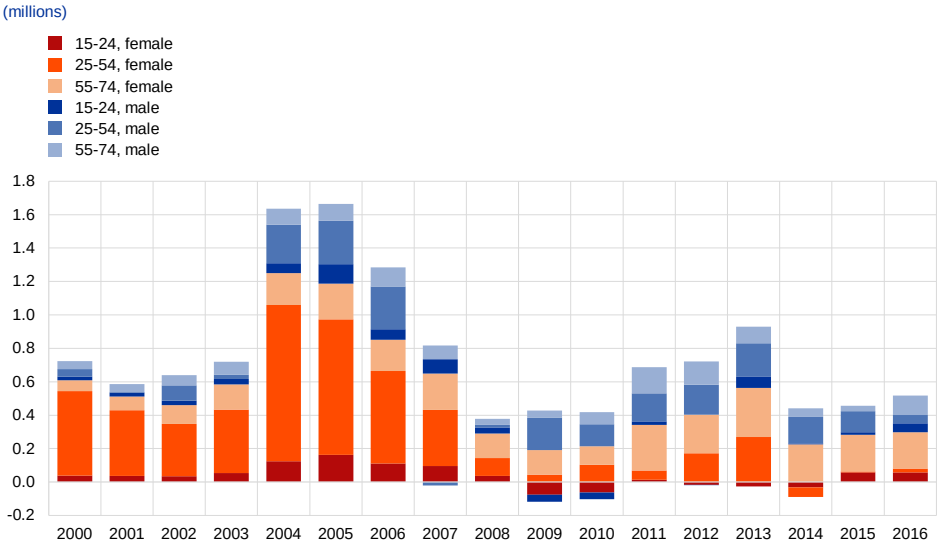
Source: Eurostat.

Cohort effects have a major influence on the dynamics of part-time employment. Before the crisis, prime-age female workers made the largest contribution to the increase in part-time employment, but this contribution declined considerably over the recovery, and growth in prime-age female employment is now being driven by full-time positions. Older workers are making a large contribution to the increase in part-time employment, which is thus used as a way to stay in the labour market when close to or beyond the statutory retirement age.[38] Moreover, prime-age male workers are continuing to take up part-time employment, likely reflecting, at least partially, better work-life balance opportunities (see Chart 16).

[38] See Aranki, T. and Macchiarelli, C., "Employment duration and shifts into retirement in the EU", *Working Paper Series*, No 1517, ECB, February 2013.

Chart 16

Composition of part-time employment growth in the euro area by age and gender



Source: Eurostat.
Note: The data are influenced by structural breaks in 2003 in France, in 2004 in Italy and in 2005 in Spain.

Part-time employment is closely linked to the increasing supply of female and older workers. In theory, the drivers of part-time employment may be cyclical or structural, and both can be related to labour demand or labour supply.[39] The most important structural factors are, on the demand side, the increasing share of market and public services in the economy (as these sectors have a higher propensity for part-time employment), and, on the supply side, the increasing participation of women and older workers. All of these factors have followed similar increasing trends in the euro area (see Chart 17). However, it is difficult to find the direction of causality among them, as they may reinforce each other. While these structural factors, together with labour market measures to promote flexible forms of employment, are likely to have played a major role, cyclical factors have also contributed during both the crisis and the recovery. Indeed, in a recession, companies frequently use part-time employment (i.e. by reducing the hours worked by incumbent workers) to hoard labour. They can thus decrease their firing, rehiring and training costs over the business cycle and prevent erosion of the skills of their employees. Labour hoarding indeed played a role in increasing part-time employment during the crisis.[40] Finally, part-time labour supply also changes with the business cycle. When the unemployment rate is high, finding any job may become more important than finding a full-time job. Indeed, the numbers of unemployed looking only for full-time work decreased after 2008, while the numbers of those who had no clear preference increased substantially (see Chart 18). Overall, the rise in part-time employment from 2008 was primarily demand rather than supply-driven, as

39 Bodnár, K., "Part-time employment during the crisis", *MNB Bulletin*, Magyar Nemzeti Bank, March 2014.

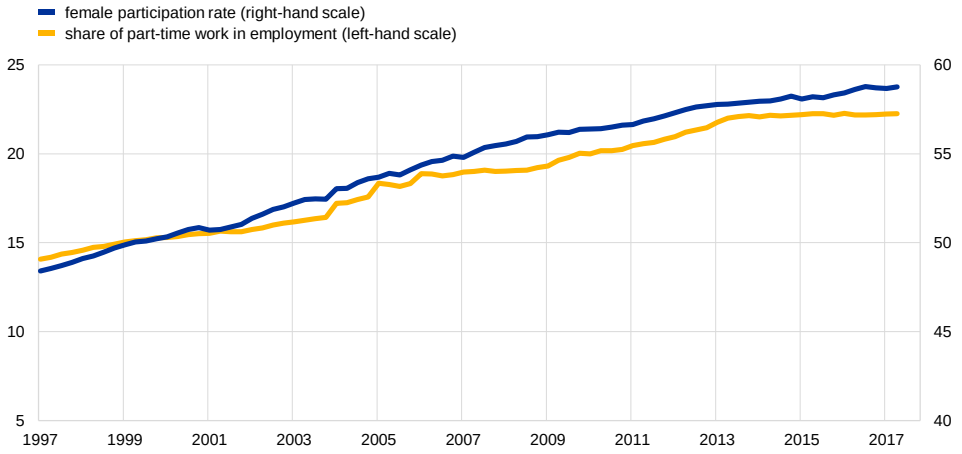
40 See for example Lydon, R., Mathä, T., Millard, S., "Short-time work during the great recession – evidence from 20 countries", mimeo.

shown by the increase in underemployment.[41] Underemployment has started to decline over the recovery, which means that part-time employment is increasing again on a voluntary basis.

Chart 17

Part-time work and the female participation rate in the euro area

(left-hand scale: percentage of employment; right-hand scale: percentage of working age population)

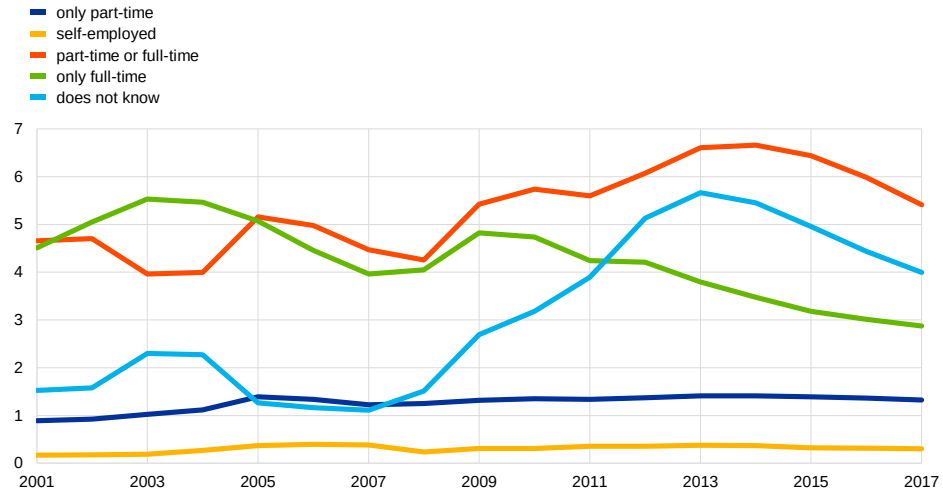


Source: Eurostat.

Chart 18

Type of employment sought by unemployed people in the euro area

(millions)



Source: Eurostat.
Note: 2017 data refer to the first two quarters only.

Looking ahead, the increase in part-time employment is likely to continue, although at a moderate rate. Further increases in the labour market participation of older workers as well as the continuing concentration of employment growth in services are likely to support this. At the same time, increasing labour shortages in

[41] See the box entitled "Assessing labour market slack", *Economic Bulletin*, Issue 3, ECB, 2017.

some countries and sectors may result in declining part-time employment and/or higher average hours worked.

5 The impact of migration on employment developments

The analysis of migration suffers from several methodological and data issues. First of all, it is not clear how migrants should be defined.[42] In this article, migrants are defined by citizenship, while the time spent in a country and the degree of assimilation are not taken into account. Second, data on migration are not always comparable across countries, and time series are generally short and published with a significant lag. Third, an additional problem with stock variables (as opposed to flows) is that calculating the number of immigrant workers or the size of immigrant labour supply for the euro area as a whole is virtually impossible. This is due to the lack of detailed statistics on the origin of people with a migration background. In the light of these caveats, data on migration must be assessed with caution.

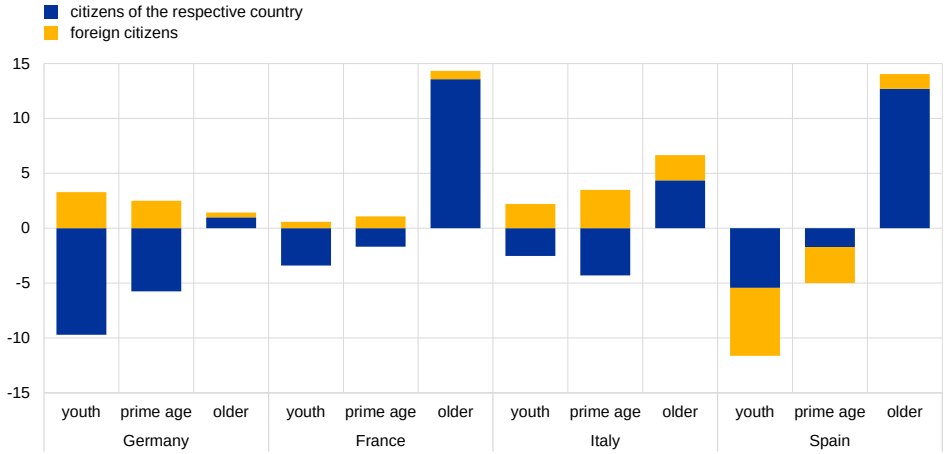
A major part of the recent population growth in several euro area countries can be linked to developments in migration. Immigration, as measured in terms of people with foreign citizenship, has had an upward impact on the growth of, particularly, the youth and prime-age population in the largest euro area countries (see Chart 19). This reflects the fact that net immigration flows have been positive in the euro area since data have been available (see Chart 20). The pattern of migration in the euro area has changed considerably in the last decade. Before the crisis, Spain was the main destination country, but recently Germany has received the largest numbers of immigrants. Several other large countries are net destination countries, while some smaller countries tend to be net senders of migrants.

[42] Place of birth or citizenship are not necessarily the right indicators to identify those who move between countries. For example, some people with a foreign passport or place of birth may have moved to the country as a child and be very similar to nationals. At the same time, people who have left their home country may return after a while and may be different from both those who had remained in the country as well as foreign migrants in terms of the characteristics important for the labour market. While the time spent in a country and the degree of assimilation would be important to take into account, data on these are usually scarce.

Chart 19

Population growth by citizenship and age in the largest euro area countries between 2009 and 2015

(percentages of the respective total population in 2009)

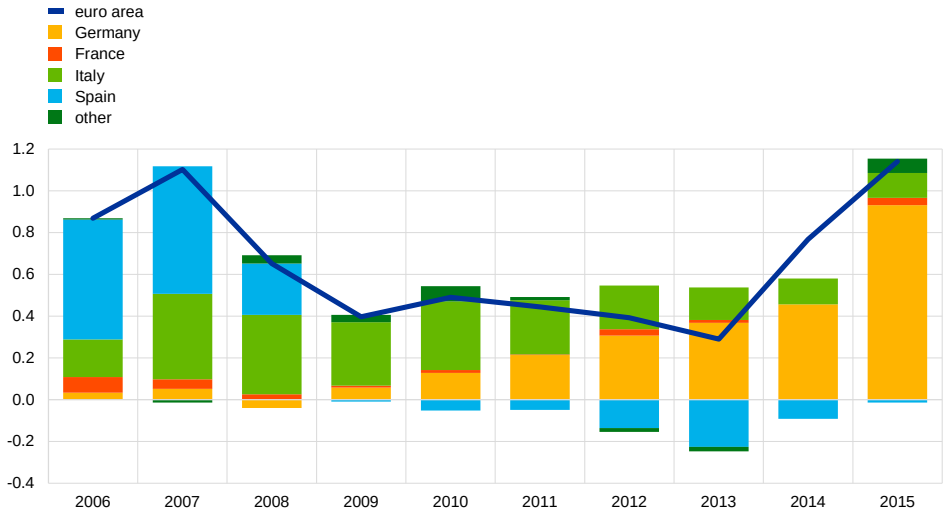


Sources: Eurostat and ECB calculations.
Note: Youth: 15-24 years, prime age: 25-54 years, older: 55-74 years.

Chart 20

Migration flows into the euro area and member countries

(millions)



Source: Eurostat.
Notes: Difference between gross immigration and gross emigration of the working age population (aged 15-64). The euro area figure is the sum of the net immigration of the member countries; thus net migration among euro area countries is netted out and the chart shows net immigration flows into the euro area. Migration data are missing for Belgium in 2008 and 2009 and for France in 2014.

Migration in the euro area has been influenced by three main factors in the last decade. First, the enlargements of the EU in 2004 and 2007 resulted in a large inflow of workers from the new to the existing Member States; the destination countries included the largest euro area countries, primarily Italy and Spain. The inflow at the euro area level continued after the start of the crisis, owing to a large degree to the opening up of the German and Austrian labour markets in 2011 and 2014 (for nationals of the countries that joined the EU in 2004 and in 2007,

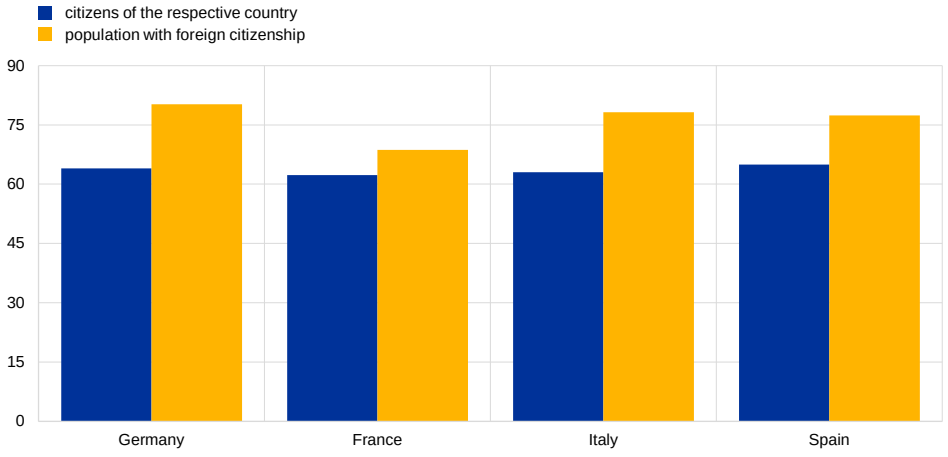
respectively). Second, the impact of the crisis on labour markets triggered large-scale outward migration from some countries. The largest contribution came from Spain, which witnessed large-scale immigration before the crisis which then became emigration, partly by pre-crisis immigrants. In other countries, emigrants were primarily nationals, whose destination was in many cases Germany, owing to high labour demand in that country. Third, the refugee crisis has resulted in a considerable increase in immigration flows into Germany, Italy and Austria, but the impact on the labour force has so far remained limited.

Immigrants in the largest euro area countries have a lower average age and slightly lower average educational level than nationals. In the largest euro area countries, a larger share of foreign citizens than of nationals are in the working age population (15-64) (see Chart 21). This also suggests that the increase in the share of older workers in the working age population would have been even more pronounced without the recent migration flows. The average educational level of foreign citizens is lower than that of nationals in all countries (see Chart 22).

Chart 21

Ratio of the working age population to total population by citizenship

(percentages of the respective population, 2016)

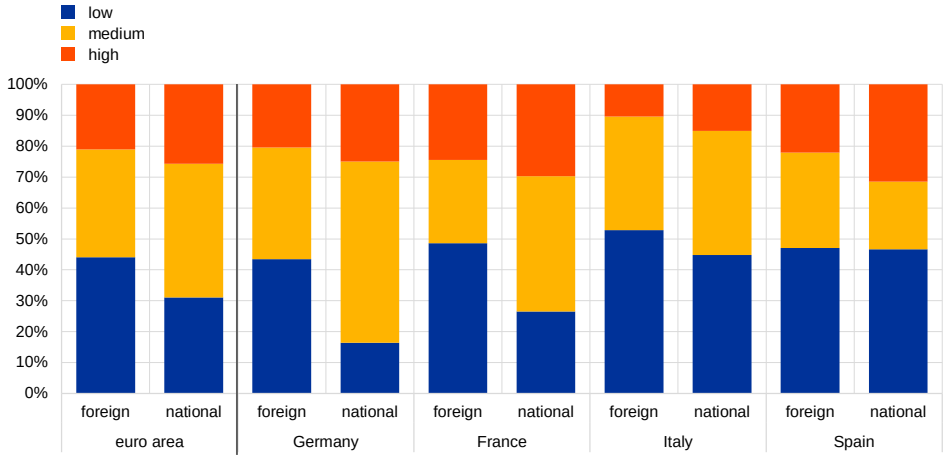


Source: Eurostat.
Note: Data are for the population aged 15-64.

Chart 22

Distribution of the working age population by educational level and citizenship

(percentages of the respective working age population, 2016)



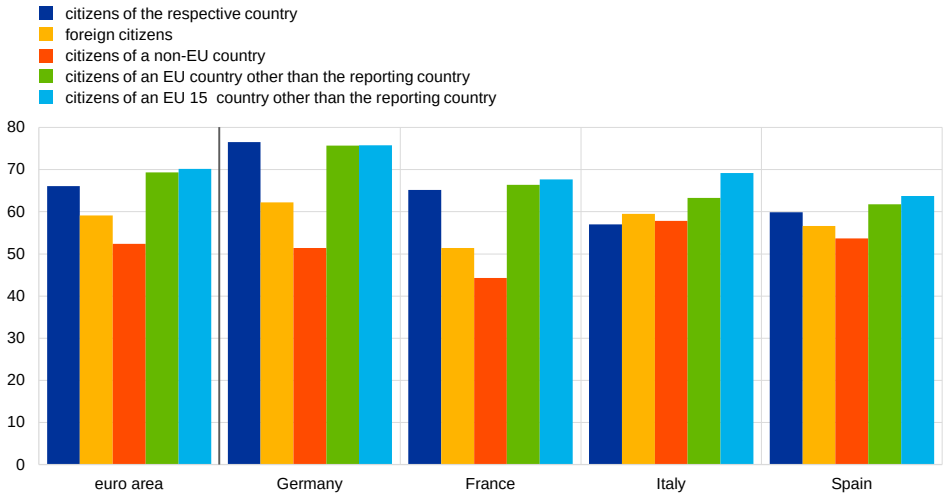
Source: Eurostat.
Note: Data are for the population aged 15-74.

