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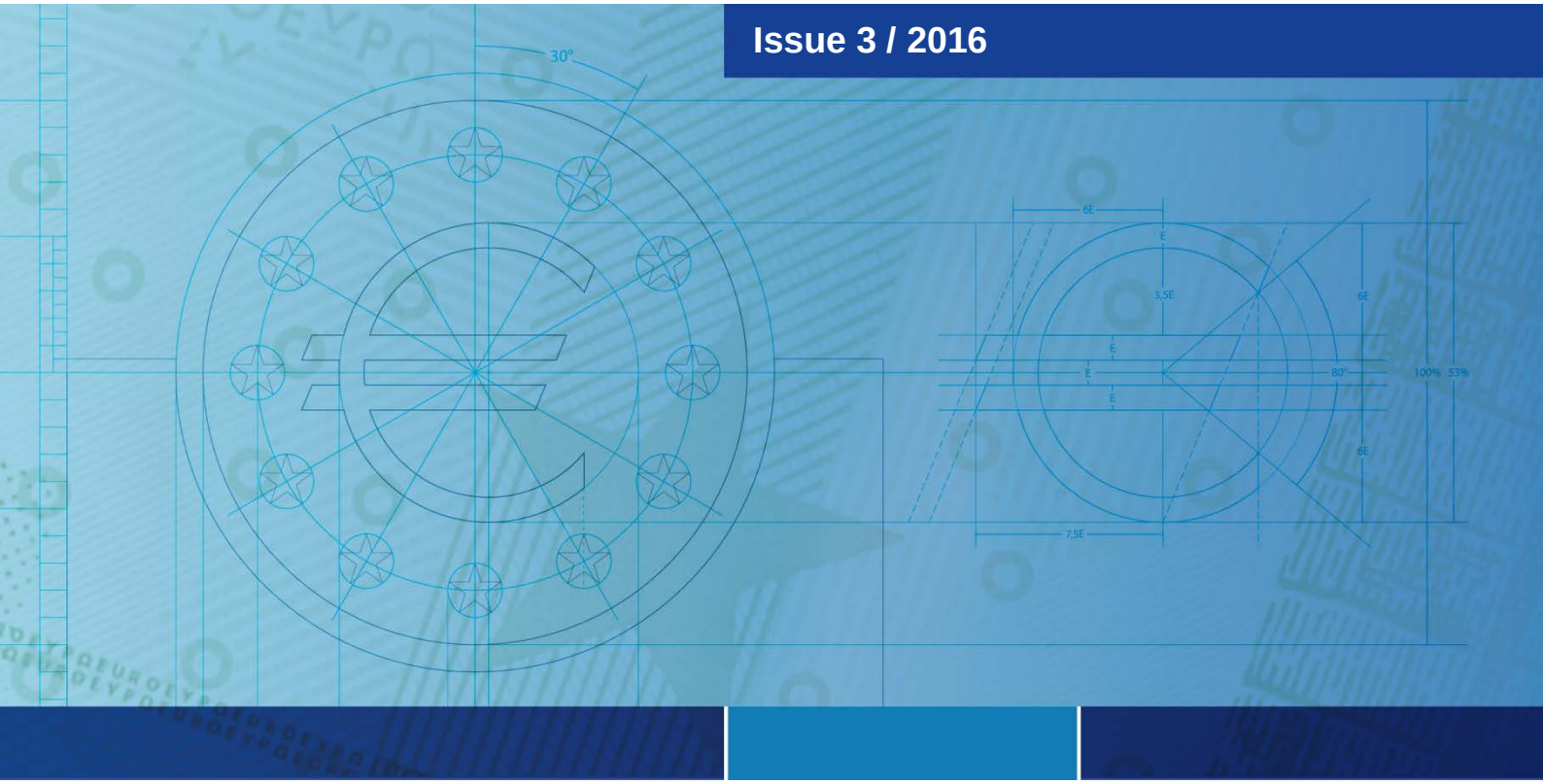

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The financial market turbulence of early 2016 has subsided and global economic activity is showing signs of stabilisation. World trade has been resilient at the start of the year, although its growth rate is expected to remain moderate. Risks to the outlook for global activity, most prominently for emerging market economies, remain on the downside and relate in particular to policy uncertainty, financial turbulence and geopolitical risks. Global headline inflation has remained at low levels as past energy price declines continue to weigh on price increases.

Euro area sovereign bond yields have declined along with their counterparts in the United States. Corporate bond spreads have tightened substantially amid a stabilisation in market volatility and following the announcement of the ECB's corporate sector purchase programme. Reduced volatility has provided further support for global equity prices, while the effective exchange rate of the euro has appreciated.

The economic recovery in the euro area is continuing, driven by domestic demand, while foreign demand growth remains weak. Domestic demand continues to be supported by monetary policy measures. Their favourable impact on financing conditions, together with improvements in corporate profitability, is benefiting investment. Moreover, the accommodative monetary policy stance, continued employment gains resulting from past structural reforms and the still relatively low price of oil should provide ongoing support for households' real disposable income and private consumption. In addition, the fiscal stance in the euro area is slightly expansionary. At the same time, the economic recovery in the euro area is still dampened by the ongoing balance sheet adjustments in a number of sectors, the insufficient pace of implementation of structural reforms in some countries and subdued growth prospects in emerging markets. The risks to the euro area growth outlook remain tilted to the downside.

Euro area headline inflation has remained at levels around zero in recent months. The low level of inflation continues to reflect mainly the impact of strongly negative annual rates of change in energy prices. At the same time, most measures of underlying inflation do not show a clear upward trend. Domestic price pressures remain subdued. Market-based measures of long-term inflation expectations have stabilised at low levels and remain substantially below readings from survey-based expectation measures. Looking ahead, on the basis of current futures prices for energy, inflation rates are likely to be negative in the coming months before picking up during the second half of 2016, owing in large part to base effects. Thereafter, inflation rates are expected to recover further in 2017 and 2018, supported by the ECB's monetary policy measures and the economic recovery.

Following the comprehensive package of monetary policy measures adopted in early March, broad financing conditions in the euro area have improved. The pass-through of the monetary policy stimulus to firms and households, notably through the banking system, is strengthening. Money growth has remained solid, while loan growth is continuing its gradual recovery. Domestic sources of money creation are still the main driver of broad money growth. Low interest rates, the targeted longer-term refinancing operations and the expanded asset purchase programme are supporting improvements in money and credit dynamics. Banks' funding costs have declined further, with banks passing on their more favourable funding conditions to lower lending rates. Overall, the monetary policy measures in place since June 2014 have clearly improved borrowing conditions for firms and households, as well as credit flows across the euro area. The monetary policy measures adopted in March 2016 underpin the ongoing upturn in loan growth, thereby supporting the recovery of the real economy.

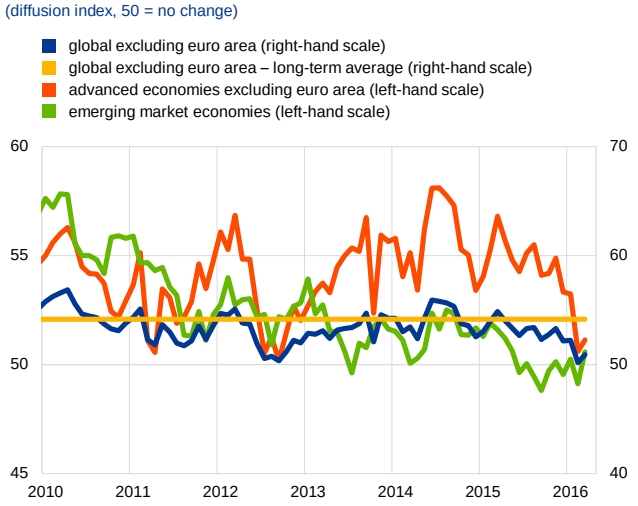
At its meeting on 21 April 2016, based on the regular economic and monetary analyses, the Governing Council decided to keep the key ECB interest rates unchanged. The Governing Council continues to expect the key ECB interest rates to remain at present or lower levels for an extended period of time, and well past the horizon of the net asset purchases. Regarding non-standard monetary policy measures, as decided on 10 March 2016, the ECB has started to expand the monthly purchases under the asset purchase programme to €80 billion, from the previous amount of €60 billion. As stated before, these purchases are intended to run until the end of March 2017, 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, in June the ECB will conduct the first operation of the new series of targeted longer-term refinancing operations (TLTRO II) and will commence purchases under the corporate sector purchase programme.

Looking ahead, it is essential to preserve an appropriate degree of monetary accommodation as long as needed in order to underpin the momentum of the euro area's economic recovery and in order to accelerate the return of inflation to levels below, but close to, 2%. The Governing Council will continue to monitor closely the evolution of the outlook for price stability and, if warranted to achieve its objective, will act by using all the instruments available within its mandate. In the current context, it is crucial to ensure that the very low inflation environment does not become entrenched in second-round effects on wage and price setting.

1 External environment

Recent survey-based indicators suggest that global economic activity stabilised during the first quarter of 2016. The turbulence in financial markets observed at the beginning of the year has now subsided, as heightened concerns about the global economy have gradually diminished. Indeed, stock markets have recovered all of the losses suffered since the start of the year, volatility has declined and commodity prices have also rebounded somewhat. This has helped to ease financial conditions in many emerging market economies (EMEs), which have seen capital flows return amid an improved global appetite for risk.

Chart 1
Global composite output PMI



Sources: Markit and ECB staff calculations.
Note: The latest observation is for March 2016.

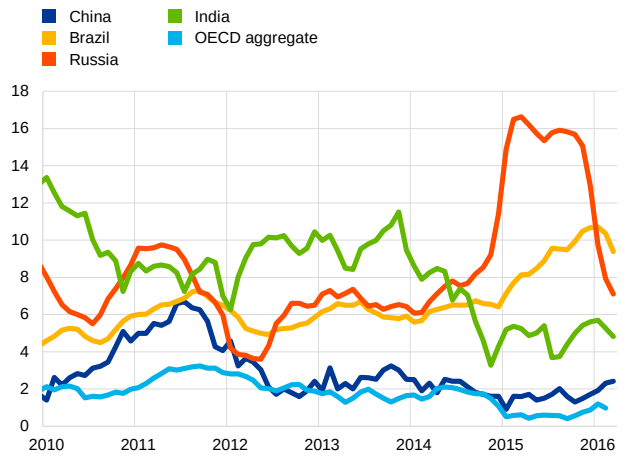
The global composite output Purchasing Managers' Index (PMI) increased slightly in March relative to February, pointing to some improvement in global activity. This followed a number of rather weak readings during the previous months (see Chart 1) and reflects a modest pick-up in activity in both the services and manufacturing sectors. However, in quarterly terms the global output PMI for the first quarter of 2016 was still lower than that of the previous quarter, remaining below its long-term average. This decline was largely due to developments in advanced economies, particularly in the United States, while the composite output PMI improved somewhat among EMEs. Overall, the PMI data suggest some deceleration in growth among advanced economies and continued modest growth in EMEs in the first quarter of 2016.

Global trade has shown resilience. Global merchandise trade sustained its momentum in January, following a strong upward revision to the December data. In January the volume of world imports of goods grew by 1.2% in three-month on three-month terms, following growth of 1.5% in December. This upward revision was driven by more positive data for emerging Asia. In January the momentum in world imports remained resilient, supported by continued strong growth in emerging Asia and the euro area. By contrast, there was a further decline in trade in the United States and trade growth turned negative in central and eastern Europe. The global PMI for new export orders increased marginally from 49.4 to 49.6 in March, but still pointed to weak growth in global trade.

Global headline inflation remained at low levels. Annual consumer price index (CPI) inflation in the OECD area declined in February, to 1.0% from 1.2% the previous month, owing to a more negative contribution from energy prices (see Chart 2). Excluding food and energy, OECD annual CPI inflation remained unchanged at 1.9% in February.

Chart 2
Consumer price inflation

(year-on-year percentage changes)



Sources: OECD and national sources.
Note: The latest observation is for March 2016 for individual countries and February 2016 for the OECD aggregate.

Brent crude oil prices have continued to recover since mid-March, reflecting a moderation in the global oil supply overhang and higher than expected global demand for oil. Brent crude oil prices have traded in the range of USD 38-47 per barrel since mid-March 2016, trading at USD 47 per barrel on 28 April. This equates to a 67% increase compared with the 12-year lows recorded in mid-January. The recent increase in the oil price was underpinned by a moderation in the global oil supply overhang. In particular, OPEC output decreased in March 2016, mainly on account of supply disruptions in Iraq, Nigeria and the United Arab Emirates. In addition, oil demand was higher than expected in the first quarter of 2016, largely because of strong demand in India and other non-OECD Asian countries. Oil price volatility has decreased slightly since mid-March, but remains high. A number of factors have contributed to the current volatility, including geopolitical tensions, issues surrounding the return of Iran to the global oil market, uncertainty surrounding the economic outlook for EMEs and doubts about a deal between OPEC and leading non-OPEC producers to freeze output. The prices of non-oil commodities such as food and metals have remained stable in the period since mid-March. Looking ahead, the volatile geopolitical situation in the Middle East (notably Iraq) and in Nigeria continues to represent a short-term risk, potentially leading to further supply-side disruptions.

The soft patch in US activity appears to have continued into the first quarter of 2016, although underlying fundamentals remain healthy. Following a moderate expansion of real GDP by an annualised rate of 1.4% in the fourth quarter of 2015, economic activity showed signs of further deceleration in the first quarter of 2016. In particular, high-frequency indicators for business equipment spending suggested only modest growth in business investment. While real consumption growth remained moderate in February, recent manufacturing data indicate improving conditions in the sector. Non-farm payrolls rose strongly in March and the labour force participation rate increased further, suggesting that previously discouraged workers are returning to the labour market. This resulted in only a small uptick in the unemployment rate, to 5.0%. Looking forward, the strengthening of the labour market is expected to support real income and consumption. Headline inflation remained low. Annual headline CPI inflation decreased slightly in March to 0.9%, from 1.0% in February, weighed down by energy and food prices. Excluding food and energy, annual CPI inflation declined to 2.2% in March, restrained by negative goods price inflation, but has been on a gradual upward trend since mid-2015.

In Japan, the growth momentum remains subdued. Economic indicators at the start of 2016 continue to point to sluggish economic activity, following a quarter-on-quarter decline in real GDP of 0.3% in the last quarter of 2015. Recent surveys indicate that private consumption was weak at the start of the year. Industrial

production also remained subdued, although this was largely due to one-off factors, while real exports staged a mild recovery. At the same time, survey indicators signalled some deterioration in business sentiment. Annual CPI inflation picked up from 0% in January to 0.3% in February, while annual CPI inflation excluding food and energy rose slightly, to 0.8%.

In the United Kingdom, GDP growth is expected to moderate. In the fourth quarter of 2015 real GDP increased by 0.6% quarter on quarter, more than previously estimated and at a more rapid pace with respect to the previous quarter. As a result, annual GDP growth was 2.3% in 2015, compared with 2.9% in 2014. In the last quarter of 2015 economic growth was driven by solid private consumption, while investment growth turned sharply negative on the back of uncertainty regarding the pace of global demand and net exports continued to exert a drag on growth. Short-term indicators and surveys of business intentions suggest a moderate slowdown in the pace of GDP growth in the first half of 2016. The unemployment rate stabilised at 5.1% in the three months to January 2016, while earnings growth remained relatively subdued at 2.1%, despite improvements in labour market conditions. In February 2016 annual headline CPI inflation edged up to 0.3% owing to base effects stemming from energy prices, while inflation excluding food, energy, alcoholic beverages and tobacco declined marginally to 1.1%.

In China, available data remain consistent with a gradual slowdown in activity growth, which has been underpinned by policy support and rapid credit expansion. In the first quarter China recorded GDP growth of 6.7% year on year, which was marginally below that recorded in the previous quarter but in line with the new growth target range set by Chinese authorities for 2016 (6.5-7.0%). The latest short-term indicators point to sustained economic momentum, with industrial production, fixed-asset investment, credit growth and retail sales showing some improvements. There are also signs of stabilisation in the housing market, with a modest rebound in residential investment and strong increases in house prices in the large cities. Conversely, trade data, which have shown a high degree of volatility in recent months, weakened in the first quarter of the year. Greater stability in financial markets and the Renminbi exchange rate has helped to alleviate some of the uncertainty which prevailed at the start of the year, while monetary accommodation and modest fiscal stimulus are expected to continue supporting demand.

Growth momentum remains weak and heterogeneous across other EMEs. Activity has remained resilient in commodity-importing countries such as non-euro area central and eastern European countries and, to a lesser extent, India and Turkey, while growth continues to be very weak in commodity-exporting countries. In particular, latest short-term indicators suggest that the downturn in Brazil will continue into 2016. Political uncertainty, deteriorating terms of trade and tightening financing conditions are weighing heavily on economic activity. In line with expectations, economic activity in Russia declined again in the last quarter of 2015, following tentative signs of improvement in the third quarter of last year. Uncertainty remains high and business confidence weak, while lower oil revenues continue to restrain public expenditure.

2 Financial developments

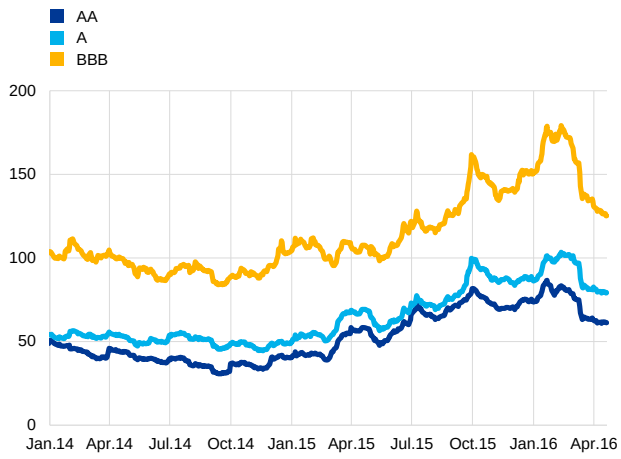
Between 9 March and 20 April 2016 euro area sovereign yields declined along with their US counterparts. Following a slight pick-up in early March, euro area government bond yields started to decrease shortly after the March meeting of the Governing Council, in line with similar developments in US yields. After reaching a new all-time low of 0.75% on 1 April 2016, the GDP-weighted ten-year euro area sovereign bond yield rebounded somewhat towards the end of the review period, to stand at 0.86% on 20 April. Overall, the declines in long-term yields were slightly more pronounced in higher-rated euro area countries.

In corporate bond markets, risk premia for non-financial corporations (NFCs) declined substantially amid a stabilisation in market volatility and following the Governing Council's announcement of a corporate sector purchase programme (CSPP). Spreads on NFC bonds – like those on financial company bonds – declined in the second half of March after market volatility came down from its earlier peaks. Following the announcement of the CSPP, NFC bond spreads recorded a further considerable decrease, before continuing to decline more gradually in the course of April (see Chart 3).

The stabilisation in volatility also provided support for global equity prices, which gained over the review period. The broad EURO STOXX index increased by more than 4% between 9 March and 20 April 2016 (see Chart 4). In the United States, the S&P 500 index gained almost 6% over the same period. The prices of bank stocks were subject to somewhat more pronounced swings than the overall market in both jurisdictions and, in the euro area, also slightly underperformed the market, with an increase of about 2%.

Chart 3

Spreads of euro area investment-grade non-financial corporate bonds, by rating

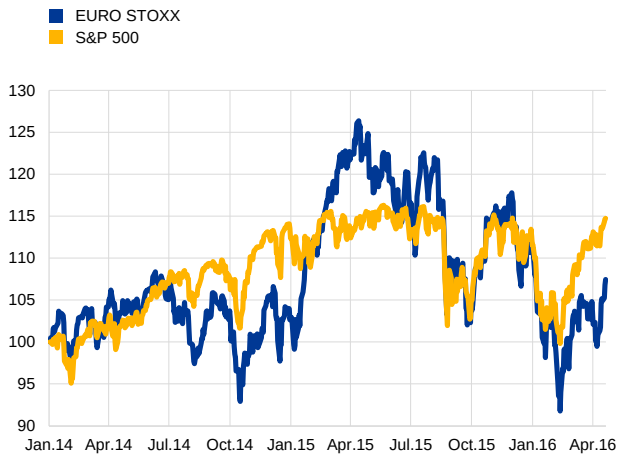


Source: Thomson Reuters.
Note: The latest observation is for 20 April 2016.

Chart 4

Euro area and US equity price indices

(1 January 2014 = 100)



Sources: Thomson Reuters and ECB calculations.
Note: The latest observation is for 20 April 2016.

The effective exchange rate of the euro appreciated. In bilateral terms, the euro strengthened by 3.7% against the US dollar over the review period amid narrowing long-term bond yield spreads between the United States and the euro area, largely reflecting revised market expectations concerning the future path of US policy rates. The euro also appreciated against the pound sterling, the Chinese renminbi, the Japanese yen and the currencies of most emerging market economies. It depreciated against the Russian rouble, the Swedish krona, the Swiss franc and the currencies of most commodity-exporting countries, as well as the currencies of several central and eastern European countries.

The euro overnight index average (EONIA) declined over the review period, reflecting the Governing Council's decision to cut the deposit facility rate by 10 basis points to -0.40% in March. Since the rate cut took effect at the start of the second reserve maintenance period, the EONIA has remained in a range between -33 and -35 basis points, except at the end of the first quarter, when it temporarily rose to -30 basis points. Excess liquidity increased by around €43 billion to €744 billion amid ongoing Eurosystem purchases under the expanded asset purchase programme.

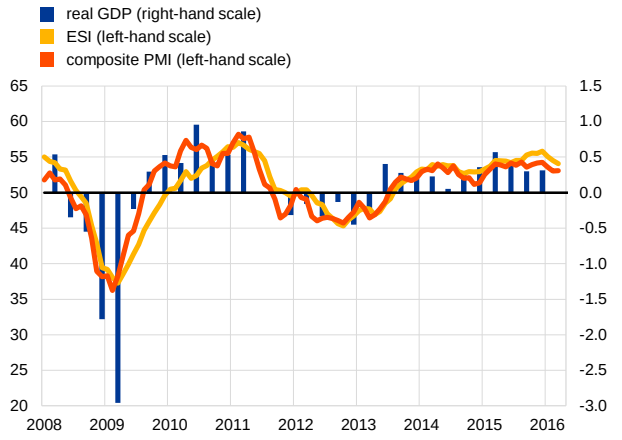
3 Economic activity

The economic recovery in the euro area is continuing, driven largely by developments in private consumption, but more recently also by investment (see Chart 5). Although output has been rising since the beginning of 2013, euro area real GDP still only remains close to its pre-crisis peak in the first quarter of 2008.

Chart 5

Euro area real GDP, the ESI and the composite PMI

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



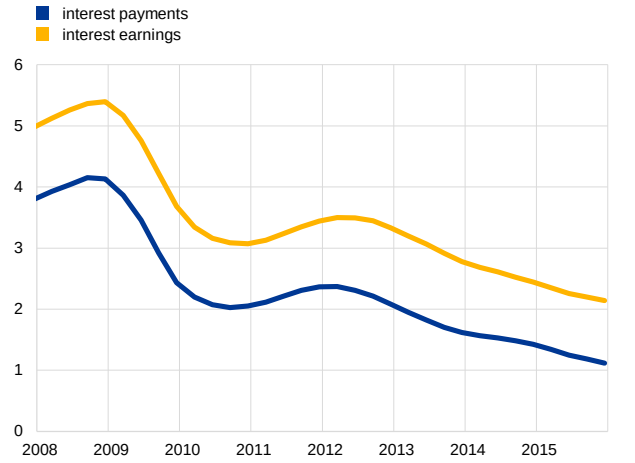
Sources: Eurostat, European Commission, Markit and ECB.
Notes: The ESI is normalised with the mean and standard deviation of the PMI. The latest observations are for the fourth quarter of 2015 for real GDP and for March 2016 for the ESI and the PMI.

Private consumption continues to contribute positively to growth, following a temporary slowdown in the final quarter of 2015. The slowdown in consumer spending in the fourth quarter of last year reflected in part lower sales of seasonal clothing and a decline in energy consumption, developments that can be attributed to the mild winter weather in parts of the euro area. Moreover, the terrorist attacks in Paris in November 2015 appear to have adversely affected consumption of services such as hotels and restaurants in France. More fundamentally, consumer spending has been benefiting from rising real disposable income among households, which in turn primarily reflects rising employment and lower oil prices. In addition, households' balance sheets have become less constrained, and consumer confidence remains elevated and, despite recent declines, above its long-term average.

The accommodative monetary policy and the associated low interest rates should continue to support aggregate euro area consumption. Since the third quarter of 2008, euro area households' interest payments relative to disposable income have decreased by about three percentage points, while interest earnings fell by roughly the same amount (see Chart 6). Thus, aggregate euro area household disposable income has been hardly affected. However, lower interest rates typically redistribute resources from net savers with a lower marginal propensity to consume to net borrowers with a higher marginal propensity to consume, creating an overall positive impact on aggregate consumption in the euro area. As for the near-term outlook, recent data on retail trade and new passenger car registrations signal a pick-up in consumption growth in the first quarter of this year.

Chart 6
Household interest payments and earnings

(percentage of disposable income)



Sources: Eurostat and ECB calculations.
Notes: The latest observations refer to the fourth quarter of 2015.

Following an acceleration in investment growth at the end of 2015, investment conditions have continued to improve somewhat in early 2016, though downside risks prevail. Rising capacity utilisation and a combined increase in industrial production of capital goods in January and February suggest that euro area business investment is likely to have grown at a robust pace in the first quarter of 2016. However, a weak external environment, combined with weaker business confidence, fewer industrial orders of capital goods and subdued production expectations in the capital goods sector, will most likely weigh on the growth rate of non-construction investment in the first half of 2016. Construction investment is likely to have continued to grow in the first quarter, linked mainly to developments in the housing segment, as evidenced by a strong rise in building production compared to the previous quarter. Seeing through the usual volatility, building permits as well as construction confidence, as measured by the Purchasing Managers' Index (PMI) and the Economic Sentiment Indicator (ESI), have been increasing, suggesting a bottoming-out of the construction sector business cycle.

Beyond the short-term, recovering demand, accommodative monetary policy and improving financing conditions should boost investment. Improving profit margins and diminishing spare capacity should also support investment decisions. However, investment may be held back by deleveraging needs, low profit levels and institutional rigidities, particularly in some countries, as well as subdued potential growth prospects.

Growth in euro area exports continues to remain subdued overall. According to monthly trade data, goods exports, after having declined significantly in January, partially recovered in February. Goods exports in the first two months of the year stood below their average level in the fourth quarter of 2015. Export growth has probably been held back by weak growth momentum in advanced economies, notably the United States, and in some emerging market economies. Looking ahead,

the appreciation of the effective exchange rate of the euro since the end of last year is expected to continue to weigh on euro area exports. More timely indicators, such as surveys, signal continued subdued developments in foreign demand and relatively weak export orders outside the euro area in the near term.

The latest economic indicators are consistent with continued real GDP growth in the first quarter of 2016. Industrial production (excluding construction) stood on average in January and February 1.1% above its average level in the fourth quarter of 2015, when it rose by 0.4%, quarter on quarter. More timely survey data paint a somewhat less optimistic picture than hard data. While the ESI declined throughout the first quarter, the composite output PMI declined in January and February before remaining broadly stable in March (see Chart 5). Developments in survey data, however, are currently more complex to interpret than normal, as their slowdown points to weaker growth vis-à-vis the fourth quarter of last year, whereas their levels, which still remain above the long-term averages, point to unchanged or even slightly accelerating growth.

Euro area labour markets continue to improve gradually. Employment increased further by 0.3%, quarter on quarter, in the fourth quarter of 2015, having now risen for two and a half years. As a result, employment stood 1.2% above the level recorded one year earlier, the highest annual rise observed since the second quarter of 2008. The unemployment rate for the euro area, which started to decline in mid-2013, fell further in February to stand at 10.3%. Although more timely survey data point to some deceleration in employment growth, they are still consistent with further employment gains in the period ahead.

Looking ahead, the economic recovery is expected to proceed. Domestic demand, in particular, continues to be supported by the ECB's monetary policy measures. Their favourable impact on financing conditions, together with improvements in corporate profitability, is benefiting investment. Moreover, the accommodative monetary policy stance, continued employment gains resulting from past structural reforms and the still relatively low price of oil should provide ongoing support for households' real disposable income and private consumption. In addition, the fiscal stance in the euro area is slightly expansionary. At the same time, the economic recovery in the euro area is still dampened by the ongoing balance sheet adjustments in a number of sectors, the insufficient pace of implementation of structural reforms and subdued growth prospects in emerging markets. The risks to the euro area growth outlook still remain tilted to the downside. The results of the latest round of the ECB's Survey of Professional Forecasters, conducted in early April, indicate a similar picture as the ECB staff projections published in March, of an ongoing economic recovery, with rising annual GDP growth rates (http://www.ecb.europa.eu/stats/prices/indic/forecast/html/index.en.html).

4 Prices and costs

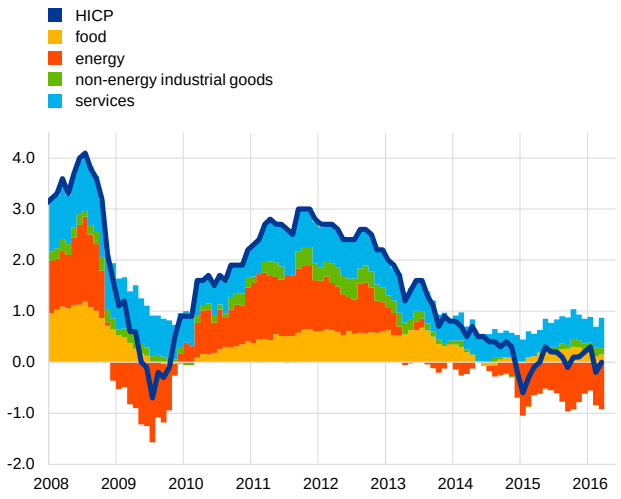
Headline inflation has remained at levels around zero in recent months. The low level of inflation continues to reflect the dampening impact of strongly negative

annual rates of change in energy prices. At the same time, HICP inflation excluding food and energy continues to hover at rates around 1.0% (see Chart 7).

Chart 7

Contribution of components to euro area headline HICP inflation

(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB staff calculations.
Note: The latest observations are for March 2016.

Most measures of underlying inflation do not show any clear upward trend. The annual rate of HICP inflation excluding food and energy continues to lie at or somewhat below 1.0%. This suggests that underlying inflation has not gathered upward momentum since last summer, as corroborated by the evidence from model-based measures[1]. Looking at the main components, services price inflation increased to 1.4% in March, up 0.5 percentage point from a historical low of 0.9% in February. This acceleration partially reflects a temporary rebound in package holiday prices for the Easter period, which this year occurred in March (see also the box entitled "Harmonised index of consumer prices - Easter effects and improved seasonal adjustment"). Non-energy industrial goods price inflation has been within the range of 0.5% to 0.7% in recent months.

The recent appreciation of the euro has mitigated some of the upward price pressure stemming from its earlier strong depreciation. Import price inflation for non-food consumer goods, which has thus far been the main source of upward pipeline pressures, decreased to 0.7% in February, from 1.6% in January. This is a continuation of the decline from the record high of 5.6% in April 2015, and reflects some appreciation in the effective exchange rate of the euro as well as the impact of global disinflationary pressures stemming from lower oil prices.