Immigration in the largest countries also contributes to the growth of employment. A major part of the immigration into the euro area is aimed at finding employment. Participation and employment rates of immigrants are relatively high, but they tend to remain lower than for nationals. While those coming from EU countries have employment rates similar to or higher than those of nationals, those coming from outside the EU have lower employment rates (see Chart 23). This at least partially reflects differences in educational and skill levels as well as difficulties with the recognition of qualifications. According to the available data or, in the absence of data, estimations on the basis of the population by citizenship and the employment rates, immigration has contributed considerably to recent employment growth in the euro area.

Chart 23

Employment rates by citizenship in the euro area and its largest member countries, 2016

(percentages of the working age population)



Source: Eurostat.
Notes: "EU 15" denotes the following countries: Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom. The working age population refers to ages 15-64.

The labour market situation of immigrants in Europe is less favourable than that of nationals. Immigration in Europe is frequently associated with down-skilling – i.e. immigrants work in occupations for which a lower educational level is needed than they possess. This is usually explained by their lack of country-specific skills and experience, as well as the time required for qualification recognition. With time, the difference between the skill distributions of nationals and immigrants declines, but gaps usually remain.[43] The less favourable labour market situation of immigrants has been found to be reflected in several other indicators (for example, the share of temporary work is higher (see Chart 24), income is lower, and living conditions and children's scores in the PISA knowledge and skills survey are worse). Differences between nationals and immigrants in terms of the degree of labour market integration have been found to be inherited by or in some cases enlarged for the descendants of immigrants in Europe[44] but not in the United States.[45] This suggests that there is room for improvement in the labour market integration of immigrants in the European countries.

43 See, for example, Alcobendas, M.A. and Rodríguez-Planas, N., "Immigrants' Assimilation Process in a Segmented Labor Market", *Discussion Paper Series*, IZA, No 4394, 2009 and Fernández, C. and Ortega, C., "Labor Market Assimilation of Immigrants in Spain: Employment at the Expense of Bad Job-Matches?", *Documento de Trabajo* No 2006-21, FEDEA, 2006.

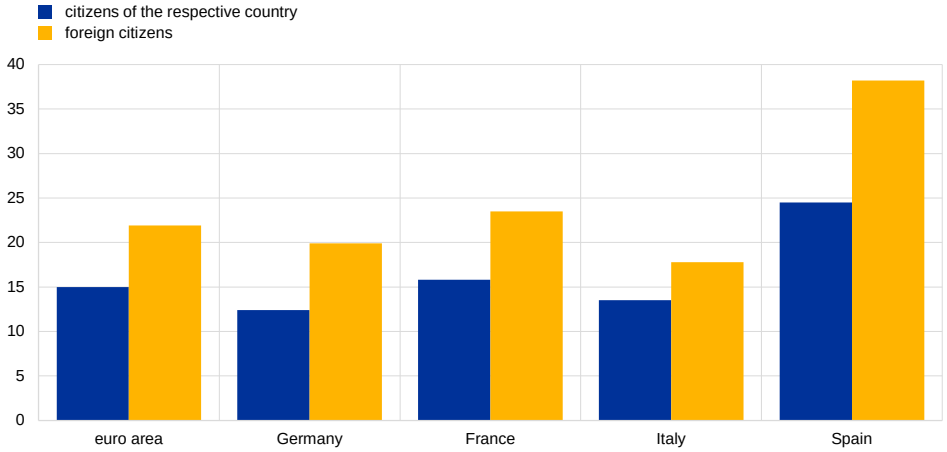
44 Gorodzeisky, A. and Semyonov, M., "Labor force participation, unemployment and occupational attainment among immigrants in West European countries", PLoS ONE, 12(5): e0176856, 2017.

45 Liebig, T. and Widmaier, S., "Children of Immigrants in the Labour Markets of EU and OECD Countries: An Overview", OECD Social, *Employment and Migration Working Papers*, No 97, 2009.

Chart 24

Share of temporary workers in employment by citizenship in the euro area and its largest member countries, 2016

(percentages of total employment)



Source: Eurostat.

Immigration has influenced labour markets in the euro area through several channels. Immigration has two main impacts: first, it influences the composition of total employment, and second, it impacts the labour market situation of nationals. Empirical papers frequently find that immigrants complement nationals in the labour market,[46] which results in an improvement of nationals' labour market situation and wages. Empirical studies in both Europe and the United States have mostly shown that immigrants bring complementary skills, ideas and connections, and fill important niches in both fast-growing and declining sectors of the economy.[47] Also, cross-country evidence in OECD countries points to overall positive effects from immigration.[48] The complementarity of immigrants may also help nationals to increase their labour market participation, hours worked or their skill level.[49]

46 See for example Ottaviano, G.I.P. and Peri, G., "Rethinking The Effect Of Immigration On Wages", *Journal of the European Economic Association*, Vol. 10(1), February 2012, pp. 152-197.

47 For evidence on European countries see, for example, D'Amuri, F., Ottaviano, G.I.P. and Peri, G., "The labor market impact of immigration in Western Germany in the 1990's", *Working Paper* No 687, Banca d'Italia, 2008; De la Rica, S., Glitz, A., Ortega, F., "Immigration in Europe: Trends, Policies and Empirical Evidence", *Discussion Paper Series*, No 7778, IZA, November 2013; "The Economic Impact of Migration", in OECD Economic Surveys: Spain 2003, OECD Publishing, 2003.

48 For a literature review, see Peri, G., "Do immigrant workers depress the wages of native workers?", IZA, 2014. See also "Is migration good for the economy?", *Migration Policy Debates*, OECD, May 2014.

49 See Cortés, P. and Tessada, J., "Low-Skilled Immigration and the Labor Supply of Highly Skilled women", *American Economic Journal: Applied Economics*, Vol. 3, No 3, July 2011; Farré, L., González, L. and Ortega, F., "Immigration, Family Responsibilities and the Labor Supply of Skilled Native Women", *The B.E. Journal of Economic Analysis & Policy*, Vol. 11, No 1, 2011; Barone, G. and Mocetti, S., "With a little help from abroad: The effect of low-skilled immigration on the female labour supply", *Labour Economics*, Vol. 18, No 5, October 2011, pp. 664-675; and Cavounidis, J., "Labor Market Impact of Migration: Employment Structures and the Case of Greece", *International Migration Review*, Vol. 40, No 3, August 2006, pp. 635-660.

6 Conclusions

Labour supply in the euro area has changed considerably in the last few decades in terms of both quantity and composition. The changes have been complex and affected the age, gender and skill composition of the labour force.

These developments have also impacted employment and unemployment over the recovery period. The continuation of the longer-term trends in the labour market participation of older people and women, as well as recent waves of net immigration, have helped to meet the rising labour demand. The increasing employment of these groups also explains, at least partially, the recent developments in part-time and temporary employment. Compositional effects in employment have also had an impact on wage dynamics.

A reversal of the recent increase in labour supply is expected in the medium term, owing to the ageing of the population. Thus, policy measures will be needed to boost labour supply and employment of all age groups, to foster productivity growth despite the ageing workforce, and to further enhance flexible forms of employment that give access to the labour markets to groups with still low participation rates.

Statistics

Contents

Further information

ECB statistics can be accessed from the Statistical Data Warehouse (SDW):	http://sdw.ecb.europa.eu/
Data from the statistics section of the Economic Bulletin are available from the SDW:	http://sdw.ecb.europa.eu/reports.do?node=1000004813
A comprehensive Statistics Bulletin can be found in the SDW:	http://sdw.ecb.europa.eu/reports.do?node=1000004045
Methodological definitions can be found in the General Notes to the Statistics Bulletin:	http://sdw.ecb.europa.eu/reports.do?node=10000023
Details on calculations can be found in the Technical Notes to the Statistics Bulletin:	http://sdw.ecb.europa.eu/reports.do?node=10000022
Explanations of terms and abbreviations can be found in the ECB's statistics glossary:	http://www.ecb.europa.eu/home/glossary/html/glossa.en.html

Conventions used in the tables

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

1 External environment

1.1 Main trading partners, GDP and CPI

	GDP [1] (period-on-period percentage changes)						CPI (annual percentage changes)						
	G20	United States	United Kingdom	Japan	China	Memo item: euro area	OECD countries		United States	United Kingdom (HICP)	Japan	China	Memo item: euro area [2] (HICP)
							Total	excluding food and energy					
	1	2	3	4	5	6	7	8	9	10	11	12	13
2015	3.5	2.9	2.3	1.4	6.9	2.1	0.6	1.7	0.1	0.0	0.8	1.4	0.0
2016	3.2	1.5	1.9	0.9	6.7	1.8	1.1	1.8	1.3	0.7	-0.1	2.0	0.2
2017	.	.	.	.	6.9	.	.	.	2.1	2.7	.	.	1.5
2017 Q1	0.9	0.3	0.3	0.4	1.4	0.6	2.4	1.8	2.5	2.1	0.3	1.4	1.8
Q2	1.0	0.8	0.3	0.7	1.8	0.7	2.1	1.8	1.9	2.7	0.4	1.4	1.5
Q3	1.0	0.8	0.4	0.6	1.8	0.7	2.2	1.8	2.0	2.8	0.6	1.6	1.4
Q4	.	.	.	.	1.6	.	.	.	2.1	3.0	.	.	1.4
2017 July	-	-	-	-	-	-	2.0	1.8	1.7	2.6	0.4	1.4	1.3
Aug.	-	-	-	-	-	-	2.2	1.8	1.9	2.9	0.7	1.8	1.5
Sep.	-	-	-	-	-	-	2.3	1.8	2.2	3.0	0.7	1.6	1.5
Oct.	-	-	-	-	-	-	2.2	1.9	2.0	3.0	0.2	1.9	1.4
Nov.	-	-	-	-	-	-	2.4	1.9	2.2	3.1	0.6	1.7	1.5
Dec.	-	-	-	-	-	-	.	.	2.1	3.0	.	.	1.4

Sources: Eurostat (col. 3, 6, 10, 13); BIS (col. 9, 11, 12); OECD (col. 1, 2, 4, 5, 7, 8).
1) Quarterly data seasonally adjusted; annual data unadjusted.
2) Data refer to the changing composition of the euro area.

1.2 Main trading partners, Purchasing Managers' Index and world trade

	Purchasing Managers' Surveys (diffusion indices; s.a.)									Merchandise imports [1]		
	Composite Purchasing Managers' Index						Global Purchasing Managers' Index [2]					
	Global [2]	United States	United Kingdom	Japan	China	Memo item: euro area	Manufacturing	Services	New export orders	Global	Advanced economies	Emerging market economies
	1	2	3	4	5	6	7	8	9	10	11	12
2015	53.2	55.8	56.2	51.4	50.4	53.8	51.8	53.7	50.3	1.1	3.6	-0.5
2016	51.6	52.4	53.4	50.5	51.4	53.3	51.8	51.9	50.2	1.0	1.1	0.9
2017	53.3	54.3	54.7	52.5	51.8	56.4	54.0	53.8	52.8	.	.	.
2017 Q1	53.3	54.3	54.6	52.5	52.3	55.6	53.4	53.3	51.8	2.0	1.3	2.4
Q2	53.1	53.6	54.8	53.0	51.3	56.6	52.5	53.3	51.5	0.2	1.6	-0.7
Q3	53.3	54.9	54.1	51.8	51.9	56.0	52.7	53.5	51.8	1.6	0.9	2.2
Q4	53.4	54.6	55.2	52.6	51.9	57.2	53.6	53.4	52.1	.	.	.
2017 Aug.	53.6	55.3	54.0	51.9	52.4	55.7	52.8	53.9	52.4	1.1	1.0	1.1
Sep.	53.2	54.8	54.2	51.7	51.4	56.7	52.8	53.4	51.5	1.6	0.9	2.2
Oct.	53.6	55.2	55.8	53.4	51.0	56.0	52.7	53.9	51.7	0.8	0.3	1.2
Nov.	53.3	54.5	54.8	52.2	51.6	57.5	53.7	53.1	52.2	.	.	.
Dec.	53.5	54.1	54.9	52.2	53.0	58.1	54.2	53.2	52.4	.	.	.
2018 Jan.	.	.	.	.	.	58.6	.	.	.	.	.	.

Sources: Markit (col. 1-9); CPB Netherlands Bureau for Economic Policy Analysis and ECB calculations (col. 10-12).
1) Global and advanced economies exclude the euro area. Annual and quarterly data are period-on-period percentages; monthly data are 3-month-on-3-month percentages. All data are seasonally adjusted.
2) Excluding the euro area.

2 Financial developments

2.1 Money market interest rates

(percentages per annum; period averages)

	Euro area [1]					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
2015	-0.11	-0.07	-0.02	0.05	0.17	0.32	0.09
2016	-0.32	-0.34	-0.26	-0.17	-0.03	0.74	-0.02
2017	-0.35	-0.37	-0.33	-0.26	-0.15	1.26	-0.02
2017 June	-0.36	-0.37	-0.33	-0.27	-0.15	1.26	-0.01
July	-0.36	-0.37	-0.33	-0.27	-0.15	1.31	-0.01
Aug.	-0.36	-0.37	-0.33	-0.27	-0.16	1.31	-0.03
Sep.	-0.36	-0.37	-0.33	-0.27	-0.17	1.32	-0.03
Oct.	-0.36	-0.37	-0.33	-0.27	-0.18	1.36	-0.04
Nov.	-0.35	-0.37	-0.33	-0.27	-0.19	1.43	-0.03
Dec.	-0.34	-0.37	-0.33	-0.27	-0.19	1.60	-0.02

Source: ECB.

1) Data refer to the changing composition of the euro area, see the General Notes.

2.2 Yield curves

(End of period; rates in percentages per annum; spreads in percentage points)

	Spot rates					Spreads			Instantaneous forward rates			
	Euro area [1], [2]					Euro area [1], [2]	United States	United Kingdom	Euro area [1], [2]			
	3 months	1 year	2 years	5 years	10 years	10 years - 1 year	10 years - 1 year	10 years - 1 year	1 year	2 years	5 years	10 years
	1	2	3	4	5	6	7	8	9	10	11	12
2015	-0.45	-0.40	-0.35	0.02	0.77	1.17	1.66	1.68	-0.35	-0.22	0.82	1.98
2016	-0.93	-0.82	-0.80	-0.47	0.26	1.08	1.63	1.17	-0.78	-0.75	0.35	1.35
2017	-0.78	-0.74	-0.64	-0.17	0.52	1.26	0.67	0.83	-0.66	-0.39	0.66	1.56
2017 June	-0.69	-0.65	-0.59	-0.17	0.54	1.19	1.07	0.93	-0.60	-0.41	0.65	1.63
July	-0.71	-0.71	-0.67	-0.21	0.58	1.29	1.07	0.93	-0.70	-0.51	0.72	1.75
Aug.	-0.78	-0.77	-0.73	-0.35	0.38	1.15	0.89	0.92	-0.75	-0.62	0.48	1.52
Sep.	-0.76	-0.75	-0.70	-0.26	0.52	1.27	1.04	0.98	-0.73	-0.54	0.65	1.68
Oct.	-0.79	-0.79	-0.74	-0.32	0.44	1.23	0.95	0.87	-0.78	-0.60	0.55	1.61
Nov.	-0.78	-0.76	-0.70	-0.28	0.44	1.20	0.79	0.88	-0.73	-0.52	0.56	1.52
Dec.	-0.78	-0.74	-0.64	-0.17	0.52	1.26	0.67	0.83	-0.66	-0.39	0.66	1.56

Source: ECB.

1) Data refer to the changing composition of the euro area, see the General Notes.

2) ECB calculations based on underlying data provided by EuroMTS and ratings provided by Fitch Ratings.

2.3 Stock market indices

(index levels in points; period averages)

	Dow Jones EURO STOXX indices												United States	Japan
	Benchmark		Main industry indices											
	Broad index	50	Basic materials	Consumer services	Consumer goods	Oil and gas	Financials	Industrials	Technology	Utilities	Telecoms	Health care	Standard & Poor's 500	Nikkei 225
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2015	356.2	3,444.1	717.4	261.9	628.2	299.9	189.8	500.6	373.2	278.0	377.7	821.3	2,061.1	19,203.8
2016	321.6	3,003.7	620.7	250.9	600.1	278.9	148.7	496.0	375.8	248.6	326.9	770.9	2,094.7	16,920.5
2017	376.9	3,491.0	757.3	268.6	690.4	307.9	182.3	605.5	468.4	272.7	339.2	876.3	2,449.1	20,209.0
2017 June	383.6	3,547.8	767.8	283.0	698.8	299.9	182.4	617.2	475.2	283.6	355.4	927.3	2,434.0	20,045.6
July	377.8	3,483.9	745.3	270.9	685.3	289.5	187.7	606.5	465.2	273.5	339.7	891.3	2,454.1	20,044.9
Aug.	375.1	3,451.3	727.5	266.5	681.4	288.8	187.3	596.2	467.4	284.4	340.3	861.1	2,456.2	19,670.2
Sep.	380.7	3,507.1	750.1	261.2	701.2	298.1	185.9	615.8	480.3	288.2	331.8	883.8	2,492.8	19,924.4
Oct.	391.7	3,614.7	791.0	267.8	724.9	306.3	190.2	636.2	501.1	290.1	330.9	895.9	2,557.0	21,267.5
Nov.	391.7	3,601.4	802.3	269.2	727.7	315.4	188.3	640.6	508.6	294.8	317.3	854.9	2,593.6	22,525.1
Dec.	389.7	3,564.7	796.2	274.9	719.0	313.5	189.1	641.2	491.3	291.3	316.1	839.7	2,664.3	22,769.9

Source: ECB.

2 Financial developments

2.4 MFI interest rates on loans to and deposits from households (new business) [1), 2)]

(Percentages per annum; period average, unless otherwise indicated)

	Deposits				Revolving loans and overdrafts	Extended credit card credit	Loans for consumption			Loans to sole proprietors and unincorporated partnerships	Loans for house purchase					
	Overnight	Redeemable at notice of up to 3 months	With an agreed maturity of:				By initial period of rate fixation		APRC [3)]		By initial period of rate fixation				APRC [3)]	Composite cost-of-borrowing indicator
			Up to 2 years	Over 2 years			Floating rate and up to 1 year	Over 1 year			Floating rate and up to 1 year	Over 1 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	14	15	16
2016 Dec.	0.08	0.49	0.43	0.76	6.33	16.69	4.78	5.48	5.87	2.31	1.77	1.90	1.80	1.75	2.24	1.78
2017 Jan.	0.07	0.48	0.41	0.76	6.34	16.64	5.05	5.87	6.24	2.27	1.76	1.88	1.80	1.76	2.28	1.81
Feb.	0.07	0.48	0.40	0.77	6.38	16.69	5.09	5.72	6.17	2.39	1.77	1.89	1.84	1.81	2.29	1.85
Mar.	0.06	0.48	0.40	0.74	6.39	16.70	4.99	5.62	6.08	2.39	1.74	1.88	1.85	1.82	2.25	1.85
Apr.	0.06	0.47	0.39	0.72	6.34	16.70	4.83	5.58	5.97	2.36	1.73	1.89	1.91	1.85	2.26	1.87
May	0.06	0.47	0.39	0.81	6.33	16.70	5.09	5.78	6.22	2.43	1.73	1.90	1.90	1.87	2.23	1.87
June	0.06	0.47	0.38	0.77	6.31	16.82	4.68	5.74	6.20	2.41	1.69	1.89	1.91	1.89	2.21	1.87
July	0.05	0.46	0.38	0.76	6.27	16.80	4.95	5.84	6.28	2.36	1.75	1.91	1.90	1.90	2.21	1.88
Aug.	0.05	0.45	0.35	0.75	6.24	16.80	5.33	5.89	6.34	2.35	1.75	2.00	1.92	1.94	2.21	1.91
Sep.	0.05	0.45	0.35	0.74	6.28	16.80	5.08	5.71	6.21	2.34	1.70	1.93	1.96	1.96	2.20	1.89
Oct.	0.05	0.44	0.35	0.75	6.24	16.80	4.92	5.68	6.15	2.40	1.68	1.92	1.93	1.96	2.17	1.88
Nov. [p]	0.05	0.45	0.33	0.75	6.21	16.81	4.69	5.69	6.12	2.36	1.66	1.93	1.95	1.93	2.16	1.87

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Including non-profit institutions serving households.

3) Annual percentage rate of charge (APRC).

2.5 MFI interest rates on loans to and deposits from non-financial corporations (new business) [1), 2)]

(Percentages per annum; period average, unless otherwise indicated)

	Deposits			Revolving loans and overdrafts	Other loans by size and initial period of rate fixation									Composite cost-of-borrowing indicator
	Overnight	With an agreed maturity of:			up to EUR 0.25 million			over EUR 0.25 and up to 1 million			over EUR 1 million			
		Up to 2 years	Over 2 years		Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	Floating rate and up to 3 months	Over 3 months and up to 1 year	Over 1 year	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2016 Dec.	0.07	0.12	0.59	2.64	2.58	2.84	2.30	1.83	1.84	1.68	1.33	1.46	1.62	1.81
2017 Jan.	0.06	0.12	0.51	2.64	2.68	2.80	2.30	1.81	1.86	1.73	1.22	1.37	1.62	1.79
Feb.	0.06	0.10	0.53	2.64	2.58	2.78	2.35	1.77	1.76	1.71	1.18	1.31	1.53	1.76
Mar.	0.06	0.08	0.58	2.58	2.52	2.79	2.35	1.76	1.79	1.72	1.30	1.62	1.57	1.82
Apr.	0.06	0.10	0.40	2.56	2.55	2.69	2.35	1.79	1.78	1.70	1.34	1.50	1.64	1.81
May	0.05	0.10	0.43	2.51	2.49	2.77	2.37	1.76	1.73	1.71	1.20	1.47	1.63	1.76
June	0.05	0.06	0.43	2.51	2.46	2.68	2.34	1.74	1.71	1.67	1.27	1.43	1.56	1.76
July	0.05	0.11	0.35	2.45	2.45	2.76	2.36	1.75	1.74	1.72	1.23	1.33	1.65	1.74
Aug.	0.05	0.10	0.36	2.44	2.49	2.70	2.41	1.74	1.78	1.78	1.24	1.43	1.59	1.74
Sep.	0.04	0.07	0.44	2.42	2.45	2.73	2.39	1.71	1.68	1.73	1.19	1.45	1.58	1.73
Oct.	0.04	0.11	0.40	2.40	2.39	2.69	2.36	1.70	1.66	1.70	1.23	1.35	1.60	1.73
Nov. [p]	0.04	0.08	0.30	2.36	2.43	2.60	2.35	1.70	1.61	1.69	1.23	1.33	1.56	1.71

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector.

2 Financial developments

2.6 Debt securities issued by euro area residents, by sector of the issuer and initial maturity

(EUR billions; transactions during the month and end-of-period outstanding amounts; nominal values)

	Outstanding amounts							Gross issues [1]						
	Total	MFIs (including Euro-system)	Non-MFI corporations			General government		Total	MFIs (including Euro-system)	Non-MFI corporations			General government	
			Financial corporations other than MFIs	FVCs	Non-financial corporations	Central govern-ment	Other general govern-ment			Financial corporations other than MFIs	FVCs	Non-financial corporations	Central govern-ment	Other general govern-ment
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Short-term														
2014	1,320	543	131	.	59	538	50	410	219	34	.	38	93	25
2015	1,269	517	147	.	62	478	65	347	161	37	.	33	82	34
2016	1,241	518	136	.	59	466	62	349	161	45	.	32	79	33
2017 June	1,292	507	147	.	81	484	73	356	149	61	.	34	81	33
July	1,296	515	152	.	87	477	66	386	177	57	.	44	77	32
Aug.	1,302	516	155	.	85	474	72	359	169	57	.	29	80	25
Sep.	1,314	530	161	.	81	478	65	378	162	69	.	38	82	29
Oct.	1,287	529	155	.	84	457	62	372	175	45	.	41	74	36
Nov.	1,277	527	147	.	81	461	61	343	159	36	.	35	87	25
Long-term														
2014	15,130	4,048	3,161	.	993	6,285	643	226	65	49	.	16	86	10
2015	15,247	3,785	3,288	.	1,056	6,481	637	217	68	47	.	13	81	9
2016	15,399	3,695	3,235	.	1,186	6,643	641	220	62	53	.	18	79	8
2017 June	15,408	3,620	3,220	.	1,143	6,788	638	230	62	50	.	24	84	9
July	15,403	3,618	3,237	.	1,153	6,762	633	269	74	94	.	21	76	4
Aug.	15,329	3,593	3,178	.	1,149	6,777	633	127	29	35	.	3	54	5
Sep.	15,368	3,571	3,181	.	1,177	6,805	634	232	56	64	.	17	90	5
Oct.	15,343	3,584	3,159	.	1,183	6,777	640	242	76	50	.	21	85	10
Nov.	15,382	3,602	3,128	.	1,190	6,820	643	236	55	54	.	23	95	8

Source: ECB.

1) For the purpose of comparison, annual data refer to the average monthly figure over the year.

2.7 Growth rates and outstanding amounts of debt securities and listed shares

(EUR billions; percentage changes)

	Debt securities							Listed shares			
	Total	MFIs (including Eurosystem)	Non-MFI corporations			General government		Total	MFIs	Financial corporations other than MFIs	Non-financial corporations
			Financial corporations other than MFIs	FVCs	Non-financial corporations	Central government	Other general government				
	1	2	3	4	5	6	7	8	9	10	11
Oustanding amount											
2014	16,450.0	4,590.7	3,291.9	.	1,051.6	6,822.7	693.0	6,016.4	591.3	850.5	4,574.6
2015	16,516.5	4,301.8	3,434.9	.	1,118.1	6,959.3	702.4	6,813.1	584.3	984.0	5,244.9
2016	16,640.2	4,213.2	3,370.3	.	1,245.0	7,108.2	703.5	7,089.5	537.6	1,097.9	5,454.0
2017 June	16,700.0	4,127.7	3,366.6	.	1,223.2	7,272.4	710.1	7,694.5	640.5	1,151.7	5,902.4
July	16,698.8	4,133.0	3,388.1	.	1,240.2	7,238.8	698.8	7,718.2	663.1	1,197.6	5,857.6
Aug.	16,631.1	4,108.7	3,332.7	.	1,234.1	7,250.6	705.1	7,638.4	630.8	1,174.6	5,833.0
Sep.	16,681.9	4,100.6	3,341.5	.	1,258.2	7,282.2	699.5	7,937.9	657.7	1,237.6	6,042.6
Oct.	16,630.8	4,112.6	3,314.8	.	1,266.9	7,234.2	702.2	8,168.1	649.6	1,301.4	6,217.0
Nov.	16,658.4	4,128.5	3,275.2	.	1,270.5	7,280.7	703.4	8,009.9	638.4	1,256.7	6,114.8
Growth rate											
2014	-0.6	-8.0	1.1	.	5.3	3.2	1.1	1.5	7.2	1.9	0.7
2015	0.3	-7.0	5.7	.	4.7	1.8	0.6	1.1	4.2	1.6	0.6
2016	0.3	-3.0	-1.7	.	7.5	2.1	-0.1	0.5	1.2	0.9	0.4
2017 June	1.5	-2.2	3.8	.	8.4	1.7	0.4	0.7	4.8	1.2	0.3
July	1.9	-1.1	3.6	.	9.5	1.8	-0.9	0.8	6.1	1.4	0.1
Aug.	1.6	-1.5	2.2	.	9.2	2.0	-0.3	0.8	6.1	1.4	0.2
Sep.	1.4	-1.5	1.3	.	7.7	2.3	-0.4	0.9	6.1	2.0	0.2
Oct.	1.0	-0.9	-0.5	.	7.3	1.9	-0.4	0.9	6.0	2.8	0.1
Nov.	1.2	-0.7	-0.1	.	6.6	2.1	0.4	1.0	6.1	2.8	0.2

Source: ECB.

2 Financial developments

2.8 Effective exchange rates [1)]

(period averages; index: 1999 Q1=100)

	EER-19						EER-38	
	Nominal	Real CPI	Real PPI	Real GDP deflator	Real ULCM [2)]	Real ULCT	Nominal	Real CPI
	1	2	3	4	5	6	7	8
2015	91.7	87.6	88.6	82.8	80.7	88.3	105.7	87.0
2016	94.4	89.5	90.8	84.9	80.0	89.5	109.7	89.3
2017	96.6	91.4	92.0	.	.	.	112.1	90.5
2017 Q1	93.8	89.0	89.6	83.4	79.5	88.3	108.6	88.1
Q2	95.3	90.3	91.0	84.7	79.1	89.3	110.2	89.1
Q3	98.6	93.2	93.8	87.7	81.3	92.1	114.5	92.4
Q4	98.6	93.1	93.4	.	.	.	115.1	92.5
2017 July	97.6	92.4	93.0	-	-	-	113.4	91.5
Aug.	99.0	93.6	94.3	-	-	-	115.1	92.8
Sep.	99.0	93.6	94.0	-	-	-	115.1	92.8
Oct.	98.6	93.1	93.5	-	-	-	114.9	92.4
Nov.	98.5	92.9	93.2	-	-	-	115.1	92.5
Dec.	98.8	93.2	93.4	-	-	-	115.4	92.7
Percentage change versus previous month								
2017 Dec.	0.3	0.3	0.2	-	-	-	0.2	0.2
Percentage change versus previous year								
2017 Dec.	5.4	4.8	4.0	-	-	-	6.3	5.0

Source: ECB.

1) For a definition of the trading partner groups and other information see the General Notes to the Statistics Bulletin.

2) ULCM-deflated series are available only for the EER-18 trading partner group.

2.9 Bilateral exchange rates

(period averages; units of national currency per euro)

	Chinese renminbi	Croatian kuna	Czech koruna	Danish krone	Hungarian forint	Japanese yen	Polish zloty	Pound sterling	Romanian leu	Swedish krona	Swiss franc	US Dollar
	1	2	3	4	5	6	7	8	9	10	11	12
2015	6.973	7.614	27.279	7.459	309.996	134.314	4.184	0.726	4.4454	9.353	1.068	1.110
2016	7.352	7.533	27.034	7.445	311.438	120.197	4.363	0.819	4.4904	9.469	1.090	1.107
2017	7.629	7.464	26.326	7.439	309.193	126.711	4.257	0.877	4.5688	9.635	1.112	1.130
2017 Q1	7.335	7.467	27.021	7.435	309.095	121.014	4.321	0.860	4.5217	9.506	1.069	1.065
Q2	7.560	7.430	26.535	7.438	309.764	122.584	4.215	0.861	4.5532	9.692	1.084	1.102
Q3	7.834	7.426	26.085	7.438	306.418	130.349	4.258	0.898	4.5822	9.557	1.131	1.175
Q4	7.789	7.533	25.650	7.443	311.597	132.897	4.232	0.887	4.6189	9.793	1.162	1.177
2017 July	7.796	7.412	26.079	7.437	306.715	129.482	4.236	0.886	4.5689	9.589	1.106	1.151
Aug.	7.876	7.405	26.101	7.438	304.366	129.703	4.267	0.911	4.5789	9.548	1.140	1.181
Sep.	7.826	7.464	26.075	7.440	308.368	131.924	4.269	0.895	4.5992	9.533	1.147	1.191
Oct.	7.789	7.509	25.766	7.443	309.951	132.763	4.263	0.891	4.5895	9.614	1.155	1.176
Nov.	7.772	7.551	25.538	7.442	311.891	132.392	4.227	0.888	4.6347	9.848	1.164	1.174
Dec.	7.807	7.539	25.645	7.443	313.163	133.638	4.203	0.883	4.6348	9.937	1.169	1.184
Percentage change versus previous month												
2017 Dec.	0.5	-0.2	0.4	0.0	0.4	0.9	-0.6	-0.6	0.0	0.9	0.4	0.8
Percentage change versus previous year												
2017 Dec.	7.0	0.0	-5.1	0.1	0.3	9.2	-5.2	4.5	2.6	2.3	8.7	12.3

Source: ECB.

2 Financial developments

2.10 Euro area balance of payments, financial account

(EUR billions, unless otherwise indicated; outstanding amounts at end of period; transactions during period)

	Total [1]			Direct investment		Portfolio investment		Net financial derivatives	Other investment		Reserve assets	Memo: Gross external debt
	Assets	Liabilities	Net	Assets	Liabilities	Assets	Liabilities		Assets	Liabilities		
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts (international investment position)												
2016 Q4	23,995.3	24,798.1	-802.8	10,690.9	8,633.5	7,864.0	10,583.9	-56.3	4,789.0	5,580.6	707.6	13,795.5
2017 Q1	25,224.7	25,780.6	-555.9	11,113.0	8,955.8	8,256.5	10,868.6	-61.5	5,190.3	5,956.2	726.6	14,252.2
Q2	24,681.2	25,242.2	-560.9	10,845.7	8,841.2	8,198.2	10,636.9	-46.7	5,001.4	5,764.1	682.7	13,826.2
Q3	24,507.7	25,014.4	-506.8	10,552.7	8,562.7	8,354.3	10,665.4	-58.8	4,984.6	5,786.3	674.8	13,700.9
Outstanding amounts as a percentage of GDP												
2017 Q3	221.7	226.2	-4.6	95.4	77.4	75.6	96.5	-0.5	45.1	52.3	6.1	123.9
Transactions												
2016 Q4	108.7	9.5	99.2	116.9	39.0	22.6	-12.8	15.9	-51.4	-16.6	4.6	-
2017 Q1	655.0	585.6	69.4	204.8	206.7	174.8	75.5	23.2	254.6	303.4	-2.3	-
Q2	195.6	133.2	62.4	27.2	18.4	171.4	145.4	-2.3	0.9	-30.6	-1.6	-
Q3	91.2	-71.1	162.2	-139.9	-155.8	190.9	42.5	-10.7	50.2	42.2	0.5	-
2017 June	-82.2	-122.2	39.9	-42.5	0.8	63.4	34.0	-8.6	-96.0	-156.9	1.4	-
July	-2.1	-58.8	56.7	-163.0	-168.4	68.4	39.7	-2.7	100.4	69.9	-5.2	-
Aug.	61.8	24.3	37.5	9.6	17.2	73.9	-16.1	-5.1	-15.9	23.2	-0.7	-
Sep.	31.4	-36.6	68.0	13.5	-4.5	48.7	18.9	-2.9	-34.2	-50.9	6.4	-
Oct.	188.6	149.5	39.1	34.4	7.6	27.2	-22.9	-0.2	129.9	164.8	-2.7	-
Nov.	53.0	17.9	35.1	-4.7	13.2	49.8	16.6	0.4	1.3	-11.9	6.2	-
12-month cumulated transactions												
2017 Nov.	1,009.8	565.2	444.6	131.1	43.2	645.3	269.8	16.9	210.2	252.2	6.3	-
12-month cumulated transactions as a percentage of GDP												
2017 Nov.	9.1	5.1	4.0	1.2	0.4	5.8	2.4	0.2	1.9	2.3	0.1	-

Source: ECB.

1) Net financial derivatives are included in total assets.