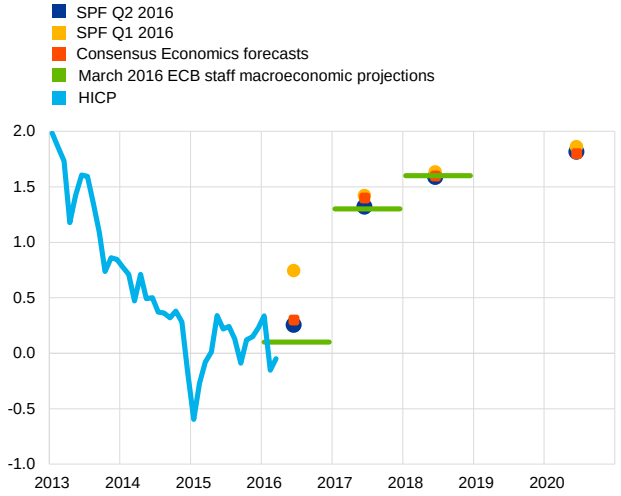
Producer price and wage pressures have remained subdued. Annual producer price inflation for domestic sales of non-food consumer goods declined to -0.1% in February from +0.1% in January, and survey data for input and output prices up until April point to a continuation of subdued price pressures at the producer level. Wage growth stabilised at low levels. Annual growth in compensation per employee stood at 1.3% in the fourth quarter of 2015, unchanged from the previous quarter of that year. Given that the rate of annual productivity growth declined by 0.2 percentage point over the same period, unit labour costs therefore increased by 0.2 percentage point. Factors which may be weighing on wage growth are described in the box entitled "Recent wage trends in the euro area".

[1] For more details on model-based measures of underlying inflation, see Chart C in Box 5 on "Tracking developments in underlying inflation", *Annual Report*, ECB, 2015.

Chart 8

Survey-based measures of inflation expectations

(annual percentage changes)



Sources: ECB Survey of Professional Forecasters (SPF), Consensus Economics and ECB calculations.
Notes: Realised HICP data are included up to March 2016. Consensus Economics data are taken from the forecasts published in April 2016.

Market-based measures of long-term inflation expectations have stabilised at low levels and remain substantially below survey-based measures of expectations. After recovering from an all-time low in February, the five-year forward inflation rate five years ahead continues to stand at very low levels. This in part reflects a relatively weak appetite in the market for holding financial instruments with inflation-linked cash flows, indicating that market participants consider it relatively unlikely that inflation will pick up soon. In contrast to market-based measures, survey-based measures of long-term inflation expectations, such as those included in the ECB Survey of Professional Forecasters (SPF) and in Consensus Economics surveys, have been more stable and resilient to the downward adjustment of shorter-term expectations (see Chart 8). According to the April 2016 SPF results, the average point forecast for inflation five years ahead was 1.8%, unchanged from the previous survey, and the downside risk to this mean expectation appears to have decreased somewhat.

Looking ahead, on the basis of current futures prices for energy, inflation rates are likely to be negative in the coming months before picking up during the second half of 2016, in large part owing to base effects. Thereafter, inflation rates should recover further in 2017 and 2018, supported by the ECB's monetary policy measures and the expected economic recovery.

Turning to house price developments, annual growth in the ECB's residential property price indicator for the euro area has continued to increase. In the fourth quarter of 2015, the annual rate of change in residential property prices was 2.2%, up from 1.5% in the third quarter and 1.1% in the second quarter of that year. The ongoing recovery in residential property price dynamics is relatively broadly based across the euro area countries.

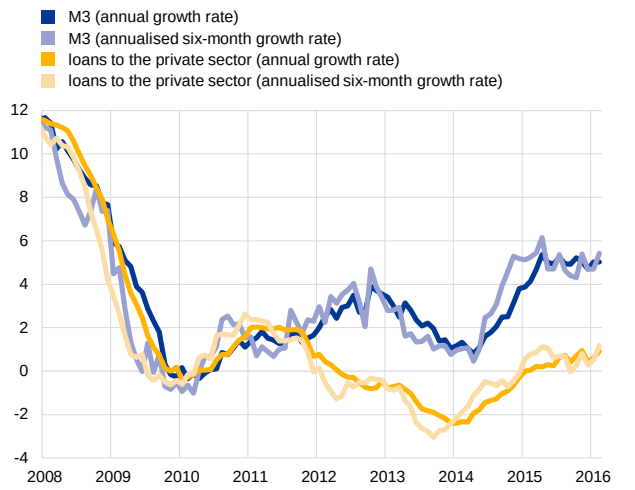
5 Money and credit

Broad money growth remained robust. The annual growth rate of M3 stayed at around 5.0%, the level maintained since March 2015 (see Chart 9). Money growth was once again supported by the most liquid components. The annual growth rate of M1 continued to moderate from the peak reached in July 2015, but was still at a high level. Overall, recent developments in narrow money remain consistent with a continuation of the economic recovery in the euro area.

Chart 9

M3 and loans to the private sector

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



Source: ECB.
Note: The latest observation is for February 2016.

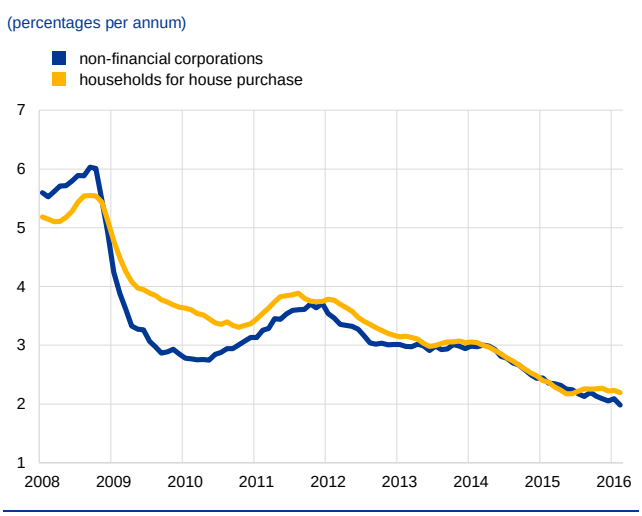
Overnight deposits continued to provide considerable support to M3 growth. The main factors behind this growth were the low opportunity costs of holding the most liquid components of money and the impact of the ECB's expanded asset purchase programme (APP). By contrast, short-term deposits other than overnight deposits contracted further, though to a lesser extent than in previous months. The growth rate of marketable instruments (i.e. M3 minus M2), a small component of M3, was negative at the beginning of 2016, despite the recovery in money market fund shares/units observed since mid-2014.

Broad money growth was again mainly driven by domestic sources of money creation. The ECB's non-standard monetary policy measures partly account for this development. From a counterpart perspective, the largest sources of money creation in February were the bond purchases made by the Eurosystem in the context of the public sector purchase programme (PSPP) and shifts away from longer-term financial liabilities. A large proportion of those instruments were purchased from monetary financial institutions (MFIs) (excluding the Eurosystem). The annual rate of change of MFIs' longer-term financial liabilities (excluding capital and reserves) remained strongly negative. This reflects the flatness of the yield curve, linked to the ECB's non-standard monetary policy measures, which has made it less favourable for investors to hold longer-term bank liabilities. The attractiveness of the targeted longer-term refinancing operations as an alternative to longer-term market-based bank funding is a further explanatory factor. Furthermore, money creation continued to be supported by credit from MFIs to the euro area private sector. The MFI sector's net external asset position was still weighing on annual M3 growth, with this reflecting capital outflows from the euro area and ongoing portfolio rebalancing in favour of non-euro area instruments (more specifically, the euro area government bonds sold by non-residents under the PSPP) (see Box 4).

Loan dynamics remained on a path of gradual recovery, but loan growth was still weak. The annual growth rate of MFI loans to the private sector (adjusted for sales and securitisation) increased in February (see Chart 9) on the back of both loans to non-financial corporations (NFCs) and households. Nonetheless, the annual growth rate of loans to NFCs remained weak, having not yet fully recovered from the trough of the first quarter of 2014. These trends were generally observed across the euro area, being supported by the significant decreases in bank lending rates witnessed since summer 2014 (notably owing to the ECB's non-standard monetary policy measures) and progress in the supply of and demand for bank loans. Despite these positive signs, the ongoing consolidation of bank balance sheets and persistently high levels of non-performing loans in some jurisdictions remain a drag on loan growth.

Chart 10

Composite bank lending rates for NFCs and households



Source: ECB.
Notes: The indicator for the composite bank lending rates is calculated by aggregating short and long-term rates using a 24-month moving average of new business volumes. The latest observation is for February 2016.

Bank lending rates for NFCs fell to a new historic low in February. Composite lending rates for NFCs and households have shown a greater decrease than market reference rates since the ECB's credit easing package was announced in June 2014 (see Chart 10). Receding fragmentation in euro area financial markets and the improvement in the pass-through of monetary policy measures to bank lending rates help account for this development. The decline in composite lending rates is also explained by a decrease in banks' composite funding costs, which is being passed on in the form of lower lending rates. Between May 2014 and February 2016, the composite lending rate on loans to euro area NFCs fell by around 95 basis points to 1.98%. And, over the same period, the composite lending rate on loans to households for house purchase decreased by more than 70 basis points to 2.20% in February 2016. Furthermore, 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 has been moving downwards since June 2014, when credit easing was enhanced, and appears to have recently stabilised at low levels. This indicator suggests that small and medium-sized companies have benefited to a greater extent than large companies from the recent lending rate developments.

The April 2016 euro area bank lending survey suggests that the recovery in loan growth is still in progress (see survey at: https://www.ecb.europa.eu/stats/money/surveys/lend/html/index.en.html). In the first quarter of 2016 loan supply conditions for enterprises continued to improve and there was an increase in demand for all types of loans. Competition remained the main factor driving the easing (in net terms) of credit standards for loans to enterprises. Banks further eased terms and conditions for new loans in general, particularly those involving households. As regards the effects of the ECB's expanded asset purchase programme, banks have mainly used the liquidity obtained from the APP to grant loans. Euro area banks also reported that the APP has had a negative impact on profitability. Furthermore, the ECB's negative deposit facility rate was said to be having a positive effect on lending volumes, but weighing on banks' net interest income and loan margins.

NFCs' net issuance of debt securities increased significantly in March 2016, after contracting in the previous two months. The turnaround in net issuance corresponds to a decline in the cost of market-based debt financing: it dropped for the second consecutive time during March. The continued strong growth of retained earnings, however, has most likely been a dampening factor in recent months. Retained earnings grew markedly in the fourth quarter of 2015.

Financing costs for euro area NFCs remain favourable. The overall nominal cost of external financing for NFCs is estimated to have declined in March 2016, thereby reversing most of the increases observed around the turn of the year. This development is explained by the reduction in both the cost of equity financing and the cost of market-based debt. In March 2016 the cost of equity and market-based debt was around 50 and 30 basis points higher, respectively, than in February 2015 – a time of historical lows.

Box 1
Harmonised Index of Consumer Prices – Easter effects and improved seasonal adjustment

This box explains the improvements that have been made to the ECB's seasonal adjustment of euro area HICPs following a recent review and the introduction of a calendar adjustment. Because month-on-month HICP inflation rates are affected by seasonality and calendar constellations, short-term inflation analyses benefit from seasonal adjustment. Calendar constellations may also have an impact on annual inflation rates, especially in periods affected by moving holidays. The ECB estimates that the year-on-year growth rate of the euro area HICP for services in March 2016 was elevated by 0.1 percentage point because Easter was in March, while it was in April in 2015.

Seasonal fluctuations are infra-year movements which appear in the same period of a calendar year and have a similar impact on a time series; the size of such fluctuations may evolve over time. Seasonality can be caused by weather conditions; events related to administrative measures, such as the dating of school holidays; and habits and traditions, such as Christmas shopping. Conventions in the compilation of the HICP may also play a role, for example the coverage of prices for goods and services whose price changes exhibit a seasonal pattern. Calendar effects are related to calendar constellations which may change every year, such as the dating of Easter. Examples of seasonal effects in HICPs include seasonality in price indices for fresh fruit and vegetables, winter and summer package holidays, and clothing and footwear. Seasonal fluctuations in the euro area HICP have become more pronounced over time, in particular due to the gradual harmonisation of statistical concepts and methods related to prices that exhibit seasonality. For example, comprehensive coverage of sales prices for clothing and footwear was introduced in 2001.

The ECB started compiling seasonally adjusted euro area HICPs in 2000, with the aim of broadening the analytical toolbox beyond the data provided by statistical institutes.[1] The seasonally adjusted total HICP for the euro area is compiled indirectly by aggregating the seasonally adjusted sub-indices for processed food, unprocessed food, and industrial goods excluding energy and for services, and the unadjusted series for energy. This procedure has now been reviewed and improvements to the seasonal adjustment of HICPs for services and for non-energy

[1] Traditionally, most statistical institutes do not calculate price indices in a seasonally adjusted format. The ECB's approach to seasonal adjustment of the euro area HICP is described in the 2000 report entitled "Seasonal adjustment of monetary aggregates and HICP for the euro area". For additional information, see the box entitled "Analysis of HICP developments based on seasonally adjusted data", *Monthly Bulletin*, ECB, January 2001.

industrial goods will be implemented.[2] The processed food and unprocessed food components will be broadly unaffected, while the HICP for energy continues to show no identifiable seasonality.

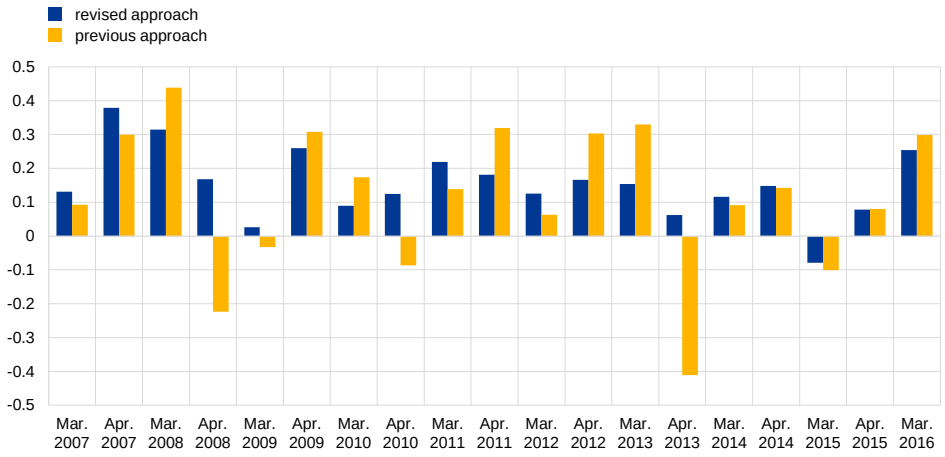
Estimation of Easter effects in the HICP for services

Before the review, the euro area HICP and its components were not adjusted for calendar effects. While the number of working or shop-opening days typically causes pronounced calendar effects on GDP, industrial production and retail trade, different constellations of week and weekend days do not affect consumer prices. However, the dating of Easter may substantially affect the level of prices for services in March and April, particularly for package holidays, accommodation services and airfares, since the prices of these services are recorded in HICPs when the service is provided, e.g. when the package holiday starts. An examination of Easter effects for euro area countries shows that a reliable estimate of their impact is feasible.[3] Chart A shows that after the ECB's recent review, negative month-on-month growth rates in the last ten years which were recorded in April in years in which Easter fell in March (e.g. 2008 and 2013) or early April (e.g. 2010 and 2015) were changed considerably by the introduction of a calendar adjustment. The adjustment for the Easter effect resulted in a reduction in the standard deviation of month-on-month growth rates, which fell from 0.13 percentage point to 0.08 percentage point, with the most pronounced decrease in month-on-month growth rates recorded in April 2013 (from -0.41% to 0.06%).

Chart A

Euro area HICP for services in March and April

(month-on-month rates of change; percentages; seasonally adjusted)



Sources: Eurostat and ECB calculations.

2 The corresponding data in the statistics section of the Economic Bulletin will be available according to the new methodology from mid-May 2016.

3 The estimation of Easter effects in the euro area HICP for services is based on the date of Catholic/Protestant Easter. The complex and pronounced Easter effect in Germany is calculated separately and provided by the Bundesbank.

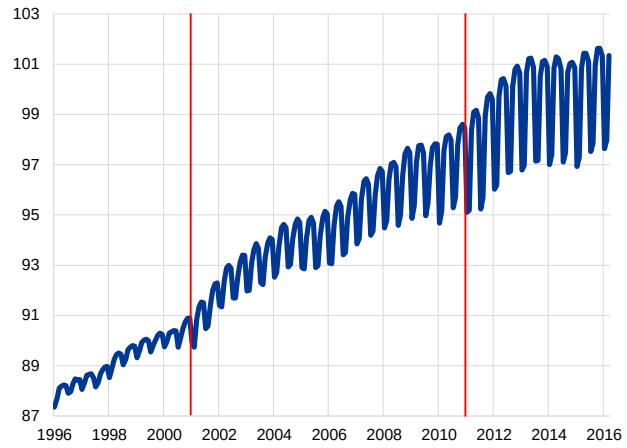
Improvements in the HICP for non-energy industrial goods

The seasonal adjustment of non-energy industrial goods has been improved through an explicit treatment of several statistical breaks (see Chart B). One of these breaks was caused by the introduction of a harmonised treatment of price reductions[4] in EU Member States in 2001.[5] As of 2001 sales prices for clothing and footwear have been covered comprehensively in the HICPs of euro area countries, typically resulting in drops during the traditional sales periods at the end of the winter and summer seasons. Another break was due to the introduction of the HICP Regulation on the treatment of seasonal products in 2011.[6] This resulted in more pronounced seasonal patterns, mainly related to the statistical treatment of out of season clothing, for which the carry-forward of prices was abandoned.

Chart B

Euro area HICP for non-energy industrial goods

(2015=100; non-adjusted)

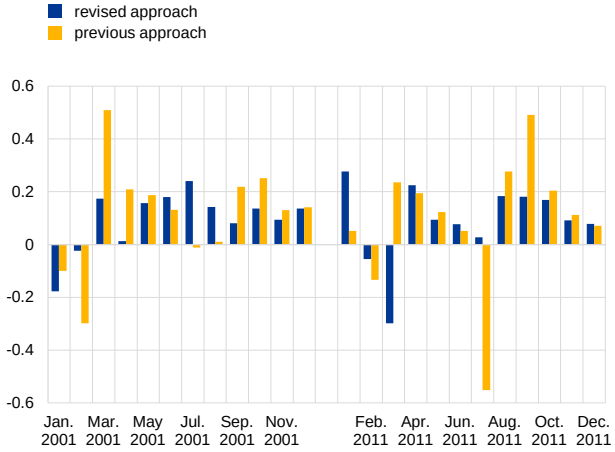


Source: Eurostat.
Note: The vertical lines refer to the years of major methodological changes.

Chart C

Euro area HICP for non-energy industrial goods after the breaks in 2001 and 2011

(month-on-month rates of change; percentages; seasonally adjusted)



Sources: Eurostat and ECB calculations.

Without adjustment for breaks, the seasonally adjusted euro area HICP for non-energy industrial goods exhibited unwanted volatility in periods before and after the breaks. The seasonal adjustment has been improved by splitting the time series into three time segments: up to December 2000, from January 2001 to December 2010, and from January 2011.[7] Chart C shows that the improved adjustment avoids distortions in the seasonally adjusted data in periods before and after the breaks.

4 Commission Regulation (EC) No 2601/2000.

5 From 2000 in Belgium, Spain and Italy.

6 HICP Regulation No. 33/2009 on the treatment of seasonal products. For details, see the box entitled "Methodological changes in the compilation of the HICP and their impact on recent data", *Monthly Bulletin*, ECB, April 2011.

7 The statistical institute of Spain back-calculated the HICP for non-energy industrial goods to 2010. The reviewed ECB seasonal adjustment therefore treats the HICP for non-energy industrial goods for Spain separately.

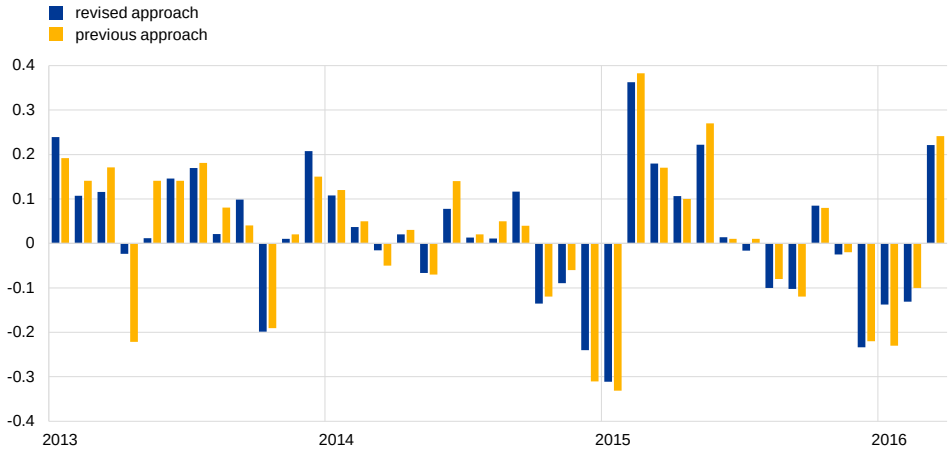
Combined effect on total HICP

The review of the seasonal adjustment approach and the introduction of an Easter adjustment have resulted in seasonally adjusted euro area HICPs which are more useful for analytical and forecasting purposes. Appropriately estimated seasonal and calendar effects are an important input into the monitoring of short-term inflation developments and can reduce the uncertainty in forecasting HICP inflation that is affected by such effects. The introduction of an Easter adjustment and an explicit treatment of statistical breaks has improved the statistical quality of the adjusted indices. Nonetheless, the differences in month-on-month growth rates of the total HICP between the approaches used before and after the review are moderate (0.04 percentage point on average in absolute terms). The largest differences are concentrated around Easter (see Chart D).

Chart D

Total HICP for the euro area

(month-on-month rates of change; percentages; seasonally adjusted)



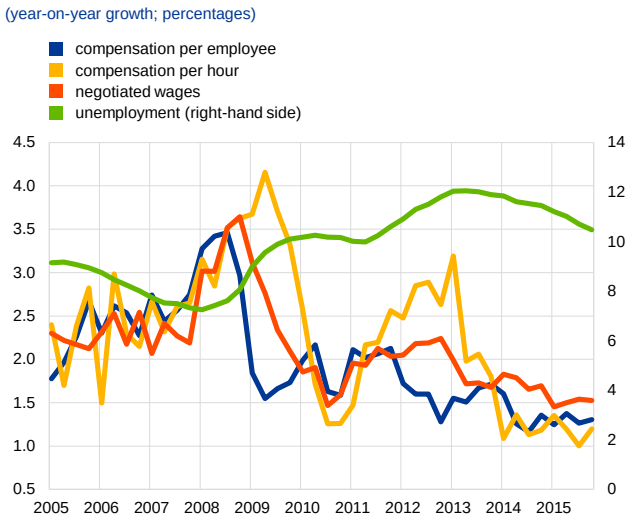
Sources: Eurostat and ECB calculations.

Box 2
Recent wage trends in the euro area

Wage growth has remained relatively low in the euro area despite an environment of improving labour markets. In the fourth quarter of 2015, growth in compensation per employee stood at 1.3% in year-on-year terms, being one of the lowest figures registered since the start of monetary union. The growth in negotiated wages is more robust, but also registered historically low figures in 2015. At the same time, the unemployment rate, while still high, has been declining since the second quarter of 2013, indicating a reduction in the amount of slack in the labour market.

Chart A

Wage growth and unemployment rate in the euro area



Sources: Eurostat and ECB staff calculations.

Wage growth has not only been low, but also consistently over-predicted. Chart B depicts forecasts for growth in compensation per employee during different Eurosystem/ECB staff projection rounds since 2013. The forecasts for growth in compensation per employee (shown by the shaded grey lines) lie above the realised outcomes (shown by the black line). This pattern indicates that the actual growth in compensation per employee surprised on the downside.

Negative forecast errors in the growth of compensation per employee have been accompanied by positive errors in employment growth (see Chart C). Indeed, employment growth has been stronger than expected in recent quarters, and the unemployment rate has declined at a faster pace than projected. The positive surprises in employment growth and the higher than expected wage moderation could both be partly related to structural labour market reforms aimed at increasing labour market flexibility and reducing nominal rigidities.

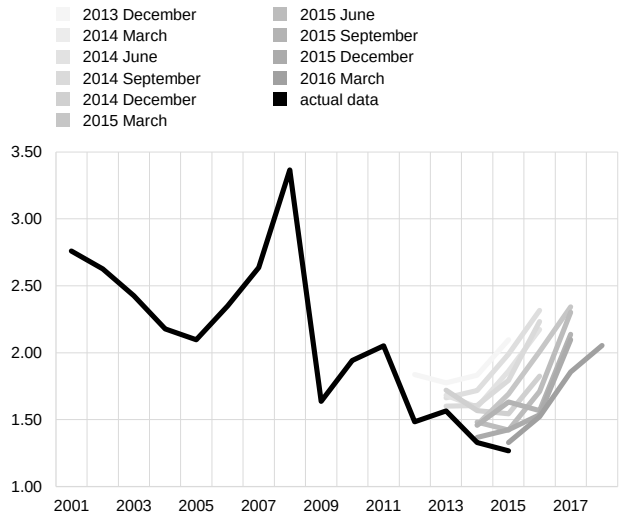
The large remaining amount of slack is a key factor pulling wage inflation down. Even if the labour market in the euro area is improving, the high unemployment rate still points to ample labour supply. The measurement of the amount of slack in the labour market is surrounded by high uncertainty and the observed unemployment rate might understate the actual labour market slack in the economy. For example, the share of underemployed people, i.e. those working on a part-time basis but who would like to work more hours, and the share of discouraged

workers increased over the crisis[1] and this is not fully captured by the observed unemployment rate.

Chart B

Compensation per employee growth

(year-on-year percentage changes)

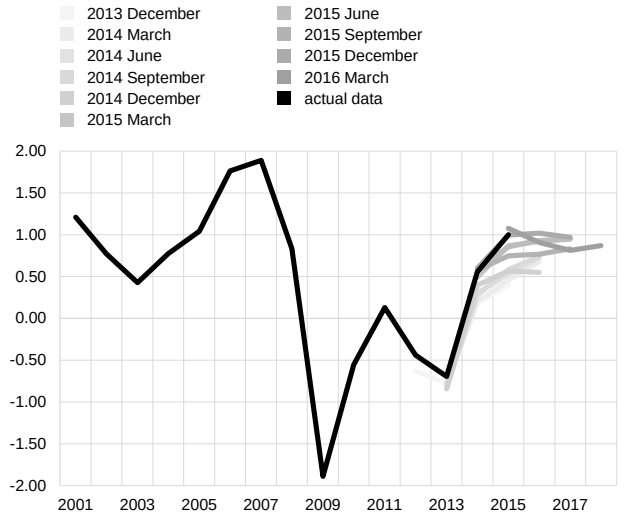


Sources: Eurostat and ECB staff calculations.
Note: The solid black line refers to historical data as published by Eurostat while the grey lines refer to the forecast path in selected projection rounds.

Chart C

Employment growth

(year-on-year percentage changes)



Sources: Eurostat and ECB staff calculations.
Note: The solid black line refers to historical data as published by Eurostat while the grey lines refer to the forecast path in selected projection rounds.

Furthermore, labour market reforms introduced since the crisis might have altered the functioning of the labour market. The aim of these reforms has been to make wages more responsive to labour market conditions by abolishing wage indexation schemes and reducing labour protection. Indeed, there is evidence that downward wage rigidities became weaker as the crisis became more protracted.[2] If the labour markets are still in an adjustment phase, the impact of labour market reforms would imply that, for a certain period of time, shrinking slack would go hand in hand with low wage growth. Also, wages today might reflect nominal rigidities prevailing in the past: downward nominal rigidities could have prevented wages from adjusting sufficiently to the amount of slack during the downturn, thereby hindering a stronger wage increase in the upturn.

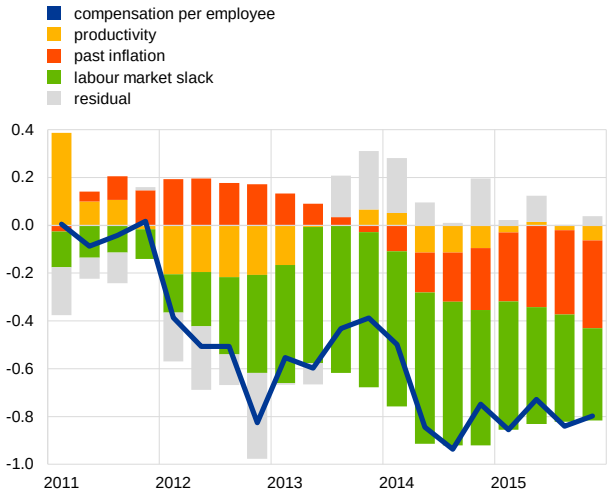
1 See ECB (2015), "Comparisons and contrasts of the impact of the crisis on euro area labour markets", *Occasional Paper Series*, No 159, Chapter 2.4. Discouraged workers are not counted as unemployed, and thus are not included in the calculation of the unemployment gap.

2 Anderton, R. and Bonthuis, B. (2015), "Downward Wage Rigidities in the Euro Area", Nottingham University Centre for Research on Globalisation and Economic Policy (GEP*), Discussion Papers Series*, No 2015/09.

Chart D

Decomposition of wage growth based on a Phillips curve model

(deviations from mean in year-on-year growth terms; percentage point contributions)



Sources: Eurostat and ECB staff calculations.
Notes: Sample: 1995-2015. Based on an equation where compensation per employee (annualised quarterly growth rate of the seasonally adjusted series) is regressed against its own lag, lagged inflation, productivity per employee, the lagged unemployment rate and a constant. Contributions are derived as in Yellen, J.L. (2015), "Inflation Dynamics and Monetary Policy", Speech at the Philip Gamble Memorial Lecture, University of Massachusetts, Amherst, September 24.

The low inflation environment may have also contributed to containing wage growth. Low inflation, which is very much driven by low oil prices, might affect the wage negotiation process, as workers might not push for higher wages when falling energy prices boost their real income. Low inflation could affect wage growth via formal and informal wage indexation mechanisms or via expectation formation. Disentangling between these two channels is challenging, also because of the lack of data on the expectations of households and firms, which are the ones that matter in the wage negotiation process. Chart D shows the contributions of key wage drivers to growth in compensation per employee based on a standard Phillips curve model.[3] In this model, it is assumed that wage setting takes past inflation into account (but the model specification can overstate the importance of past inflation in wage setting). The results suggest that (i) labour market slack has been exerting a substantial negative drag on wage growth since the beginning of the financial crisis, although this drag is diminishing; (ii) recent inflation readings are also negatively influencing wage growth; and (iii) weak productivity growth is weighing on wages.

The structure of recent employment creation may have also contributed to low productivity and wage growth in the euro area. Since the second quarter of 2013, employment creation in the euro area has been relatively stronger in low-productivity sectors, such as business services and trade and transportation services.[4] As low-productivity sectors tend to be associated with relatively lower wage levels and wage growth rates, this employment composition effect puts a drag on average wage growth.

As economic activity gains momentum and the labour market tightens, upward pressures on wages are expected to intensify. The recent ECB staff macroeconomic projections published in March indicate that compensation per employee is expected to grow moderately in 2016, picking up to 2.1% in 2018, following the gradual recovery in euro area real GDP.

3 The slack measure is the unemployment rate, which can overstate the importance of labour market slack in wage formation if it is assumed that the natural rate of unemployment increased after the crisis.