3 Economic activity

3.1 GDP and expenditure components

(quarterly data seasonally adjusted; annual data unadjusted)

	GDP											
	Total	Domestic demand								External balance [1]		
		Total	Private consumption	Government consumption	Gross fixed capital formation				Changes in inventories [2]	Total	Exports [1]	Imports [1]
						Total construction	Total machinery	Intellectual property products				
	1	2	3	4	5	6	7	8	9	10	11	12
	Current prices (EUR billions)											
2014	10,157.6	9,786.6	5,633.9	2,129.1	1,997.1	1,006.5	599.7	385.6	26.5	371.0	4,541.7	4,170.8
2015	10,515.1	10,030.3	5,754.3	2,168.9	2,078.1	1,016.2	637.9	418.4	29.0	484.8	4,847.0	4,362.2
2016	10,788.8	10,310.0	5,891.6	2,218.8	2,189.3	1,051.8	674.3	457.7	10.3	478.8	4,936.0	4,457.2
2016 Q4	2,726.0	2,614.9	1,489.4	559.0	557.8	267.3	171.3	117.8	8.7	111.1	1,264.5	1,153.4
2017 Q1	2,748.0	2,630.9	1,504.4	561.9	560.4	273.7	171.7	113.8	4.1	117.1	1,297.3	1,180.2
Q2	2,780.2	2,661.1	1,515.5	565.0	571.8	276.1	174.8	119.6	8.9	119.1	1,307.9	1,188.8
Q3	2,808.5	2,674.7	1,522.6	567.7	572.0	279.9	179.0	111.8	12.3	133.8	1,322.8	1,189.0
	as a percentage of GDP											
2016	100.0	95.6	54.6	20.6	20.3	9.7	6.2	4.2	0.1	4.4	-	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2016 Q4	0.7	0.7	0.5	0.3	0.9	0.6	0.9	1.5	-	-	1.6	1.8
2017 Q1	0.6	0.1	0.5	0.2	0.2	1.5	0.6	-3.6	-	-	1.3	0.3
Q2	0.7	1.0	0.6	0.3	1.7	0.4	1.7	4.9	-	-	1.1	1.6
Q3	0.7	0.2	0.4	0.3	-0.3	0.7	2.5	-6.7	-	-	1.5	0.5
	annual percentage changes											
2014	1.3	1.3	0.8	0.7	1.9	-0.4	4.6	3.8	-	-	4.7	4.9
2015	2.1	2.0	1.8	1.3	3.3	0.5	5.3	7.3	-	-	6.4	6.7
2016	1.8	2.3	2.0	1.8	4.5	2.5	5.5	8.3	-	-	3.3	4.7
2016 Q4	1.9	2.3	1.9	1.6	4.4	2.5	3.1	11.2	-	-	3.8	4.8
2017 Q1	2.1	1.9	1.7	1.0	4.2	3.5	3.5	6.8	-	-	4.8	4.8
Q2	2.4	2.3	1.9	1.1	3.5	4.1	4.2	1.0	-	-	4.5	4.4
Q3	2.8	2.0	1.9	1.1	2.4	3.3	5.8	-4.2	-	-	5.6	4.3
	contributions to quarter-on-quarter percentage changes in GDP; percentage points											
2016 Q4	0.7	0.7	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	-	-
2017 Q1	0.6	0.1	0.3	0.0	0.0	0.2	0.0	-0.2	-0.2	0.5	-	-
Q2	0.7	0.9	0.3	0.1	0.4	0.0	0.1	0.2	0.2	-0.2	-	-
Q3	0.7	0.2	0.2	0.1	-0.1	0.1	0.2	-0.3	0.0	0.5	-	-
	contributions to annual percentage changes in GDP; percentage points											
2014	1.3	1.3	0.5	0.1	0.4	0.0	0.3	0.1	0.3	0.1	-	-
2015	2.1	2.0	1.0	0.3	0.6	0.0	0.3	0.3	0.0	0.1	-	-
2016	1.8	2.2	1.1	0.4	0.9	0.2	0.3	0.3	-0.1	-0.4	-	-
2016 Q4	1.9	2.2	1.0	0.3	0.9	0.2	0.2	0.4	-0.1	-0.3	-	-
2017 Q1	2.1	1.8	0.9	0.2	0.8	0.3	0.2	0.3	-0.1	0.2	-	-
Q2	2.4	2.2	1.0	0.2	0.7	0.4	0.3	0.0	0.2	0.2	-	-
Q3	2.8	2.0	1.1	0.2	0.5	0.3	0.4	-0.2	0.2	0.8	-	-

Sources: Eurostat and ECB calculations.

1) Exports and imports cover goods and services and include cross-border intra-euro area trade.

2) Including acquisitions less disposals of valuables.

3 Economic activity

3.2 Value added by economic activity

(quarterly data seasonally adjusted; annual data unadjusted)

	Gross value added (basic prices)											Taxes less subsidies on products
	Total	Agriculture, forestry and fishing	Manufacturing energy and utilities	Const-ruction	Trade, transport, accom-modation and food services	Infor-mation and com-munica-tion	Finance and insurance	Real estate	Professional, business and support services	Public ad-ministration, education, health and social work	Arts, enter-tainment and other services	
	1	2	3	4	5	6	7	8	9	10	11	12
	Current prices (EUR billions)											
2014	9,123.0	152.0	1,782.5	461.6	1,720.2	418.4	458.0	1,050.1	980.8	1,777.4	322.0	1,034.6
2015	9,443.2	153.8	1,899.9	468.7	1,782.7	433.1	464.2	1,073.0	1,025.7	1,811.4	330.6	1,072.0
2016	9,680.3	151.4	1,936.6	489.3	1,831.2	451.3	454.0	1,100.2	1,070.7	1,857.6	338.1	1,108.5
2016 Q4	2,443.8	38.7	489.8	123.8	463.0	114.5	112.2	277.4	270.6	468.5	85.1	282.2
2017 Q1	2,465.0	40.5	490.7	126.2	469.2	114.8	112.4	279.7	275.1	470.9	85.5	283.0
Q2	2,493.5	40.5	498.0	128.1	476.0	116.5	112.4	282.2	279.0	474.6	86.3	286.7
Q3	2,519.9	41.2	504.7	129.7	480.5	117.3	112.9	284.7	283.2	478.6	87.0	288.6
	as a percentage of value added											
2016	100.0	1.6	20.0	5.1	18.9	4.7	4.7	11.4	11.1	19.2	3.5	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2016 Q4	0.6	-0.8	1.3	0.5	0.8	0.9	-0.4	0.3	0.8	0.4	0.2	1.0
2017 Q1	0.7	2.1	0.0	1.5	1.2	1.0	-0.2	0.6	1.5	0.3	0.3	0.3
Q2	0.7	-0.3	1.1	0.7	0.7	0.9	0.4	0.3	1.0	0.5	0.5	0.8
Q3	0.8	-0.2	1.5	0.5	0.7	1.3	0.2	0.5	0.7	0.5	0.6	0.3
	annual percentage changes											
2014	1.3	1.7	2.7	-1.0	1.7	4.3	-1.9	0.4	2.7	0.5	0.1	1.3
2015	1.9	3.1	4.0	0.4	1.7	3.4	-0.1	0.7	2.8	0.9	1.1	3.4
2016	1.7	-1.3	2.0	1.6	1.9	3.0	0.4	0.9	2.9	1.3	0.9	3.0
2016 Q4	1.9	-2.5	2.6	1.7	2.1	3.6	-0.2	1.0	2.7	1.6	0.9	2.5
2017 Q1	2.0	0.8	1.8	2.6	2.7	4.4	-0.7	1.2	3.5	1.3	1.0	2.6
Q2	2.4	0.6	3.0	3.2	3.2	4.5	-0.3	1.2	3.2	1.5	1.2	2.9
Q3	2.8	0.8	3.9	3.3	3.4	4.0	0.0	1.6	4.0	1.6	1.7	2.5
	contributions to quarter-on-quarter percentage changes in value added; percentage points											
2016 Q4	0.6	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	-
2017 Q1	0.7	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.1	0.0	-
Q2	0.7	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	-
Q3	0.8	0.0	0.3	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	-
	contributions to annual percentage changes in value added; percentage points											
2014	1.3	0.0	0.5	-0.1	0.3	0.2	-0.1	0.0	0.3	0.1	0.0	-
2015	1.9	0.1	0.8	0.0	0.3	0.2	0.0	0.1	0.3	0.2	0.0	-
2016	1.7	0.0	0.4	0.1	0.4	0.1	0.0	0.1	0.3	0.3	0.0	-
2016 Q4	1.9	0.0	0.5	0.1	0.4	0.2	0.0	0.1	0.3	0.3	0.0	-
2017 Q1	2.0	0.0	0.4	0.1	0.5	0.2	0.0	0.1	0.4	0.3	0.0	-
Q2	2.4	0.0	0.6	0.2	0.6	0.2	0.0	0.1	0.4	0.3	0.0	-
Q3	2.8	0.0	0.8	0.2	0.6	0.2	0.0	0.2	0.4	0.3	0.1	-

Sources: Eurostat and ECB calculations.

3 Economic activity

3.3 Employment [1)]

(quarterly data seasonally adjusted; annual data unadjusted)

	Total	By employment status		By economic activity										
		Employees	Self-employed	Agriculture, forestry and fishing	Manufacturing, energy and utilities	Construction	Trade, transport, accommodation and food services	Information and communication	Finance and insurance	Real estate	Professional, business and support services	Public administration, education, health and social work	Arts, entertainment and other services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Persons employed													
as a percentage of total persons employed													
2014	100.0	85.0	15.0	3.4	15.0	6.1	24.7	2.7	2.7	1.0	13.1	24.3	7.1
2015	100.0	85.2	14.8	3.3	14.9	6.0	24.8	2.7	2.6	1.0	13.3	24.3	7.1
2016	100.0	85.5	14.5	3.2	14.8	5.9	24.9	2.8	2.6	1.0	13.5	24.3	7.0
annual percentage changes													
2014	0.6	0.7	0.1	0.1	-0.4	-1.3	0.7	0.7	-0.9	0.2	2.3	1.0	0.7
2015	1.0	1.2	-0.3	-1.2	0.2	0.0	1.3	1.4	-0.2	1.4	2.8	1.0	0.5
2016	1.3	1.6	-0.3	-0.5	0.6	-0.2	1.7	2.4	0.0	1.9	2.8	1.3	1.1
2016 Q4	1.3	1.6	-0.1	0.1	0.6	0.4	1.7	2.6	0.0	2.6	2.8	1.3	0.5
2017 Q1	1.6	1.8	0.2	1.0	0.8	1.5	1.7	3.2	-0.5	1.9	3.2	1.2	1.1
Q2	1.6	2.0	-0.3	0.6	1.1	1.5	1.8	3.4	-0.8	2.0	3.3	1.1	1.8
Q3	1.7	2.0	-0.1	-0.2	1.3	2.2	2.0	3.1	-0.9	2.0	3.2	1.1	2.0
Hours worked													
as a percentage of total hours worked													
2014	100.0	80.3	19.7	4.4	15.6	6.8	25.6	2.9	2.7	1.0	12.8	22.0	6.3
2015	100.0	80.5	19.5	4.3	15.5	6.8	25.6	2.9	2.7	1.0	13.0	22.0	6.3
2016	100.0	80.8	19.2	4.2	15.4	6.7	25.7	2.9	2.7	1.0	13.2	22.0	6.2
annual percentage changes													
2014	0.6	0.8	-0.4	-0.3	-0.1	-0.9	0.4	0.6	-1.0	0.0	2.4	1.2	0.1
2015	1.1	1.4	-0.2	-0.3	0.6	0.6	0.9	2.4	-0.1	1.8	2.9	1.0	0.8
2016	1.2	1.6	-0.1	-0.4	0.7	-0.1	1.6	1.9	0.6	2.1	2.8	1.0	0.9
2016 Q4	1.0	1.4	-0.3	-1.1	0.8	0.0	1.3	2.0	0.2	2.4	2.5	0.9	0.1
2017 Q1	1.3	1.7	-0.4	-0.6	1.0	1.6	1.3	2.9	-0.2	2.3	2.9	0.9	1.1
Q2	1.5	1.9	-0.2	-0.5	1.4	1.7	1.7	3.1	-1.4	1.8	2.8	1.0	1.7
Q3	1.8	2.2	0.0	-0.2	1.7	2.4	2.0	2.5	-0.8	2.0	3.1	1.0	2.3
Hours worked per person employed													
annual percentage changes													
2014	0.0	0.1	-0.5	-0.4	0.3	0.4	-0.3	-0.1	-0.1	-0.3	0.1	0.3	-0.5
2015	0.1	0.1	0.1	0.9	0.3	0.5	-0.4	1.0	0.1	0.3	0.1	0.0	0.3
2016	-0.1	-0.1	0.1	0.0	0.1	0.2	-0.2	-0.4	0.6	0.2	0.0	-0.2	-0.1
2016 Q4	-0.3	-0.2	-0.2	-1.1	0.2	-0.4	-0.4	-0.6	0.1	-0.1	-0.2	-0.4	-0.3
2017 Q1	-0.3	-0.1	-0.6	-1.6	0.2	0.1	-0.4	-0.3	0.2	0.4	-0.3	-0.3	0.0
Q2	-0.1	-0.1	0.1	-1.1	0.3	0.2	0.0	-0.4	-0.6	-0.2	-0.4	-0.1	-0.1
Q3	0.1	0.2	0.1	0.0	0.5	0.2	0.1	-0.6	0.2	0.0	-0.1	-0.1	0.3

Sources: Eurostat and ECB calculations.

1) Data for employment are based on the ESA 2010.

3 Economic activity

3.4 Labour force, unemployment and job vacancies

(seasonally adjusted, unless otherwise indicated)

	Labour force, millions [1]	Under-employ-ment, % of labour force [1]	Unemployment											Job vacancy rate [2]
			Total		Long-term unemploy-ment, % of labour force [1]	By age				By gender				
						Adult		Youth		Male		Female		
			Millions	% of labour force		Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	% of total posts
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
% of total in 2016			100.0			81.8		18.3		52.2		47.8		
2014	160.334	4.6	18.654	11.6	6.1	15.218	10.4	3.436	23.8	9.931	11.5	8.722	11.8	1.4
2015	160.600	4.6	17.464	10.9	5.6	14.302	9.8	3.162	22.3	9.259	10.7	8.205	11.1	1.5
2016	161.877	4.3	16.242	10.0	5.0	13.283	9.0	2.960	20.9	8.473	9.7	7.769	10.4	1.7
2016 Q4	162.300	4.2	15.768	9.7	4.9	12.887	8.7	2.881	20.4	8.241	9.4	7.527	10.0	1.7
2017 Q1	161.635	4.3	15.408	9.5	4.8	12.650	8.5	2.758	19.6	7.984	9.1	7.424	9.9	1.9
Q2	162.214	4.2	14.868	9.2	4.5	12.165	8.2	2.702	19.1	7.705	8.8	7.163	9.5	1.9
Q3	163.330	4.0	14.594	9.0	4.2	11.922	8.0	2.672	18.7	7.567	8.6	7.027	9.3	1.9
2017 June	-	-	14.716	9.1	-	12.034	8.1	2.682	18.9	7.641	8.7	7.075	9.4	-
July	-	-	14.718	9.0	-	12.045	8.1	2.673	18.8	7.626	8.7	7.092	9.4	-
Aug.	-	-	14.598	9.0	-	11.919	8.0	2.679	18.7	7.580	8.6	7.018	9.3	-
Sep.	-	-	14.467	8.9	-	11.803	7.9	2.664	18.6	7.495	8.5	6.972	9.3	-
Oct.	-	-	14.370	8.8	-	11.725	7.9	2.646	18.4	7.464	8.5	6.906	9.2	-
Nov.	-	-	14.263	8.7	-	11.639	7.8	2.624	18.2	7.406	8.4	6.857	9.1	-

Sources: Eurostat and ECB calculations.

1) Not seasonally adjusted.

2) The job vacancy rate is equal to the number of job vacancies divided by the sum of the number of occupied posts and the number of job vacancies, expressed as a percentage.

3.5 Short-term business statistics

	Industrial production						Con-struction produc-tion	ECB indicator on industrial new orders	Retail sales				New passenger car regis-trations
	Total (excluding construction)	Main Industrial Groupings							Total	Food, beverages, tobacco	Non-food	Fuel	
		Manu-facturing	Inter-mediate goods	Capital goods	Consumer goods	Energy							
	1	2	3	4	5	6	7	8	9	10	11	12	13
% of total in 2010	100.0	86.0	33.6	29.2	22.5	14.7	100.0	100.0	100.0	39.3	51.5	9.1	100.0
annual percentage changes													
2015	2.1	2.4	1.0	3.6	2.6	0.8	-0.9	3.6	2.7	1.7	3.3	2.3	8.8
2016	1.5	1.6	1.9	1.7	1.2	0.2	2.2	0.3	1.4	1.3	1.7	1.8	7.2
2017	.	.	.	.	.	.	.	.	.	.	.	.	5.6
2017 Q1	1.3	1.3	2.2	1.3	-0.6	1.8	1.9	5.5	2.2	1.4	2.8	1.4	4.8
Q2	2.7	2.8	3.9	2.4	1.7	1.7	3.6	6.7	3.0	2.8	3.3	1.4	6.0
Q3	3.7	4.0	4.9	4.7	2.0	0.4	3.0	9.0	2.9	1.7	4.3	0.5	5.5
Q4	.	.	.	.	.	.	.	.	.	.	.	.	6.3
2017 July	3.7	3.8	5.0	4.6	1.0	1.9	2.7	7.3	2.3	1.4	3.5	1.1	4.6
Aug.	3.9	4.3	5.3	5.1	2.6	0.5	2.1	9.0	2.3	1.3	3.7	0.0	6.9
Sep.	3.4	3.9	4.6	4.5	2.4	-1.1	3.6	10.7	4.1	2.5	5.7	0.3	5.3
Oct.	3.9	4.6	5.3	3.5	5.2	-1.7	2.2	8.9	0.2	-0.1	0.3	0.2	5.9
Nov.	3.2	4.2	4.6	6.2	0.5	-3.4	2.7	.	2.8	1.6	4.1	0.2	8.7
Dec.	.	.	.	.	.	.	.	.	.	.	.	.	4.4
month-on-month percentage changes (s.a.)													
2017 July	0.3	0.5	0.6	1.0	0.6	-1.1	-0.1	-0.6	0.0	-0.5	0.3	-0.5	-1.9
Aug.	1.5	1.7	1.2	3.3	0.3	0.9	0.1	3.2	-0.2	0.0	0.0	-0.7	2.9
Sep.	-0.5	-0.5	-0.5	-1.6	0.2	-1.2	0.2	1.0	0.8	1.1	0.5	-0.4	1.4
Oct.	0.4	0.3	0.3	-0.2	0.1	0.2	-0.3	0.1	-1.1	-1.6	-1.2	-0.2	-3.2
Nov.	1.0	1.3	1.1	3.0	0.3	0.0	0.5	.	1.5	1.2	2.3	0.3	4.9
Dec.	.	.	.	.	.	.	.	.	.	.	.	.	0.2

Sources: Eurostat, ECB calculations, ECB experimental statistics (col. 8) and European Automobile Manufacturers Association (col. 13).

3 Economic activity

3.6 Opinion surveys
(seasonally adjusted)

	European Commission Business and Consumer Surveys (percentage balances, unless otherwise indicated)								Purchasing Managers' Surveys (diffusion indices)			
	Economic sentiment indicator (long-term average = 100)	Manufacturing industry		Consumer confidence indicator	Construction confidence indicator	Retail trade confidence indicator	Service industries		Purchasing Managers' Index (PMI) for manufacturing	Manufacturing output	Business activity for services	Composite output
		Industrial confidence indicator	Capacity utilisation (%)				Services confidence indicator	Capacity utilisation (%)				
	1	2	3	4	5	6	7	8	9	10	11	12
1999-14	100.1	-5.9	80.7	-12.7	-14.4	-8.3	6.8	-	51.1	52.4	52.9	52.7
2015	104.2	-3.1	81.4	-6.2	-22.4	1.6	9.2	88.4	52.2	53.4	54.0	53.8
2016	104.8	-2.6	81.9	-7.7	-16.6	1.5	11.2	89.1	52.5	53.6	53.1	53.3
2017	111.3	4.6	.	-2.5	-4.2	3.3	14.6	.	57.4	58.5	55.6	56.4
2017 Q1	108.0	1.1	82.6	-5.5	-11.0	2.0	13.2	89.4	55.6	56.9	55.1	55.6
Q2	110.0	3.3	82.9	-2.7	-5.0	3.2	13.4	89.8	57.0	58.3	56.0	56.6
Q3	112.1	5.4	83.5	-1.5	-2.2	2.9	14.9	89.9	57.4	58.0	55.3	56.0
Q4	114.9	8.4	.	-0.2	1.5	5.3	17.0	.	59.7	60.7	56.0	57.2
2017 Aug.	111.9	5.0	-	-1.5	-3.3	1.6	15.1	-	57.4	58.3	54.7	55.7
Sep.	113.1	6.7	-	-1.2	-1.7	3.0	15.4	-	58.1	59.2	55.8	56.7
Oct.	114.1	8.0	83.8	-1.1	0.4	5.5	16.2	89.6	58.5	58.8	55.0	56.0
Nov.	114.6	8.1	-	0.0	1.5	4.3	16.4	-	60.1	61.0	56.2	57.5
Dec.	116.0	9.1	-	0.5	2.7	6.2	18.4	-	60.6	62.2	56.6	58.1
2018 Jan.	.	.	-	1.3	.	.	.	-	59.6	61.1	57.6	58.6

Sources: European Commission (Directorate-General for Economic and Financial Affairs) (col. 1-8) and Markit (col. 9-12).

3.7 Summary accounts for households and non-financial corporations
(current prices, unless otherwise indicated; not seasonally adjusted)

	Households							Non-financial corporations					
	Saving ratio (gross) [1]	Debt ratio	Real gross disposable income	Financial investment	Non-financial investment (gross)	Net worth [2]	Housing wealth	Profit share [3]	Saving ratio (net)	Debt ratio [4]	Financial investment	Non-financial investment (gross)	Financing
	Percentage of gross disposable income (adjusted)		Annual percentage changes					Percentage of net value added		Percentage of GDP	Annual percentage changes		
	1	2	3	4	5	6	7	8	9	10	11	12	13
2014	12.7	94.4	1.0	1.9	1.3	2.7	0.9	32.1	4.6	132.4	2.9	7.2	1.6
2015	12.3	93.7	1.6	2.2	1.4	3.7	2.6	32.6	6.1	134.6	4.3	4.8	2.4
2016	12.1	93.3	1.8	1.8	5.9	4.3	4.5	33.2	8.1	134.6	3.9	6.0	1.9
2016 Q4	12.1	93.3	1.4	1.8	6.5	4.3	4.5	33.2	8.1	134.6	3.9	5.5	1.9
2017 Q1	12.1	93.0	1.6	1.9	10.2	4.7	4.6	33.4	7.7	134.2	4.4	9.5	2.2
Q2	12.1	93.1	1.3	1.9	5.4	4.9	4.8	33.2	6.9	133.6	4.1	10.0	2.2
Q3	.	.	1.6	2.1	6.2	5.0	5.4	33.4	7.0	.	4.3	4.1	2.5

Sources: ECB and Eurostat.
1) Based on four-quarter cumulated sums of both saving and gross disposable income (adjusted for the change in the net equity of households in pension fund reserves).
2) Financial assets (net of financial liabilities) and non-financial assets. Non-financial assets consist mainly of housing wealth (residential structures and land). They also include non-financial assets of unincorporated enterprises classified within the household sector.
3) The profit share uses net entrepreneurial income, which is broadly equivalent to current profits in business accounting.
4) Based on the outstanding amount of loans, debt securities, trade credits and pension scheme liabilities.

3 Economic activity

3.8 Euro area balance of payments, current and capital accounts

(EUR billions; seasonally adjusted unless otherwise indicated; transactions)

	Current account											Capital account [1]	
	Total			Goods		Services		Primary income		Secondary income			
	Credit	Debit	Net	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
	1	2	3	4	5	6	7	8	9	10	11	12	13
2016 Q4	948.6	859.6	89.0	548.1	458.0	198.6	193.1	173.6	143.5	28.3	64.9	9.4	9.6
2017 Q1	959.3	868.2	91.1	558.6	479.3	206.1	188.4	167.6	143.9	27.0	56.6	7.4	17.7
Q2	965.0	884.1	80.9	559.9	477.3	207.8	190.4	170.8	146.1	26.4	70.3	7.0	17.2
Q3	991.0	866.9	124.2	575.7	477.1	210.8	184.6	177.9	139.2	26.7	65.9	6.5	8.4
2017 June	320.3	293.3	27.0	186.6	157.2	70.0	63.8	55.3	49.4	8.4	22.9	2.9	5.6
July	326.1	288.1	38.0	188.0	159.0	69.8	61.5	59.4	44.9	8.9	22.7	2.5	2.7
Aug.	333.0	289.5	43.5	191.6	159.5	70.2	61.2	62.1	48.3	9.1	20.6	1.9	2.6
Sep.	331.9	289.3	42.7	196.0	158.7	70.8	61.9	56.4	46.1	8.7	22.6	2.1	3.1
Oct.	317.0	286.8	30.3	187.6	161.3	69.0	62.2	52.1	42.5	8.3	20.8	2.9	1.6
Nov.	325.5	293.0	32.5	195.9	164.8	68.3	63.8	53.2	42.6	8.1	21.7	2.9	1.7
12-month cumulated transactions													
2017 Nov.	3,872.5	3,486.4	386.1	2,263.4	1,914.2	827.6	753.9	675.0	562.4	106.5	255.9	32.0	51.0
12-month cumulated transactions as a percentage of GDP													
2017 Nov.	35.0	31.5	3.5	20.5	17.3	7.5	6.8	6.1	5.1	1.0	2.3	0.3	0.5

1) The capital account is not seasonally adjusted.

3.9 Euro area external trade in goods [1] , values and volumes by product group [2]

(seasonally adjusted, unless otherwise indicated)

	Total (n.s.a.)		Exports (f.o.b.)					Imports (c.i.f.)					
			Total				Memo item:	Total				Memo items:	
	Exports	Imports		Intermediate goods	Capital goods	Consump-tion goods	Manu-facturing		Intermediate goods	Capital goods	Consump-tion goods	Manu-facturing	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)													
2016 Q4	2.2	2.5	525.2	245.0	109.5	157.5	440.9	461.9	256.7	76.0	119.4	336.7	50.0
2017 Q1	10.9	13.8	539.2	258.4	110.1	161.0	449.8	485.8	279.2	78.4	120.2	344.7	59.9
Q2	5.4	9.9	544.8	256.9	112.6	162.7	455.4	486.8	275.3	80.4	123.4	352.8	52.2
Q3	5.9	7.7	546.6	256.6	113.8	164.0	457.8	484.2	272.3	79.9	122.8	353.0	48.2
2017 June	4.3	6.8	180.8	84.5	37.3	53.8	151.3	159.5	89.6	26.0	41.1	116.0	16.6
July	5.8	9.0	178.6	83.8	36.8	53.8	149.1	161.1	90.4	26.4	41.0	117.3	15.8
Aug.	6.8	9.0	183.1	86.0	38.0	55.3	153.7	162.3	91.4	26.9	41.1	119.1	16.0
Sep.	5.3	5.3	184.9	86.8	39.0	54.8	155.0	160.8	90.5	26.7	40.7	116.6	16.4
Oct.	8.9	10.3	181.0	86.4	36.4	53.9	150.9	162.0	91.9	26.3	41.2	118.1	17.5
Nov.	7.7	7.3	187.1	.	.	.	.	164.6	.	.	.	.	.
Volume indices (2000 = 100; annual percentage changes for columns 1 and 2)													
2016 Q4	1.5	0.9	120.5	118.1	119.2	124.9	120.3	109.9	108.7	108.9	111.8	112.9	104.2
2017 Q1	6.4	3.1	120.9	121.3	118.7	124.3	120.6	110.3	111.2	108.1	110.1	112.4	109.5
Q2	1.6	2.2	122.5	121.3	121.7	125.4	122.1	112.6	112.7	111.5	114.3	115.7	104.5
Q3	3.7	3.3	124.0	122.0	124.1	127.9	123.7	114.2	113.9	113.9	114.5	117.3	100.0
2017 May	9.0	10.1	123.6	122.7	124.6	126.9	123.7	115.0	115.0	115.2	116.9	118.5	104.9
June	1.8	1.8	122.9	120.7	121.9	125.2	122.3	112.5	112.1	109.7	115.0	114.9	106.2
July	3.3	3.7	121.1	119.4	119.3	125.5	120.3	113.5	113.4	110.8	113.9	115.8	101.6
Aug.	4.9	5.1	124.8	122.5	125.1	129.8	124.7	115.5	115.3	116.8	114.9	119.3	100.3
Sep.	3.2	1.2	126.1	124.0	128.0	128.5	126.0	113.7	113.0	114.0	114.6	116.8	98.2
Oct.	7.1	7.2	123.1	122.8	120.2	126.0	122.6	114.1	114.2	112.9	115.5	118.3	102.3

Sources: ECB and Eurostat.

1) Differences between ECB's b.o.p. goods (Table 3.8) and Eurostat's trade in goods (Table 3.9) are mainly due to different definitions.

2) Product groups as classified in the Broad Economic Categories.

4 Prices and costs

4.1 Harmonised Index of Consumer Prices [1)]

(annual percentage changes, unless otherwise indicated)

	Total					Total (s.a.; percentage change vis-à-vis previous period) [2)]						Memo item: Administered prices	
	Index: 2015 = 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 excluding food and energy										
	1	2	3	4	5	6	7	8	9	10	11	12	13
% of total in 2017	100.0	100.0	70.9	55.4	44.6	100.0	12.1	7.5	26.3	9.5	44.6	86.6	13.4
2015	100.0	0.0	0.8	-0.8	1.2	-	-	-	-	-	-	-0.1	0.9
2016	100.2	0.2	0.9	-0.4	1.1	-	-	-	-	-	-	0.2	0.2
2017	101.8	1.5	1.0	1.7	1.4	-	-	-	-	-	-	1.6	1.0
2017 Q1	101.0	1.8	0.8	2.3	1.1	0.7	0.3	2.0	0.1	3.3	0.3	2.0	0.5
Q2	102.0	1.5	1.1	1.5	1.6	0.1	0.7	-1.2	0.1	-1.4	0.6	1.6	1.3
Q3	101.8	1.4	1.2	1.4	1.5	0.2	0.6	0.4	0.2	-0.9	0.4	1.5	1.1
Q4	102.4	1.4	0.9	1.6	1.2	0.4	0.5	1.1	0.1	2.6	0.0	1.5	1.2
2017 July	101.4	1.3	1.2	1.1	1.6	0.1	0.2	0.3	0.1	-0.7	0.2	1.3	1.1
Aug.	101.7	1.5	1.2	1.4	1.6	0.2	0.2	0.6	0.0	0.7	0.1	1.6	1.1
Sep.	102.1	1.5	1.1	1.6	1.5	0.1	0.1	0.1	0.0	1.0	0.0	1.6	1.0
Oct.	102.2	1.4	0.9	1.5	1.2	0.1	0.1	0.8	0.0	0.7	-0.1	1.4	1.1
Nov.	102.3	1.5	0.9	1.8	1.2	0.2	0.2	0.0	0.1	1.5	0.0	1.6	1.2
Dec.	102.7	1.4	0.9	1.5	1.2	0.2	0.2	0.2	0.1	0.1	0.2	1.4	1.2

	Goods						Services					
	Food (including alcoholic beverages and tobacco)			Industrial goods			Housing		Transport	Communication	Recreation and personal care	Miscellaneous
	Total	Processed food	Unprocessed food	Total	Non-energy industrial goods	Energy		Rents				
	14	15	16	17	18	19	20	21	22	23	24	25
% of total in 2017	19.6	12.1	7.5	35.8	26.3	9.5	10.7	6.5	7.3	3.2	15.1	8.2
2015	1.0	0.6	1.6	-1.8	0.3	-6.8	1.2	1.1	1.3	-0.8	1.5	1.2
2016	0.9	0.6	1.4	-1.1	0.4	-5.1	1.1	1.1	0.8	0.0	1.4	1.2
2017	1.8	1.6	2.2	1.6	0.4	4.9	1.3	1.2	2.1	-1.5	2.1	0.7
2017 Q1	2.0	0.9	4.0	2.4	0.3	8.2	1.3	1.2	1.7	-1.1	1.4	0.7
Q2	1.5	1.4	1.6	1.5	0.3	4.6	1.3	1.3	2.6	-1.4	2.3	0.8
Q3	1.6	2.0	0.9	1.3	0.5	3.4	1.3	1.2	2.3	-1.8	2.4	0.8
Q4	2.2	2.1	2.3	1.3	0.4	3.5	1.2	1.2	1.7	-1.7	2.0	0.4
2017 July	1.4	1.9	0.6	0.9	0.5	2.2	1.3	1.2	2.2	-1.8	2.5	0.8
Aug.	1.4	2.0	0.6	1.4	0.5	4.0	1.3	1.2	2.5	-1.9	2.4	0.8
Sep.	1.9	2.0	1.5	1.4	0.5	3.9	1.3	1.2	2.1	-1.8	2.4	0.9
Oct.	2.3	2.1	2.8	1.1	0.4	3.0	1.3	1.2	1.5	-1.8	2.1	0.4
Nov.	2.2	2.1	2.4	1.6	0.4	4.7	1.3	1.2	1.7	-1.6	2.0	0.4
Dec.	2.1	2.2	1.9	1.2	0.5	2.9	1.2	1.2	1.9	-1.7	1.9	0.4

Sources: Eurostat and ECB calculations.

1) Data refer to the changing composition of the euro area.

2) In May 2016 the ECB started publishing enhanced seasonally adjusted HICP series for the euro area, following a review of the seasonal adjustment approach as described in Box 1, *Economic Bulletin*, Issue 3, ECB, 2016 (https://www.ecb.europa.eu/pub/pdf/ecbu/eb201603.en.pdf).

4 Prices and costs

4.2 Industry, construction and property prices

(annual percentage changes, unless otherwise indicated)

	Industrial producer prices excluding construction [1]										Con-struction	Residential property prices [2]	Experimental indicator of commercial property prices [2]
	Total (index: 2010 = 100)	Total		Industry excluding construction and energy						Energy			
			Manu-facturing	Total	Intermediate goods	Capital goods	Consumer goods						
							Total	Food, beverages and tobacco	Non-food				
	1	2	3	4	5	6	7	8	9	10	11	12	13
% of total in 2010	100.0	100.0	78.1	72.1	29.4	20.1	22.6	13.8	8.9	27.9			
2014	106.9	-1.5	-0.9	-0.3	-1.1	0.4	0.1	-0.1	0.3	-4.3	0.3	0.4	1.2
2015	104.0	-2.7	-2.4	-0.5	-1.3	0.7	-0.6	-0.9	0.2	-8.2	0.2	1.6	3.2
2016	101.6	-2.3	-1.5	-0.5	-1.7	0.4	0.0	0.0	0.1	-6.9	0.4	3.2	5.3
2016 Q4	103.1	0.4	1.0	0.4	0.0	0.5	0.8	1.2	0.1	0.4	1.2	3.7	5.1
2017 Q1	104.7	4.1	4.0	2.1	3.1	0.8	1.7	2.6	0.2	9.9	1.9	3.8	3.5
Q2	104.2	3.3	3.1	2.4	3.5	0.9	2.4	3.5	0.2	5.7	1.9	3.9	5.2
Q3	104.4	2.4	2.7	2.1	3.0	1.0	2.2	3.2	0.3	3.2	2.0	4.4	5.5
2017 June	104.0	2.4	2.1	2.2	3.0	0.9	2.4	3.5	0.3	2.5	-	-	-
July	104.0	2.0	2.3	2.0	2.7	1.0	2.2	3.2	0.2	1.9	-	-	-
Aug.	104.3	2.5	2.7	2.2	3.0	1.0	2.2	3.2	0.3	3.5	-	-	-
Sep.	104.8	2.8	2.9	2.2	3.3	1.0	2.2	3.1	0.3	4.4	-	-	-
Oct.	105.2	2.5	2.6	2.3	3.5	0.9	1.8	2.4	0.2	3.1	-	-	-
Nov.	105.8	2.8	2.9	2.1	3.2	1.0	1.5	2.0	0.3	4.9	-	-	-

Sources: Eurostat, ECB calculations, and ECB calculations based on MSCI data and national sources (col. 13).