4 For more details on employment creation in the euro area see the article entitled "What is behind the recent rebound in euro area employment?", *Economic Bulletin*, Issue 8, December 2015, ECB.

Box 3
The second series of targeted longer-term refinancing operations (TLTRO II)

On 10 March 2016 the Governing Council announced a second series of targeted longer-term refinancing operations (TLTRO II), which will reinforce the ECB's accommodative monetary policy stance and strengthen the transmission of monetary policy. The new operations offer long-term funding at attractive conditions to banks to further ease private sector credit conditions and to stimulate bank lending to the real economy. In conjunction with the other non-standard measures in place, TLTRO II will contribute to a return of inflation rates to levels below, but close to, 2% over the medium term.

TLTRO II will consist of a series of four operations which will be conducted once a quarter between June 2016 and March 2017. Counterparties[1] will be able to borrow in the operations a total amount of up to 30% of a specific eligible part of their outstanding loans[2] as at 31 January 2016, less any amount which was previously borrowed under the first two TLTRO operations conducted in 2014 and still outstanding at the time of the settlement of TLTRO II. The upper limit for the aggregated borrowing allowances is estimated to amount to around €1.6 trillion.[3] However, as illustrated by the take-up in the first series of TLTROs (TLTRO I), this figure cannot be treated as a reflection of the expected take-up in the operations. Take-up of the total allowance would require that all banks with eligible loans apply for participation in TLTRO II (which requires optimal formation of TLTRO groups) and fully repay the amounts borrowed in the first two TLTRO I operations conducted in 2014. More importantly, banks will assess the attractiveness of the new operations against market conditions, their issuance plans, their overall funding needs and their lending outlook.

Targeted longer-term refinancing operations have a track record of supporting the transmission of lower policy rates to better borrowing conditions for the non-financial private sector. Such operations were first introduced as part of the June 2014 credit-easing package. Lending rates for euro area non-financial enterprises and households declined markedly after the announcement of the credit-easing package, and the associated reductions in bank funding costs have increasingly been passed on to bank borrowers (see Chart 11 in Section 5). The observed reductions have been more pronounced in vulnerable countries, where lending rates had previously been elevated vis-à-vis those prevailing elsewhere in

1 As in the first series of TLTROs, counterparties can participate in TLTRO II individually or, subject to certain conditions, on a group basis.

2 As in the first series of TLTROs, eligible loans are defined as those to euro area non-financial corporations and households excluding loans to households for house purchase.

3 Amounts which were previously borrowed under the first two TLTRO operations conducted in 2014 and not repaid will reduce this borrowing allowance. Currently such borrowings amount to €212 billion.

the euro area. Moreover, in the former group of countries, there is evidence that counterparties that borrowed in the first series of TLTROs have lowered the rates charged to non-financial enterprises by more than their non-participating peers.[4] In line with these observations, the majority of banks surveyed in the euro area bank lending survey (in January 2015, July 2015 and January 2016) reported that they intended to use the funds obtained in the first series of TLTROs to grant loans, in particular loans to enterprises and consumer credit.

The main gauge of the measure's effectiveness will be its performance in improving funding conditions for final borrowers in the real economy. While widespread participation in TLTRO II is welcome, the amount of liquidity allotted is only one of the criteria by which to assess the likely success of the measure, as also seen by the experience with TLTRO I. In fact, the mere availability of long-term funding at low rates for banks via TLTRO II (together with the other monetary policy measures in place) is expected to ease bank funding conditions in general and to lower the cost of market-based bank funding. As was the case for TLTRO I, this cost advantage is in turn expected to be passed on to bank borrowers.

All TLTRO II operations have a maturity of four years from the time of settlement, with the possibility of voluntary early repayment after two years. The long maturity of the operations will provide counterparties with funding certainty and allow them to match the maturity of their funding with that of loans that finance real investment spending. At the same time, the measure provides flexibility as counterparties will be able to repay the amounts borrowed under TLTRO II at a quarterly frequency starting two years from the settlement of each operation. Counterparties will not be subject to mandatory early repayments, as was possible under TLTRO I. Moreover, an additional voluntary repayment possibility in June 2016 for all currently outstanding TLTRO I operations has been introduced, just ahead of the settlement of the first TLTRO II operation. This will allow counterparties that participated in the previous series of TLTROs to transfer their funding to TLTRO II and thereby benefit from the more accommodative terms of the new series of operations.

The pricing mechanism of TLTRO II is intended to incentivise banks to pass on to ultimate borrowers the accommodative funding conditions it offers. The rate at which counterparties can borrow under TLTRO II depends on their lending pattern (see Chart A).[5] The maximum interest rate applied under TLTRO II will be fixed for each operation at the rate applied in the main refinancing operation (MRO) prevailing at the time of allotment. However, counterparties whose eligible net lending in the period between 1 February 2016 and 31 January 2018 exceeds a certain benchmark – which depends on each counterparty's past lending behaviour, as explained below – will benefit from a lower rate for the entire term of the operation. In particular, the rate on TLTRO II borrowing can be as low as the rate on the deposit facility prevailing at the time of allotment for counterparties with a sufficiently strong lending

4 For more details, see the article entitled "The transmission of the ECB's recent non-standard monetary policy measures", *Economic Bulletin*, Issue 7, ECB, 2015.

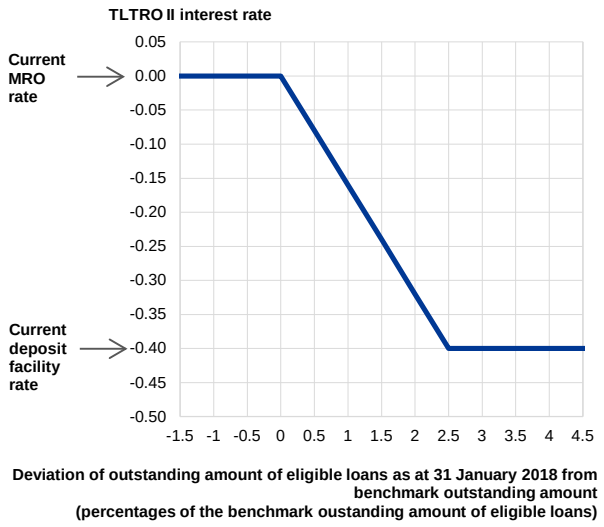
5 The precise technical details pertaining to TLTRO II, including the method for the calculation of the applicable interest rate, are specified in the relevant legal act.

performance. Counterparties will achieve this rate if they exceed their benchmark stock of eligible loans by 2.5% in total as at 31 January 2018. Up to this limit, the level of the interest rate will be graduated linearly depending on the percentage by which a counterparty exceeds its benchmark stock of eligible loans. This means that all counterparties with positive eligible net lending or with an improved lending performance compared with the 12 months to 31 January 2016 will borrow at a rate lower than the MRO rate prevailing at the time of allotment.

Chart A

Illustration of the borrowing rate for TLTRO II

(percentages per annum)

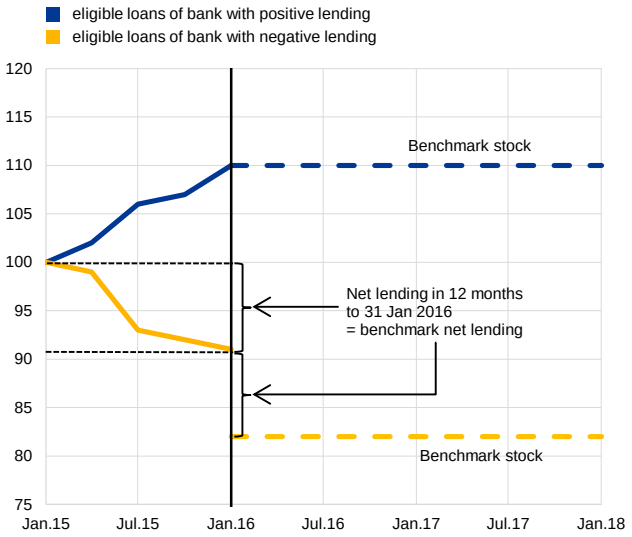


Source: ECB.
Notes: The chart provides an illustration of the borrowing rate for TLTRO II operations launched at the currently prevailing policy rates. For operations launched at different MRO rates and deposit facility rates, those rates will apply accordingly. This illustration abstracts from adjustments to the outstanding amounts of loans, such as those resulting from loan sales and purchases or securitisations.

Chart B

Illustration of the TLTRO II benchmark

(EUR millions)



Source: ECB.
Note: This illustration abstracts from adjustments to the outstanding amounts of loans, such as those resulting from loan sales and purchases or securitisations.

Counterparties' benchmarks depend on their lending pattern over the 12 months to 31 January 2016. For counterparties that exhibited positive eligible net lending in the 12-month period to 31 January 2016, the benchmark net lending is set at zero. For counterparties that exhibited negative eligible net lending in the 12-month period to 31 January 2016, the benchmark net lending is equal to the eligible net lending in that period. The benchmark lending concept is illustrated in Chart B. The chart gives a stylised example for a counterparty with positive lending during the 12 months up to 31 January 2016, as well as for a counterparty with negative lending during that period. For the counterparty with positive net lending (blue line), the benchmark net lending flow is zero, so that the benchmark stock is equal to the outstanding amount of eligible loans on 31 January 2016. By contrast, for the counterparty with negative net lending (yellow line), the benchmark net lending flow is equal to the negative net lending flow during that period. The benchmark stock that counterparties have to exceed is thus equal to the outstanding amount of eligible loans on 31 January 2016 plus the (negative) net lending flow recorded in the 12 months to 31 January 2016.

Table A

Stylised examples of TLTRO II benchmarks

(EUR millions)

Counterparty	Eligible net lending 1 February 2015 – 31 January 2016	Outstanding amount of eligible loans as at 31 January 2016	Benchmark net lending	Benchmark outstanding amount
A, B, C	50	1,000	0	1,000
D, E, F	-40	1,000	-40	960

Source: ECB.

The application of this pricing mechanism is illustrated with a few stylised examples.[6] Table A considers stylised cases of three counterparties with positive eligible net lending in the 12-month period to 31 January 2016 (counterparties A, B and C) and three with negative eligible net lending in that period (counterparties D, E and F). Counterparties A, B and C, as positive net lenders in the 12-month period to 31 January 2016, are assigned a zero net lending benchmark. For counterparties D, E and F, which had negative eligible net lending in the 12 months to 31 January 2016, the benchmark net lending is equal to their net lending in that period, i.e. -€40 million in these examples.

In Table B it is assumed that counterparty A achieves positive net lending of €30 million in the period from 1 February 2016 to 31 January 2018. This counterparty therefore exceeds its benchmark outstanding amount (assumed to be €1,000 million) by 3.0% and as a result obtains the lowest possible rate of -0.40%, i.e. the current rate on the deposit facility (all examples are based on the current MRO and deposit facility rates). Counterparty B registers negative net lending of -€10 million. This counterparty does not meet its benchmark net lending and, therefore, the maximum rate of 0.00%, i.e. the current MRO rate, will be applied to its borrowing under TLTRO II. Counterparty C exhibits positive net lending, thereby meeting its benchmark net lending. However, its positive net lending of €10 million results in this counterparty exceeding its benchmark outstanding amount by only 1.0%, i.e. less than the 2.5% necessary to obtain the minimum rate. In this case a rate of -0.16% will be applied to counterparty C's borrowing under TLTRO II. This is 40% of the difference between the current deposit facility rate (-0.40%) and the rate applied in the MRO (0.00%), reflecting the fact that this counterparty exceeded its benchmark by only 40% of the amount required to receive the minimum possible rate.

Counterparty D exhibits net lending of -€10 million in the period from 1 February 2016 to 31 January 2018. This counterparty exceeds its benchmark outstanding amount (assumed to be €960 million) by 3.1% and as a result obtains the lowest possible rate of -0.40%. By contrast, counterparty E does not meet its benchmark net lending, as it registers eligible net lending of -€50 million in the period from 1 February 2016 to 31 January 2018. In this case the MRO rate of 0.00% will be applied. Finally, counterparty F exhibits net lending of -€35 million, thereby exceeding its benchmark outstanding amount by only 0.5%, i.e. 20% of what is required in order to achieve the minimum rate on TLTRO II borrowing. In this case

6 Please note that all calculations are rounded. The exact number of decimal places to apply is specified in the TLTRO II legal act.

the rate applied to counterparty F's borrowing under TLTRO II will be 20% of the difference between the current deposit facility rate (-0.40%) and the rate applied in the MRO (0.00%), i.e. -0.08%.

Table B

Stylised examples of the application of the TLTRO II pricing mechanism

Counterparty	Eligible net lending 1 February 2016 - 31 January 2018 *(EUR millions)*	Percentage deviation from benchmark outstanding amount *(percentages)*	TLTRO II interest rate *(percentages per annum)*
A	30	3.0	-0.40
B	-10	-1.0	0.00
C	10	1.0	-0.16
D	-10	3.1	-0.40
E	-50	-1.0	0.00
F	-35	0.5	-0.08

Source: ECB.

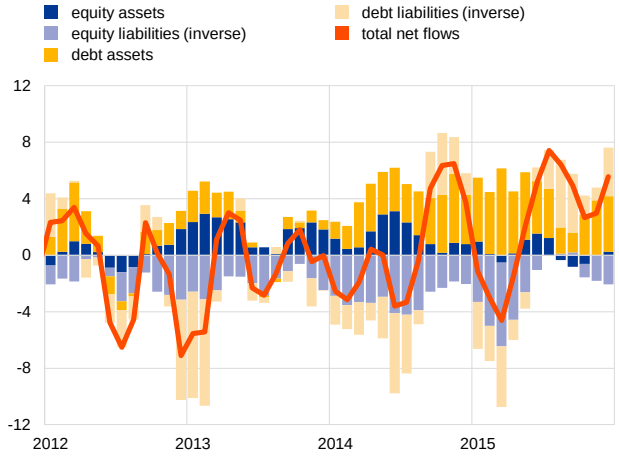
Box 4
Rebalancing in euro area portfolio investment flows

This box describes recent developments in the portfolio investment flows of the euro area financial account. During 2015 the euro area's current account surplus was mainly mirrored by net portfolio investment outflows in the financial account of the balance of payments.

Chart A

Breakdown of euro area portfolio investment flows

(as a percentage of GDP; three-month moving averages)



Sources: ECB and Eurostat.
Notes: For assets, a positive (negative) number indicates net purchases (sales) of foreign securities by euro area investors. For liabilities, a positive (negative) number indicates net sales (purchases) of euro area securities by foreign investors. For net flows, a positive (negative) number indicates net outflows (inflows) from (into) the euro area. The latest observation is for December 2015.

In 2015 the euro area recorded net outflows in portfolio investment largely due to a rebalancing towards foreign debt securities (see Chart A). Euro area investors significantly stepped up their purchases of foreign debt securities from mid-2014 – when the ECB embarked on comprehensive credit easing measures – to levels not seen since the outbreak of the global financial crisis. Since mid-2014, euro area residents have been persistent net buyers of foreign debt securities, largely in the form of long-term bonds. In the first quarter of 2015, when the ECB's public sector purchase programme was launched, foreign investors partly offset these outflows with substantial net purchases of euro area debt securities. Subsequently, however, non-residents have broadly disinvested from euro area debt securities. The rebalancing towards foreign debt securities is in line with the euro area's persistently negative interest rate differentials vis-à-vis other advanced economies. Foreign investors' net purchases of euro area equities – which have been substantial in recent years – peaked in the first quarter of 2015. Thereafter, foreign investment inflows to euro area equities abated, thereby contributing to the rebalancing towards net portfolio investment outflows from the euro area. Net purchases of foreign equities by euro area investors declined to low levels in 2015 and thus did not contribute significantly to overall developments in portfolio investment flows.

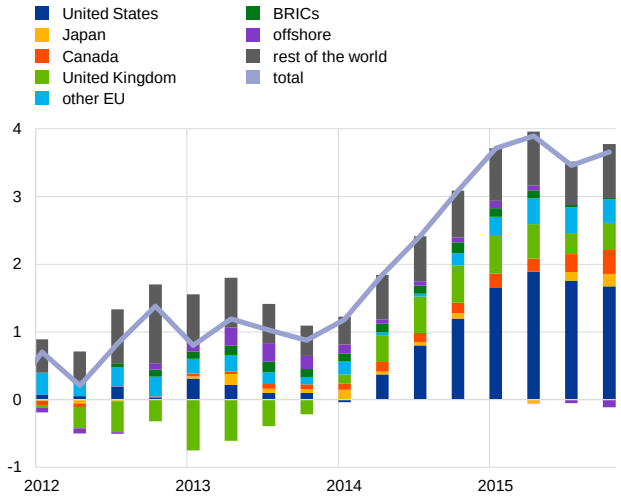
Rising euro area portfolio debt investment abroad largely targeted other advanced economies in 2015 (see Chart B). Around 45% of euro area investors' net purchases of foreign debt securities in 2015 were directed towards the United States, followed by the United Kingdom (11%), other EU Member States (10%), Canada (10%) and Japan (5%). Net purchases by euro area residents of debt securities issued by Brazil, China, India and Russia largely dried up during 2015, concomitant with waning investor confidence in these markets. As information on the source countries of foreign inflows to the euro area is not available, indicative

evidence is derived from changes in foreign investment positions vis-à-vis the euro area as reported in the International Monetary Fund's Coordinated Portfolio Investment Survey (CPIS). These data show that, in particular, investors from Japan, the United Kingdom and Denmark reduced their holdings of euro area portfolio debt securities in the first half of 2015.[1]

Chart B

Geographic breakdown of euro area investors' net purchases of foreign portfolio debt securities

(percentages of euro area GDP, four-quarter averages)

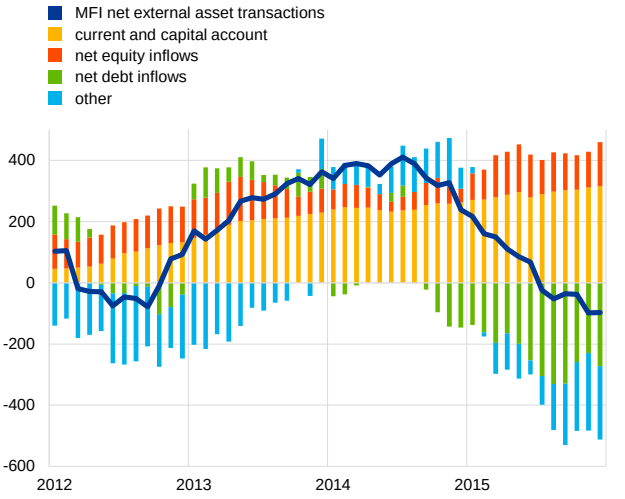


Sources: ECB and Eurostat.
Notes: The BRIC aggregate comprises Brazil, China, India and Russia; "other EU" includes EU Member States outside the euro area, excluding the United Kingdom. The latest observation is for the fourth quarter of 2015.

Chart C

Monetary presentation of the balance of payments

(12-month moving sums of monthly flows in EUR billions)



Source: ECB.
Notes: A positive number refers to a net inflow/increase in MFIs' net external assets. All transactions refer to the money-holding sector. "Other" includes: net inflows in FDI and other investments, financial derivative transactions and discrepancies between balance of payments and monetary statistics, as well as errors and omissions. The latest observation is for December 2015.

In the non-MFI sector, portfolio rebalancing away from euro area debt securities increasingly dragged on the euro area MFI net external asset position in 2015 (see Chart C). The net external asset position of MFIs mirrors transactions resulting from trade and financial flows of the money-holding sector. As can be seen from the monetary presentation of the balance of payments, net portfolio debt outflows of the money-holding sector had a negative impact on annual M3 growth in the euro area in 2015. Conversely, MFI net external assets continued to be supported by non-MFI transactions related to the euro area's current account surplus and, to a lesser extent, to net equity inflows.

[1] The latest available data in the CPIS refer to the second quarter of 2015.

Article
The slowdown in emerging market economies and its implications for the global economy

Emerging market economies (EMEs) have been a significant driver of global growth and euro area external demand in the 21st century. However, since 2010 growth in EMEs has been on a downward trend. Some of that moderation has been driven by structural factors such as diminishing capital accumulation and productivity gains and waning global trade integration. Other headwinds include the sluggish recoveries seen in advanced economies, which have dampened external demand, sharp declines in commodity prices, which have particularly affected growth in commodity-exporting economies, and the gradual tightening of global financing conditions since 2013. Moreover, following a period in which policies were highly accommodative and private sector debt increased, policy buffers have been eroded and macroeconomic vulnerabilities have increased. The slowdown in EMEs has already dampened global growth and had an adverse, albeit moderate, impact on euro area exports. However, this has been partially offset by the boost to real disposable incomes resulting from declines in commodity prices. Looking ahead, risks to the outlook for EMEs remain on the downside. A further broad-based and pronounced slowdown in EMEs could have a sizeable adverse impact on the outlook for the global economy.

1 Introduction

The weakening growth observed in EMEs in recent years has surprised many forecasters.[1] That slowdown has been pronounced and has affected a large number of countries. However, the underlying causes vary from country to country. In some countries, structural impediments to growth and macroeconomic imbalances are increasingly limiting potential growth, while other countries are adjusting to lower commodity prices and tighter external financing conditions.

EMEs are playing an increasingly important role in the global economy. EMEs account for almost two-thirds of global GDP in purchasing power parity (PPP) terms. A broad slowdown in EMEs could therefore act as a significant drag on global growth.

[1] This article focuses mainly on a group of large EMEs comprising Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand, Turkey and Venezuela. In some cases, however, data availability issues have necessitated the analysis of smaller groups. Moreover, definitions of EMEs vary across statistical providers, and the countries included in broader aggregates compiled by other institutions can vary.

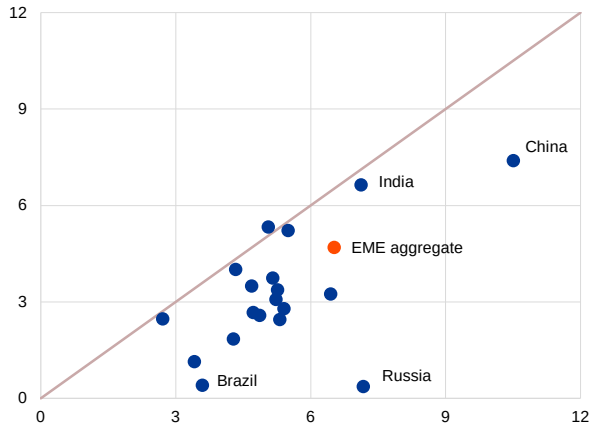
This article analyses the causes of the slowdown in EMEs and assesses the economic outlook and the implications for the global economy and the euro area. The next section outlines the headwinds that have been impeding EMEs in recent years. Section 3 then assesses the risks to the economic outlook, focusing on EMEs' potential vulnerability to an abrupt tightening of external financing conditions against the backdrop of rising indebtedness. The final section discusses the role of EMEs in the global economy and considers the transmission channels to the euro area in the event of a more pronounced slowdown in EMEs.

2 The factors contributing to the slowdown in EMEs

Since 2010 growth in EMEs has been on a downward trend. EMEs weathered the global financial crisis rather better than advanced economies and recovered strongly afterwards, recording aggregate GDP growth of 7.5% in 2010. However, last year was the fifth consecutive year of slowing economic growth in EMEs, with aggregate GDP growth standing at just 4.0% in 2015 – markedly lower than the levels observed in the years before the financial crisis. The slowdown has been broadly based: growth has been weaker in the last three years than it was before the financial crisis in most large EMEs (see Chart 1).

Chart 1
Average GDP growth in large EMEs

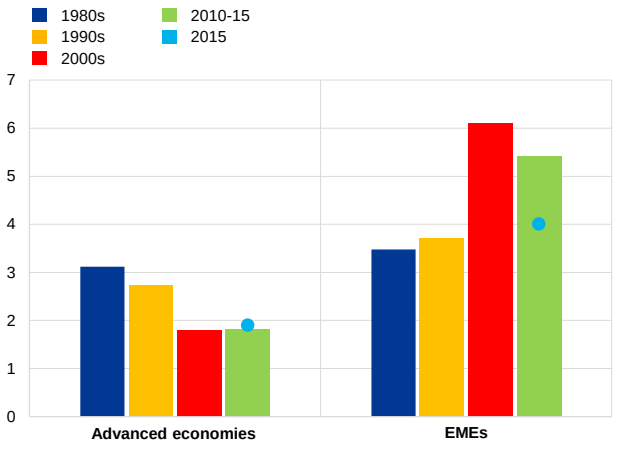
(x-axis: average real GDP growth, 2000-07; y-axis: average real GDP growth, 2012-15; annual percentage changes)



Sources: IMF and ECB staff calculations.
Notes: The sample comprises Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand and Turkey. The EME aggregate is a PPP-weighted average for these countries.

Chart 2
Average GDP growth in past decades

(annual percentage changes)



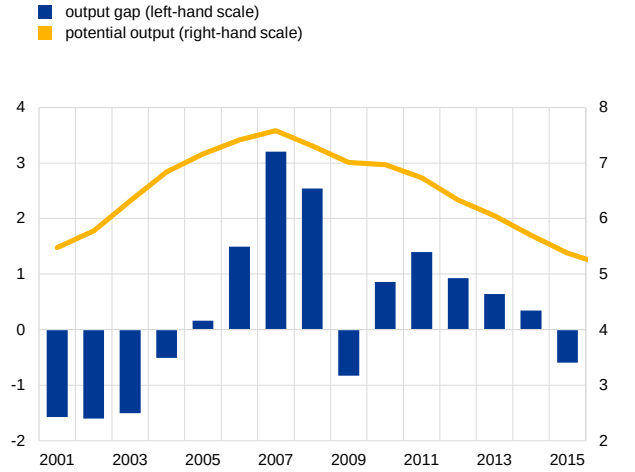
Sources: IMF and ECB staff calculations.

One factor underlying that deceleration has been a structural moderation in EMEs' growth. Looking at developments from a longer-term perspective, the period from 2000 to 2010 was exceptional, with EMEs averaging aggregate GDP growth of almost 6%, compared with less than 4% in the previous two decades (see Chart 2). EMEs benefited from a confluence of tailwinds: strong demand in advanced economies, buoyant financial markets in the run-up to the global financial crisis, and

increasing integration into the global economy. The rise in commodity prices – which was partly attributable to the strong growth seen in many EMEs – also benefited commodity-exporting economies, boosting investment in these economies. In this environment, robust capital accumulation and strong productivity growth helped to boost trend growth rates. As those factors have ebbed since the global financial crisis, so too has potential growth. In addition, previously favourable demographic trends have gradually waned in some countries, as growth in the working age population has moderated. ECB staff estimates based on a Cobb-Douglas production function attribute around one-third of the moderation in growth seen in the seven largest EMEs since 2010 to falling potential growth (see Chart 3).

Chart 3
Potential output in large EMEs

(percentages of potential output; annual percentage changes)



Sources: IMF, OECD, national data and ECB staff calculations.
Note: This chart shows PPP-weighted estimates of potential GDP for Brazil, China, India, Mexico, Russia, South Korea and Turkey, based on a Cobb-Douglas production function.

Changes in potential growth have varied across the largest EMEs, as have the factors underlying those developments. In China, years of credit-driven investment have resulted in excess capacity in some sectors, as well as the misallocation of resources and a build-up of debt, while the benefits of accession to the World Trade Organization and increased trade integration have gradually waned. Moreover, although there remains scope for productivity gains through the reallocation of workers from rural to urban areas and integration into more advanced sectors with higher levels of productivity, the labour force has been in decline since 2011. In Russia, unfavourable demographic trends are also weighing on potential growth. Declines in energy prices and international sanctions imposed as a result of the conflict in Ukraine have also exacerbated long-standing obstacles to investment and growth, such as infrastructure bottlenecks and a poor business climate (which were encouraging capital outflows even before the sharp recession began in 2014). In Brazil, potential growth has deteriorated as reduced commodity prices have hit investment activity in the country's key export sectors. Weak infrastructure investment and an onerous regulatory environment have exacerbated poor productivity. In India, by contrast, potential growth has remained robust as favourable demographics and structural reforms aimed at enhancing the country's business environment have boosted growth dynamics.[2]

External factors have also contributed to the slowdown in EMEs. The literature has highlighted the impact that external factors, such as global trade dynamics, the global financing environment and commodity market fluctuations, have on EMEs' economic activity.[3] Bayesian vector autoregressive (BVAR)[4] models for a sample of

2 See the box entitled "The rise to prominence of India's economy", *Economic Bulletin*, Issue 4, ECB, 2015.

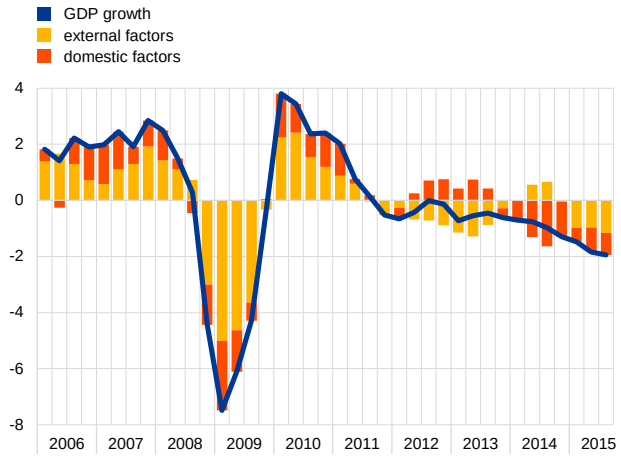
3 See IMF, *World Economic Outlook*, Chapter 4, April 2014; and Didier, T., Kose, M.A., Ohnsorge, F. and Ye, L.S., "Slowdown in emerging markets: rough patch or prolonged weakness?", Policy Research Note PRN/15/04, World Bank Group, December 2015.

12 large EMEs confirm that view, suggesting that external factors have accounted for around half of all variations in growth dynamics in the last two decades. Looking at the most recent period, external factors were important in the initial downturn observed as of 2010. Since 2014, however, domestic factors have played a larger role in dampening growth (see Chart 4).

Chart 4

Contributions to GDP growth in EMEs

(contributions to aggregate annual GDP growth expressed as deviations from the steady state)



Sources: ECB staff calculations, Bloomberg and the IMF World Economic Outlook.
Notes: This chart shows estimated contributions to annual GDP growth (expressed as deviations from the steady state) based on BVAR models estimated separately for each EME and aggregated using PPP weights. The sample comprises Argentina, Brazil, Chile, India, Indonesia, Malaysia, Mexico, Russia, South Korea, Taiwan, Thailand and Turkey. See footnote 4 for details.

Among the external factors, sluggish external demand and global trade have both had an adverse effect on EMEs in recent years. Global trade volumes have grown at rates well below historical norms in the past five years. After growing at almost twice the rate of GDP on average in the two decades before the financial crisis, trade has barely kept pace with economic activity since 2011. Some of that weakness stems from inter-EME trade developments, perhaps reflecting the dwindling benefits of EMEs' integration into global markets. In particular, the moderation seen in trade with China has affected that country's trading partners, including other Asian EMEs and commodity-exporting economies. However, the slow recoveries observed in advanced economies, where both private and public sectors have sought to repair balance sheets in the wake of the global financial crisis, have also weighed on trade-intensive components of demand such as investment. Moreover, the persistent weakness of global trade volumes since 2011 may also point to a structural shift, perhaps related to the weakening of global supply chain expansion.[5]

Declines in commodity prices have also affected some EMEs. Oil prices have declined sharply over the last 18 months, with prices at the end of March 2016 around two-thirds of the mid-2014 peaks. Other commodity prices have also been on a downward trend, with the IMF non-fuel primary commodities index standing 40% below its 2011 peak. The moderation seen in commodity prices – particularly oil prices – has reflected both supply and demand-side factors. Much of the initial decline in oil prices during 2014 was attributable to supply-side factors, as oil production increased more strongly than expected against the backdrop of high levels of past investment and technological innovations. OPEC's decision in November 2014 to keep production quotas unchanged exacerbated the decline in oil prices, as did the resilience of shale oil production. However, weaker demand played

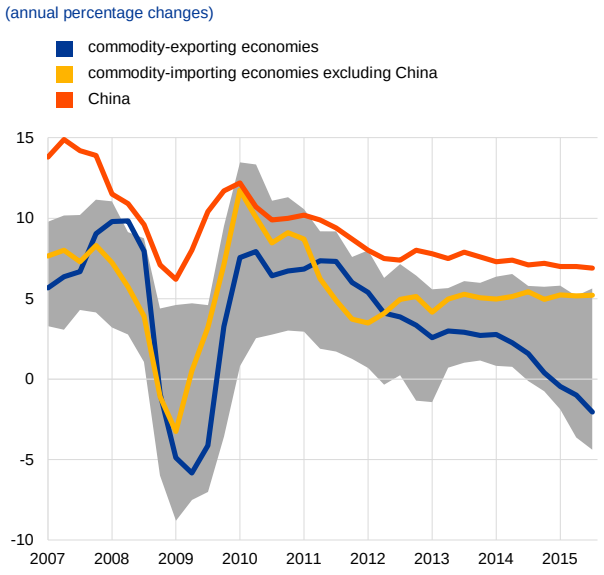
4 The BVAR models are estimated separately for each of the 12 EMEs. Each model includes an external (i.e. exogenous) block (comprising growth and inflation in the United States, ten-year US bond yields, the J.P. Morgan Emerging Market Bond Index spread, and the terms of trade) and a domestic block (comprising GDP, inflation, the real effective exchange rate and the short-term real interest rate). The models use a Choleski identification scheme, with the variables ordered as above. They are estimated using quarterly data from the first quarter of 1998 to the third quarter of 2015. For a similar analysis, see IMF, *World Economic Outlook*, Chapter 4, April 2014.

5 See the article entitled "Understanding the weakness in world trade", *Economic Bulletin*, Issue 3, ECB, 2015.

an increasingly important role in driving prices down in the second half of 2015, particularly as growth in EMEs slowed. This has resulted in a sharp divergence in EMEs' prospects, depending on whether they are exporters or importers of commodities. Commodity-exporting economies' terms of trade have deteriorated, which has affected economic activity and caused contractions in investment in commodity-related sectors (see Chart 5). In some larger countries, particularly Brazil and Russia, declines in key commodity prices have interacted with other shocks (including political uncertainty and the fallout from geopolitical tensions), leading to significant macroeconomic adjustments. As commodity-driven revenues have shrunk and fiscal positions have deteriorated, governments in commodity-exporting economies have had difficulty cushioning the downturn in activity. Commodity-exporting economies with flexible exchange rates have also seen their monetary policies constrained, as their currencies have depreciated in line with the falling commodity prices and inflationary pressures have risen. At the same time, although commodity-importing economies have benefited from rising real disposable incomes, the effects on economic activity have been fairly slow to materialise. In some countries, falling energy prices have enabled governments to reduce fuel subsidies and increase fiscal sustainability, while in others, private savings have increased.

Chart 5

Average GDP growth in commodity-exporting economies and commodity-importing economies



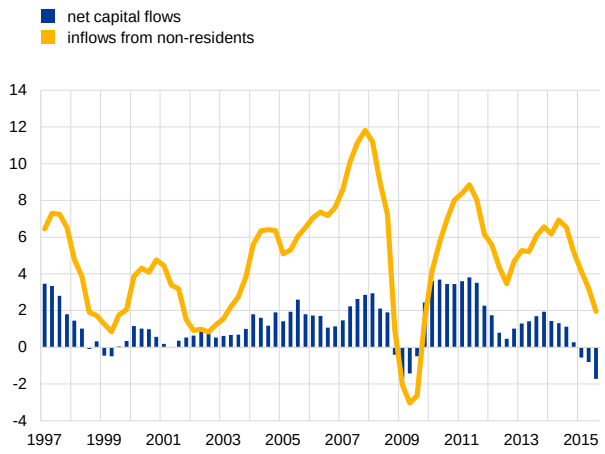
Sources: National data and Haver Analytics.
Notes: The latest observation is for the third quarter of 2015. Lines are PPP-weighted averages of GDP growth in EMEs. The shaded area shows the 10th to the 90th growth percentiles across the EMEs in the sample. The commodity-importing economies are the Hong Kong SAR, India, Singapore, South Korea, Taiwan, Thailand and Turkey. The commodity-exporting economies are Argentina, Brazil, Chile, Colombia, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, South Africa and Venezuela.

In addition, after being broadly favourable in the years following the global financial crisis, the external financing environment has gradually tightened. In the early stages of the post-crisis recovery, EMEs benefited from a supportive external financing environment. Global funding conditions were favourable to EMEs, with central banks in advanced economies pursuing accommodative policies, keeping interest rates low and engaging in large-scale asset purchases. Capital flows to EMEs generally remained buoyant. Over the last three years, however, financing conditions have tightened. The "taper tantrum" observed in the summer of 2013, when speculation mounted about the Federal Reserve System's intention to tighten US monetary policy, sparked a sharp correction in financial markets. External funding conditions tightened again in anticipation of an increase in US interest rates (which eventually came in December 2015). Meanwhile, the unwinding of excessive stock market valuations amid changes in China's exchange rate policy framework has added to uncertainty and financial market volatility in recent months. Balance of payments data show net capital outflows from the largest EMEs during the first three quarters of 2015 (see Chart 6). More timely indicators point to a strengthening of capital outflows towards the end of 2015, particularly in China. Several EMEs have seen their currencies depreciate (see Chart 7). The impact of tighter financing conditions can be seen in higher bond yields, widening credit spreads and substantial corrections in equity prices.

Chart 6

Average capital flows to EMEs

(percentages of GDP; four-quarter moving averages)

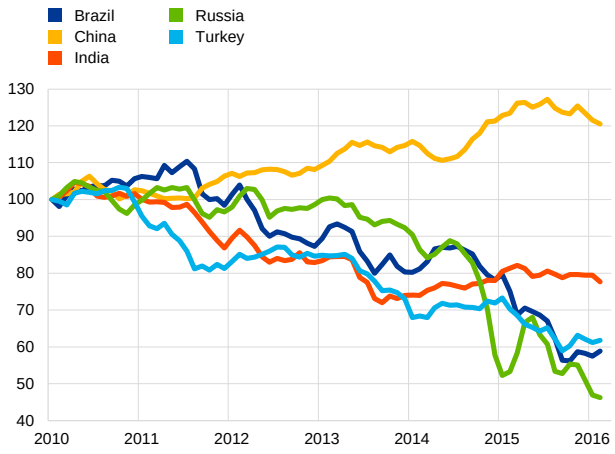


Sources: IMF and national data.
Notes: The latest observation is for the third quarter of 2015. Data represent aggregate flows (as percentages of GDP) for Argentina, Brazil, Chile, China, Colombia, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Singapore, South Korea, Taiwan, Thailand and Turkey. Net capital flows represent the financial account from the balance of payments excluding changes in reserve assets.

Chart 7

Nominal effective exchange rates

(indices: January 2010 = 100)



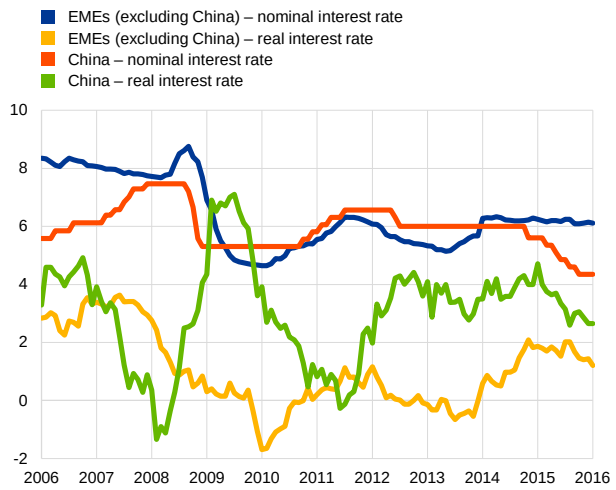
Source: ECB staff calculations.
Note: The latest observation is for February 2016. An increase in the index denotes an increase in the value of the currency.

At the same time, the support provided by accommodative policies in the aftermath of the financial crisis, which helped to sustain demand (particularly through strong credit growth), has weakened. Although favourable external funding conditions supported EME growth in the years after the global recession, they also posed challenges for EMEs. Faced with a choice between restraining domestic demand and deterring unwelcome capital inflows in order to alleviate appreciation pressures, many EMEs chose to maintain relatively accommodative policies. On aggregate, short-term (ex post) real interest rates were close to zero from 2008 to 2012 (see Chart 8). Long-term interest rates also fell during this period. The substantial fiscal stimulus provided in 2009 and 2010 contributed to the supportive macroeconomic environment. In the presence of loose financial conditions, credit expanded rapidly in several countries (see Chart 9). The analysis in the box suggests that domestic and global financial cycles have had a major influence on EMEs' business cycles. The combination of rising domestic credit and capital inflows initially helped to sustain EME growth during a period of external weakness, but in the last three years financial conditions have tightened and that support has begun to wane.

Chart 8

Policy interest rates in EMEs

(percentages per annum)

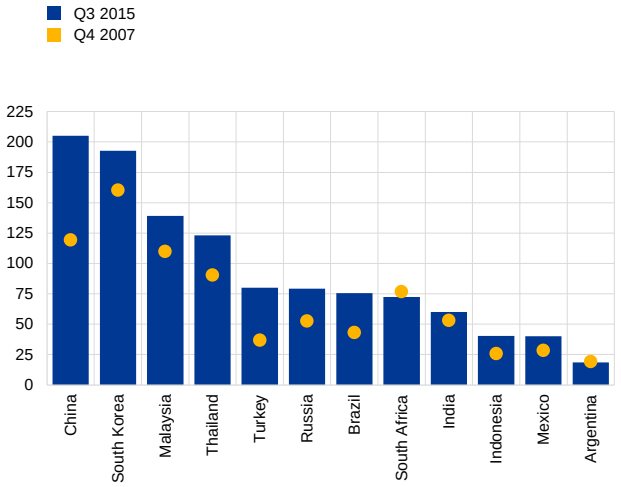


Sources: IMF and national data.
Notes: The latest observation is for January 2016. Data represent GDP-weighted averages for the following EMEs: Brazil, Chile, Colombia, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, South Africa, South Korea, Taiwan, Thailand and Turkey. Real rates are calculated as the nominal short-term policy rate minus the CPI inflation rate.

Chart 9

Private sector credit-to-GDP ratios

(private sector credit as a percentage of GDP)



Source: BIS.

Box

The implications of global and domestic credit cycles for EMEs: measures of "finance-adjusted" output gaps

The buoyant credit growth observed in many EMEs has increased concerns about growing imbalances and the potential risks to the economic outlook if the credit cycle were to turn. In order to gauge the impact of global and domestic credit developments on the business cycle, this box describes estimates of "finance-adjusted" output gaps for a selection of EMEs.

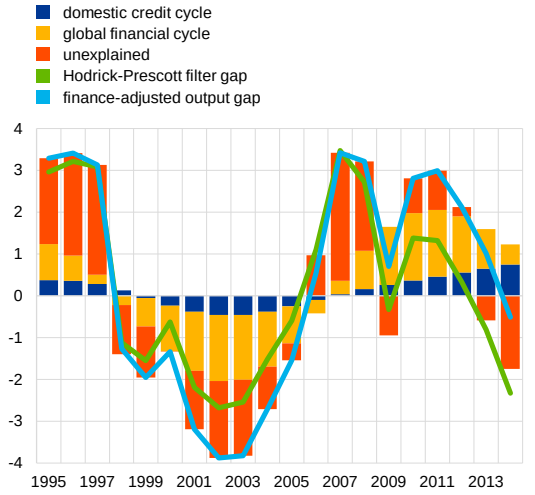
Measures of finance-adjusted output gaps provide a way of understanding the role that financial factors have played in shaping recent EME business cycle dynamics. The theory is that traditional measures of potential output may be too restrictive, as inflation may not be the only symptom of an unsustainable expansion. Indeed, the pre-crisis experiences of a number of advanced economies suggest that it is possible for output to be on an unsustainable path even if inflation remains low and stable. Recent literature has explored the concept of finance-adjusted gaps (which use simple filtering techniques to estimate the impact that the financial cycle has on economic activity), finding that financial cycle information can explain some of the cyclical movements in output in some advanced economies.[6]

[6] See Borio, C., Disyatat, P. and Juselius, M., "Rethinking potential output: Embedding information about the financial cycle", *BIS Working Papers*, No 404, February 2013.

Chart

Contributions to the aggregate EME finance-adjusted output gap

(gap as a percentage of trend output; percentage point contributions)



Source: ECB staff calculations.
Notes: This chart shows contributions to a finance-adjusted output gap estimated for an aggregate of 12 large EMEs. See footnote 7 for details of the sample. The latest observation is for 2014.

Finance-adjusted output gaps have been estimated for a sample of 12 large EMEs, incorporating measures of global and domestic credit cycles.[7] The model augments a Hodrick-Prescott filter within a simple state-space framework, allowing financial variables to influence the output gap. Domestic credit gaps are estimated as the deviation of real private sector credit from long-term trends, using an asymmetric band-pass filter.[8] The global financial cycle is estimated as the deviation of aggregate net capital flows to EMEs from long-term trends.[9]

The model suggests that financial cycle information – as captured by the behaviour of domestic and global credit aggregates – explains part of the cyclical movements in output for most EMEs. For most countries, global and domestic credit variables explain a large amount of the variation seen in output gaps. Since the global financial crisis, the finance-adjusted output gap has diverged from a measure based on the Hodrick-Prescott filter. Several countries have seen strong increases in domestic credit during this period, which have raised growth above trend levels. Strong capital inflows also helped to boost economic activity in the aftermath of the global financial crisis, but in 2013 and 2014 (the last two years for which output gaps have been estimated) this contribution moderated. With global financing conditions having tightened further in 2015, this contribution is likely to have declined further.

The finance-adjusted model comes with some important caveats, but it provides an interesting alternative perspective on recent developments in EMEs, differing from other models of the business cycle. The production function approach suggests that EMEs' potential growth rose in the mid-2000s and has since fallen (see Chart 3 in the article). By contrast, estimates of finance-adjusted gaps offer an alternative view, suggesting that, in part, EMEs' strong growth reflected some overheating, with economic growth reliant on strong credit growth, particularly after the financial crisis. There are clear limitations to this approach. The model is mostly statistical and does not allow for a structural interpretation. It does not model the process of

7 The sample comprises Brazil, Chile, China, India, Indonesia, Malaysia, Mexico, Russia, South Africa, South Korea, Thailand and Turkey. The model is estimated separately for each country using annual GDP data between 1980 (or the earliest available data) and 2014, which are aggregated using PPP weights.

8 Reflecting the common view in the literature that financial cycles last longer than traditional business cycles, we measure credit gaps using a filter that isolates cycles with a duration of between 8 and 20 years. See Drehmann, M., Borio, C. and Tsatsaronis, K., "Characterising the financial cycle: don't lose sight of the medium term!", *BIS Working Papers*, No 380, June 2012.

9 See Blanchard, O., Adler, G. and de Carvalho Filho, I., "Can foreign exchange intervention stem exchange rate pressures from global capital flow shocks?", *IMF Working Papers*, No 15/159, July 2015. For each country, the series for aggregate net capital flows to EMEs that is included in the model excludes that country from the calculation – i.e. capital flows to the country are not included in the calculation of the aggregate.

the financial cycle, and the link with the business cycle is simplistic. Moreover, it provides no insight into the possible distortions generated by financial imbalances.[10] However, even bearing these caveats in mind, the model could suggest that a further tightening of financing and credit conditions could remove a quantitatively important component of support for economic activity in some EMEs.

3 Risks and vulnerabilities in the outlook for EMEs

As economic activity in EMEs has slowed, concerns have increased about the outlook for economic growth and the possible vulnerabilities of some countries. As discussed in Section 2, some of the factors that helped to sustain activity in the short term have meant that – in some countries, at least – vulnerabilities have increased. The nature of that fragility varies from country to country, ranging from external vulnerabilities to domestic imbalances such as high levels of credit growth. This section assesses risks to the outlook for EMEs, focusing on EMEs' potential vulnerability to an abrupt deterioration in global risk sentiment.

Many EMEs appear better placed to withstand external shocks than they were prior to previous crises. Most of the large EMEs have better external positions than they did prior to previous crises. Many countries have either current account surpluses or small deficits (see Chart 10). EMEs also typically have stronger macroeconomic frameworks, with more flexible exchange rate regimes. Moreover, many EMEs hold substantial foreign exchange reserves, considerably in excess of their short-term external liabilities, which should increase resilience in the event of external shocks. A large proportion of EMEs have also adopted inflation-targeting monetary policy frameworks, which can help to anchor inflation expectations and stabilise business cycles.[11]

Nonetheless, the rising external debt observed in recent years (particularly as a result of US dollar-denominated financing) may have left EMEs vulnerable to a sustained deterioration in global financing conditions. EMEs' stock of external debt has risen since the global financial crisis, increasing from USD 3 trillion to USD 5 trillion between 2010 and 2014. The appreciation of the US dollar has helped to increase the external debt servicing burden in domestic currency terms for borrowers in some of these countries. Banks remain the primary recipients of cross-border lending, but non-financial corporations are increasingly financing themselves by issuing debt securities, often through overseas subsidiaries.[12] Allowing companies to increase wholesale bank deposits may also have fuelled the expansion of bank

10 For a more comprehensive discussion regarding the possible drawbacks, see Borio, C., Disyatat, P. and Juselius, M., "Rethinking potential output: Embedding information about the financial cycle", *BIS Working Papers*, No 404, February 2013.

11 See Didier, T., Kose, M.A., Ohnsorge, F. and Ye, L.S., "Slowdown in emerging markets: rough patch or prolonged weakness?", Policy Research Note PRN/15/04, World Bank Group, December 2015.

12 External debt statistics may understate cross-border borrowing, as some corporations obtain funding from their foreign subsidiaries via inter-company lending, which is not recorded in international debt statistics. See Avdjiev, S., Chui, M. and Song Shin, H., "Non-financial corporations from emerging market economies and capital flows", *BIS Quarterly Review*, December 2014.

balance sheets and domestic credit booms in some EMEs. Although aggregate data suggest that EMEs' net foreign currency position has improved in recent years, there may be currency and maturity mismatches at sector or firm level.[13] In these circumstances, rather than acting as a shock absorber, the depreciation of EMEs' currencies could exacerbate balance sheet weaknesses, posing a risk to their economic outlook. Moreover, while growing issuance of debt denominated in local currency has helped to reduce currency mismatches for EME borrowers, sizeable non-resident holdings of such bonds may nonetheless leave those countries exposed in the event of a swift reversal of global sentiment.[14]

Moreover, domestic imbalances have increased and policy space has become more limited in some countries. As foreign currency-denominated financing has risen, domestic credit has increased significantly. Aggregate EME debt across the government, household and corporate sectors has risen by around 50 percentage points as a percentage of GDP since end-2007, with credit to the non-financial corporate sector accounting for the majority of that increase. While the sharpest rise in debt has been observed in China, several other countries have also seen marked increases in private sector credit as a percentage of GDP (see Chart 9). Moreover, in some countries, growing imbalances have been combined with diminishing policy buffers (see Chart 10). Most of the largest EMEs are currently running fiscal deficits. In particular, although falling commodity prices have alleviated fiscal pressures in commodity-importing economies, the fiscal positions of commodity-exporting economies have deteriorated considerably as commodity-driven revenues have shrunk. At the same time, there has been a divergence in terms of the scope for monetary accommodation in the event of further shocks. Some commodity-importing economies have already benefited from interest rate cuts as inflation has fallen. In some cases, however, the scope for further monetary easing may be tempered by concerns about excessive credit growth, given the strong build-up of credit in recent years. In commodity-exporting economies, monetary policy's ability to cushion a further downturn is limited by either fixed exchange rate regimes or high levels of inflation (associated, in part, with sharp declines in the value of those countries' currencies).

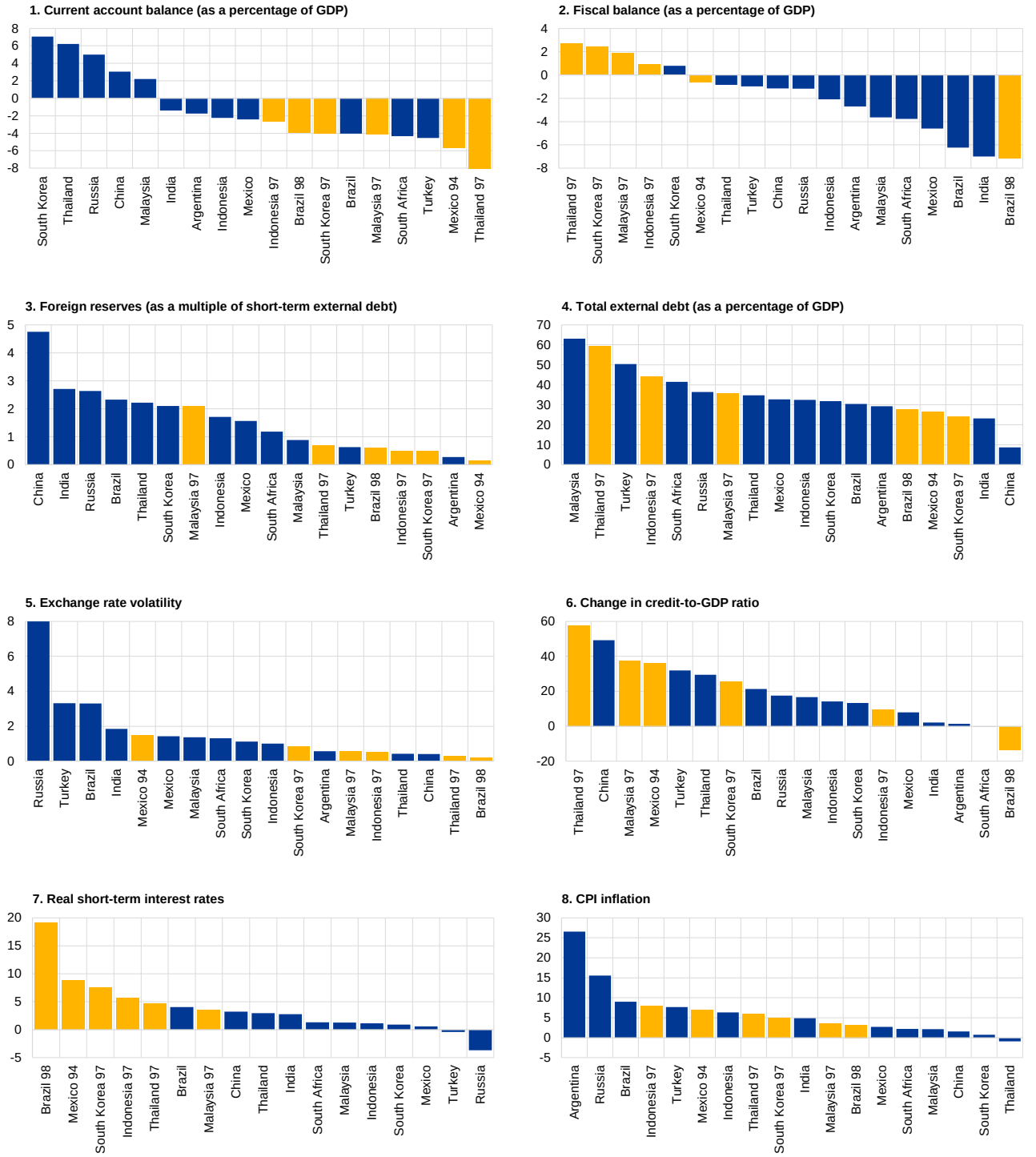
13 See Bénétrix, A.S., Lane, P.R. and Shambaugh, J.C., "International currency exposures, valuation effects and the global financial crisis", NBER Working Paper No 20820, January 2015. For a discussion of risks to corporate balance sheets, see Chui, M., Fender, I. and Sushko, V., "Risks related to EME corporate balance sheets: the role of leverage and currency mismatch", *BIS Quarterly Review*, September 2014. See also "Corporate Leverage in Emerging Markets – A Concern?", Chapter 3, IMF *Global Financial Stability Report*, October 2015.

14 See Ebeke, C. and Kyobe, A., "Global financial spillovers to emerging market sovereign bond markets", *IMF Working Papers*, No 15/141, June 2015.

Chart 10

EMEs' vulnerabilities relative to previous crises

(latest data for EMEs (blue bars), compared with previous crises (yellow bars))



Sources: IMF, BIS, Wall Street Journal, national data and ECB staff calculations.
Notes: Blue bars show recent data for large EMEs. Yellow bars show the situation prior to previous crises in EMEs: Mexico in 1994; Thailand, Indonesia, Malaysia and South Korea in 1997; and Brazil in 1998. The panels show: (1) current account balances as a percentage of GDP in 2014; (2) general government net lending as a percentage of GDP in 2014 (with positive (negative) figures denoting surpluses (deficits)); (3) foreign exchange reserves divided by short-term external debt in 2014; (4) total external debt as a percentage of GDP in 2014; (5) the standard deviation of daily exchange rate changes against the US dollar in 2015; (6) changes in the ratio of credit to the non-financial private sector to GDP in the five years to the second quarter of 2015; (7) short-term policy interest rates minus annual CPI inflation in 2015; and (8) annual CPI inflation in 2015.

An abrupt shift in global risk sentiment could therefore pose risks to EMEs' economic outlook. The "taper tantrum" of 2013 provided an indication of the turbulence that could arise in the event of a sharp reversal of global risk sentiment. In May of that year, speculation about the pace of monetary policy tightening in the United States prompted a sharp increase in the yield on ten-year US Treasury bonds, which rose by almost 100 basis points between then and the end of the year. EME asset prices fell and some countries' currencies depreciated rapidly. Economies with external fragilities, such as large current account deficits or heavy reliance on external funding, experienced particularly severe financial turmoil. The Federal Reserve's decision to raise interest rates in December 2015 was met with a relatively muted response in financial markets. Federal funds futures suggest that markets are expecting subsequent policy rate increases to be very gradual, and term premia remain compressed. However, a deterioration in global funding conditions could present policymakers in the worst-affected EMEs with new challenges. Indeed, central banks could be forced to tighten monetary policy substantially to prevent large-scale capital outflows and currency depreciation.

Moreover, other risks are also weighing on the outlook for EMEs. The protracted downturn over the last five years has raised concerns that the effect of cyclical and structural headwinds in some EMEs could be stronger than expected. For instance, the impact of weak investment, infrastructure bottlenecks and capacity constraints could be stronger than expected. In more vulnerable economies, the limited policy space could also prevent monetary or fiscal easing from cushioning the effects of weaker demand. Finally, geopolitical risks are also continuing to weigh on the economic outlook, and increases in tensions could have adverse implications for EMEs.

4 The implications of the downturn in EMEs for the global economy and the euro area

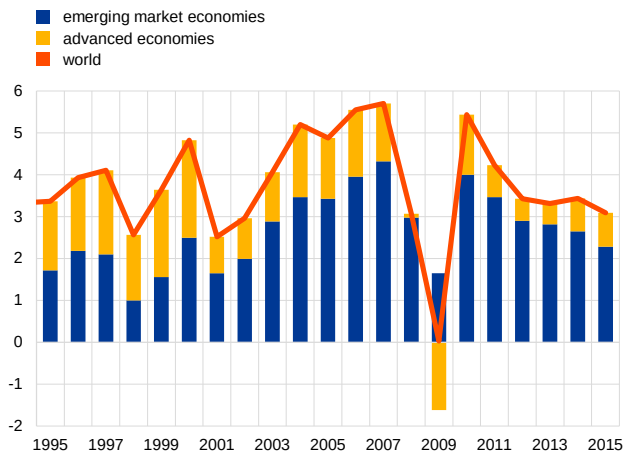
EMEs play a prominent role in the global economy. On average, EMEs have accounted for three-quarters of global growth since 2000 (see Chart 11). In 2014 they accounted for more than one-third of global stocks of inward foreign direct investment.[15] EMEs are also a significant source of demand in commodity markets. Looking ahead, therefore, developments in EMEs could affect other economies (including the euro area) through a variety of channels, including trade and financial links, their impact on commodity prices and confidence effects.

[15] See UNCTAD statistics.

Chart 11

Contributions to global GDP growth

(annual percentage changes; percentage point contributions)

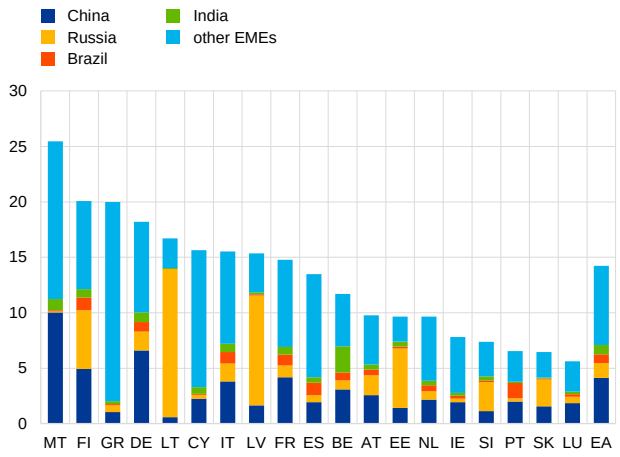


Source: IMF World Economic Outlook.
Note: Aggregates are PPP-weighted.

Chart 12

Euro area countries' trade exposure to EMEs

(percentages of total nominal exports)



Sources: IMF Direction of Trade Statistics, Haver Analytics and ECB staff calculations.
Notes: This chart shows EMEs' share of euro area countries' total nominal exports in the second quarter of 2015. The EMEs in question are Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Thailand, Turkey and Venezuela.

EMEs are an important source of external demand for the euro area. After a prolonged increase during the 2000s, driven chiefly by rising exports to China, EMEs' share of euro area nominal exports has stabilised at around 15%. Within the euro area, several countries have large exposures to Russia. Of the largest euro area countries, Germany has the greatest trade exposure to EMEs, particularly China (see Chart 12).[16] The slowdown in EMEs has already affected economic activity in the euro area through the trade channel. Since the beginning of 2012 the contribution made by EMEs to euro area external demand has been below the long-term average (see Chart 13). In particular, sluggish demand from China, Brazil and Russia has had a negative impact on the euro area's export growth – offset, in part, by more resilient growth in other EMEs.[17] A further moderation in EMEs' economic activity would weigh on euro area external demand and output.[18]

16 For further insight into the various trade relationships between the euro area and its trading partners, see the article entitled "Transmission of output shocks across countries: the role of cross-border production chains", *Economic Bulletin*, Issue 2, ECB, 2016.