1) Domestic sales only.

2) Experimental data based on non-harmonised sources (see https://www.ecb.europa.eu/stats/ecb_statistics/governance_and_quality_framework/html/experimental-data.en.html for further details).

4.3 Commodity prices and GDP deflators

(annual percentage changes, unless otherwise indicated)

	GDP deflators								Oil prices (EUR per barrel)	Non-energy commodity prices (EUR)					
	Total (s.a.; index: 2010 = 100)	Total	Domestic demand				Exports [1]	Imports [1]		Import-weighted [2]			Use-weighted [2]		
			Total	Private consump-tion	Govern-ment consump-tion	Gross fixed capital formation				Total	Food	Non-food	Total	Food	Non-food
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
% of total										100.0	45.4	54.6	100.0	50.4	49.6
2015	106.0	1.4	0.4	0.3	0.5	0.8	0.3	-1.9	47.1	0.0	4.2	-4.5	2.9	7.0	-2.7
2016	106.8	0.8	0.4	0.3	0.5	0.8	-1.5	-2.5	39.9	-3.5	-3.9	-3.2	-7.3	-10.3	-2.9
2017	.	.	.	.	.	.	.	.	48.1	5.9	-3.3	16.2	5.5	-3.1	17.1
2017 Q1	107.4	0.7	1.5	1.6	1.0	1.3	2.5	4.5	50.8	18.3	5.9	33.2	13.0	0.1	32.4
Q2	107.9	1.1	1.4	1.4	1.0	1.3	2.3	3.2	45.6	6.8	-2.7	18.2	6.7	-2.4	19.9
Q3	108.2	1.3	1.5	1.3	1.0	1.4	1.5	1.9	44.0	1.7	-7.4	11.9	2.4	-5.7	13.0
Q4	.	.	.	.	.	.	.	.	52.2	-2.4	-8.9	4.3	0.1	-4.7	5.8
2017 July	-	-	-	-	-	-	-	-	42.2	1.0	-6.1	8.9	2.0	-4.4	10.1
Aug.	-	-	-	-	-	-	-	-	43.5	1.1	-9.0	12.3	1.0	-8.0	13.1
Sep.	-	-	-	-	-	-	-	-	46.3	3.1	-7.2	14.7	4.1	-4.8	15.8
Oct.	-	-	-	-	-	-	-	-	49.0	2.6	-6.1	12.0	5.2	-1.2	13.2
Nov.	-	-	-	-	-	-	-	-	53.3	-2.6	-8.3	3.2	0.3	-3.5	4.8
Dec.	-	-	-	-	-	-	-	-	54.2	-6.7	-12.2	-1.3	-4.8	-9.2	0.3

Sources: Eurostat, ECB calculations and Bloomberg (col. 9).

1) Deflators for exports and imports refer to goods and services and include cross-border trade within the euro area.

2) Import-weighted: weighted according to 2009-11 average import structure; use-weighted: weighted according to 2009-11 average domestic demand structure.

4 Prices and costs

4.4 Price-related opinion surveys
(seasonally adjusted)

	European Commission Business and Consumer Surveys (percentage balances)					Purchasing Managers' Surveys (diffusion indices)			
	Selling price expectations (for next three months)				Consumer price trends over past 12 months	Input prices		Prices charged	
	Manu-facturing	Retail trade	Services	Construction		Manu-facturing	Services	Manu-facturing	Services
	1	2	3	4	5	6	7	8	9
1999-14	4.4	-	-	-3.0	33.5	57.2	56.5	-	49.8
2015	-2.8	1.3	2.7	-13.2	-0.2	48.9	53.5	49.6	49.0
2016	-0.4	1.7	4.4	-7.3	0.2	49.8	53.9	49.3	49.6
2017	9.1	5.5	6.9	2.3	12.4	64.6	56.3	55.1	51.6
2017 Q1	9.0	5.5	6.4	-3.7	12.9	67.8	56.7	55.0	51.4
Q2	7.8	4.2	5.9	1.8	12.3	62.5	55.9	54.6	51.5
Q3	8.7	4.9	6.8	3.2	10.5	60.4	55.7	54.4	51.4
Q4	11.1	7.6	8.3	8.1	13.8	67.9	56.9	56.3	52.1
2017 Aug.	8.1	4.0	6.4	0.1	9.9	59.4	55.6	54.3	51.3
Sep.	10.5	6.1	8.0	4.3	11.5	64.0	56.3	55.2	51.8
Oct.	8.7	8.4	8.6	7.8	13.0	66.4	56.7	55.8	52.1
Nov.	11.1	7.4	8.3	7.8	14.7	69.4	56.9	56.8	52.1
Dec.	13.4	7.0	8.0	8.5	13.7	67.9	57.1	56.3	52.0
2018 Jan.	.	.	.	.	.	70.8	58.4	58.1	53.3

Sources: European Commission (Directorate-General for Economic and Financial Affairs) and Markit.

4.5 Labour cost indices
(annual percentage changes, unless otherwise indicated)

	Total (index: 2012 = 100)	Total	By component		For selected economic activities		Memo item: Indicator of negotiated wages [1]
			Wages and salaries	Employers' social contributions	Business economy	Mainly non-business economy	
	1	2	3	4	5	6	7
% of total in 2012	100.0	100.0	74.6	25.4	69.3	30.7	
2014	102.6	1.3	1.3	1.2	1.2	1.2	1.7
2015	104.3	1.6	1.9	0.7	1.6	1.6	1.5
2016	105.8	1.5	1.5	1.6	1.4	1.5	1.4
2016 Q4	112.3	1.6	1.6	1.5	1.6	1.4	1.4
2017 Q1	100.5	1.4	1.3	1.6	1.3	1.7	1.6
Q2	111.2	1.8	2.1	0.8	1.9	1.4	1.4
Q3	104.2	1.6	1.7	1.6	2.0	0.9	1.5

Sources: Eurostat and ECB calculations.

1) Experimental data based on non-harmonised sources (see https://www.ecb.europa.eu/stats/ecb_statistics/governance_and_quality_framework/html/experimental-data.en.html for further details).

4 Prices and costs

4.6 Unit labour costs, compensation per labour input and labour productivity

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

	Total (index: 2010 =100)	Total	By economic activity									
			Agriculture, forestry and fishing	Manu-facturing, energy and utilities	Con-struction	Trade, transport, accom-modation and food services	Information and commu-nication	Finance and insurance	Real estate	Professional, business and support services	Public ad-ministration, education, health and social work	Arts, enter-tainment and other services
	1	2	3	4	5	6	7	8	9	10	11	12
Unit labour costs												
2014	104.4	0.7	-1.4	-1.0	1.3	0.3	-1.4	3.0	1.7	1.3	1.6	1.6
2015	104.8	0.4	-3.3	-1.8	0.5	1.2	0.9	0.6	2.0	1.6	1.3	1.4
2016	105.6	0.8	1.3	0.0	-0.3	1.3	0.0	1.7	4.3	0.7	1.2	1.7
2016 Q4	106.1	0.8	3.4	-0.4	0.0	1.1	-0.3	2.3	4.9	0.9	1.1	1.6
2017 Q1	106.3	1.0	0.1	0.7	0.3	0.4	-0.5	2.0	4.0	1.8	1.4	1.6
Q2	106.4	0.9	0.7	-0.2	0.4	0.0	0.4	1.2	5.9	2.5	1.4	1.9
Q3	106.5	0.7	0.4	-0.8	0.6	0.4	1.2	0.0	3.5	2.1	1.0	1.1
Compensation per employee												
2014	106.6	1.4	0.2	2.1	1.6	1.2	2.2	2.0	1.9	1.7	1.1	1.0
2015	108.1	1.4	0.8	1.9	0.9	1.6	2.8	0.7	1.4	1.6	1.2	2.0
2016	109.5	1.3	0.5	1.4	1.5	1.5	0.7	2.2	3.3	0.8	1.2	1.5
2016 Q4	110.3	1.4	0.7	1.6	1.3	1.6	0.6	2.1	3.3	0.9	1.4	2.0
2017 Q1	110.7	1.5	-0.2	1.6	1.3	1.4	0.7	1.8	3.3	2.2	1.5	1.6
Q2	111.1	1.7	0.7	1.7	2.1	1.3	1.5	1.7	5.1	2.4	1.8	1.4
Q3	111.6	1.7	1.4	1.8	1.7	1.8	2.1	1.0	3.1	2.8	1.5	0.7
Labour productivity per person employed												
2014	102.1	0.7	1.7	3.1	0.3	0.9	3.6	-0.9	0.2	0.4	-0.5	-0.6
2015	103.2	1.1	4.3	3.7	0.4	0.4	1.9	0.1	-0.7	0.1	-0.1	0.5
2016	103.7	0.5	-0.9	1.4	1.8	0.2	0.6	0.4	-0.9	0.1	0.0	-0.2
2016 Q4	104.0	0.6	-2.6	2.0	1.3	0.4	1.0	-0.2	-1.5	-0.1	0.3	0.4
2017 Q1	104.1	0.5	-0.2	0.9	1.1	1.0	1.2	-0.2	-0.6	0.3	0.1	-0.1
Q2	104.4	0.8	0.0	1.9	1.7	1.4	1.1	0.5	-0.8	-0.1	0.4	-0.5
Q3	104.7	1.0	0.9	2.6	1.0	1.4	0.9	1.0	-0.4	0.7	0.5	-0.3
Compensation per hour worked												
2014	108.5	1.3	1.1	1.7	1.1	1.4	2.0	2.0	1.7	1.3	0.8	1.4
2015	109.9	1.3	0.7	1.5	0.3	1.6	1.8	0.7	0.6	1.2	1.3	1.8
2016	111.4	1.3	-0.1	1.3	1.5	1.5	1.0	1.7	3.4	0.7	1.5	1.7
2016 Q4	112.2	1.6	1.3	1.4	1.5	1.8	1.2	2.1	4.2	1.0	1.8	2.4
2017 Q1	112.5	1.6	0.3	1.4	1.1	1.6	0.8	1.5	3.3	2.1	1.9	1.5
Q2	112.9	1.7	1.9	1.4	1.9	1.5	1.7	2.4	5.5	2.5	1.9	1.2
Q3	113.2	1.5	0.4	1.3	1.1	1.7	2.3	0.8	3.2	2.7	1.7	0.1
Hourly labour productivity												
2014	104.2	0.8	2.0	2.8	-0.1	1.3	3.7	-0.9	0.5	0.3	-0.8	-0.1
2015	105.2	1.0	3.4	3.4	-0.2	0.8	0.9	0.0	-1.0	0.0	0.0	0.2
2016	105.8	0.6	-0.9	1.3	1.6	0.3	1.0	-0.2	-1.2	0.1	0.3	0.0
2016 Q4	106.2	0.9	-1.5	1.8	1.8	0.8	1.6	-0.4	-1.4	0.2	0.7	0.7
2017 Q1	106.2	0.7	1.4	0.8	1.0	1.4	1.5	-0.5	-1.1	0.6	0.4	-0.1
Q2	106.5	0.9	1.1	1.6	1.5	1.4	1.4	1.1	-0.6	0.3	0.5	-0.5
Q3	106.8	0.9	1.0	2.1	0.9	1.3	1.4	0.8	-0.4	0.8	0.6	-0.6

Sources: Eurostat and ECB calculations.

5 Money and credit

5.1 Monetary aggregates [1)]

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	M3											
	M2							M3-M2				
	M1			M2-M1								
	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	Debt securities with a maturity of up to 2 years		
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts												
2014	970.1	4,975.6	5,945.7	1,585.7	2,147.6	3,733.2	9,678.9	120.8	430.0	110.1	660.9	10,339.8
2015	1,037.7	5,575.8	6,613.5	1,444.1	2,159.7	3,603.8	10,217.2	74.5	485.1	75.6	635.2	10,852.4
2016	1,075.1	6,128.3	7,203.4	1,328.6	2,175.7	3,504.3	10,707.7	70.4	523.2	95.7	689.2	11,396.9
2016 Q4	1,075.1	6,128.3	7,203.4	1,328.6	2,175.7	3,504.3	10,707.7	70.4	523.2	95.7	689.2	11,396.9
2017 Q1	1,087.2	6,292.0	7,379.1	1,304.7	2,181.3	3,486.0	10,865.2	74.4	531.6	100.2	706.2	11,571.3
Q2	1,094.9	6,424.8	7,519.7	1,258.0	2,194.2	3,452.2	10,971.9	68.2	513.7	80.1	662.1	11,634.0
Q3	1,103.9	6,573.9	7,677.8	1,222.3	2,208.2	3,430.5	11,108.3	66.6	530.8	80.1	677.5	11,785.8
2017 June	1,094.9	6,424.8	7,519.7	1,258.0	2,194.2	3,452.2	10,971.9	68.2	513.7	80.1	662.1	11,634.0
July	1,095.0	6,468.2	7,563.2	1,245.9	2,200.4	3,446.3	11,009.5	66.3	518.2	79.9	664.4	11,673.9
Aug.	1,099.6	6,528.0	7,627.6	1,239.0	2,205.0	3,444.0	11,071.6	70.5	521.0	76.9	668.4	11,740.0
Sep.	1,103.9	6,573.9	7,677.8	1,222.3	2,208.2	3,430.5	11,108.3	66.6	530.8	80.1	677.5	11,785.8
Oct.	1,110.0	6,590.2	7,700.3	1,216.3	2,215.4	3,431.7	11,132.0	68.9	527.2	72.2	668.4	11,800.3
Nov. [(p)]	1,110.2	6,657.5	7,767.7	1,200.5	2,215.6	3,416.0	11,183.8	78.7	520.7	80.7	680.1	11,863.9
Transactions												
2014	59.6	376.6	436.2	-88.4	3.7	-84.7	351.5	3.8	11.8	12.8	28.3	379.8
2015	66.5	566.9	633.3	-134.5	12.3	-122.2	511.2	-47.4	49.7	-27.2	-25.0	486.1
2016	37.5	542.0	579.5	-105.8	16.0	-89.8	489.7	-4.2	38.0	16.1	49.9	539.5
2016 Q4	8.2	171.4	179.6	-53.4	4.0	-49.4	130.2	-7.6	20.6	3.2	16.2	146.4
2017 Q1	12.1	166.4	178.5	-21.5	5.5	-16.0	162.5	4.1	8.5	4.0	16.5	179.0
Q2	7.8	152.4	160.2	-37.1	12.5	-24.6	135.5	-5.6	-17.5	-20.7	-43.9	91.6
Q3	9.0	157.8	166.8	-32.7	10.8	-22.0	144.8	-1.1	17.0	2.6	18.5	163.4
2017 June	2.5	54.2	56.7	-8.8	4.2	-4.6	52.1	-3.5	-5.7	-2.9	-12.1	40.0
July	0.1	49.5	49.6	-10.0	3.0	-7.0	42.6	-1.6	4.3	0.9	3.5	46.1
Aug.	4.6	63.3	67.9	-5.9	4.6	-1.3	66.5	4.5	2.8	-3.7	3.6	70.1
Sep.	4.3	45.1	49.3	-16.8	3.2	-13.6	35.7	-3.9	9.9	5.4	11.4	47.1
Oct.	6.2	13.3	19.4	-7.1	7.2	0.1	19.5	2.2	-3.6	-8.0	-9.5	10.1
Nov. [(p)]	0.1	71.1	71.2	-7.7	0.2	-7.5	63.7	9.9	-6.7	4.5	7.7	71.4
Growth rates												
2014	6.5	8.4	8.1	-5.2	0.2	-2.2	3.8	3.1	2.8	18.5	4.6	3.9
2015	6.8	11.3	10.6	-8.5	0.6	-3.3	5.3	-38.9	11.4	-25.4	-3.8	4.7
2016	3.6	9.7	8.8	-7.4	0.7	-2.5	4.8	-5.7	7.8	21.0	7.8	5.0
2016 Q4	3.6	9.7	8.8	-7.4	0.7	-2.5	4.8	-5.7	7.8	21.0	7.8	5.0
2017 Q1	3.7	9.9	8.9	-7.6	0.8	-2.5	5.0	-14.5	12.9	3.9	7.9	5.1
Q2	3.8	10.5	9.5	-9.4	1.1	-3.0	5.2	-18.6	5.0	-16.3	-1.0	4.8
Q3	3.5	10.9	9.8	-10.5	1.5	-3.2	5.4	-13.2	5.7	-12.1	1.1	5.2
2017 June	3.8	10.5	9.5	-9.4	1.1	-3.0	5.2	-18.6	5.0	-16.3	-1.0	4.8
July	3.4	10.2	9.2	-9.9	1.2	-3.2	5.0	-18.5	4.3	-20.4	-2.1	4.5
Aug.	3.5	10.6	9.5	-9.2	1.4	-2.7	5.4	-11.3	6.2	-24.9	-0.6	5.0
Sep.	3.5	10.9	9.8	-10.5	1.5	-3.2	5.4	-13.2	5.7	-12.1	1.1	5.2
Oct.	3.5	10.4	9.4	-9.9	1.8	-2.7	5.4	-6.1	3.4	-20.2	-0.8	5.0
Nov. [(p)]	3.3	10.1	9.1	-9.4	1.8	-2.5	5.3	10.2	1.7	-19.9	-0.4	4.9

Source: ECB.

1) Data refer to the changing composition of the euro area.