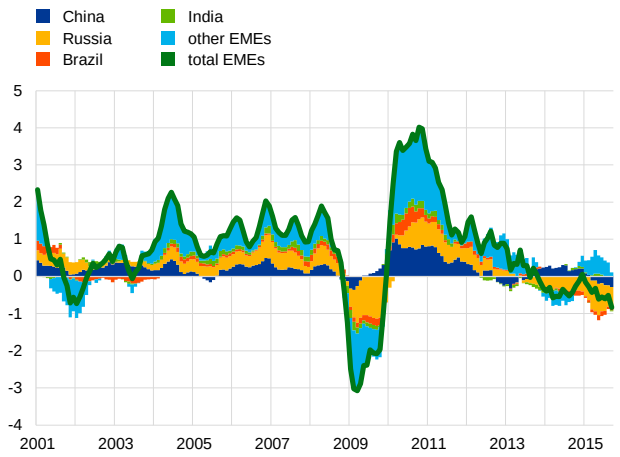
17 While reduced domestic spending in EMEs has contributed to declining external demand for euro area exports, some EMEs also play an important role in global supply chains. For example, weaker exports by China and other economies that are central to global supply chains may also, in part, be a symptom of the broader moderation in global trade discussed in Section 2. See the article entitled "Understanding the weakness in world trade", *Economic Bulletin*, Issue 3, ECB, 2015.

18 There could, for example, be an impact through the exchange rate channel. If EMEs' currencies were to depreciate in response to the slowdown in activity, the associated rise in the euro's effective exchange rate would weigh on exports.

Chart 13

EMEs' contribution to euro area real export growth

(annual percentage changes)

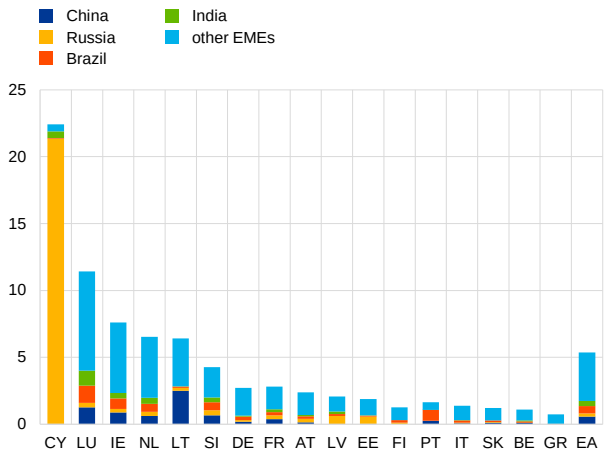


Sources: Eurostat and ECB staff calculations.
Notes This chart shows the contribution of EMEs to the growth of euro area export volumes, computed as the annual growth rate of the three-month moving averages of euro area exports to the EMEs, weighted by EMEs' share in total euro area trade in the previous year. The EMEs in question are Argentina, Brazil, Chile, China, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand and Turkey.

Chart 14

Euro area countries' portfolio investment in EMEs

(portfolio investment in EMEs as a percentage of total foreign assets)



Sources: IMF Coordinated Portfolio Investment Survey and ECB staff calculations.
Notes: This chart shows investment in EMEs as a percentage of total foreign investment in securities in the second half of 2014 (the latest data available). Spain and Malta have not been reported because of a lack of data. The EMEs in question are Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong SAR, India, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand, Turkey and Venezuela.

On the other hand, the commodity channel would tend to dampen the adverse effects of any weakening of external demand. EMEs are significant consumers of energy products, accounting for more than half of total energy consumption in 2014 and all of the net growth in global energy consumption over the last decade.[19] When it comes to other commodities (such as metals), EMEs consume even larger proportions of global production. For example, China alone consumes more than half of the world's iron ore production and around half of the world's refined copper and aluminium output.[20] Although commodity prices have already fallen substantially, a further slowdown in EMEs would weigh on commodity prices, boosting real disposable incomes in commodity-importing economies such as the euro area and helping to offset the impact of weaker external demand.

In general, direct financial links between EMEs and the euro area remain weak. EMEs' share of total portfolio investment is below 10% in most euro area countries, with limited exposure to Brazil, China, India and Russia (see Chart 14). BIS data on international banking activities suggest that euro area banks have relatively small cross-border claims on six of the largest EMEs (Brazil, China, India, Mexico, Russia and Turkey), with those claims accounting for less than 4% of their total assets, although banks in some euro area countries are more exposed. Banks are mainly exposed via traditional loans, predominantly to the corporate sector.

However, even in the absence of strong direct financial links with EMEs, the euro area could still be affected if heightened concerns about the economic

19 Non-OECD countries accounted for 57.5% of primary energy consumption in 2014. See BP, *BP Statistical Review of World Energy*, June 2015.

20 See IMF, *World Economic Outlook*, October 2015.

outlook were to trigger volatility in financial markets and adversely affect global confidence. With financial turbulence in 2015 confined to a few of the more fragile EMEs, spillover effects for the euro area were fairly well contained. However, given the sustained build-up of debt seen in EMEs in recent years, there is potential for fresh turbulence to materialise. In these circumstances, an increase in risk aversion and uncertainty could have a strong impact on the global economy. Indeed, in the second half of 2015 and early 2016, sharp stock market declines in China led to significant volatility across global equity markets.[21] That lends some support to the view that EMEs have the potential to trigger confidence and financial shocks affecting the global economy.

5 Conclusions

Looking ahead, heightened uncertainties about the outlook for EMEs are likely to remain a key risk for the global economy. Potential growth has weakened in the context of dwindling capital accumulation, waning productivity growth and unfavourable demographic trends. Other factors have caused further headwinds in the form of sluggish external demand, weaker commodity prices (which have particularly affected commodity-exporting economies) and the tightening of global financing conditions. Many EMEs are adjusting to a new reality. In several economies, the slowdown has revealed structural impediments which are increasingly limiting growth potential. In others, it has exacerbated existing macroeconomic imbalances. Some of these challenges are unlikely to be overcome quickly. The rebalancing process that is under way is necessary to ensure sustainable growth over the medium term, but the transition path is likely to be bumpy and risks will tend to be on the downside.

The slowdown in EMEs has already had a substantial dampening effect on global growth and an adverse impact – albeit a moderate one – on euro area activity. The weakening of demand in EMEs has weighed on euro area exports. However, the adverse effects of the slowdown in EMEs have, in part, been offset by the boost to real disposable incomes resulting from the declines in commodity prices. Looking ahead, risks to the economic outlook for EMEs remain on the downside. A further broad-based and pronounced slowdown in EMEs could have a sizeable adverse impact on the outlook for the global economy.

[21] See the box entitled “Understanding the links between China and the euro area”, *Financial Stability Review*, ECB, November 2015.

Article
Government debt reduction strategies in the euro area

This article analyses the economic and institutional factors supporting the reduction of government debt-to-GDP ratios from high levels in the euro area. To this end, it reviews past debt reduction episodes and assesses – as an example of an operationalised government debt reduction strategy – the debt rule enshrined in the reformed Stability and Growth Pact (SGP).

1 Introduction

Many euro area countries did not take advantage of the favourable economic conditions prior to the crisis to build up fiscal buffers for future downturns. This contributed to a rapid increase of government debt to high levels after the outbreak of the crisis. There is widespread recognition that high government debt renders countries vulnerable to economic shocks and may hamper growth in a number of ways. Reducing persistently high levels of government debt thus remains one of the main economic policy objectives. As a major lesson from the crisis, in 2011 the EU's fiscal governance framework was therefore strengthened, including by the introduction of a debt rule. This rule operationalises the Maastricht Treaty's debt criterion under the SGP, which had effectively not been implemented until then.

The SGP's debt rule is a constraining factor mostly for countries with very high levels of government debt. In the light of low growth and inflation, some of these countries have recently faced difficulties in delivering the fiscal adjustment required to put debt on the appropriate downward path, despite the declining burden of interest payments. Against this background, this article reviews the experience with past debt reduction episodes and assesses the SGP's debt rule as an example of an operationalised government debt reduction strategy.

The article is structured as follows. Section 2 reflects on the merits of reducing high government debt ratios and considers the main factors underlying recent successful debt reduction episodes. Section 3 first reviews the rise in government debt ratios to high levels during the crisis, before turning to the SGP's debt rule and its enforcement as an example of an operationalised debt reduction strategy. Section 4 provides some conclusions.

2 Government debt and long-term fiscal sustainability

2.1 The economic consequences of high government debt

High government debt poses significant economic challenges and makes the economy less resilient to shocks. It can exert adverse pressure on the economy through multiple channels.

First, a high government debt burden makes the economy more vulnerable to macroeconomic shocks and limits the room for counter-cyclical fiscal policy. High government borrowing requirements can make a country more prone to liquidity shocks and sovereign default risks. Lower real growth or inflation shocks increase the real burden of debt, with larger fiscal costs if the initial level of debt is high. Investors may thus more easily question the sustainability of fiscal policies of a sovereign with a high debt burden, particularly when its fiscal track record and growth prospects are poor. This can increase volatility and restrain economic activity as perceived sovereign vulnerability can spill over to other sectors or jurisdictions, especially in integrated economic and monetary unions.[1] A high debt burden limits the room for fiscal policy to counteract a negative demand shock or may hurt the recovery if pro-cyclical fiscal policies need to be implemented in recessions.

Second, a high government debt burden entails the need to sustain high primary surpluses over long periods[2], which may be difficult under fragile political or economic circumstances. As explained above, high primary surpluses are difficult to maintain under adverse economic conditions. Banking crises in particular are associated with large contingent liabilities, which can quickly lead to a deterioration in fiscal positions, often with lasting effects, stemming from the process of balance sheet repair. In addition, though the ability of a sovereign to sustain large primary surpluses depends, inter alia, on the quality of its institutions and political factors, fiscal fatigue is more likely to set in at very high debt ratios, where the required adjustment needs to be large over a long period. Finally, the proximity of elections tends to reduce the responsiveness of fiscal policy to larger debt burdens.

Third, and related to the points above, the theoretical and empirical literature suggests that high government debt burdens can ultimately impede long-term growth.[3] This is particularly the case when debt is contracted to finance unproductive expenses or to build up public capital stocks that exceed optimal

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1 For a discussion of the relationship between fiscal-monetary and financial sector interactions in Economic and Monetary Union, see the articles entitled "One monetary policy and many fiscal policies: ensuring a smooth functioning of EMU", *Monthly Bulletin*, ECB, July 2008 and "Monetary and fiscal policy interactions in a monetary union", *Monthly Bulletin*, ECB, July 2012.

2 See also the box entitled "Past experiences of EU countries with sustaining large primary budget surpluses", *Monthly Bulletin*, ECB, June 2011.

3 The theoretical and empirical contributions on the topic have grown significantly since the euro area sovereign debt crisis. For recent reviews, see Dieppe, A. and Guarda, P. (eds.), "Public debt, population ageing and medium-term growth", *Occasional Paper Series*, No 165, ECB, 2015; the box entitled "Growth effects of high public debt", *Monthly Bulletin*, ECB, March 2013; and Reinhart, C., Reinhart, V. and Rogoff, K., "Public debt overhangs: advanced-economy episodes since 1800", *Journal of Economic Perspectives*, Vol. 26, No 3, 2012, pp. 69-86.

(growth-maximising) levels.[4] While government debt can help to smooth consumption and finance lumpy investment, such financing is constrained above certain debt thresholds. A long body of research[5] finds that high public debt can affect growth through the channels of sovereign spreads (confidence effects), crowding-out of private investment, reduced capacity to finance future public investment, expansion of precautionary savings (in anticipation of future tax hikes) and increased uncertainty. While country heterogeneity plays an important role, several studies reveal that, on average for a panel of advanced economies, detrimental growth effects may appear at levels of around 80-100% of GDP.[6] Similar debt levels are found in the literature on early signals of sovereign distress. For instance, the debt sustainability analysis framework of the International Monetary Fund adopts a debt ratio of 85% of GDP to flag fiscal risks in advanced economies, with a similar approach being followed in the European Commission's methodology.[7]

The objective of keeping debt ratios at prudent levels, such as below the SGP's 60% threshold, makes it all the more important to create sufficient fiscal buffers to withstand adverse macroeconomic shocks and cope with the projected costs of ageing. Several studies in the literature distinguish between optimal or steady-state debt ratios and risky debt levels or debt limits beyond which governments may default. In many of these studies, steady-state debt ratios are estimated or calibrated at around (or below) 60% of GDP.[8] Arguably, such debt ratios are country-specific and depend on a wide range of factors, such as the structural features of the economy and institutional factors. The amount of assets, especially liquid assets, that governments hold as well as the maturity and ownership structure of government debt are also important determinants of the propensity of investors to hold or shun the debt of a given sovereign. At the same time, debt limits based on past data estimation do not usually take into account various sources of government contingent liabilities. Though the latest projections of age-related public spending in the euro area indicate more favourable developments compared with the past, the burden on public spending is still expected to be significant.[9] Moreover,

4 See Aizenman, J., Kletzer, K. and Pinto, B., "Economic Growth with Constraints on Tax Revenues and Public Debt: Implications for Fiscal Policy and Cross-Country Differences", *NBER Working Paper,* No 12750, 2007 and Checherita-Westphal, C., Hughes-Hallett, A. and Rother, P., "Fiscal sustainability using growth-maximising debt targets", *Applied Economics*, Vol. 46(6), February 2014, pp. 638-647.

5 See the reviews cited in footnote 3.

6 See for instance Reinhart, Reinhart and Rogoff (2012), op. cit.; Checherita, C. and Rother, P., "The impact of high and growing government debt on economic growth: an empirical investigation for the euro area", *European Economic Review*, Vol. 56, No 7, 2012, pp. 1392-1405; and Cecchetti, S., Mohanty, M. and Zampolli, F., "The real effects of debt", *Working Paper Series*, No 352, Bank for International Settlements, 2011.

7 See *Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries*, IMF, 2013 and *Fiscal Sustainability Report 2015*, European Commission, 2015.

8 Ghosh et al. (2013) find much lower "steady" or long-run debt ratios for euro area countries (on average for the panel, 62% or 74% of GDP depending on the assumptions) compared with default-inducing debt limits. Checherita-Westphal et al. (2014) op. cit. find an optimal debt ratio of 50% of GDP for a panel of euro area countries based on average estimates for the output productivity of public capital. Similarly, Fall et al. (2015) find an "optimal" debt level related to the role of government debt in financing public infrastructure at 50-80% of GDP. See Ghosh, A., Kim, J., Mendoza, E., Ostry, J. and Qureshi, M., "Fiscal Fatigue, Fiscal Space and Debt Sustainability in Advanced Economies", *Economic Journal*, Vol. 123(566), 2013; and Fall, F., Bloch, D., Fournier, J.-M. and Hoeller, P., "Prudent debt targets and fiscal frameworks", *OECD Economic Policy Papers*, No 15, July 2015.

9 See "The 2015 Ageing Report", *European Economy*, 3/2015, European Commission, 2015.

during episodes of financial stress, sufficient fiscal buffers are critical to underpin confidence in the sovereign's ability to safeguard financial stability.[10]

Overall, from a general policy perspective, existing evidence points to the importance of reducing high public debt to restore fiscal sustainability and support stronger fundamentals. While the empirical evidence suggests that the relationship between debt and growth is bi-directional, with economic, financial and sovereign debt crises reinforcing each other's detrimental impact on output and welfare, keeping debt ratios at prudent levels is essential to avoid further sovereign debt crises.

2.2 Lessons from government debt reduction episodes

Various academic works have investigated large past debt reductions and found that a combination of debt-reducing factors was needed.[11] In particular, these include fiscal adjustment, growth-enhancing measures (such as complementary structural reforms), a monetary policy stance that supports the recovery and typically also sizeable privatisation programmes.

Sustained fiscal adjustment requires several elements. More specifically, debt consolidations seem to be most successful when they are based on permanent cuts in current (non-productive) expenditure. Other important factors are a strengthening of institutions, including well-designed rules-based fiscal frameworks, effective public administration, as well as support from other policy areas, in particular a monetary policy oriented towards price stability and structural reforms which reinforce the potential of the economy to grow out of debt. In this context, Box 1 shows some stylised debt scenarios for the euro area which highlight how various factors – such as variations in potential growth and interest rates – impact on the accumulation of government debt.

Past experience shows that many EU Member States have achieved significant primary surpluses over extended periods.[12] This holds true in particular for countries that were confronted with a high and rising government debt-to-GDP ratio.

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10 Given, among other things, the adverse sovereign-bank feedback loops at work during the crisis, the ensuing real economic and financial downturn implied significant fiscal costs and contingent liabilities for governments. For a recent review, see the article entitled "The fiscal impact of financial sector support during the crisis", *Economic Bulletin*, Issue 6, ECB, 2015.

11 See Nickel, C., Rother, P. and Zimmerman, L., "Major public debt reductions: lessons from the past, lessons for the future", *Working Paper Series*, No 1241, ECB, 2012; Baldacci, E., Gupta, S. and Mulas-Granados, C., "Restoring Debt Sustainability After Crises: Implications for the Fiscal Mix", *IMF Working Paper*, WP/10/232, 2010; and Abbas, S., Akitoby, B., Andritzky, J., Berger, H., Komatsuzaki, T. and Tyson, J., "Dealing with High Debt in an Era of Low Growth", *IMF Staff Discussion Note*, SDN/13/07, September 2013.

12 Overall, ten EU Member States (Belgium, Bulgaria, Denmark, Ireland, Spain, Italy, Luxembourg, the Netherlands, Finland and Sweden) have recorded uninterrupted episodes of primary surplus for ten or more years since the late 1970s. In cumulative terms up to 2009, the primary balance surplus stood at over 50% of GDP in seven EU Member States (Belgium, Bulgaria, Denmark, Ireland, Luxembourg, the Netherlands and Finland). See the box entitled "Government debt dynamics and primary budget balance developments in EU Member States", *Monthly Bulletin*, ECB, March 2011 and the box entitled "Past experiences of EU countries with sustaining large primary budget surpluses", *Monthly Bulletin*, ECB, June 2011.

Stabilising and reducing government debt typically required a sustained upfront consolidation effort that allowed the achievement of large primary surpluses, which were maintained over an extended period of time. While the achievement of high primary surpluses may be more difficult in the current weak economic environment, the benign interest rate conditions create fiscal savings, which should be used for debt reduction, especially in the case of high-debt countries.

Box 1
Stylised debt scenarios for the euro area

Public debt dynamics are determined by three main factors, namely the "snowball" effect, the government primary balance and the deficit-debt adjustment (DDA). The standard debt accumulation equation summarises this as follows:[13]

$$\Delta b_t = \frac{i_t - g_t}{1 + g_t} b_{t-1} - pb_t + dda_t$$

The change in the government debt-to-GDP ratio (Δb_t) in each period is expressed as the sum of the current primary balance[14] (pb_t), the snowball effect (first term on the right-hand side[15]), which captures the joint impact of interest payments on the accumulated stock of debt and of real GDP growth and inflation on the debt ratio (through the denominator). Finally, the deficit-debt adjustment (dda_t) relates to that part of the change in the debt-to-GDP ratio which is not reflected in the deficit. Such stock-flow adjustments may derive, for example, from government financial transactions or privatisation receipts. DDAs played an important role during the financial crisis.[16]

Deterministic[17] debt projections are commonly used to analyse fiscal policy scenarios and their impact on the accumulation of debt. In its 2015 Fiscal Sustainability Report[18], the European Commission presents medium-term debt projections for EU Member States together with the aggregates for the EU and the euro area up to the year 2026. Among others, the report refers to a baseline scenario assuming no fiscal policy change as well as a scenario assuming compliance with the requirements of the preventive arm of the SGP. Building on the core assumptions underlying the Commission's 2015 Fiscal Sustainability Report, Chart A shows a number of debt scenarios for the euro area aggregate. The baseline scenario for the euro area assumes potential growth of 1.1% on average over the period 2016-26, while GDP deflator growth would gradually increase from 1.2% in 2016 to 2% by 2020 and remain constant thereafter. The output gap would close by 2020. The implicit interest rate[19] is assumed to increase from 2.5% to 3.7% over the

13 For more details, see the article entitled "Ensuring fiscal sustainability in the euro area", *Monthly Bulletin*, ECB, April 2011.

14 The primary government balance is defined as the headline balance net of interest payments.

15 g_t denotes nominal GDP growth and i_t the average interest rate on outstanding government debt.

16 See the article entitled "The fiscal impact of financial sector support during the crisis", *Economic Bulletin*, Issue 6, ECB, 2015.

17 Traditional deterministic debt projections build on the debt accumulation equation and typically assess the impact of variations in the determining variables by means of scenario analysis.

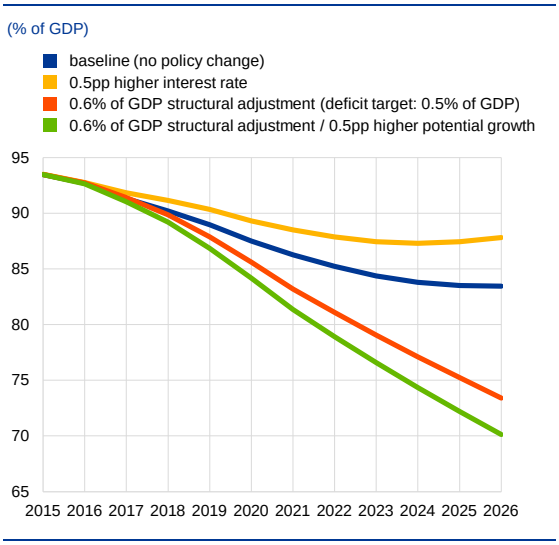
18 See http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip018_en.pdf

19 The implicit interest rate on government debt is computed as interest payments on the previous year's debt as a percentage of the current year's debt.

projection horizon. The baseline projections take into account the ageing-related expenditure increases as projected in the European Commission's 2015 Ageing Report.

Chart A

Stylised debt scenarios for the euro area



Sources: European Commission's winter 2016 forecast and ECB calculations.

Under a no policy change assumption, aggregate euro area debt as a percentage of GDP would decline from around 94% in 2015 to around 84% in the coming decade (see the blue line in Chart A).[20] This decline corresponds to an average annual decline of the debt ratio of around 1% of GDP between 2016 and 2026. Around two-thirds of the nominal adjustment would result from primary surpluses, while the remainder would be related to an (on average) debt-reducing snowball effect. The latter is, however, projected to become debt-increasing towards the end of the projection horizon in relation to the assumed increase in interest spending. At the same time, higher ageing-related fiscal costs would gradually reduce primary surpluses. Both effects explain the flattening of the debt path in the second half of the projection horizon. The debt adjustment under the no policy change scenario for the euro area aggregate falls short of the requirement of the SGP's debt rule (see Section 3.2 for a description).

A 0.5 percentage point higher interest rate would put debt on an increasing path towards the end of the scenario horizon (see the yellow line in the chart). In this scenario, the implicit interest rate on government debt is assumed to be 0.5 percentage point higher as of 2017. Compared with the baseline scenario (see the blue line), the average debt adjustment over the period 2016-26 would decline from around 1% to 0.5% of GDP. The less favourable debt dynamics would mainly relate to the fact that the snowball effect becomes debt-increasing earlier than in the baseline, given that increases in the interest burden outweigh the debt-reducing impact of nominal GDP growth.

Structural adjustment in keeping with the requirements of the SGP's preventive arm would put the aggregate euro area debt ratio on a steeper declining path in line with the "sufficiently diminishing" requirements of the debt rule (see the red line in Chart A). According to the matrix of adjustment requirements under the preventive arm of the SGP,[21] the scenario assumes an annual improvement in the structural balance of 0.6% of GDP (as of 2017) until a structural deficit target of 0.5% of GDP is reached. Such an adjustment would reduce the

[20] The no policy change baseline scenario for the euro area builds on the assumptions from the European Commission's Fiscal Sustainability Report 2015. Up to 2017, the debt projections build on the European Commission's winter 2016 forecast. As of 2018 (and up to 2026), potential growth is assumed to develop in line with the country-specific paths agreed in the Economic Policy Committee's Output Gaps Working Group. Long-term real interest rates are assumed to converge to 3%. Moreover, inflation, as measured by the change in the GDP deflator, is assumed to converge to 2% by 2020 in parallel to the closing of the output gap. The structural balance is assumed to be only affected by the cost of ageing – as projected in the 2015 Ageing Report – and assumed changes in interest spending.

[21] See http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/2015-01-13_communication_sgp_flexibility_guidelines_en.pdf

debt ratio by around 2% of GDP on average every year until 2026, which would meet the requirement of the SGP's debt rule. The larger debt adjustment compared with the no policy change baseline would result from a significantly larger average primary surplus of around 1.5% of GDP over the projection horizon.

Assuming higher potential GDP growth results in a more favourable debt path (see the green line in the chart). In this scenario, the structural adjustment is combined with an increase in the growth rate of potential GDP by 0.5 percentage point as of 2016. Such an increase in potential GDP growth could be related, for example, to the implementation of structural reforms. As a result, the snowball effect becomes more negative, i.e. debt-reducing, which results in an average annual decline in the debt of more than 2% of GDP per annum over the period 2016-26. The related debt adjustment would be in line with the "sufficiently diminishing" requirement of the debt rule.

3 The debt rule in the Stability and Growth Pact

3.1 Developments in euro area government debt ahead of the crisis

In the years prior to the sovereign debt crisis, many euro area countries did not take advantage of the favourable economic and financial environment to build up fiscal buffers against adverse shocks. Strong but only transitory revenue growth, buoyed by an unsustainable rise in domestic demand, was perceived to be permanent, triggering increases in structural government expenditure. At the same time, in many countries sizeable falls in interest burdens in the run-up to and in the early years of Economic and Monetary Union (EMU) were used largely for higher government expenditure rather than for reducing general government deficits and debt.[22] Hence, many euro area countries either made very little or no progress towards stronger underlying budgetary positions. In a number of member countries, the structural balance actually deteriorated during this period of strong economic growth.[23] Consequently, while general government debt-to-GDP ratios declined in many euro area countries in the years ahead of the crisis, this decline fell significantly short of what would have been desirable under the favourable economic circumstances at that time. In fact, with the notable exception of Belgium, where the high government debt ratio declined by about twenty percentage points, several of the countries which posted the highest government debt ratios within the euro area at the start of the last decade recorded further increases (e.g. Portugal) or only very small declines (e.g. Greece and Italy) in government debt ratios over the period 2000-07 (see Chart 1). Thus, even the boom period before the crisis did not trigger a trend decline in high government debt-to-GDP ratios. In 2007 a number of countries

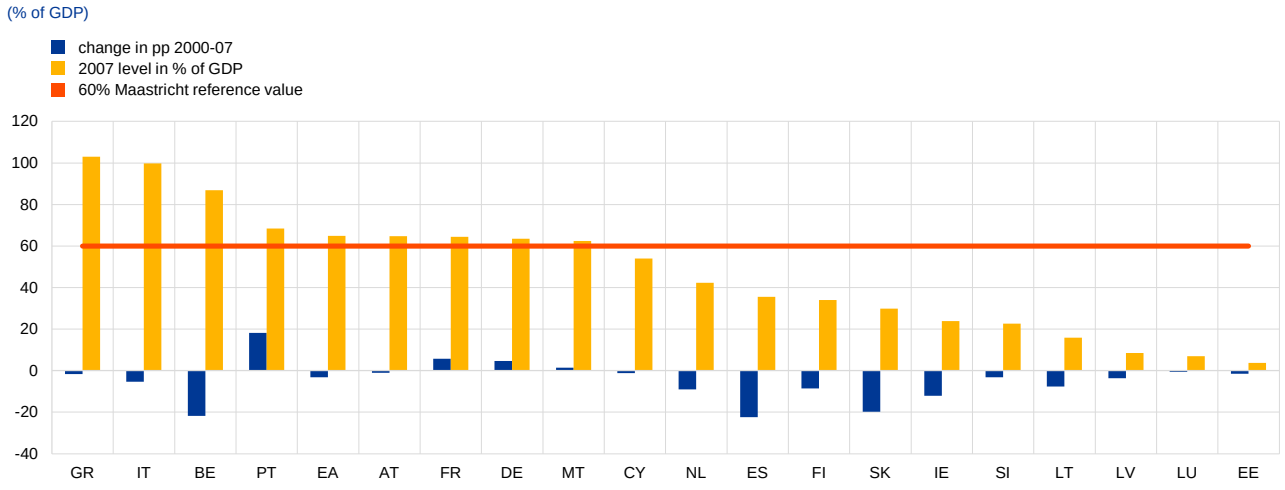
22 See also "EMU and the conduct of fiscal policies", *Monthly Bulletin*, ECB, January 2004.

23 For an overview of fiscal imbalances ahead of the crisis, see Kamps, C., de Stefani, R., Leiner-Killinger, N., Rüffer, R. and Sondermann, D., "The identification of macroeconomic imbalances: unexploited synergies under the strengthened EU governance framework", *Occasional Paper Series*, No 157, ECB, 2014 and van Riet, A. (ed.), "Euro area fiscal policies and the crisis", *Occasional Paper Series*, No 109, ECB, 2010.

recorded government debt-to-GDP ratios well in excess of the Maastricht Treaty's 60% reference value.

Chart 1

Level of and change in government debt-to-GDP ratios during the period 2000-07

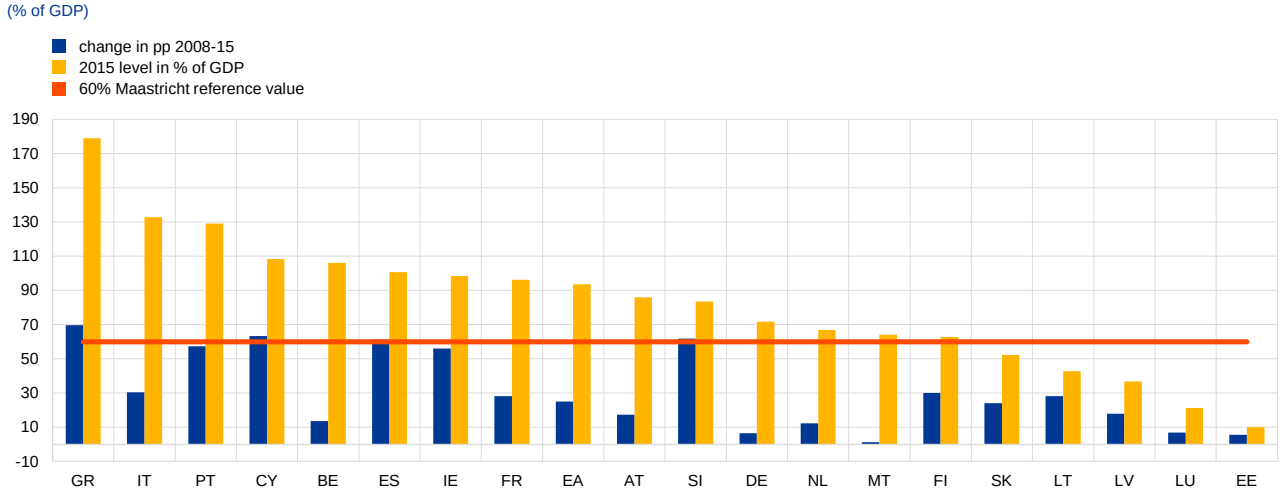


Sources: AMECO and ECB calculations.

When the crisis erupted in 2008, government debt accumulated quickly (see Chart 2). This resulted from drops in real GDP growth, rising bond yields and often sizeable support to the financial sector. The euro area aggregate debt ratio is estimated to have peaked in 2014 at 94.5% of GDP, up from 68.5% in 2007. Only five of the 19 euro area countries are expected to have recorded debt ratios below the 60% of GDP reference value in 2015. And debt ratios above 90% of GDP are expected for eight countries, with these even exceeding 100% in six cases. (See the European Commission's winter 2016 forecast.)

Chart 2

General government debt ratios in the euro area during the period 2008-15



Sources: European Commission's winter 2016 forecast and ECB calculations.

When the EU's Stability and Growth Pact was implemented in 1997, its intention was also to limit the deficit bias prevalent in many EU countries since the 1970s. The tendency of governments to conduct fiscal policies in a short-sighted manner with an insufficient focus on medium-term spending pressures and long-term fiscal sustainability induces pro-cyclicality and rising government debt ratios.[24] The SGP therefore anchors the EU countries' decentralised fiscal policies based on the Maastricht Treaty's reference values for the government deficit and debt-to-GDP ratios of 3% and 60% of GDP, respectively. Furthermore, the 2005 reform of the SGP introduced, under its preventive arm, medium-term budgetary objectives (MTOs), which set country-specific structural balance targets over the medium term. They are designed, inter alia, to ensure sustainable debt ratios by also taking account of the budgetary costs of ageing.[25]

The Pact's debt criterion has effectively not been implemented since the start of EMU. First, monitoring the SGP's deficit criterion had been deemed sufficient by the European Commission and the European Council to steer countries' fiscal policies towards sustainable government debt positions.[26] This was one of the reasons why significant breaches of the 60% of GDP reference value over a prolonged period of time did not lead the Council to take procedural steps to ensure a return towards the Treaty's debt threshold. Second, the "sufficiently diminishing" requirement of the Treaty[27] had not been operationalised prior to the introduction of the debt reduction benchmark in 2011. Third, large deviations from the benchmark structural effort requirement under the Pact's preventive arm to ensure sufficient progress towards sound fiscal positions were not penalised. In the absence of a correction mechanism for past fiscal slippages, all of this contributed to a piling-up of government debt.

Fiscal rules that target the level of government debt directly have the advantage of keeping track of past fiscal developments. More specifically, developments reflected in changes in the primary budget balance, the evolution of interest spending as well as stock-flow adjustments (such as government support to the financial sector) cumulate into changes in the level of government debt. Effectively enforced debt rules are therefore less prone to a ratcheting-up of

24 See e.g. Hagen, J. von and Harden, I., "Budget processes and commitment to fiscal discipline", *European Economic Review*, Vol. 39, 1995.

25 MTOs are set by Member States according to country-specific circumstances. They must respect minimum values and are designed to serve three goals: (i) Member States maintain a safety margin that prevents them from breaching the 3% deficit reference value during cyclical downturns; (ii) Member States' debts are sustainable taking into consideration the economic and budgetary impact of ageing populations (i.e. by in part frontloading projected ageing-related increases in government spending, while ensuring long-run convergence of the debt ratio to 60%); and (iii) Member States have room for budgetary manoeuvre, in particular when it comes to preserving public investment. For more details, see the box entitled "The effectiveness of the medium-term budgetary objective as an anchor of fiscal policies", *Economic Bulletin*, Issue 4, ECB, 2015.

26 See, for example, Part IV of the European Commission's Report on Public Finances in EMU 2015, which finds that the debt-to-GDP ratio has not played a significant role in determining the Council's recommendations under the excessive deficit procedure.

27 See Article 126(2)(b) of the Treaty on the Functioning of the European Union.

government debt than deficit rules that do not entail the correction of past fiscal slippages.[28, 29]

3.2 The features of the SGP's debt rule

As a major lesson from the sovereign debt crisis, the EU Treaty's debt criterion was operationalised as part of the "six-pack" reforms which came into force in November 2011. Article 126(2) of the Treaty on the Functioning of the European Union foresees that compliance with budgetary discipline in the EU shall be monitored based on "whether the ratio of government debt to gross domestic product exceeds a reference value, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace". In this vein, the debt rule operationalises the appropriate pace of convergence towards this level over the long term. According to Regulation (EU) No 1467/97, as amended by Regulation (EU) No 1177/2011, the debt-to-GDP ratio is regarded as diminishing sufficiently and approaching the reference value at a satisfactory pace if the differential of the government debt-to-GDP ratio with respect to the 60% of GDP reference value declines by 1/20th on average over a period of three years as a benchmark for debt reduction. With this specification, the debt rule aims to ensure that countries with larger fiscal imbalances, as reflected in higher government debt ratios, make greater efforts to ensure a return to safe debt positions.

The SGP's debt rule is assessed in three configurations. One configuration is backward-looking over the past three years, one is forward-looking over the coming two years and one is adjusted for the impact of the economic cycle. In principle, only if a country breaches the rule in all three configurations can a debt-based excessive deficit procedure (EDP) be opened. For countries subject to an EDP on 8 November 2011, when the debt rule entered into force, transitional provisions apply for the three years following the correction of the excessive deficit. During this transitional period, these countries must progress sufficiently towards meeting the debt reduction benchmark (i.e. the 1/20th rule) at the end of that period, to ensure it is fulfilled thereafter. Progress within this transitional period is measured by the adjustment in the structural budget balance, which has to be in line with the so-called minimum linear structural adjustment (MLSA).[30, 31]

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28 The "fiscal compact" as part of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, which was signed by most EU Heads of State or Government on 2 March 2012, entails a balanced budget rule including, in principle, an automatic correction mechanism to be implemented in national law. Germany and Austria have legislated so-called debt rules, which consist of a balanced budget rule with an automatic correction mechanism of past deviations from requirements under the rule.

29 For a discussion, see Eyraud, L. and Wu, T., "Playing by the Rules: Reforming Fiscal Governance in Europe", *IMF Working Paper*, WP/15/67, 2015, p. 35.

30 See the SGP's code of conduct for further details: http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/coc/code_of_conduct_en.pdf

The SGP's debt rule entails flexibility by taking into account relevant factors. With regard to the preparation of reports under Article 126(3) of the Treaty on compliance with the debt criterion, the SGP foresees a number of relevant mitigating or aggravating factors that can be taken into account in case of non-compliance with the debt reduction benchmark. These factors include developments in the country's medium-term economic position (including cyclical developments), developments in the medium-term budgetary position (including the past track record of adjustment towards the MTO) as well as any other factors which, in the opinion of the Member State for which compliance with the debt criterion is being assessed, are relevant to evaluate compliance (e.g. debt incurred in the form of bilateral and multilateral support between Member States).

3.3 Compliance with the SGP's debt rule so far

The SGP's debt rule has so far only been a binding constraint for a limited number of euro area countries. Among the 14 countries that have recorded debt ratios above the 60% of GDP threshold since the debt rule entered into force, i.e. during the years 2012-15, seven countries were in an EDP. These countries had to comply with the Council's recommendations to correct their excessive deficits. The remaining countries should conduct fiscal policies that ensure both sufficient progress towards the MTO under the SGP's preventive arm and comply with the debt rule to converge towards the Maastricht Treaty's government debt threshold.[32]

For most euro area countries with elevated debt ratios, the debt rule has been less demanding than the Pact's preventive arm. In fact, since it entered into force, only for Belgium and Italy has the debt rule been a binding constraint for fiscal policies. As indicated by Table 1, for these two countries, the structural efforts required to comply with the debt rule (as reflected in the MLSA) were consistently above the 0.5% of GDP adjustment benchmark of the SGP's preventive arm. In line with the logic of the debt rule, the structural effort requirements were larger than for countries with government debt ratios much closer to the 60% of GDP threshold.

Gaps in relation to the fulfilment of the debt rule have been growing, especially in countries with very high debt. For both Belgium and Italy, the minimum linear structural adjustment increased gradually over the period under consideration. This reflects the debt rule's inherent mechanism to correct for past slippages in meeting debt rule requirements during the transitional period. At the same time, the other countries improved their structural balance more strongly than what compliance with

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31 A country's annual structural adjustment under the debt rule should not deviate by more than 0.25% of GDP from the MLSA which ensures that the least stringent condition consistent with the respect of the debt reduction benchmark is met by the end of the transitional period. At the same time, at any point in time during the transitional period, the remaining annual structural adjustment should not exceed 0.75% of GDP. See "Vade mecum on the Stability and Growth Pact", *Occasional Paper Series*, No 151, European Commission, May 2013.

32 Countries that were subject to an EDP on 8 November 2011 are required to deliver a structural effort over a transitional period of three years (i.e. the MLSA). Germany exited its EDP in 2011, Italy in 2012 and Belgium, the Netherlands and Austria in 2013. Malta's debt-based EDP, which was abrogated in 2014, was issued after the six-pack reforms; there is thus no transitional period.

the debt rule would have required. In 2014 the gaps in relation to compliance with the debt rule amounted to 0.8% of GDP in Belgium and 1.2% of GDP in Italy (based on the European Commission's winter 2016 forecast). In 2015 this gap is expected to have risen to around 2% of GDP in the case of Italy.

Table 1

Compliance with the SGP's debt rule and preventive arm

	Correction of excessive deficit	Transitional period for the debt rule	Change in the structural balance (percentage points)				Debt rule requirement during transitional period (i.e. debt benchmark as measured by minimum linear structural adjustment)				Gap in relation to debt rule requirement during transitional period (i.e. minimum linear structural adjustment)				Gap in relation to debt bench-mark
			2012	2013	2014	2015	2012	2013	2014	2015	2012	2013	2014	2015	2015
Belgium	2013	2014-16	0.6	0.7	-0.1	0.2	.	.	0.7	1.1	.	.	0.8	0.9	.
Germany	2011	2012-14	1.2	0.4	0.6	-0.1	0.0	-0.7	-2.6	.	-1.2	-1.1	-3.2	.	-5.2
Ireland	2015	2016-18	1.1	2.1	1.1	0.5	.	.	.	.	.	.	.	.	.
Italy	2012	2013-15	2.0	0.4	-0.2	0.1	.	0.8	1.0	2.3	.	0.4	1.2	2.2	.
Malta	2011	2012-14	-0.9	0.8	0.1	0.4	-0.6	-0.4	-1.7	.	0.3	-1.2	-1.8	.	-4.9
Netherlands	2013	2014-16	1.3	1.3	0.4	-0.6	.	.	-0.6	-1.3	.	.	-1.0	-0.7	.
Austria	2013	2014-16	0.7	0.6	0.5	0.4	.	.	0.1	-0.2	.	.	-0.5	-0.6	

Sources: European Commission's winter 2016 forecast and ECB calculations.
Notes: The table reviews compliance with the SGP's debt rule for the euro area countries. For example, Belgium's excessive deficit was corrected in 2013 and it entered the transitional period towards full compliance with the debt reduction benchmark in 2014. The three-year transitional period thus started in 2014 and ends in 2016. Belgium's requirement under the debt rule is equal to an MLSA of an improvement in the structural balance of 0.7% of GDP in each year of the transitional period 2014-16. In 2014, however, Belgium's structural balance deteriorated by 0.1% of GDP. The gap relative to the MLSA requirement thus rose to 0.8% of GDP in 2014. This gap was distributed evenly across the two remaining years of the transitional period, i.e. 2015 and 2016; consequently, the MLSA rises from an original adjustment requirement of 0.7% of GDP, by 0.4 percentage point, to 1.1% of GDP in 2015. In 2015 Belgium's structural balance is expected to have improved by 0.2% of GDP. The gap in relation to the MLSA of 1.1% of GDP in 2015 thus amounts to 0.9% of GDP (i.e. 1.1% of GDP minus the effort of 0.2% of GDP delivered in 2015).

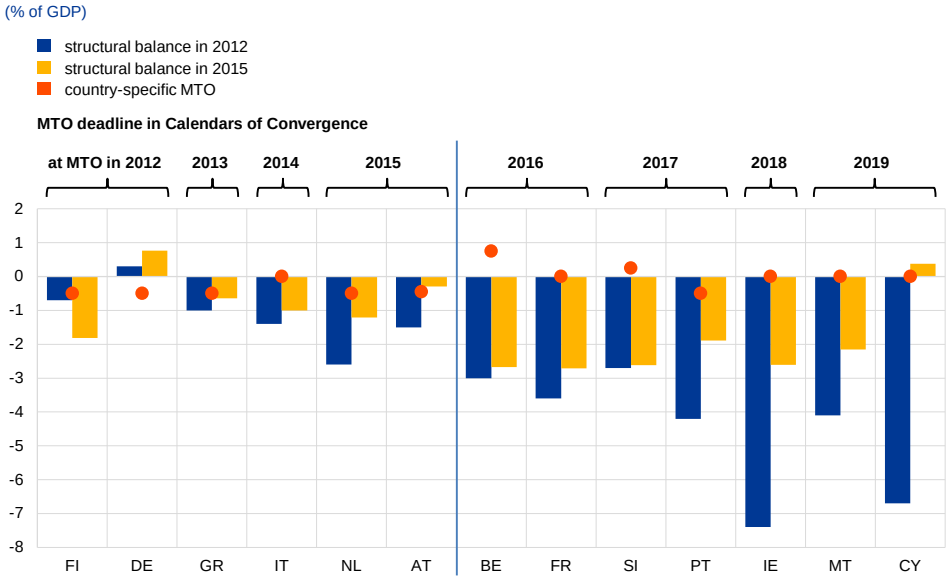
Shortfalls in structural efforts under the SGP's preventive arm, combined with lower adjustment requirements due to the recent flexibility provisions, contributed to gaps in relation to compliance with the debt reduction benchmark (see also Box 2). In 2013 the Commission put forward "calendars of convergence", i.e. country-specific time frames for achieving MTOs by a specified year as a follow-up to the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, also known as the "fiscal compact".[33] The correction mechanism enshrined in the fiscal compact, which should be triggered automatically at the national level in the event of a "significant deviation" from the MTO or the adjustment path towards it, was supposed to ensure rapid convergence of countries towards their respective MTOs. However, as Chart 3 shows, progress towards the MTOs has not materialised as recommended at that time. In the case of Belgium, these shortfalls explain the gaps vis-à-vis full compliance with the debt rule. In the same vein, had Italy improved its structural balance by about 1.5 percentage points from its level in 2012 to achieve its MTO of a balanced structural budget in 2014 (as put forward in the calendar of convergence), the gap in relation to compliance with the debt rule would have almost closed. Instead, the achievement of MTOs was frequently postponed. This was also associated with the lower adjustment requirements deriving from increased flexibility under the SGP that was granted in

[33] The deadlines for achieving the MTOs were set on the basis of the medium-term budgetary plans presented in the 2013 update of the stability and convergence programmes and in line with the SGP. See "Report on Public Finances in EMU 2013", *European Economy*, Issue 4, European Commission, 2013, Part 1, Annex 1.

2015 following a communication from the Commission.[34] These provisions clarified but also extended the SGP's flexibility as regards the application of the rules with respect to cyclical conditions, structural reforms and government investment.

Chart 3

Gaps in structural balances relative to the 2013 calendars of convergence



Sources: European Commission (winter 2016 forecast and "Report on Public Finances in EMU 2013") and ECB calculations.

Box 2

The consistency of the SGP's preventive arm with the debt rule

By construction, the requirements under the SGP's preventive arm are not necessarily consistent with those of the debt rule. The former aims at achieving and maintaining country-specific MTOs, which constitute the anchor of the preventive arm. The speed of convergence towards the MTO is determined by the matrix of adjustment requirements. The anchor of the SGP's debt rule, on the other hand, is the 60% Treaty debt limit. Convergence towards this anchor should follow the 1/20th rule, which requires that the differential with respect to the reference value be reduced at an average rate of one-twentieth per year as a benchmark. As a result, the speed of adjustment under the preventive arm and the debt rule can deviate. It is also not necessarily the case that the achievement of the country-specific MTO ensures compliance with the debt rule.[35]

In Belgium and Italy, sizeable deviations from the requirements of the (transitional) debt reduction benchmark emerged. At the same time, both countries were considered broadly compliant with the preventive arm. In February 2015 the European Commission issued Article 126(3) reports for Belgium and Italy which came to the conclusion that prima facie, i.e.

[34] For further details, see the box entitled "Flexibility within the Stability and Growth Pact", *Economic Bulletin*, Issue 1, ECB, 2015.

[35] In its recent communication on steps towards completing EMU, the Commission announced that it would prepare proposals to ensure the consistency of the methodology between the debt rule of the EDP and the Member States' MTOs. See http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1447860914350&uri=CELEX:52015DC0600

before considering all relevant factors, the debt criterion of the Treaty was not fulfilled in both cases given that the winter 2015 forecast showed sizeable shortfalls vis-à-vis the required structural adjustment. At the same time, both Belgium and Italy were expected to broadly comply with the required adjustment path towards the MTO, which was considered a relevant factor for not opening debt-based EDPs in the two cases. The discrepancies between the assessment under the preventive arm and the assessment of compliance with the SGP's debt rule were related to a number of factors: (i) the adjustment requirements under the preventive arm were lower than the benchmark adjustment of 0.5% of GDP (owing to the use of the flexibility provisions in the case of Italy); (ii) the methodology to assess compliance under the preventive arm differs from the one used under the debt rule; and (iii) deviations from the debt reduction benchmark cumulate over time, while this is not the case for the preventive arm.

Illustrative debt scenarios suggest that full compliance with the requirements of the preventive arm would enable Belgium and Italy to comply with the debt reduction benchmark as of 2019 (see the yellow lines in charts A and B). The full compliance scenarios assume structural adjustment in line with the preventive arm matrix as of 2017 until the country-specific MTO is reached. Belgium would accordingly improve the structural balance by 0.6% of GDP in the period 2017-19 and comply with the forward-looking debt reduction benchmark as of 2019. As a result, government debt would be reduced by around 2.5% of GDP on average per annum to around 80% of GDP in 2026. In the case of Italy, structural adjustments of 0.6% of GDP in 2017 and 2018 and 0.5% of GDP in 2019 would be sufficient to comply with the forward-looking debt reduction benchmark and the MTO by 2019.

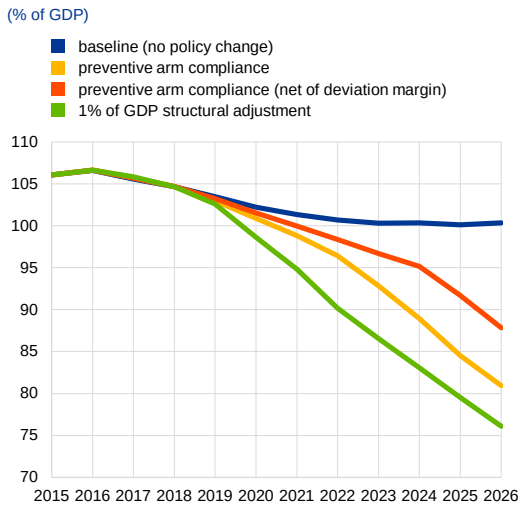
Broad compliance with the requirements of the preventive arm would, however, unduly postpone compliance with the forward-looking debt reduction benchmark by one and four years in Italy and Belgium, respectively (see the red lines in charts A and B). The broad compliance scenarios incorporate the 0.25% of GDP deviation margin preventing procedural steps under the significant deviation procedure of the preventive arm, i.e. structural adjustment requirements and the MTO are lowered by that amount.[36] In the case of Belgium, the 0.25% of GDP lower adjustment would result in a postponement of the achievement of the MTO by three years to 2025. Accordingly, the debt path is flatter. For Italy, the 0.25% of GDP lower annual adjustment would postpone the achievement of the MTO by one year to 2020.

A structural adjustment of 1% of GDP towards the MTO would ensure compliance with the forward-looking debt reduction benchmark as of 2018 in Italy and Belgium, respectively (see the green lines in charts A and B). Under such a scenario, Belgium would reach its MTO in 2020 and reduce its debt to around 75% of GDP in 2026. In Italy, a balanced budget position would be reached in 2018. Debt would decline to around 100% of GDP by 2026.

[36] The recent experience with the implementation of the SGP shows a tendency of Member States to internalise the deviation margin in their budgetary planning so as to avoid procedural steps. For example, in the 2016 round of draft budgetary plans (DBPs), only five out of twelve Member States subject to the preventive arm submitted a plan that was found to be compliant with the requirements, while the remaining countries were assessed to be broadly compliant or at risk of non-compliance. However, no DBP was found to be in particularly serious non-compliance and therefore rejected.

Chart A

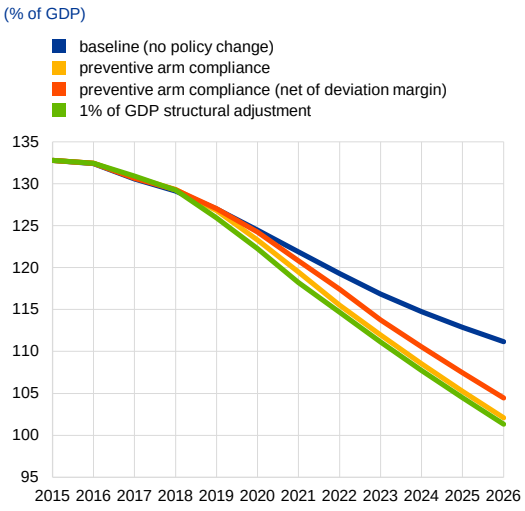
Belgium: government debt scenarios



Sources: European Commission's winter 2016 forecast and ECB calculations.

Chart B

Italy: government debt scenarios



Sources: European Commission's winter 2016 forecast and ECB calculations.

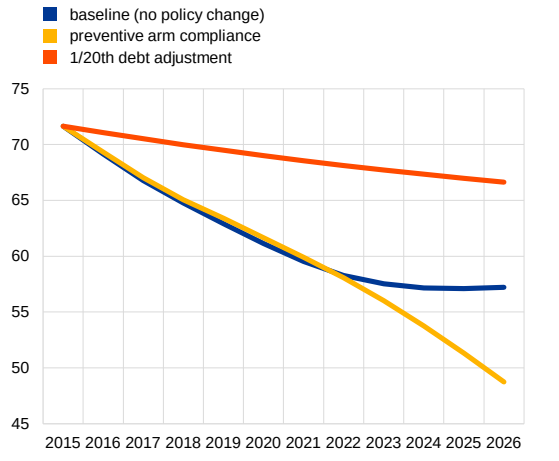
Typically, the debt rule is not a binding constraint for countries with lower debt ratios that have reached their MTO. Charts C and D show a number of debt scenarios for Germany and Austria. The former currently over-achieves its MTO so that the no policy change baseline scenario implies a decline in the debt ratio which is larger than what would occur under preventive arm compliance.[37] The average decline in the debt ratio in the period 2016-26 is also larger than the 1/20th debt reduction benchmark (see the red line in Chart C).[38] In the case of Austria, maintaining the MTO over the 2016-26 horizon would require some structural adjustment (relative to the baseline). The debt path under the preventive arm compliance scenario therefore shows a larger average decline in the debt ratio (see Chart D).

[37] The preventive arm compliance scenario for Germany assumes a gradual loosening of the structural balance until the MTO is reached and maintained as of 2018.

[38] The 1/20th debt reduction benchmark scenario assumes an annual decline in the debt ratio of 1/20th of the difference between debt in the previous year and 60% of GDP.

Chart C

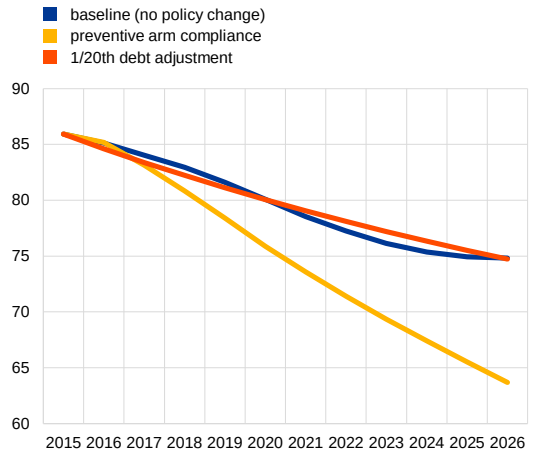
Germany: government debt scenarios



Sources: European Commission's winter 2016 forecast and ECB calculations.

Chart D

Austria: government debt scenarios



Sources: European Commission's winter 2016 forecast and ECB calculations.

3.4 Procedural enforcement of the SGP's debt rule

So far, one EDP has been based on the debt criterion. In May 2013 the Council issued an EDP for Malta and recommended an annual structural adjustment effort of 0.7% of GDP in 2013 and 2014 to ensure the deficit was brought to 2.7% of GDP in 2014, in line with the debt rule. The EDP was abrogated in a timely manner by the 2014 EDP deadline, which necessitated as a procedural prerequisite compliance with the forward-looking debt rule.

The consideration of relevant mitigating factors has so far prevented the opening of an EDP for Italy and Belgium despite significant (cumulative) gaps vis-à-vis the requirements of the transitional debt rule. The Commission's Article 126(3) reports for Belgium and Italy, which were prepared in the light of significant gaps vis-à-vis the requirements, concluded that the countries were at that time compliant with the debt criterion. The Commission, in its assessment, found three factors which were deemed to account for the shortfalls vis-à-vis the MLSA requirements.[39] First, both countries were assessed to be in (broad) compliance with the preventive arm's structural effort requirements (see also Box 2). Second, the reports considered unfavourable economic conditions related, in particular, to low inflation and real negative growth (in the case of Italy). As Box 3 shows, low growth and inflation do indeed affect debt dynamics adversely and thus render compliance with the debt reduction benchmark more difficult. Third, the reports considered the

[39] Relevant factors can be taken into account in the debt rule irrespective of the magnitude of the deviation from the benchmark. By contrast, for countries with debt ratios above 60% of GDP, relevant factors cannot be taken into account for a deficit-based EDP, unless the breach of the reference value is temporary and small.

expected implementation of growth-enhancing structural reforms. However, the reports did not quantify how they expected the structural reforms to ease the debt burden over time.

To account for mitigating factors transparently when assessing compliance with the debt criterion, these factors need to be quantified based on commonly agreed methodologies. The above-mentioned relevant mitigating factors taken into account in the cases of Italy and Belgium indeed appear to have been of particular relevance for the assessment of compliance with the debt criterion as they made these countries' delivery of the structural effort required to comply with the debt reduction benchmark more difficult. However, the Article 126(3) reports do not attribute the entire gap in relation to the debt reduction benchmark to the individual mitigating factors that have been taken into account. The related lack of transparency risks undermining the consistent implementation of the debt rule and thereby its effectiveness and credibility. Thus, relevant factors should be quantified in the analysis and should explain the gap vis-à-vis the requirements under the debt rule in full. To this end, the assessment of compliance with the debt criterion should be based on a method that quantifies the individual impacts of relevant factors such as low growth and inflation as well as the implementation of structural reforms and their contribution to the occurrence of shortfalls vis-à-vis the requirements of the debt reduction benchmark in a transparent manner.[40] A sound methodological framework to do so should be agreed upon ex ante and applied consistently over time. In the absence of such a transparent and coherent implementation, there is a risk that the debt rule will be side-lined.

Box 3
The impact of low inflation and growth on the requirements of the debt rule

Negative inflation surprises tend to make compliance with the requirements of the debt rule more demanding in the short term. Government revenues typically adjust faster to price changes than primary expenditure. The former tend to evolve broadly in line with inflation developments depending on the speed of adjustment of the respective tax bases, whereas, for government expenditure, ceilings are typically set ahead of actual implementation so that inflation surprises would not immediately lead to an adjustment. Fiscal balances therefore tend to be adversely affected by unanticipated declines in inflation. At the same time, to the extent that interest payments are sensitive to short-term inflation developments, e.g. in the case of inflation-indexed bonds or variable rate debt, a negative inflation surprise may drive down interest spending, counteracting the adverse impact on the primary balance. In its Report on Public Finances in EMU 2015[41], the European Commission analysed the impact of the negative inflation surprise of 2014 in EU Member States. The analysis suggests that the impact on fiscal balances was rather low on average.[42] At

40 See also the article entitled "The short-term fiscal implications of structural reforms", *Economic Bulletin*, Issue 7, ECB, 2015, which stresses the importance of quantifying the short-term costs of structural reforms in the context of the SGP's structural reform clause. This is to ensure that this clause, which was broadened by the Commission communication on SGP flexibility in January 2015, is applied in a way that preserves fiscal sustainability and the credible application of the SGP provisions.

41 See http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip014_en.pdf

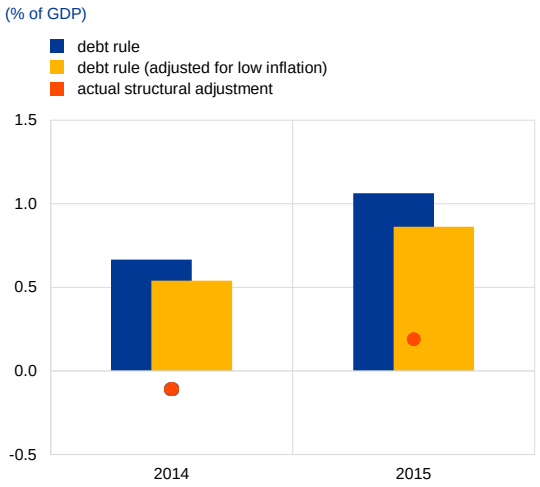
42 According to the analysis, the semi-elasticity of government deficits to a 1 percentage point deflationary surprise amounts to around 0.1% of GDP in the first year and less than that in the second year.

the same time, and more importantly, unanticipated declines in inflation accelerate the accumulation of government debt through a denominator effect, thereby making compliance with the debt reduction benchmark more demanding. If low inflation is accompanied by weak real growth (or a contraction of real GDP) compliance with the debt rule is rendered more difficult. Weak or negative real growth will adversely affect debt dynamics through a larger snowball effect and the negative cyclical impact on the primary balance.

Both in Belgium and Italy, structural adjustment in 2014 and 2015 – according to the European Commission's winter 2016 forecast – fell significantly short of the requirements of the (transitional) debt rule. In Belgium, the structural fiscal position loosened in 2014**,** while an adjustment of 0.7% of GDP was required. Despite some adjustment in 2015, the shortfall compared with the debt rule requirement was significant in that year (i.e. larger than 0.25% of GDP) (see Chart A). In the case of Italy (see Chart B), the structural adjustment of 0.4% of GDP in 2013 fell somewhat short of the MLSA when considering the 0.25% of GDP deviation margin. However, large deviations have occurred in 2014 and 2015.

Chart A

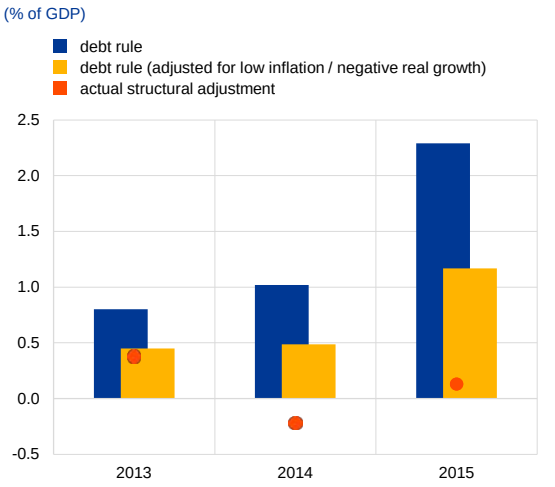
Belgium: debt rule requirements and actual structural adjustment



Sources: European Commission's winter 2016 forecast and ECB calculations.

Chart B

Italy: debt rule requirements and actual structural adjustment



Sources: European Commission's winter 2016 forecast and ECB calculations.

Shortfalls vis-à-vis the debt rule requirements remain significant both in Belgium and Italy when netting out the impact of low inflation and negative growth. Mechanical simulations suggest that the adjustment requirements under the transitional debt rule react sensitively to changes in inflation and growth.[43] In the case of Belgium, assuming GDP deflator growth of 2% as of 2014 would reduce the debt rule requirements in 2014 and 2015 by around 0.2% of GDP per annum (see Chart A). The average structural adjustment of 0.1% of GDP in the period 2014-15, however, falls significantly short of debt rule requirements adjusted for the impact of low inflation (of

[43] The simulations were conducted on the basis of the methodological framework for computing the MLSA for the application of the debt criterion in the transitional period, as laid out in the "Vade mecum on the Stability and Growth Pact" (see http://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp151_en.pdf). Only the denominator effect of higher GDP deflator growth is taken into account given the small size of direct effects on headline deficits.