5 Money and credit

5.2 Deposits in M3 [1]

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Non-financial corporations [2]					Households [3]					Financial corporations other than MFIs and ICPFs [2]	Insurance corporations and pension funds	Other general government [4]
	Total	Overnight	With an agreed maturity of up to 2 years	Redeemable at notice of up to 3 months	Repos	Total	Overnight	With an agreed maturity of up to 2 years	Redeemable at notice of up to 3 months	Repos			
	1	2	3	4	5	6	7	8	9	10	11	12	13
Outstanding amounts													
2014	1,864.7	1,366.5	366.5	112.6	19.1	5,556.2	2,749.7	811.9	1,991.5	3.1	851.0	223.4	334.4
2015	1,953.2	1,503.9	323.6	117.4	8.3	5,750.7	3,060.7	695.0	1,992.3	2.7	957.9	226.6	365.5
2016	2,079.0	1,656.1	296.1	118.2	8.4	6,052.6	3,401.2	643.8	2,005.7	1.9	990.1	198.2	383.2
2016 Q4	2,079.0	1,656.1	296.1	118.2	8.4	6,052.6	3,401.2	643.8	2,005.7	1.9	990.1	198.2	383.2
2017 Q1	2,159.7	1,734.4	301.3	117.6	6.5	6,135.9	3,498.1	620.5	2,014.7	2.6	973.0	191.5	392.3
Q2	2,187.9	1,769.1	293.5	118.9	6.4	6,187.6	3,560.6	599.2	2,025.5	2.3	970.1	196.5	403.1
Q3	2,218.1	1,806.7	285.9	120.1	5.3	6,255.3	3,635.2	582.0	2,036.2	2.0	977.4	201.0	419.2
2017 June	2,187.9	1,769.1	293.5	118.9	6.4	6,187.6	3,560.6	599.2	2,025.5	2.3	970.1	196.5	403.1
July	2,193.0	1,777.7	289.8	119.4	6.1	6,205.3	3,578.7	593.1	2,031.3	2.1	978.3	194.8	409.4
Aug.	2,205.8	1,793.1	286.9	120.0	5.7	6,231.9	3,607.3	588.4	2,034.2	2.0	988.5	199.2	417.1
Sep.	2,218.1	1,806.7	285.9	120.1	5.3	6,255.3	3,635.2	582.0	2,036.2	2.0	977.4	201.0	419.2
Oct.	2,229.2	1,822.4	280.5	120.8	5.5	6,293.4	3,674.8	574.1	2,042.2	2.2	946.4	202.7	419.2
Nov. (p)	2,244.7	1,833.6	282.2	121.0	7.9	6,293.9	3,682.5	567.1	2,042.3	2.0	991.4	207.9	414.4
Transactions													
2014	68.9	90.9	-26.2	1.4	2.7	140.7	208.8	-65.1	-1.2	-1.8	56.8	7.0	22.3
2015	85.1	124.3	-32.9	4.9	-11.2	194.7	303.8	-109.8	1.2	-0.4	88.3	-0.5	29.6
2016	127.9	151.8	-24.3	0.2	0.2	299.9	333.6	-46.5	13.7	-0.8	30.9	-29.6	18.8
2016 Q4	9.8	30.6	-18.9	-1.0	-0.8	70.7	90.4	-23.4	4.6	-0.7	43.1	-7.9	-1.4
2017 Q1	83.7	79.7	6.5	-0.7	-1.9	83.5	97.4	-23.6	8.9	0.7	-15.5	-6.4	9.2
Q2	37.7	40.8	-4.8	1.7	0.0	54.9	65.7	-20.4	10.0	-0.3	13.6	5.3	10.6
Q3	35.2	41.0	-6.0	1.3	-1.1	66.0	75.5	-16.8	7.6	-0.3	12.7	4.8	16.1
2017 June	15.8	15.3	-0.2	0.5	0.2	16.4	20.6	-6.4	2.5	-0.3	10.6	0.3	2.9
July	8.9	11.5	-2.8	0.5	-0.3	15.5	18.7	-5.7	2.7	-0.2	11.5	-1.5	6.4
Aug.	14.5	16.6	-2.4	0.6	-0.4	27.0	28.9	-4.7	2.9	0.0	12.6	4.6	7.7
Sep.	11.8	12.9	-0.9	0.2	-0.5	23.4	27.9	-6.4	2.0	-0.1	-11.4	1.7	2.0
Oct.	9.3	14.2	-5.9	0.7	0.3	37.5	39.2	-7.9	6.0	0.2	-32.7	1.6	-0.1
Nov. (p)	17.5	12.6	2.3	0.2	2.4	1.4	8.3	-6.9	0.2	-0.2	53.8	5.4	-4.7
Growth rates													
2014	4.0	7.6	-6.5	1.3	15.3	2.6	8.2	-7.4	-0.1	-36.3	7.1	3.7	7.4
2015	4.6	9.0	-9.2	4.4	-57.6	3.5	11.0	-13.6	0.1	-13.2	10.2	-0.2	8.8
2016	6.6	10.1	-7.6	0.2	2.1	5.2	10.9	-6.7	0.7	-29.9	3.2	-13.0	5.1
2016 Q4	6.6	10.1	-7.6	0.2	2.1	5.2	10.9	-6.7	0.7	-29.9	3.2	-13.0	5.1
2017 Q1	7.8	11.4	-5.5	-0.3	-32.6	5.3	11.4	-10.1	1.0	1.6	1.4	-13.0	4.2
Q2	8.1	11.2	-4.3	0.4	-21.4	4.8	10.7	-12.4	1.3	-25.3	3.2	-6.2	6.1
Q3	8.1	11.8	-7.4	1.1	-42.3	4.6	9.9	-12.6	1.6	-25.3	5.7	-2.0	8.9
2017 June	8.1	11.2	-4.3	0.4	-21.4	4.8	10.7	-12.4	1.3	-25.3	3.2	-6.2	6.1
July	7.6	10.7	-5.4	1.1	-25.2	4.5	10.1	-12.6	1.4	-29.9	4.4	-9.3	6.6
Aug.	8.1	11.3	-5.1	1.6	-32.2	4.5	9.9	-12.4	1.5	-28.8	6.4	-5.9	8.7
Sep.	8.1	11.8	-7.4	1.1	-42.3	4.6	9.9	-12.6	1.6	-25.3	5.7	-2.0	8.9
Oct.	8.3	11.8	-7.1	1.7	-20.0	4.8	10.1	-12.9	1.8	-21.7	4.2	-1.5	7.3
Nov. (p)	8.4	11.5	-5.7	2.7	-4.8	4.4	9.3	-12.9	1.7	-17.5	6.4	1.0	8.0

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

3) Including non-profit institutions serving households.

4) Refers to the general government sector excluding central government.

5 Money and credit

5.3 Credit to euro area residents [1)]

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Credit to general government			Credit to other euro area residents								
					Loans						Debt securities	Equity and non-money market fund investment fund shares
					Total		To non-financial corporations [3)]	To households [4)]	To financial corporations other than MFIs and ICPFs [3)]	To insurance corporations and pension funds		
	Total	Loans	Debt securities	Total		Adjusted loans [2)]						
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts												
2014	3,613.5	1,136.1	2,475.2	12,509.1	10,454.5	10,724.6	4,317.2	5,201.5	806.6	129.2	1,282.2	772.5
2015	3,901.3	1,113.5	2,785.4	12,599.8	10,509.6	10,805.0	4,290.2	5,308.7	787.1	123.8	1,307.8	782.4
2016	4,393.6	1,083.3	3,297.1	12,839.2	10,669.8	10,977.6	4,312.7	5,409.7	834.6	112.7	1,385.4	784.0
2016 Q4	4,393.6	1,083.3	3,297.1	12,839.2	10,669.8	10,977.6	4,312.7	5,409.7	834.6	112.7	1,385.4	784.0
2017 Q1	4,434.5	1,071.6	3,348.8	12,967.5	10,751.7	11,045.5	4,332.0	5,456.6	850.3	112.9	1,423.2	792.6
Q2	4,463.9	1,064.5	3,385.2	12,964.1	10,729.8	11,047.0	4,299.9	5,485.1	832.1	112.7	1,437.8	796.5
Q3	4,548.3	1,050.5	3,483.7	13,016.7	10,783.7	11,101.8	4,303.0	5,524.0	844.8	111.9	1,438.8	794.1
2017 June	4,463.9	1,064.5	3,385.2	12,964.1	10,729.8	11,047.0	4,299.9	5,485.1	832.1	112.7	1,437.8	796.5
July	4,496.7	1,058.1	3,424.3	12,985.5	10,735.4	11,070.3	4,303.6	5,485.5	832.2	114.2	1,455.2	794.9
Aug.	4,541.5	1,057.1	3,470.0	12,992.1	10,761.3	11,083.6	4,304.1	5,507.1	835.4	114.7	1,440.5	790.4
Sep.	4,548.3	1,050.5	3,483.7	13,016.7	10,783.7	11,101.8	4,303.0	5,524.0	844.8	111.9	1,438.8	794.1
Oct.	4,559.0	1,044.7	3,500.4	13,060.6	10,827.7	11,144.7	4,329.7	5,534.3	851.5	112.1	1,432.4	800.4
Nov. [p)]	4,582.0	1,041.7	3,526.4	13,085.7	10,854.5	11,165.1	4,344.4	5,549.0	846.1	115.0	1,426.1	805.0
Transactions												
2014	73.3	16.7	56.6	-99.8	-47.0	-32.8	-60.6	-14.6	16.3	11.8	-89.7	36.9
2015	295.3	-21.0	316.0	83.0	55.9	77.0	-15.0	98.5	-22.0	-5.7	25.6	1.5
2016	488.3	-34.6	522.8	316.4	233.6	258.0	81.7	119.5	43.6	-11.1	78.7	4.1
2016 Q4	152.6	-17.2	170.0	80.6	60.3	68.3	15.4	37.5	4.7	2.7	18.2	2.0
2017 Q1	77.4	-11.1	88.0	143.3	96.4	86.4	26.5	49.1	20.6	0.2	36.7	10.1
Q2	34.6	-5.2	39.8	57.5	26.2	48.4	-1.1	37.8	-10.5	0.0	19.4	12.0
Q3	88.7	-10.8	99.6	76.9	78.6	86.5	20.8	43.8	14.7	-0.7	2.1	-3.8
2017 June	-8.5	-2.5	-5.8	28.4	11.5	15.8	-16.7	17.0	10.2	1.1	4.4	12.4
July	32.9	-6.0	38.8	34.1	18.1	37.0	11.6	1.6	3.4	1.5	18.1	-2.1
Aug.	39.3	-1.3	40.5	17.7	33.4	22.4	4.6	23.5	4.7	0.6	-14.4	-1.2
Sep.	16.5	-3.5	20.3	25.1	27.1	27.1	4.5	18.7	6.7	-2.8	-1.5	-0.5
Oct.	4.1	-5.7	9.7	37.4	43.7	44.1	27.3	10.9	5.2	0.2	-8.9	2.6
Nov. [p)]	19.5	-3.1	22.5	42.8	36.1	30.7	19.6	17.3	-3.8	2.9	-0.9	7.6
Growth rates												
2014	2.1	1.5	2.4	-0.8	-0.4	-0.3	-1.4	-0.3	1.7	11.9	-6.6	4.6
2015	8.2	-1.8	12.8	0.7	0.5	0.7	-0.3	1.9	-2.7	-4.4	2.0	0.2
2016	12.5	-3.1	18.7	2.5	2.2	2.4	1.9	2.3	5.5	-9.0	6.0	0.5
2016 Q4	12.5	-3.1	18.7	2.5	2.2	2.4	1.9	2.3	5.5	-9.0	6.0	0.5
2017 Q1	10.9	-4.2	16.8	3.1	2.4	2.7	1.7	2.5	4.8	3.6	8.2	4.7
Q2	8.2	-3.8	12.6	3.1	2.4	2.5	1.2	3.0	3.7	8.4	7.2	6.4
Q3	8.4	-4.0	12.8	2.8	2.5	2.7	1.4	3.1	3.6	2.0	5.6	2.6
2017 June	8.2	-3.8	12.6	3.1	2.4	2.5	1.2	3.0	3.7	8.4	7.2	6.4
July	7.7	-4.1	11.9	3.0	2.2	2.6	1.2	2.9	3.4	3.6	7.5	5.6
Aug.	8.4	-3.9	12.9	2.8	2.4	2.6	1.3	3.1	3.5	4.0	6.0	2.6
Sep.	8.4	-4.0	12.8	2.8	2.5	2.7	1.4	3.1	3.6	2.0	5.6	2.6
Oct.	7.4	-4.2	11.5	2.8	2.6	2.8	1.7	3.2	3.5	-1.6	4.4	2.8
Nov. [p)]	6.8	-3.9	10.5	2.8	2.6	2.9	1.8	3.1	2.9	0.1	3.8	4.4

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Adjusted for loan sales and securitisation (resulting in derecognition from the MFI statistical balance sheet) as well as for positions arising from notional cash pooling services provided by MFIs.

3) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

4) Including non-profit institutions serving households.

5 Money and credit

5.4 MFI loans to euro area non-financial corporations and households [1)]

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	Non-financial corporations [2)]					Households [3)]				
	Total		Up to 1 year	Over 1 and up to 5 years	Over 5 years	Total		Loans for consumption	Loans for house purchase	Other loans
		Adjusted loans [4)]					Adjusted loans [4)]			
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2014	4,317.2	4,269.8	1,112.3	724.5	2,480.4	5,201.5	5,546.5	563.0	3,861.7	776.9
2015	4,290.2	4,272.8	1,043.1	761.8	2,485.2	5,308.7	5,641.5	595.4	3,949.4	763.9
2016	4,312.7	4,312.2	1,001.2	797.8	2,513.6	5,409.7	5,726.4	615.2	4,046.2	748.4
2016 Q4	4,312.7	4,312.2	1,001.2	797.8	2,513.6	5,409.7	5,726.4	615.2	4,046.2	748.4
2017 Q1	4,332.0	4,333.1	1,005.1	802.6	2,524.3	5,456.6	5,767.6	626.4	4,085.7	744.5
Q2	4,299.9	4,314.1	988.8	798.6	2,512.5	5,485.1	5,797.5	635.0	4,112.9	737.1
Q3	4,303.0	4,324.3	976.3	812.4	2,514.3	5,524.0	5,828.8	644.4	4,148.7	730.9
2017 June	4,299.9	4,314.1	988.8	798.6	2,512.5	5,485.1	5,797.5	635.0	4,112.9	737.1
July	4,303.6	4,325.7	984.4	802.7	2,516.5	5,485.5	5,809.1	639.4	4,112.0	734.0
Aug.	4,304.1	4,326.0	980.9	804.9	2,518.3	5,507.1	5,818.8	642.5	4,132.0	732.6
Sep.	4,303.0	4,324.3	976.3	812.4	2,514.3	5,524.0	5,828.8	644.4	4,148.7	730.9
Oct.	4,329.7	4,350.5	990.4	816.8	2,522.6	5,534.3	5,840.1	647.2	4,156.4	730.7
Nov. [(p)]	4,344.4	4,364.8	986.5	824.8	2,533.2	5,549.0	5,851.1	651.5	4,166.3	731.2
Transactions										
2014	-60.6	-67.1	-14.1	2.5	-49.0	-14.6	6.0	-3.0	-2.9	-8.6
2015	-15.0	23.7	-62.1	31.9	15.2	98.5	77.0	21.8	80.2	-3.5
2016	81.7	98.6	-17.3	44.3	54.7	119.5	114.3	23.5	105.2	-9.2
2016 Q4	15.4	29.7	-10.6	7.7	18.2	37.5	33.1	9.0	32.2	-3.7
2017 Q1	26.5	31.4	6.2	6.4	14.0	49.1	43.4	11.1	38.9	-0.8
Q2	-1.1	10.2	-2.8	2.1	-0.4	37.8	40.2	10.5	27.9	-0.6
Q3	20.8	33.3	-6.5	17.0	10.2	43.8	35.9	10.8	36.6	-3.6
2017 June	-16.7	-9.7	-3.9	-2.4	-10.4	17.0	11.7	1.5	15.6	-0.1
July	11.6	20.5	-1.1	5.7	7.0	1.6	12.7	4.8	-0.6	-2.6
Aug.	4.6	5.3	-1.8	3.3	3.2	23.5	11.9	3.5	20.4	-0.3
Sep.	4.5	7.5	-3.5	8.0	0.0	18.7	11.3	2.5	16.8	-0.7
Oct.	27.3	28.1	13.9	4.6	8.9	10.9	12.3	3.3	7.5	0.1
Nov. [(p)]	19.6	19.1	-1.9	9.0	12.5	17.3	14.9	4.9	10.9	1.5
Growth rates										
2014	-1.4	-1.5	-1.3	0.3	-1.9	-0.3	0.1	-0.5	-0.1	-1.1
2015	-0.3	0.6	-5.6	4.4	0.6	1.9	1.4	3.9	2.1	-0.5
2016	1.9	2.3	-1.7	5.8	2.2	2.3	2.0	4.0	2.7	-1.2
2016 Q4	1.9	2.3	-1.7	5.8	2.2	2.3	2.0	4.0	2.7	-1.2
2017 Q1	1.7	2.4	-2.7	4.9	2.6	2.5	2.4	4.5	2.9	-1.2
Q2	1.2	2.0	-2.6	3.8	2.0	3.0	2.6	6.0	3.3	-1.1
Q3	1.4	2.4	-1.4	4.2	1.7	3.1	2.7	6.8	3.4	-1.2
2017 June	1.2	2.0	-2.6	3.8	2.0	3.0	2.6	6.0	3.3	-1.1
July	1.2	2.3	-2.2	3.7	1.8	2.9	2.6	6.7	3.1	-1.4
Aug.	1.3	2.4	-1.9	3.8	1.9	3.1	2.7	6.7	3.3	-1.3
Sep.	1.4	2.4	-1.4	4.2	1.7	3.1	2.7	6.8	3.4	-1.2
Oct.	1.7	2.9	-0.9	4.5	1.9	3.2	2.7	6.7	3.4	-1.0
Nov. [(p)]	1.8	3.1	-1.1	5.0	2.0	3.1	2.8	7.0	3.3	-0.8

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

3) Including non-profit institutions serving households.

4) Adjusted for loan sales and securitisation (resulting in derecognition from the MFI statistical balance sheet) as well as for positions arising from notional cash pooling services provided by MFIs.