0.7% of GDP on average in the period 2014-15). For Italy, in addition to the assumption of higher GDP deflator growth as of 2014, the simulations assume real GDP growth of zero in 2014 (while real GDP actually contracted in that year). This reduces the adjustment requirements under the debt rule by around half between 2013 and 2015 (see Chart B). The actual adjustment in 2013 is broadly in line with the requirement under the debt rule adjusted for negative growth and low inflation. However, the structural adjustment in the period 2014-15 falls significantly short of the average adjusted requirement under the debt rule (of around 0.7% of GDP).

4 Conclusions

The reduction of the government debt overhang in the euro area remains a key policy priority. The aggregate debt level continues to exceed 90% of GDP – well above the 60% of GDP reference value of the Treaty. The stylised debt scenarios presented in this article show that fiscal adjustment in line with the requirements of the Stability and Growth Pact would within a decade contribute to a sizeable reduction of the euro area government debt ratio, bringing it closer to the reference level. In the absence of such fiscal action, the downward debt adjustment would be much more limited, owing mainly to mounting ageing-related spending pressures and rising interest spending.

At the Member State level, convergence towards sound fiscal positions and sustainable debt levels will be crucial to regain fiscal buffers and increase economic resilience. The SGP's debt reduction benchmark – introduced in the context of the 2011 six-pack of reforms to operationalise the debt criterion – constitutes an appropriate framework to guide the reduction of still very high debt ratios in many Member States. While providing a numerical benchmark for the pace of debt reduction, it explicitly takes into account cyclical conditions and provides additional flexibility through the consideration of relevant mitigating factors which hinder the required adjustment.

The SGP's debt rule was introduced as a major lesson from the European sovereign debt crisis and should be applied rigorously. Sizeable deviations from the requirements of the transitional debt rule have so far not led to the opening of debt-based EDPs owing to the consideration of relevant mitigating factors. Looking ahead, it should be ensured that compliance with the requirements of the debt reduction benchmark is not unduly delayed.

The application of the debt rule needs to be based on a well-defined and transparent methodological framework in order to ensure a consistent implementation across countries and over time. In particular, only quantifiable relevant factors should be taken into account when assessing compliance with the debt criterion. A proper quantification of the impact of relevant mitigating factors and their contribution to the occurrence of shortfalls vis-à-vis the requirements of the debt reduction benchmark will increase the transparency of the underlying analysis. As a result, the scope for discretion in the application of the debt rule would be reduced, which would support a more effective implementation.

The experience with past debt reduction episodes suggests that bringing down high levels of government debt requires complementary policy action. The price stability-oriented monetary policy already supports economic activity. It should be complemented by further effective structural reforms to increase the euro area's growth potential. Moreover, fiscal adjustment can contribute decisively to helping countries grow out of government debt. To this end, fiscal policies should remain in compliance with the fiscal rules of the SGP. At the same time, all countries should strive for a more growth-friendly composition of their budgetary policies. By converging towards lower levels of government debt and regaining fiscal buffers, the euro area will increase its resilience and fiscal space to cope with potentially adverse economic shocks in the future.

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 [2]	United States	United Kingdom	Japan	China	Memo item: euro area	OECD countries		United States	United Kingdom (HICP)	Japan	China	Memo item: euro area [3] (HICP)
							Total	excluding food and energy					
	1	2	3	4	5	6	7	8	9	10	11	12	13
2013	3.1	1.5	2.2	1.4	7.7	-0.3	1.6	1.6	1.5	2.6	0.4	2.6	1.4
2014	3.4	2.4	2.9	-0.1	7.3	0.9	1.7	1.8	1.6	1.5	2.7	2.0	0.4
2015	3.2	2.4	2.3	0.5	6.9	1.6	0.6	1.7	0.1	0.0	0.8	1.4	0.0
2015 Q2	0.8	1.0	0.6	-0.4	1.9	0.4	0.5	1.6	0.0	0.0	0.5	1.4	0.2
Q3	0.8	0.5	0.4	0.3	1.8	0.3	0.5	1.7	0.1	0.0	0.2	1.7	0.1
Q4	0.7	0.3	0.6	-0.3	1.6	0.3	0.7	1.8	0.5	0.1	0.3	1.5	0.2
2016 Q1	.	.	.	.	.	.	.	.	1.1	0.3	.	2.1	0.0
2015 Oct.	-	-	-	-	-	-	0.6	1.8	0.2	-0.1	0.3	1.3	0.1
Nov.	-	-	-	-	-	-	0.7	1.8	0.5	0.1	0.3	1.5	0.1
Dec.	-	-	-	-	-	-	0.9	1.9	0.7	0.2	0.2	1.6	0.2
2016 Jan.	-	-	-	-	-	-	1.2	1.9	1.4	0.3	0.0	1.8	0.3
Feb.	-	-	-	-	-	-	1.0	1.9	1.0	0.3	0.3	2.3	-0.2
Mar.	-	-	-	-	-	-	.	.	0.9	0.5	.	2.3	0.0

Sources: Eurostat (col. 3, 6, 10, 13); BIS (col. 2, 4, 9, 11, 12); OECD (col. 1, 5, 7, 8).
1) Quarterly data seasonally adjusted; annual data unadjusted.
2) Data for Argentina are currently not available owing to the state of emergency in the national statistical system declared by the government of Argentina on 7 January 2016. As a consequence, Argentina is not included in the calculation of the G20 aggregate. The policy regarding the inclusion of Argentina will be reconsidered in the future depending on further developments.
3) 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
2013	53.4	54.8	56.8	52.6	51.5	49.7	52.2	52.7	50.6	3.3	-0.1	5.8
2014	54.2	57.3	57.9	50.9	51.1	52.7	53.1	54.1	51.5	3.2	3.7	2.9
2015	53.3	55.8	56.3	51.4	50.4	53.8	51.7	53.9	50.3	1.5	3.8	-0.2
2015 Q2	53.3	55.9	57.2	51.3	51.1	53.9	51.1	54.1	49.6	-0.9	-1.0	-0.9
Q3	53.0	55.4	55.1	51.9	49.0	53.9	50.2	54.0	48.8	2.0	1.1	2.7
Q4	52.7	55.0	55.4	52.3	49.9	54.1	51.3	53.2	50.5	1.4	0.2	2.3
2016 Q1	51.1	51.4	54.2	51.2	50.3	53.2	50.6	51.3	49.4	.	.	.
2015 Oct.	52.7	55.0	55.3	52.3	49.9	53.9	51.2	53.3	50.8	2.0	2.2	1.8
Nov.	53.3	56.1	55.7	52.3	50.5	54.2	51.8	53.8	50.7	0.4	1.1	-0.2
Dec.	52.2	54.0	55.2	52.2	49.4	54.3	50.9	52.6	49.8	1.4	0.2	2.3
2016 Jan.	52.2	53.2	56.2	52.6	50.1	53.6	51.0	52.7	50.1	0.9	-0.8	2.1
Feb.	50.2	50.0	52.7	51.0	49.4	53.0	49.9	50.3	48.9	.	.	.
Mar.	50.9	51.1	53.6	49.9	51.3	53.1	50.8	50.9	49.3	.	.	.

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
2013	0.09	0.13	0.22	0.34	0.54	0.27	0.15
2014	0.09	0.13	0.21	0.31	0.48	0.23	0.13
2015	-0.11	-0.07	-0.02	0.05	0.17	0.31	0.09
2015 Sep.	-0.14	-0.11	-0.04	0.04	0.15	0.33	0.08
Oct.	-0.14	-0.12	-0.05	0.02	0.13	0.32	0.08
Nov.	-0.13	-0.14	-0.09	-0.02	0.08	0.37	0.08
Dec.	-0.20	-0.19	-0.13	-0.04	0.06	0.53	0.08
2016 Jan.	-0.24	-0.22	-0.15	-0.06	0.04	0.62	0.08
Feb.	-0.24	-0.25	-0.18	-0.12	-0.01	0.62	0.01
Mar.	-0.29	-0.31	-0.23	-0.13	-0.01	0.63	-0.01

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
2013	0.08	0.09	0.25	1.07	2.24	2.15	2.91	2.66	0.18	0.67	2.53	3.88
2014	-0.02	-0.09	-0.12	0.07	0.65	0.74	1.95	1.45	-0.15	-0.11	0.58	1.77
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
2015 Sep.	-0.36	-0.27	-0.24	0.04	0.70	0.97	1.73	1.24	-0.22	-0.17	0.73	1.76
Oct.	-0.35	-0.33	-0.31	-0.03	0.63	0.96	1.82	1.40	-0.32	-0.25	0.66	1.69
Nov.	-0.41	-0.40	-0.40	-0.13	0.58	0.98	1.73	1.34	-0.41	-0.36	0.58	1.77
Dec.	-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 Jan.	-0.45	-0.45	-0.47	-0.23	0.44	0.89	1.47	1.18	-0.47	-0.46	0.43	1.55
Feb.	-0.50	-0.51	-0.54	-0.36	0.22	0.73	1.14	1.01	-0.54	-0.56	0.18	1.23
Mar.	-0.49	-0.49	-0.49	-0.30	0.26	0.75	1.18	1.03	-0.49	-0.47	0.25	1.21

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
2013	281.9	2,794.0	586.3	195.0	468.2	312.8	151.5	402.7	274.1	230.6	253.4	629.4	1,643.8	13,577.9
2014	318.7	3,145.3	644.3	216.6	510.6	335.5	180.0	452.9	310.8	279.2	306.7	668.1	1,931.4	15,460.4
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
2015 Sep.	330.9	3,165.5	649.6	250.9	566.4	267.2	178.5	469.7	339.5	250.8	362.6	817.4	1,944.4	17,944.2
Oct.	342.2	3,275.5	658.6	261.3	598.9	290.0	183.4	478.7	360.4	263.5	362.3	823.9	2,024.8	18,374.1
Nov.	358.2	3,439.6	703.0	269.0	640.1	297.3	187.0	507.4	394.1	270.3	385.3	850.1	2,080.6	19,581.8
Dec.	346.0	3,288.6	652.5	262.8	630.2	278.1	180.2	494.9	391.7	263.6	363.3	811.0	2,054.1	19,202.6
2016 Jan.	320.8	3,030.5	589.3	250.1	584.0	252.6	161.6	463.6	379.6	254.3	345.1	769.6	1,918.6	17,302.3
Feb.	304.3	2,862.6	559.2	245.9	569.1	250.5	144.0	449.9	352.5	245.7	332.8	732.6	1,904.4	16,347.0
Mar.	322.2	3,031.4	598.6	257.6	595.8	271.6	155.9	483.1	366.3	248.1	349.9	746.9	2,022.0	16,897.3

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
2015 Mar.	0.17	0.83	0.89	1.24	7.13	17.05	5.16	6.17	6.50	2.72	2.10	2.45	2.24	2.39	2.53	2.29
Apr.	0.16	0.79	0.87	1.19	7.03	17.01	4.89	6.13	6.42	2.66	2.02	2.41	2.17	2.35	2.50	2.24
May	0.16	0.82	0.84	1.13	6.98	17.08	5.04	6.29	6.60	2.67	2.06	2.35	2.10	2.29	2.45	2.17
June	0.15	0.78	0.77	1.11	6.97	17.02	4.88	6.15	6.47	2.59	2.03	2.27	2.12	2.31	2.48	2.18
July	0.15	0.74	0.67	1.14	6.83	17.08	5.10	6.20	6.53	2.61	2.06	2.32	2.21	2.35	2.56	2.22
Aug.	0.14	0.67	0.67	1.00	6.83	17.03	5.30	6.28	6.62	2.60	2.12	2.35	2.30	2.33	2.60	2.26
Sep.	0.14	0.67	0.67	1.08	6.85	17.06	5.21	6.18	6.55	2.68	2.07	2.36	2.29	2.38	2.61	2.25
Oct.	0.14	0.66	0.65	0.99	6.71	16.98	5.22	6.03	6.43	2.64	2.06	2.32	2.30	2.41	2.58	2.26
Nov.	0.14	0.65	0.64	0.96	6.68	16.91	5.23	6.22	6.60	2.68	2.04	2.31	2.32	2.45	2.62	2.27
Dec.	0.13	0.64	0.64	0.98	6.61	16.95	4.84	5.94	6.25	2.53	1.99	2.27	2.27	2.42	2.55	2.22
2016 Jan.	0.12	0.62	0.63	1.24	6.65	16.88	5.31	6.29	6.65	2.53	1.98	2.23	2.30	2.40	2.53	2.23
Feb. [(p)]	0.12	0.60	0.60	0.90	6.66	16.88	5.00	6.13	6.47	2.59	2.00	2.20	2.23	2.33	2.49	2.20

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
2015 Mar.	0.21	0.32	0.97	3.39	3.46	3.65	3.10	2.16	2.65	2.32	1.61	2.12	2.00	2.35
Apr.	0.19	0.30	0.90	3.34	3.46	3.58	2.97	2.18	2.60	2.26	1.61	1.93	2.02	2.32
May	0.18	0.30	0.91	3.28	3.37	3.50	2.97	2.15	2.46	2.23	1.56	1.85	2.04	2.25
June	0.18	0.31	1.09	3.25	3.19	3.47	2.87	2.09	2.33	2.23	1.59	1.91	2.03	2.24
July	0.17	0.32	0.86	3.19	3.27	3.60	2.87	2.07	2.36	2.20	1.50	1.73	2.04	2.17
Aug.	0.17	0.24	0.92	3.16	3.25	3.57	2.91	2.07	2.32	2.23	1.39	1.53	2.03	2.13
Sep.	0.17	0.26	0.98	3.20	3.23	3.51	2.89	2.03	2.25	2.21	1.49	1.87	2.17	2.20
Oct.	0.16	0.26	0.80	3.09	3.18	3.42	2.89	2.04	2.28	2.20	1.43	1.69	2.02	2.14
Nov.	0.16	0.23	0.84	3.05	3.14	3.39	2.88	2.02	2.16	2.20	1.37	1.62	1.98	2.09
Dec.	0.14	0.23	0.85	3.01	3.07	3.18	2.77	2.01	2.13	2.17	1.43	1.77	1.92	2.06
2016 Jan.	0.13	0.27	0.78	2.97	3.23	3.25	2.78	2.00	2.22	2.17	1.39	1.68	2.06	2.09
Feb. [(p)]	0.13	0.24	0.71	2.93	3.16	3.28	2.76	1.96	2.11	2.10	1.28	1.48	1.73	1.98

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 Eurosystem)	Non-MFI corporations			General government		Total	MFIs (including Eurosystem)	Non-MFI corporations			General government	
			Financial corporations other than MFIs	FVCs	Non-financial corporations	Central government	Other general government			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	12	13	14
						Short-term								
2013	1,253	483	122	.	67	529	53	508	314	31	.	44	99	21
2014	1,320	544	129	.	59	538	50	410	219	34	.	38	93	25
2015	1,261	521	136	.	61	478	65	334	151	36	.	32	82	34
2015 Sep.	1,325	544	127	.	75	520	59	345	162	31	.	29	93	30
Oct.	1,338	551	144	.	74	509	60	363	172	31	.	32	86	42
Nov.	1,350	558	144	.	73	509	66	311	140	39	.	30	75	26
Dec.	1,261	521	136	.	61	478	65	294	133	50	.	27	57	26
2016 Jan.	1,284	527	138	.	68	483	67	329	141	35	.	33	87	33
Feb.	1,299	539	137	.	71	487	66	317	143	31	.	30	81	31
						Long-term								
2013	15,109	4,404	3,088	.	921	6,069	627	222	70	39	.	16	89	9
2014	15,128	4,047	3,159	.	994	6,285	643	221	66	43	.	16	85	10
2015	15,179	3,781	3,215	.	1,065	6,482	637	213	66	44	.	13	81	8
2015 Sep.	15,256	3,860	3,234	.	1,042	6,488	632	256	63	82	.	14	93	4
Oct.	15,327	3,854	3,289	.	1,048	6,500	636	232	78	44	.	12	89	10
Nov.	15,372	3,864	3,275	.	1,061	6,528	644	196	67	34	.	16	67	11
Dec.	15,179	3,781	3,215	.	1,065	6,482	637	153	49	60	.	16	23	4
2016 Jan.	15,147	3,746	3,194	.	1,051	6,522	634	203	74	23	.	6	93	8
Feb.	15,099	3,743	3,129	.	1,044	6,550	633	208	65	42	.	4	88	10

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					
2013	16,362.0	4,886.5	3,210.4	.	987.4	6,598.1	679.6	5,649.0	569.1	747.3	4,332.7
2014	16,447.6	4,590.6	3,288.5	.	1,052.4	6,823.2	692.9	5,958.0	591.1	784.6	4,582.3
2015	16,440.0	4,301.7	3,351.1	.	1,125.9	6,959.9	701.4	6,745.1	586.1	915.9	5,243.1
2015 Sep.	16,580.7	4,403.7	3,361.5	.	1,116.9	7,007.3	691.3	6,291.3	582.5	822.4	4,886.4
Oct.	16,665.7	4,405.0	3,432.9	.	1,122.3	7,009.4	696.2	6,832.3	612.1	892.6	5,327.6
Nov.	16,721.8	4,422.6	3,418.4	.	1,134.4	7,036.3	710.2	7,030.0	613.9	946.4	5,469.8
Dec.	16,440.0	4,301.7	3,351.1	.	1,125.9	6,959.9	701.4	6,745.1	586.1	915.9	5,243.1
2016 Jan.	16,431.2	4,273.1	3,332.2	.	1,119.3	7,005.6	701.1	6,337.8	490.7	856.2	4,990.9
Feb.	16,398.0	4,281.2	3,265.9	.	1,114.9	7,037.1	698.9	6,235.8	471.7	872.8	4,891.3
						Growth rate					
2013	-1.4	-8.9	-3.4	.	8.0	4.5	-1.1	0.7	7.2	-0.4	0.2
2014	-0.6	-7.8	0.4	.	5.1	3.1	1.2	1.4	7.2	1.0	0.7
2015	-0.2	-6.9	3.2	.	5.3	1.8	0.5	1.1	4.5	1.5	0.6
2015 Sep.	-0.5	-7.5	2.1	.	4.4	2.4	-1.9	1.0	3.3	0.6	0.7
Oct.	0.1	-6.0	2.4	.	4.3	2.4	0.1	1.0	3.3	1.0	0.7
Nov.	0.0	-5.6	1.5	.	4.5	2.2	1.2	1.0	3.0	1.5	0.6
Dec.	-0.2	-6.9	3.2	.	5.3	1.8	0.5	1.1	4.5	1.5	0.6
2016 Jan.	-0.7	-7.8	1.8	.	4.4	2.0	0.6	1.0	3.3	1.8	0.7
Feb.	-1.0	-7.2	-0.2	.	2.8	2.0	-0.5	1.0	3.3	1.5	0.7

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
2013	101.2	98.2	96.7	91.1	102.1	98.6	111.9	95.6
2014	101.8	97.9	96.7	91.3	102.4	100.2	114.7	96.1
2015	92.4	88.4	89.1	83.4	91.4	91.2	106.5	87.9
2015 Q2	91.2	87.5	88.2	82.2	90.4	90.1	104.4	86.3
Q3	92.7	88.7	89.6	83.8	92.3	91.4	107.6	88.7
Q4	92.4	88.4	89.3	83.9	91.0	91.0	107.7	88.4
2016 Q1	94.1	89.5	90.9	.	.	.	110.4	90.1
2015 Oct.	93.6	89.6	90.4	-	-	-	109.0	89.7
Nov.	91.1	87.1	88.1	-	-	-	106.0	86.9
Dec.	92.5	88.3	89.3	-	-	-	108.0	88.4
2016 Jan.	93.6	89.1	90.4	-	-	-	109.9	89.6
Feb.	94.7	90.1	91.5	-	-	-	111.3	91.0
Mar.	94.1	89.4	90.8	-	-	-	110.0	89.7
Percentage change versus previous month								
2016 Mar.	-0.7	-0.8	-0.7	-	-	-	-1.2	-1.4
Percentage change versus previous year								
2016 Mar.	3.8	2.8	4.0	-	-	-	6.0	4.3

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
2013	8.165	7.579	25.980	7.458	296.873	129.663	4.197	0.849	4.4190	8.652	1.231	1.328
2014	8.186	7.634	27.536	7.455	308.706	140.306	4.184	0.806	4.4437	9.099	1.215	1.329
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
2015 Q2	6.857	7.574	27.379	7.462	306.100	134.289	4.088	0.721	4.4442	9.300	1.041	1.105
Q3	7.008	7.578	27.075	7.462	312.095	135.863	4.188	0.717	4.4290	9.429	1.072	1.112
Q4	7.000	7.623	27.057	7.460	312.652	132.952	4.264	0.722	4.4573	9.302	1.085	1.095
2016 Q1	7.210	7.617	27.040	7.461	312.024	126.997	4.365	0.770	4.4924	9.327	1.096	1.102
2015 Oct.	7.135	7.621	27.105	7.460	311.272	134.839	4.251	0.733	4.4227	9.349	1.088	1.124
Nov.	6.840	7.607	27.039	7.460	312.269	131.597	4.249	0.707	4.4453	9.313	1.083	1.074
Dec.	7.019	7.640	27.027	7.461	314.398	132.358	4.290	0.726	4.5033	9.245	1.083	1.088
2016 Jan.	7.139	7.658	27.027	7.462	314.679	128.324	4.407	0.755	4.5311	9.283	1.094	1.086
Feb.	7.266	7.636	27.040	7.463	310.365	127.346	4.397	0.776	4.4814	9.410	1.102	1.109
Mar.	7.222	7.559	27.051	7.457	311.154	125.385	4.293	0.780	4.4666	9.285	1.092	1.110
Percentage change versus previous month												
2016 Mar.	-0.6	-1.0	0.0	-0.1	0.3	-1.5	-2.4	0.6	-0.3	-1.3	-0.9	0.1
Percentage change versus previous year												
2016 Mar.	6.8	-1.1	-1.2	0.0	2.5	-3.9	4.1	7.8	0.7	0.4	2.9	2.4

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)												
2015 Q1	22,500.8	23,313.7	-812.9	9,479.7	7,094.0	7,296.1	10,971.1	-67.3	5,101.9	5,248.6	690.4	13,190.0
Q2	22,094.2	22,748.5	-654.3	9,382.6	7,171.3	7,193.4	10,532.3	-26.1	4,885.9	5,044.9	658.5	12,815.0
Q3	21,653.1	22,261.8	-608.6	9,384.2	7,265.4	6,854.8	9,999.3	-33.6	4,803.5	4,997.1	644.2	12,660.8
Q4	22,101.4	22,519.6	-418.2	9,694.9	7,521.1	7,169.5	10,157.5	-42.6	4,635.4	4,840.9	644.2	12,498.8
Outstanding amounts as a percentage of GDP												
2015 Q4	212.5	216.5	-4.0	93.2	72.3	68.9	97.7	-0.4	44.6	46.5	6.2	120.2
Transactions												
2015 Q1	599.2	618.0	-18.8	243.6	146.5	128.1	250.4	26.3	195.5	221.1	5.8	-
Q2	95.8	3.1	92.7	123.9	130.7	135.9	8.7	-0.1	-161.5	-136.3	-2.4	-
Q3	87.3	35.8	51.5	119.3	131.9	24.3	-67.4	-0.8	-58.2	-28.8	2.7	-
Q4	31.3	-149.9	181.2	114.7	77.7	106.2	-31.3	45.1	-239.3	-196.3	4.6	-
2015 Sep.	-32.9	-47.2	14.2	33.6	55.3	15.1	9.4	-3.7	-86.2	-111.9	8.3	-
Oct.	235.4	109.0	126.3	119.5	62.6	63.4	24.4	8.0	50.6	22.1	-6.0	-
Nov.	-74.3	-47.6	-26.7	-84.7	-14.3	23.7	1.9	17.9	-33.6	-35.2	2.5	-
Dec.	-129.8	-211.3	81.5	80.0	29.5	19.1	-57.5	19.3	-256.2	-183.3	8.1	-
2016 Jan.	136.7	151.7	-15.0	6.6	-9.9	-16.7	-50.5	10.0	137.9	212.1	-1.1	-
Feb.	170.8	122.4	48.3	67.7	21.1	44.5	-30.4	4.4	52.9	131.8	1.1	-
12-month cumulated transactions												
2016 Feb.	611.8	226.5	385.3	494.4	375.2	334.6	-113.7	68.3	-290.6	-35.0	5.1	-
12-month cumulated transactions as a percentage of GDP												
2016 Feb.	5.9	2.2	3.7	4.8	3.6	3.2	-1.1	0.7	-2.8	-0.3	0.0	-

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)											
2013	9,931.8	9,595.2	5,558.5	2,094.5	1,949.0	1,004.3	573.1	366.7	-6.8	336.6	4,373.4	4,036.7
2014	10,106.4	9,732.9	5,631.1	2,128.5	1,984.6	1,007.5	595.7	376.3	-11.3	373.6	4,521.3	4,147.8
2015	10,400.2	9,940.4	5,738.0	2,169.1	2,054.2	1,020.5	631.9	396.5	-20.8	459.7	4,751.0	4,291.3
2015 Q1	2,573.8	2,462.9	1,421.0	538.3	509.0	255.8	154.9	97.0	-5.4	110.9	1,167.6	1,056.8
Q2	2,591.7	2,473.5	1,433.0	540.4	510.1	253.4	155.6	99.8	-10.0	118.2	1,196.8	1,078.7
Q3	2,606.9	2,490.4	1,439.4	543.0	513.6	253.8	156.7	101.7	-5.6	116.5	1,195.2	1,078.7
Q4	2,624.0	2,510.0	1,444.1	546.4	521.6	256.4	161.2	102.7	-2.1	114.0	1,192.5	1,078.4
	as a percentage of GDP											
2015	100.0	95.6	55.2	20.9	19.8	9.8	6.1	3.8	-0.2	4.4	-	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2015 Q1	0.6	0.8	0.5	0.5	1.4	1.0	2.1	1.5	-	-	1.4	2.1
Q2	0.4	0.0	0.3	0.3	0.1	-1.0	0.2	2.7	-	-	1.7	1.0
Q3	0.3	0.7	0.5	0.3	0.4	0.0	0.5	1.3	-	-	0.2	1.2
Q4	0.3	0.6	0.2	0.6	1.3	1.1	2.0	0.9	-	-	0.2	0.9
	annual percentage changes											
2013	-0.3	-0.7	-0.6	0.2	-2.6	-3.6	-2.5	0.1	-	-	2.1	1.3
2014	0.9	0.9	0.8	0.8	1.3	-0.5	4.1	2.1	-	-	4.1	4.5
2015	1.6	1.8	1.7	1.3	2.7	0.7	5.2	4.2	-	-	5.0	5.7
2015 Q1	1.3	1.4	1.6	1.1	2.0	0.0	5.0	2.7	-	-	5.3	6.0
Q2	1.6	1.4	1.7	1.2	2.6	0.4	4.6	5.2	-	-	6.0	5.8
Q3	1.6	1.9	1.8	1.2	2.5	0.4	3.1	6.9	-	-	4.6	5.5
Q4	1.6	2.2	1.5	1.6	3.4	1.2	5.0	6.5	-	-	3.6	5.3
	contributions to quarter-on-quarter percentage changes in GDP; percentage points											
2015 Q1	0.6	0.8	0.3	0.1	0.3	0.1	0.1	0.1	0.2	-0.2	-	-
Q2	0.4	0.0	0.2	0.1	0.0	-0.1	0.0	0.1	-0.2	0.4	-	-
Q3	0.3	0.7	0.3	0.1	0.1	0.0	0.0	0.1	0.3	-0.4	-	-
Q4	0.3	0.6	0.1	0.1	0.3	0.1	0.1	0.0	0.1	-0.3	-	-
	contributions to annual percentage changes in GDP; percentage points											
2013	-0.3	-0.7	-0.4	0.0	-0.5	-0.4	-0.2	0.0	0.2	0.4	-	-
2014	0.9	0.9	0.4	0.2	0.3	0.0	0.2	0.1	0.0	0.0	-	-
2015	1.6	1.7	0.9	0.3	0.5	0.1	0.3	0.2	0.0	-0.1	-	-
2015 Q1	1.3	1.4	0.9	0.2	0.4	0.0	0.3	0.1	-0.2	-0.1	-	-
Q2	1.6	1.3	1.0	0.3	0.5	0.0	0.3	0.2	-0.4	0.3	-	-
Q3	1.6	1.8	1.0	0.3	0.5	0.0	0.2	0.3	0.1	-0.2	-	-
Q4	1.6	2.2	0.8	0.3	0.7	0.1	0.3	0.2	0.3	-0.6	-	-

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)											
2013	8,927.3	152.3	1,737.0	458.1	1,680.2	412.6	442.3	1,030.6	945.2	1,751.4	317.6	1,004.5
2014	9,073.5	146.7	1,756.9	461.6	1,711.1	417.6	453.9	1,051.0	968.0	1,781.8	324.8	1,033.0
2015	9,329.3	146.4	1,815.9	469.8	1,771.3	431.1	456.4	1,075.8	1,008.2	1,821.1	333.4	1,070.9
2015 Q1	2,312.6	36.1	451.1	117.1	438.5	106.3	114.9	265.7	247.8	452.5	82.5	261.2
Q2	2,324.2	36.2	453.6	116.4	441.1	107.4	114.5	267.6	250.9	453.5	83.0	267.4
Q3	2,337.7	36.7	454.3	117.0	444.4	108.3	113.7	270.5	253.3	456.0	83.6	269.2
Q4	2,351.7	37.4	454.4	118.7	447.3	109.2	113.1	271.9	256.3	459.2	84.2	272.3
	as a percentage of value added											
2015	100.0	1.6	19.5	5.0	19.0	4.6	4.9	11.5	10.8	19.5	3.6	-
	Chain-linked volumes (prices for the previous year)											
	quarter-on-quarter percentage changes											
2015 Q1	0.6	0.8	1.0	0.6	0.8	0.5	0.6	0.1	1.0	0.3	0.2	0.1
Q2	0.3	0.3	0.4	-0.5	0.4	0.9	0.1	0.1	0.9	0.1	0.3	1.0
Q3	0.3	0.6	0.2	-0.1	0.5	0.5	-0.6	0.7	0.6	0.1	0.4	0.3
Q4	0.2	0.5	-0.5	1.0	0.3	0.8	0.3	0.3	0.6	0.2	0.4	1.2
	annual percentage changes											
2013	-0.2	3.2	-0.6	-3.3	-0.8	2.5	-2.5	1.1	0.3	0.4	-0.5	-1.1
2014	0.9	3.1	0.6	-0.9	1.4	2.0	-0.6	1.3	1.4	0.5	1.2	0.8
2015	1.5	0.8	1.8	0.3	2.0	2.7	0.8	1.1	2.7	0.8	1.1	2.6
2015 Q1	1.2	0.6	1.2	-1.0	1.7	2.5	1.1	1.0	2.2	0.6	0.8	2.2
Q2	1.5	0.6	1.8	0.1	2.1	3.1	1.3	0.7	2.7	0.8	1.0	2.6
Q3	1.5	0.2	1.9	0.2	2.0	2.4	0.2	1.1	2.8	0.7	0.9	2.9
Q4	1.5	2.2	1.1	0.9	1.9	2.7	0.4	1.2	3.1	0.7	1.3	2.7
	contributions to quarter-on-quarter percentage changes in value added; percentage points											
2015 Q1	0.6	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	-
Q2	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	-
Q3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	-
Q4	0.2	0.0	-0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	-
	contributions to annual percentage changes in value added; percentage points											
2013	-0.2	0.1	-0.1	-0.2	-0.2	0.1	-0.1	0.1	0.0	0.1	0.0	-
2014	0.9	0.1	0.1	0.0	0.3	0.1	0.0	0.1	0.1	0.1	0.0	-
2015	1.5	0.0	0.3	0.0	0.4	0.1	0.0	0.1	0.3	0.1	0.0	-
2015 Q1	1.2	0.0	0.2	0.0	0.3	0.1	0.1	0.1	0.2	0.1	0.0	-
Q2	1.5	0.0	0.3	0.0	0.4	0.1	0.1	0.1	0.3	0.2	0.0	-
Q3	1.5	0.0	0.4	0.0	0.4	0.1	0.0	0.1	0.3	0.1	0.0	-
Q4	1.5	0.0	0.2	0.0	0.4	0.1	0.0	0.1	0.3	0.1	0.0	-