5 Money and credit

5.5 Counterparts to M3 other than credit to euro area residents [1)]

(EUR billions and annual growth rates; seasonally adjusted; outstanding amounts and growth rates at end of period; transactions during period)

	MFI liabilities						MFI assets			
	Central government holdings [2)]	Longer-term financial liabilities vis-à-vis other euro area residents					Net external assets	Other		
		Total	Deposits with an agreed maturity of over 2 years	Deposits redeemable at notice of over 3 months	Debt securities with a maturity of over 2 years	Capital and reserves		Total	Repos with central counter-parties [3)]	Reverse repos to central counter-parties [3)]
	1	2	3	4	5	6	7	8	9	10
Outstanding amounts										
2014	269.6	7,132.9	2,186.3	92.4	2,392.6	2,461.5	1,386.3	233.4	184.5	139.7
2015	284.7	6,999.1	2,119.4	80.0	2,255.8	2,543.9	1,350.6	284.5	205.9	135.6
2016	314.4	6,923.8	2,054.1	70.9	2,146.7	2,652.2	1,136.9	265.4	205.9	121.6
2016 Q4	314.4	6,923.8	2,054.1	70.9	2,146.7	2,652.2	1,136.9	265.4	205.9	121.6
2017 Q1	308.2	6,881.1	2,031.7	69.3	2,106.5	2,673.6	1,104.0	254.7	183.1	111.8
Q2	305.7	6,766.6	2,002.0	66.8	2,066.4	2,631.4	1,031.3	247.0	154.2	109.7
Q3	365.3	6,700.7	1,977.1	61.5	2,016.2	2,646.0	1,025.0	261.9	140.6	85.4
2017 June	305.7	6,766.6	2,002.0	66.8	2,066.4	2,631.4	1,031.3	247.0	154.2	109.7
July	324.7	6,722.8	1,991.0	63.3	2,052.9	2,615.6	1,043.6	195.5	128.1	76.4
Aug.	348.3	6,726.8	1,982.2	62.5	2,036.2	2,645.9	1,030.6	250.8	124.4	69.0
Sep.	365.3	6,700.7	1,977.1	61.5	2,016.2	2,646.0	1,025.0	261.9	140.6	85.4
Oct.	341.8	6,689.3	1,953.0	60.8	2,012.7	2,662.8	968.6	243.3	158.3	109.5
Nov. [p]	305.9	6,661.5	1,931.0	60.1	2,015.9	2,654.5	956.6	207.1	167.4	132.2
Transactions										
2014	-3.2	-170.8	-120.8	2.1	-160.1	108.0	238.5	-6.2	0.7	17.8
2015	8.9	-216.1	-106.3	-13.5	-215.4	119.0	-86.0	-13.3	21.4	-4.0
2016	26.7	-110.2	-70.2	-9.1	-110.5	79.6	-276.2	-72.5	12.8	-12.0
2016 Q4	12.1	-6.1	-20.2	-2.2	-12.0	28.3	-42.9	-38.0	-0.2	-7.5
2017 Q1	-7.5	-16.2	-16.3	-1.5	-27.3	28.9	-33.6	-31.9	-21.6	-9.1
Q2	-2.6	-7.4	-22.1	-2.4	-2.6	19.7	-13.7	3.2	-28.9	-2.1
Q3	65.0	-19.8	-22.0	-2.9	-29.7	34.8	24.0	18.9	-13.6	-24.3
2017 June	-9.9	-8.2	-9.4	-0.1	-4.5	5.7	6.6	-4.5	-8.2	5.4
July	19.1	-4.9	-8.9	-1.1	1.3	3.8	31.6	-38.3	-26.0	-33.3
Aug.	23.5	-2.8	-7.8	-0.8	-9.2	14.9	-13.8	47.6	-3.7	-7.5
Sep.	22.4	-12.1	-5.3	-1.0	-21.9	16.0	6.2	9.6	16.2	16.5
Oct.	-23.3	-28.5	-25.0	-0.7	-9.5	6.6	-64.2	-19.1	17.7	24.1
Nov. [p]	-36.0	-5.2	-1.3	-0.7	-6.6	3.4	3.1	-35.2	9.1	22.7
Growth rates										
2014	-1.4	-2.3	-5.1	2.3	-6.3	4.5	-	-	0.4	14.6
2015	3.5	-3.0	-4.8	-14.4	-8.8	4.8	-	-	11.6	-2.9
2016	9.4	-1.6	-3.3	-11.5	-4.9	3.0	-	-	6.3	-9.0
2016 Q4	9.4	-1.6	-3.3	-11.5	-4.9	3.0	-	-	6.3	-9.0
2017 Q1	-4.3	-1.1	-3.9	-10.1	-4.5	4.4	-	-	-20.8	-25.3
Q2	-7.7	-1.1	-3.9	-10.9	-3.7	3.6	-	-	-30.7	-22.6
Q3	22.1	-0.7	-3.9	-12.5	-3.4	4.3	-	-	-31.2	-33.4
2017 June	-7.7	-1.1	-3.9	-10.9	-3.7	3.6	-	-	-30.7	-22.6
July	-2.4	-0.8	-4.0	-11.5	-2.7	3.6	-	-	-35.6	-39.5
Aug.	9.0	-0.8	-4.1	-11.8	-2.9	3.9	-	-	-38.2	-48.0
Sep.	22.1	-0.7	-3.9	-12.5	-3.4	4.3	-	-	-31.2	-33.4
Oct.	8.6	-1.3	-5.0	-12.6	-3.7	3.9	-	-	-17.4	-17.6
Nov. [p]	3.1	-1.2	-4.5	-12.8	-3.7	3.7	-	-	-13.3	9.6

Source: ECB.

1) Data refer to the changing composition of the euro area.

2) Comprises central government holdings of deposits with the MFI sector and of securities issued by the MFI sector.

3) Not adjusted for seasonal effects.

6 Fiscal developments

6.1 Deficit/surplus

(as a percentage of GDP; flows during one-year period)

	Deficit (-)/surplus (+)					Memo item: Primary deficit (-)/ surplus (+)
	Total	Central government	State government	Local government	Social security funds	
	1	2	3	4	5	6
2013	-3.0	-2.6	-0.2	-0.1	-0.1	-0.2
2014	-2.6	-2.2	-0.2	0.0	-0.1	0.1
2015	-2.1	-2.0	-0.2	0.1	-0.1	0.3
2016	-1.5	-1.7	-0.1	0.2	0.0	0.6
2016 Q4	-1.5	.	.	.	.	0.6
2017 Q1	-1.3	.	.	.	.	0.8
Q2	-1.2	.	.	.	.	0.9
Q3	-0.9	.	.	.	.	1.1

Sources: ECB for annual data; Eurostat for quarterly data.

6.2 Revenue and expenditure

(as a percentage of GDP; flows during one-year period)

	Revenue						Expenditure						
	Total	Current revenue				Capital revenue	Total	Current expenditure					Capital expenditure
			Direct taxes	Indirect taxes	Net social contributions				Compen-sation of employees	Intermediate consumption	Interest	Social benefits	
	1	2	3	4	5	6	7	8	9	10	11	12	13
2013	46.7	46.2	12.6	13.0	15.5	0.5	49.8	45.6	10.4	5.3	2.8	23.0	4.2
2014	46.7	46.2	12.5	13.1	15.4	0.5	49.2	45.3	10.3	5.3	2.6	23.0	3.9
2015	46.2	45.7	12.5	13.0	15.2	0.5	48.3	44.4	10.1	5.2	2.4	22.7	3.9
2016	46.1	45.6	12.6	13.0	15.3	0.5	47.6	44.1	10.0	5.2	2.2	22.7	3.5
2016 Q4	46.1	45.6	12.6	13.0	15.3	0.4	47.6	44.1	10.0	5.2	2.2	22.7	3.5
2017 Q1	46.1	45.6	12.6	13.0	15.3	0.5	47.4	43.9	9.9	5.1	2.2	22.7	3.5
Q2	46.1	45.7	12.7	13.0	15.3	0.4	47.4	43.8	9.9	5.1	2.1	22.7	3.5
Q3	46.1	45.7	12.8	12.9	15.3	0.4	47.1	43.5	9.9	5.1	2.0	22.6	3.6

Sources: ECB for annual data; Eurostat for quarterly data.

6.3 Government debt-to-GDP ratio

(as a percentage of GDP; outstanding amounts at end of period)

	Total	Financial instrument			Holder			Original maturity		Residual maturity			Currency	
		Currency and deposits	Loans	Debt securities	Resident creditors	MFIs	Non-resident creditors	Up to 1 year	Over 1 year	Up to 1 year	Over 1 and up to 5 years	Over 5 years	Euro or participating currencies	Other curren-cies
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2013	91.3	2.6	17.5	71.2	45.4	26.4	45.9	10.4	81.0	19.4	32.1	39.9	89.3	2.1
2014	91.8	2.7	17.1	72.0	44.1	25.8	47.7	10.0	81.9	18.8	31.8	41.2	89.7	2.1
2015	89.9	2.8	16.1	71.0	44.3	27.3	45.6	9.3	80.7	17.6	31.2	41.1	87.9	2.1
2016	88.9	2.7	15.4	70.8	46.2	30.7	42.7	8.9	80.0	17.1	29.8	41.9	86.9	2.1
2016 Q4	88.9	2.7	15.4	70.8	.	.	.	.	.	.	.	.	.	.
2017 Q1	89.2	2.6	15.1	71.4	.	.	.	.	.	.	.	.	.	.
Q2	89.0	2.7	14.8	71.5	.	.	.	.	.	.	.	.	.	.
Q3	88.1	2.8	14.6	70.8	.	.	.	.	.	.	.	.	.	.

Sources: ECB for annual data; Eurostat for quarterly data.

6 Fiscal developments

6.4 Annual change in the government debt-to-GDP ratio and underlying factors [1)]

(as a percentage of GDP; flows during one-year period)

	Change in debt-to-GDP ratio [2)]	Primary deficit (+)/ surplus (-)	Deficit-debt adjustment								Interest-growth differential	Memo item: Borrowing requirement
			Total	Transactions in main financial assets					Revaluation effects and other changes in volume	Other		
				Total	Currency and deposits	Loans	Debt securities	Equity and investment fund shares				
	1	2	3	4	5	6	7	8	9	10	11	12
2013	1.9	0.2	-0.3	-0.8	-0.5	-0.4	-0.2	0.4	0.2	0.3	1.9	2.6
2014	0.5	-0.1	-0.1	-0.3	0.2	-0.2	-0.3	0.0	0.1	0.2	0.6	2.4
2015	-1.9	-0.3	-0.9	-0.5	0.2	-0.2	-0.3	-0.1	-0.1	-0.3	-0.8	1.3
2016	-1.0	-0.6	-0.3	0.3	0.3	-0.1	0.0	0.1	-0.3	-0.3	-0.1	1.6
2016 Q4	-1.0	-0.6	-0.3	0.3	0.3	-0.1	0.0	0.1	-0.3	-0.3	-0.1	1.6
2017 Q1	-1.7	-0.8	-0.5	-0.1	0.0	-0.1	0.0	0.2	-0.3	-0.2	-0.3	1.0
Q2	-1.7	-0.9	-0.6	-0.3	-0.2	-0.1	-0.1	0.1	-0.2	-0.1	-0.2	0.8
Q3	-1.6	-1.1	0.2	0.7	0.8	-0.1	-0.1	0.1	-0.1	-0.4	-0.6	1.2

Sources: ECB for annual data; Eurostat for quarterly data.
1) Intergovernmental lending in the context of the financial crisis is consolidated except in quarterly data on the deficit-debt adjustment.
2) Calculated as the difference between the government debt-to-GDP ratios at the end of the reference period and a year earlier.

6.5 Government debt securities [1)]

(debt service as a percentage of GDP; flows during debt service period; average nominal yields in percentages per annum)

	Debt service due within 1 year [2)]					Average residual maturity in years [3)]	Average nominal yields [4)]						
	Total	Principal		Interest			Outstanding amounts					Transactions	
			Maturities of up to 3 months		Maturities of up to 3 months		Total	Floating rate	Zero coupon	Fixed rate	Maturities of up to 1 year	Issuance	Redemption
	1	2	3	4	5	6	7	8	9	10	11	12	13
2014	15.8	13.8	5.1	2.0	0.5	6.5	3.1	1.6	0.4	3.5	2.8	0.8	1.6
2015	14.7	12.8	4.3	1.9	0.5	6.6	2.9	1.4	0.1	3.3	3.0	0.4	1.2
2016	14.1	12.4	4.6	1.7	0.4	6.9	2.6	1.2	-0.1	3.0	2.9	0.2	1.2
2016 Q3	14.4	12.7	4.0	1.7	0.4	6.8	2.6	1.3	-0.1	3.1	2.8	0.2	1.2
Q4	14.1	12.4	4.6	1.7	0.4	6.9	2.6	1.2	-0.1	3.0	2.9	0.2	1.2
2017 Q1	14.3	12.6	4.3	1.7	0.4	6.9	2.6	1.2	-0.2	3.0	2.9	0.2	1.1
Q2	14.3	12.6	4.4	1.7	0.4	7.0	2.5	1.2	-0.2	2.9	2.6	0.2	1.2
2017 July	13.9	12.2	4.3	1.7	0.4	7.1	2.5	1.2	-0.2	2.9	2.6	0.2	1.3
Aug.	13.7	12.0	4.3	1.7	0.4	7.1	2.5	1.1	-0.2	2.9	2.5	0.2	1.2
Sep.	13.4	11.7	3.9	1.7	0.4	7.1	2.5	1.1	-0.2	2.9	2.5	0.2	1.1
Oct.	13.2	11.6	3.8	1.7	0.4	7.2	2.5	1.1	-0.2	2.8	2.4	0.2	1.2
Nov.	13.2	11.6	3.9	1.7	0.4	7.2	2.4	1.1	-0.2	2.8	2.4	0.2	1.2
Dec.	13.3	11.6	4.3	1.7	0.4	7.1	2.4	1.1	-0.2	2.8	2.4	0.3	1.1

Source: ECB.
1) At face value and not consolidated within the general government sector.
2) Excludes future payments on debt securities not yet outstanding and early redemptions.
3) Residual maturity at the end of the period.
4) Outstanding amounts at the end of the period; transactions as 12-month average.

6 Fiscal developments

6.6 Fiscal developments in euro area countries

(as a percentage of GDP; flows during one-year period and outstanding amounts at end of period)

	Belgium	Germany	Estonia	Ireland	Greece	Spain	France	Italy	Cyprus
	1	2	3	4	5	6	7	8	9
	Government deficit (-)/surplus (+)								
2013	-3.1	-0.1	-0.2	-6.1	-13.2	-7.0	-4.1	-2.9	-5.1
2014	-3.1	0.3	0.7	-3.6	-3.6	-6.0	-3.9	-3.0	-8.8
2015	-2.5	0.6	0.1	-1.9	-5.7	-5.3	-3.6	-2.6	-1.2
2016	-2.5	0.8	-0.3	-0.7	0.5	-4.5	-3.4	-2.5	0.5
2016 Q4	-2.5	0.8	-0.3	-0.7	0.5	-4.5	-3.4	-2.5	0.5
2017 Q1	-2.0	1.0	-0.5	-0.5	1.0	-4.2	-3.4	-2.4	0.5
Q2	-1.5	0.9	-0.7	-0.6	1.0	-3.6	-3.2	-2.4	0.9
Q3	-1.1	1.4	-0.7	-0.5	1.2	-3.1	-3.1	-2.3	1.9
	Government debt								
2013	105.5	77.4	10.2	119.4	177.4	95.5	92.4	129.0	102.6
2014	106.8	74.6	10.7	104.5	179.0	100.4	95.0	131.8	107.5
2015	106.0	70.9	10.0	76.9	176.8	99.4	95.8	131.5	107.5
2016	105.7	68.1	9.4	72.8	180.8	99.0	96.5	132.0	107.1
2016 Q4	105.7	68.1	9.4	72.8	180.8	99.0	96.5	132.0	107.1
2017 Q1	107.4	66.5	9.2	74.5	177.7	100.0	98.8	134.0	106.2
Q2	106.1	65.9	8.9	74.0	176.1	99.8	99.3	134.7	106.1
Q3	107.0	65.1	8.9	72.1	177.4	98.7	98.4	134.1	103.2

	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovenia	Slovakia	Finland
	10	11	12	13	14	15	16	17	18	19
	Government deficit (-)/surplus (+)									
2013	-1.0	-2.6	1.0	-2.4	-2.4	-2.0	-4.8	-14.7	-2.7	-2.6
2014	-1.2	-0.6	1.3	-1.8	-2.3	-2.7	-7.2	-5.3	-2.7	-3.2
2015	-1.2	-0.2	1.4	-1.1	-2.1	-1.0	-4.4	-2.9	-2.7	-2.7
2016	0.0	0.3	1.6	1.1	0.4	-1.6	-2.0	-1.9	-2.2	-1.7
2016 Q4	0.0	0.3	1.6	1.1	0.4	-1.6	-2.0	-1.9	-2.2	-1.7
2017 Q1	0.0	0.7	0.7	2.2	1.0	-1.2	-1.6	-1.4	-2.0	-1.4
Q2	0.4	0.8	0.7	2.1	1.1	-1.3	-1.3	-1.2	-1.6	-0.7
Q3	0.5	1.0	0.9	3.3	1.2	-1.2	-0.1	-0.8	-1.6	-0.8
	Government debt									
2013	39.0	38.8	23.7	68.4	67.8	81.0	129.0	70.4	54.7	56.5
2014	40.9	40.5	22.7	63.8	68.0	83.8	130.6	80.3	53.5	60.2
2015	36.9	42.6	22.0	60.3	64.6	84.3	128.8	82.6	52.3	63.6
2016	40.6	40.1	20.8	57.6	61.8	83.6	130.1	78.5	51.8	63.1
2016 Q4	40.5	40.1	20.8	57.7	61.8	83.6	130.1	78.5	51.8	63.1
2017 Q1	39.4	39.2	23.9	58.2	59.6	81.7	130.5	80.2	53.3	62.7
Q2	40.0	41.7	23.4	56.5	58.7	81.3	132.1	79.8	51.7	61.7
Q3	38.3	39.4	23.4	54.9	57.0	80.4	130.8	78.4	51.3	60.4

Source: Eurostat.

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