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													
2013	100.0	85.0	15.0	3.4	15.3	6.2	24.8	2.7	2.7	1.0	12.9	24.0	7.0
2014	100.0	85.1	14.9	3.4	15.2	6.0	24.8	2.7	2.7	1.0	13.0	24.1	7.1
2015	100.0	85.3	14.7	3.4	15.1	6.0	24.9	2.7	2.6	1.0	13.3	24.0	7.0
annual percentage changes													
2013	-0.7	-0.6	-1.0	-1.6	-1.3	-4.2	-0.8	0.3	-1.0	-1.9	0.3	0.2	-0.2
2014	0.6	0.7	-0.2	0.7	-0.1	-1.8	0.7	0.8	-0.9	1.0	1.9	0.7	0.7
2015	1.0	1.2	-0.2	0.1	0.3	-0.2	1.3	1.0	-0.1	1.7	2.8	0.8	0.6
2015 Q1	0.9	1.0	-0.2	-0.3	0.2	-0.3	1.2	0.4	-0.5	1.4	2.6	0.7	0.5
Q2	0.9	1.1	0.1	0.4	0.1	0.5	1.0	0.8	0.2	2.1	2.8	0.7	0.4
Q3	1.0	1.3	-0.4	0.1	0.5	-0.6	1.3	1.4	-0.1	1.7	3.0	0.9	0.4
Q4	1.2	1.5	-0.3	0.3	0.5	-0.4	1.6	1.5	0.0	1.2	3.0	0.9	1.3
Hours worked													
as a percentage of total hours worked													
2013	100.0	80.1	19.9	4.4	15.7	6.9	25.8	2.9	2.8	1.0	12.5	21.8	6.3
2014	100.0	80.3	19.7	4.4	15.6	6.7	25.8	2.9	2.7	1.0	12.7	21.9	6.3
2015	100.0	80.5	19.5	4.4	15.6	6.7	25.7	2.9	2.7	1.0	12.9	21.9	6.3
annual percentage changes													
2013	-1.4	-1.4	-1.8	-1.4	-1.5	-5.5	-1.6	-0.1	-1.6	-3.1	-0.8	-0.4	-1.4
2014	0.6	0.8	-0.4	-0.4	0.2	-1.7	0.6	1.0	-1.0	0.6	2.0	1.1	0.6
2015	1.2	1.4	0.1	0.9	0.7	0.4	1.0	1.9	-0.2	2.0	3.0	0.9	1.0
2015 Q1	0.7	0.9	-0.3	0.4	0.0	-0.6	0.6	0.7	-0.9	1.7	2.4	0.8	1.1
Q2	1.0	1.3	0.1	0.9	0.6	0.8	0.5	1.7	0.0	2.7	3.0	0.9	1.0
Q3	1.2	1.5	0.1	0.8	0.8	0.0	1.0	2.7	-0.4	2.9	3.5	1.1	1.1
Q4	1.3	1.6	0.1	1.3	0.9	0.5	1.4	2.1	0.2	0.8	2.9	0.7	1.5
Hours worked per person employed													
annual percentage changes													
2013	-0.8	-0.7	-0.8	0.2	-0.2	-1.4	-0.8	-0.4	-0.5	-1.3	-1.1	-0.5	-1.2
2014	0.0	0.1	-0.1	-1.1	0.2	0.1	-0.1	0.1	-0.1	-0.4	0.1	0.4	-0.1
2015	0.1	0.2	0.3	0.8	0.4	0.6	-0.2	0.8	-0.1	0.3	0.2	0.1	0.3
2015 Q1	-0.2	-0.1	-0.1	0.7	-0.2	-0.2	-0.6	0.3	-0.4	0.3	-0.3	0.1	0.6
Q2	0.1	0.2	0.0	0.5	0.4	0.3	-0.5	0.8	-0.1	0.6	0.2	0.2	0.6
Q3	0.2	0.3	0.4	0.7	0.3	0.6	-0.3	1.2	-0.3	1.2	0.5	0.2	0.7
Q4	0.1	0.1	0.5	1.0	0.5	0.9	-0.1	0.6	0.2	-0.4	-0.1	-0.3	0.2

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				
			Millions	% of labour force		Adult		Youth		Male		Female		
						Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	Millions	% of labour force	% of total posts
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
% of total in 2013			100.0			81.3		18.7		53.6		46.4		
2013	159.334	4.6	19.218	12.0	5.9	15.623	10.7	3.595	24.4	10.300	11.9	8.918	12.1	1.4
2014	160.308	4.6	18.630	11.6	6.1	15.214	10.4	3.416	23.7	9.932	11.5	8.698	11.8	1.5
2015	160.556	.	17.437	10.9	5.6	14.293	9.8	3.144	22.3	9.251	10.7	8.186	11.0	1.6
2015 Q1	160.090	4.7	17.965	11.2	5.9	14.729	10.1	3.236	22.7	9.536	11.0	8.428	11.4	1.6
Q2	160.462	4.6	17.699	11.0	5.7	14.530	9.9	3.168	22.4	9.393	10.9	8.306	11.2	1.5
Q3	160.591	4.4	17.196	10.7	5.3	14.083	9.6	3.113	22.2	9.132	10.6	8.064	10.9	1.5
Q4	161.081	.	16.890	10.5	5.4	13.830	9.4	3.060	21.9	8.941	10.3	7.948	10.7	1.6
2015 Sep.	-	-	17.083	10.6	-	13.977	9.5	3.106	22.1	9.067	10.5	8.017	10.8	-
Oct.	-	-	17.020	10.6	-	13.919	9.5	3.101	22.1	9.022	10.4	7.997	10.8	-
Nov.	-	-	16.858	10.5	-	13.811	9.4	3.047	21.9	8.905	10.3	7.952	10.7	-
Dec.	-	-	16.791	10.4	-	13.759	9.4	3.033	21.8	8.896	10.3	7.895	10.6	-
2016 Jan.	-	-	16.673	10.4	-	13.663	9.3	3.010	21.7	8.795	10.2	7.878	10.6	-
Feb.	-	-	16.634	10.3	-	13.622	9.3	3.011	21.6	8.812	10.2	7.822	10.5	-

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												
2013	-0.6	-0.6	-0.9	-0.5	-0.4	-0.8	-2.3	-0.1	-0.6	-0.6	-1.0	-0.8	-4.4
2014	0.9	1.8	1.3	1.8	2.6	-5.4	1.7	3.3	1.5	0.7	1.6	-0.1	3.8
2015	1.6	1.8	0.9	2.1	2.1	0.5	-0.9	2.6	2.7	1.7	2.8	2.7	8.9
2015 Q2	1.5	1.8	1.0	2.8	1.1	-0.9	-1.0	5.4	2.7	1.7	3.0	2.9	6.9
Q3	1.9	2.2	1.0	2.7	2.8	0.0	-1.1	2.2	3.4	2.6	3.4	3.0	9.4
Q4	1.3	1.7	1.6	1.7	1.7	-2.0	0.3	1.6	2.4	1.2	2.5	2.1	10.4
2016 Q1	.	.	.	.	.	.	.	.	.	.	.	.	9.4
2015 Oct.	2.1	2.3	1.6	3.6	1.3	0.9	0.0	0.7	2.5	1.2	2.8	1.4	5.8
Nov.	1.8	2.0	2.3	2.0	1.5	-0.3	0.4	3.4	2.1	1.0	2.1	2.1	10.9
Dec.	-0.1	0.8	0.9	-0.4	2.4	-6.0	0.5	0.6	2.5	1.4	2.6	2.8	15.1
2016 Jan.	2.9	3.9	2.0	4.2	6.5	-2.8	4.9	1.6	2.0	1.2	2.5	-0.6	10.9
Feb.	0.8	1.8	1.9	3.0	0.8	-5.2	2.5	.	2.4	2.9	1.7	-0.5	10.3
Mar.	.	.	.	.	.	.	.	.	.	.	.	.	7.6
	month-on-month percentage changes (s.a.)												
2015 Oct.	0.7	0.5	0.1	1.1	0.7	1.8	0.4	1.6	-0.1	-0.3	0.1	-0.3	-1.1
Nov.	-0.1	-0.1	0.8	-1.3	0.1	-1.8	1.1	0.9	0.1	0.0	-0.1	0.4	2.4
Dec.	-0.5	-0.2	-0.2	-0.6	0.3	-3.3	-0.7	0.0	0.6	0.6	0.7	1.3	4.9
2016 Jan.	1.9	1.8	0.9	2.9	2.6	3.1	2.4	-0.9	0.3	0.4	0.5	-0.1	1.3
Feb.	-0.8	-0.8	0.0	-0.3	-1.7	-1.2	-1.1	.	0.2	0.5	-0.2	-0.2	-0.9
Mar.	.	.	.	.	.	.	.	.	.	.	.	.	-2.3

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
1999-13	100.0	-6.1	80.8	-12.8	-13.6	-8.6	6.8	-	51.0	52.4	52.9	52.7
2013	93.5	-9.0	78.6	-18.8	-27.9	-12.2	-5.4	87.1	49.6	50.6	49.3	49.7
2014	101.5	-3.8	80.4	-10.2	-26.4	-3.1	4.9	87.6	51.8	53.3	52.5	52.7
2015	104.2	-3.1	81.3	-6.2	-22.5	1.6	9.1	88.4	52.2	53.4	54.0	53.8
2015 Q2	103.6	-3.2	81.1	-5.2	-24.4	0.0	7.7	88.3	52.3	53.4	54.1	53.9
Q3	104.4	-2.9	81.3	-7.0	-22.5	3.0	10.4	88.4	52.3	53.6	54.0	53.9
Q4	106.2	-2.4	81.7	-6.4	-18.4	5.1	12.6	88.6	52.8	54.0	54.2	54.1
2016 Q1	104.0	-3.8	.	-8.3	-19.1	2.0	10.6	.	51.7	52.9	53.3	53.2
2015 Oct.	106.0	-1.9	81.5	-7.5	-20.1	6.5	12.3	88.7	52.3	53.6	54.1	53.9
Nov.	105.9	-3.3	-	-5.9	-17.5	5.8	12.7	-	52.8	54.0	54.2	54.2
Dec.	106.6	-2.0	-	-5.7	-17.6	2.9	12.8	-	53.2	54.5	54.2	54.3
2016 Jan.	105.0	-3.1	81.9	-6.3	-19.0	2.7	11.5	88.5	52.3	53.4	53.6	53.6
Feb.	103.9	-4.1	-	-8.8	-17.6	1.4	10.8	-	51.2	52.3	53.3	53.0
Mar.	103.0	-4.2	-	-9.7	-20.8	1.8	9.6	-	51.6	53.1	53.1	53.1

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
2012	12.4	98.8	-1.7	1.7	-5.3	-0.1	-3.0	30.9	1.5	132.7	1.5	-6.6	1.2
2013	12.7	97.3	-0.3	1.2	-4.1	0.5	-1.8	32.2	3.3	130.3	2.1	-1.4	0.9
2014	12.7	96.6	0.7	1.8	0.9	2.8	1.2	31.9	3.7	131.5	1.6	3.3	0.9
2015 Q1	12.7	96.0	1.8	2.0	-0.4	4.0	1.5	32.3	4.4	134.0	2.0	2.8	1.2
Q2	12.8	95.7	2.0	2.0	-0.4	2.7	1.6	33.1	5.1	133.1	2.6	4.8	1.4
Q3	12.7	95.6	1.6	2.0	1.3	2.6	2.0	33.0	5.4	132.0	3.0	3.7	1.7
Q4	.	.	1.5	2.2	4.1	3.4	2.9	33.9	7.0	131.8	3.3	8.7	1.7

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
2015 Q1	892.4	808.1	84.3	514.7	439.0	187.7	170.5	164.7	138.9	25.4	59.7	8.8	7.6
Q2	905.2	822.5	82.8	525.8	445.3	190.5	171.8	162.6	146.9	26.4	58.4	9.7	37.4
Q3	892.6	810.3	82.3	514.2	434.6	190.5	174.5	162.6	144.0	25.3	57.2	9.7	4.1
Q4	894.9	810.6	84.3	515.8	431.9	195.3	180.5	157.7	140.8	26.0	57.4	15.4	8.9
2015 Sep.	298.9	268.1	30.7	171.6	143.8	63.5	58.4	55.5	47.1	8.2	18.9	3.0	1.6
Oct.	300.8	272.9	27.9	172.8	144.8	64.8	60.6	54.3	48.0	8.8	19.5	4.9	1.8
Nov.	299.1	269.5	29.5	172.0	144.2	65.4	59.7	52.9	46.3	8.8	19.3	4.3	1.9
Dec.	295.0	268.2	26.9	170.9	142.9	65.1	60.1	50.5	46.6	8.5	18.6	6.3	5.2
2016 Jan.	292.4	264.9	27.5	171.9	141.5	64.0	60.3	48.0	44.8	8.5	18.4	2.7	3.5
Feb.	288.2	269.1	19.0	166.5	141.8	64.3	57.5	48.9	47.5	8.6	22.3	3.5	1.2
12-month cumulated transactions													
2016 Feb.	3,576.0	3,254.5	321.5	2,067.0	1,747.1	768.0	702.9	638.0	571.3	103.0	233.3	44.6	57.6
12-month cumulated transactions as a percentage of GDP													
2016 Feb.	34.4	31.3	3.1	19.9	16.8	7.4	6.8	6.1	5.5	1.0	2.2	0.4	0.6

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	Consumption goods	Manufacturing		Intermediate goods	Capital goods	Consumption goods	Manufacturing	Oil
	1	2	3	4	5	6	7	8	9	10	11	12	13
Values (EUR billions; annual percentage changes for columns 1 and 2)													
2015 Q1	5.6	1.9	510.2	241.7	106.1	149.8	423.0	448.7	260.2	70.8	109.7	315.7	55.5
Q2	8.2	4.2	514.0	242.6	106.0	153.4	429.4	453.8	265.2	70.7	110.8	317.9	60.0
Q3	4.5	0.9	507.8	235.0	105.7	153.7	423.5	446.4	255.0	71.3	113.3	318.2	51.0
Q4	3.4	2.3	509.7	238.5	105.2	154.8	426.4	445.4	250.2	72.7	114.7	324.7	45.5
2015 Sep.	0.8	-0.4	167.9	77.7	35.2	50.4	141.1	148.3	84.3	23.9	37.8	107.0	15.8
Oct.	0.4	-0.6	168.3	79.9	34.9	50.8	142.8	148.8	84.5	24.8	37.7	107.6	16.1
Nov.	6.2	4.4	170.9	78.8	35.1	51.7	141.2	148.3	82.8	24.1	38.3	107.9	14.5
Dec.	4.0	3.5	170.5	79.7	35.2	52.3	142.5	148.4	82.9	23.9	38.7	109.2	14.9
2016 Jan.	-2.0	-2.8	166.9	77.7	33.1	50.5	139.1	144.1	79.4	22.7	38.2	105.1	12.3
Feb.	1.3	2.1	168.0	.	.	.	139.9	147.8	.	.	.	110.9	.
Volume indices (2000 = 100; annual percentage changes for columns 1 and 2)													
2015 Q1	2.6	5.0	119.1	115.3	121.2	123.5	119.0	106.7	106.6	107.9	105.8	108.8	106.1
Q2	2.9	2.4	117.1	113.6	119.1	121.5	118.2	104.2	104.1	104.0	104.7	107.2	99.4
Q3	1.3	3.0	116.8	111.9	118.9	122.5	117.0	106.0	105.7	106.9	106.7	107.9	99.5
Q4	0.8	5.2	117.8	115.2	117.8	122.6	117.5	107.8	108.6	106.5	107.6	110.1	103.4
2015 Aug.	2.2	5.3	115.1	110.6	116.6	121.4	114.2	105.2	105.4	106.3	105.7	105.4	100.7
Sep.	-1.5	2.5	116.4	111.7	119.7	120.5	117.4	106.5	106.8	106.5	106.3	108.7	100.8
Oct.	-1.7	3.3	117.1	115.4	118.5	122.0	118.8	107.5	108.3	111.1	106.2	110.2	103.8
Nov.	3.7	7.4	118.5	114.3	118.5	122.4	116.9	107.5	107.2	106.7	108.0	110.2	96.2
Dec.	0.5	5.0	117.8	115.9	116.5	123.5	116.8	108.4	110.3	101.8	108.8	109.9	110.2
2016 Jan.	-3.7	-0.6	116.8	114.2	111.0	120.8	115.2	107.5	108.1	101.1	106.6	106.7	108.2

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)						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 2015	100.0	100.0	69.7	56.6	43.5	100.0	12.2	7.4	26.3	10.6	43.5	86.7	13.3
2013	99.5	1.4	1.1	1.3	1.4	-	-	-	-	-	-	1.2	2.1
2014	100.0	0.4	0.8	-0.2	1.2	-	-	-	-	-	-	0.2	1.9
2015	100.0	0.0	0.8	-0.8	1.2	-	-	-	-	-	-	-0.1	0.9
2015 Q2	100.5	0.2	0.8	-0.5	1.1	0.5	0.3	0.6	0.2	2.4	0.3	0.1	0.9
Q3	100.0	0.1	0.9	-0.8	1.2	0.0	0.2	0.4	0.2	-2.5	0.4	0.0	0.9
Q4	100.2	0.2	1.0	-0.6	1.2	-0.1	0.1	0.9	0.1	-3.0	0.2	0.1	0.6
2016 Q1	99.2	0.0	1.0	-0.8	1.1	-0.4	0.1	-0.8	0.2	-4.4	0.2	0.0	0.3
2015 Oct.	100.3	0.1	1.1	-0.8	1.3	0.1	0.0	0.6	0.1	-0.5	0.1	0.0	0.7
Nov.	100.2	0.1	0.9	-0.6	1.2	0.0	0.1	-0.3	0.0	0.0	0.0	0.1	0.6
Dec.	100.2	0.2	0.9	-0.5	1.1	-0.2	0.0	-0.7	0.0	-1.8	0.0	0.2	0.7
2016 Jan.	98.7	0.3	1.0	-0.3	1.2	-0.2	0.0	-0.3	0.1	-2.7	0.1	0.3	0.3
Feb.	98.9	-0.2	0.8	-1.0	0.9	-0.1	0.0	-0.1	0.0	-1.3	0.0	-0.2	0.3
Mar.	100.1	0.0	1.0	-1.1	1.4	0.3	0.0	0.5	0.0	1.0	0.3	-0.1	0.4

	Goods						Services					
	Food (including alcoholic beverages and tobacco)			Industrial goods			Housing		Transport	Communication	Recreation and personal	Miscellaneous
	Total	Processed food	Unprocessed food	Total	Non-energy industrial goods	Energy		Rents				
	14	15	16	17	18	19	20	21	22	23	24	25
% of total in 2015	19.7	12.2	7.4	36.9	26.3	10.6	10.6	6.3	7.4	3.1	14.9	7.4
2013	2.7	2.2	3.5	0.6	0.6	0.6	1.7	1.4	2.4	-4.2	2.3	0.7
2014	0.5	1.2	-0.8	-0.5	0.1	-1.9	1.7	1.4	1.7	-2.8	1.5	1.3
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
2015 Q2	1.1	0.7	1.8	-1.3	0.2	-5.3	1.2	1.2	1.2	-0.9	1.4	1.2
Q3	1.2	0.6	2.1	-1.8	0.4	-7.2	1.1	0.9	1.4	-0.4	1.7	1.0
Q4	1.4	0.7	2.6	-1.7	0.5	-7.2	1.2	1.0	1.1	-0.1	1.5	1.2
2016 Q1	0.8	0.6	1.1	-1.7	0.6	-7.4	1.1	1.0	0.6	0.0	1.6	1.2
2015 Oct.	1.6	0.6	3.2	-2.1	0.6	-8.5	1.2	1.1	1.4	-0.1	1.8	1.2
Nov.	1.5	0.7	2.7	-1.7	0.6	-7.3	1.2	1.0	1.2	-0.2	1.3	1.2
Dec.	1.2	0.7	2.0	-1.3	0.5	-5.8	1.2	1.0	0.7	-0.1	1.5	1.2
2016 Jan.	1.0	0.8	1.4	-1.0	0.7	-5.4	1.1	1.0	0.8	0.0	1.6	1.2
Feb.	0.6	0.6	0.6	-1.9	0.7	-8.1	1.1	1.0	0.4	-0.1	1.0	1.3
Mar.	0.8	0.4	1.3	-2.1	0.5	-8.7	1.1	1.0	0.7	0.1	2.1	1.3

Sources: Eurostat and ECB calculations.

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

4 Prices and costs

4.2 Industry, construction and property prices

(annual percentage changes, unless otherwise indicated)

	Industrial producer prices excluding construction										Con-struction	Residential property prices [1]	Experimental indicator of commercial property prices [1]
	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	78.0	72.1	29.3	20.0	22.7	13.8	8.9	27.9			
2013	108.5	-0.2	-0.1	0.4	-0.6	0.6	1.7	2.6	0.3	-1.6	0.3	-1.9	-1.1
2014	106.9	-1.5	-0.9	-0.3	-1.1	0.4	0.1	-0.2	0.3	-4.4	0.3	0.2	1.1
2015	104.0	-2.7	-2.3	-0.5	-1.3	0.7	-0.6	-1.0	0.2	-8.1	0.2	1.6	.
2015 Q1	104.5	-2.9	-2.6	-0.6	-1.5	0.7	-0.7	-1.3	0.2	-8.5	0.2	1.1	2.5
Q2	104.9	-2.1	-1.6	-0.3	-0.7	0.7	-0.8	-1.4	0.1	-6.5	0.4	1.2	3.6
Q3	104.0	-2.6	-2.6	-0.5	-1.1	0.6	-0.6	-1.1	0.1	-8.3	0.2	1.6	5.1
Q4	102.7	-3.1	-2.5	-0.7	-2.0	0.6	-0.2	-0.3	0.2	-9.4	-0.1	2.3	.
2015 Sep.	103.5	-3.2	-3.0	-0.6	-1.6	0.6	-0.4	-0.7	0.2	-10.0	-	-	-
Oct.	103.1	-3.2	-2.8	-0.7	-1.9	0.6	-0.1	-0.3	0.2	-9.8	-	-	-
Nov.	102.9	-3.2	-2.5	-0.7	-2.1	0.6	-0.2	-0.4	0.2	-9.3	-	-	-
Dec.	102.1	-3.0	-2.1	-0.7	-1.9	0.5	-0.3	-0.4	0.2	-8.9	-	-	-
2016 Jan.	100.9	-3.0	-2.0	-0.7	-1.8	0.4	-0.2	-0.2	0.1	-9.1	-	-	-
Feb.	100.2	-4.2	-3.0	-0.8	-2.1	0.4	-0.4	-0.5	-0.1	-12.8	-	-	-

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

1) Experimental data based on non-harmonised sources (see http://www.ecb.europa.eu/stats/html/experiment.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	35.0	65.0	100.0	45.0	55.0
2013	103.7	1.3	0.9	1.1	1.2	0.4	-0.4	-1.3	81.7	-9.0	-13.3	-6.9	-8.2	-9.9	-6.9
2014	104.5	0.9	0.5	0.5	0.8	0.5	-0.7	-1.7	74.5	-8.8	-1.8	-12.1	-4.7	0.4	-8.7
2015	105.8	1.2	0.3	0.2	0.6	0.7	0.1	-2.1	48.3	-4.1	5.2	-9.0	-0.8	4.8	-5.6
2015 Q2	105.7	1.3	0.4	0.3	0.6	0.9	0.9	-1.1	57.4	-0.6	2.0	-2.0	3.9	5.4	2.6
Q3	106.0	1.3	0.3	0.3	0.5	0.7	0.1	-2.3	46.1	-6.5	6.4	-13.1	-3.3	5.7	-10.6
Q4	106.4	1.3	0.4	0.3	0.6	0.7	-0.3	-2.4	40.7	-9.1	3.9	-16.2	-9.3	-3.0	-14.8
2016 Q1	.	.	.	.	.	.	.	.	32.5	-13.3	-4.8	-18.2	-13.7	-9.8	-17.2
2015 Oct.	-	-	-	-	-	-	-	-	43.9	-8.3	3.7	-14.6	-6.9	0.8	-13.3
Nov.	-	-	-	-	-	-	-	-	42.8	-8.0	6.2	-15.6	-8.5	-1.4	-14.7
Dec.	-	-	-	-	-	-	-	-	35.7	-11.1	1.8	-18.5	-12.5	-8.0	-16.5
2016 Jan.	-	-	-	-	-	-	-	-	29.7	-14.9	-3.8	-21.2	-14.7	-9.7	-19.3
Feb.	-	-	-	-	-	-	-	-	31.0	-14.4	-5.5	-19.5	-14.1	-9.5	-18.3
Mar.	-	-	-	-	-	-	-	-	36.5	-10.8	-5.1	-14.1	-12.3	-10.2	-14.2

Sources: Eurostat, ECB calculations and Thomson Reuters (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 2004-06 average import structure; use-weighted: weighted according to 2004-06 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
1999-13	4.8	-	-	-2.1	34.0	57.7	56.7	-	49.9
2014	-0.9	-1.5	1.0	-17.2	14.2	49.6	53.5	49.7	48.2
2015	-2.8	1.4	2.5	-13.3	-1.1	48.9	53.5	49.6	49.0
2016	.	.	.	.	.	.	.	.	.
2015 Q2	-1.3	3.2	2.9	-15.0	-0.9	54.7	54.4	50.4	49.0
Q3	-2.0	1.1	2.2	-12.5	-0.2	49.5	53.6	49.9	49.9
Q4	-2.2	1.9	3.7	-8.6	-0.8	45.6	53.6	49.2	49.6
2016 Q1	-4.7	0.8	3.4	-9.3	-1.7	41.5	52.5	47.7	49.0
2015 Oct.	-2.5	2.0	4.6	-10.1	-2.3	44.3	54.0	48.6	49.9
Nov.	-0.8	2.4	4.1	-8.7	-0.5	45.6	53.3	49.3	49.6
Dec.	-3.2	1.3	2.3	-7.1	0.3	47.0	53.5	49.8	49.4
2016 Jan.	-4.1	0.3	3.2	-8.0	-0.9	42.1	52.7	48.3	49.1
Feb.	-5.6	1.5	3.4	-10.4	-1.4	40.8	52.4	47.6	48.9
Mar.	-4.4	0.5	3.7	-9.4	-2.9	41.6	52.5	47.1	49.1

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	
2013	101.4	1.4	1.5	1.1	1.2	1.9	1.8
2014	102.7	1.3	1.3	1.2	1.3	1.2	1.7
2015	104.2	1.5	1.8	0.6	1.6	1.4	1.5
2015 Q1	97.6	1.9	2.1	1.1	2.0	1.5	1.5
Q2	108.3	1.7	2.2	0.4	1.8	1.6	1.5
Q3	101.6	1.1	1.5	0.2	1.2	0.9	1.5
Q4	109.4	1.3	1.5	0.7	1.2	1.6	1.5

Sources: Eurostat and ECB calculations.

1) Experimental data based on non-harmonised sources (see http://www.ecb.europa.eu/stats/intro/html/experiment.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												
2013	103.7	1.2	-1.2	2.1	0.3	0.9	-1.6	3.6	-2.9	1.0	1.4	2.1
2014	104.7	1.0	-4.0	1.4	0.7	0.5	0.8	1.3	1.4	2.1	1.2	0.7
2015	105.4	0.6	0.3	0.1	0.4	0.6	0.6	0.1	3.3	1.6	1.1	0.9
2015 Q1	105.1	0.8	-0.3	0.6	1.2	0.6	-0.2	-0.1	3.4	2.3	1.2	1.0
Q2	105.3	0.7	0.6	0.3	0.9	0.4	0.3	0.1	3.3	1.4	1.1	1.2
Q3	105.6	0.7	0.8	0.0	0.3	0.6	1.3	1.1	3.1	1.9	1.2	0.8
Q4	106.1	0.9	0.4	0.9	-0.2	1.4	0.8	0.5	3.3	1.1	1.5	0.7
Compensation per employee												
2013	105.2	1.6	3.7	2.7	1.2	0.8	0.6	2.0	0.0	1.1	1.6	1.8
2014	106.6	1.3	-1.6	2.0	1.7	1.2	2.0	1.7	1.6	1.6	1.0	1.2
2015	107.9	1.3	1.0	1.6	0.9	1.3	2.3	1.0	2.7	1.5	1.1	1.3
2015 Q1	107.7	1.2	0.5	1.6	0.5	1.0	1.9	1.5	3.0	1.9	1.2	1.4
Q2	107.9	1.4	0.8	1.9	0.6	1.4	2.6	1.3	1.9	1.4	1.2	1.8
Q3	108.2	1.3	0.9	1.4	1.1	1.4	2.2	1.3	2.5	1.7	1.0	1.4
Q4	108.7	1.3	2.2	1.5	1.1	1.7	2.0	0.9	3.3	1.2	1.3	0.7
Labour productivity per person employed												
2013	101.4	0.4	4.9	0.7	0.8	-0.1	2.2	-1.5	3.0	0.1	0.2	-0.3
2014	101.8	0.3	2.4	0.6	1.0	0.7	1.2	0.4	0.3	-0.5	-0.2	0.5
2015	102.4	0.6	0.7	1.5	0.5	0.7	1.7	0.9	-0.6	-0.1	0.0	0.4
2015 Q1	102.5	0.4	0.8	1.0	-0.6	0.5	2.1	1.6	-0.4	-0.4	0.0	0.3
Q2	102.5	0.7	0.2	1.6	-0.4	1.1	2.3	1.1	-1.3	0.0	0.1	0.6
Q3	102.5	0.6	0.1	1.4	0.8	0.7	1.0	0.3	-0.5	-0.2	-0.1	0.5
Q4	102.5	0.4	1.9	0.6	1.3	0.3	1.2	0.4	0.0	0.1	-0.2	0.0
Compensation per hour worked												
2013	107.2	2.3	3.7	2.9	2.6	1.8	0.8	2.5	1.5	2.2	2.1	3.0
2014	108.5	1.2	-0.4	1.8	1.5	1.3	1.8	1.7	1.2	1.2	0.7	1.3
2015	109.6	1.1	0.7	1.2	0.3	1.3	1.2	1.3	2.4	1.3	1.1	0.9
2015 Q1	109.5	1.4	1.0	1.9	0.5	1.5	1.1	2.1	2.8	2.1	1.0	0.4
Q2	109.6	1.2	0.2	1.5	0.3	1.7	1.5	1.5	0.7	1.1	1.0	1.1
Q3	109.7	1.0	0.6	1.0	0.5	1.4	1.1	1.8	1.9	1.3	0.9	0.4
Q4	110.3	1.2	1.4	0.9	0.4	1.7	1.2	1.0	3.2	1.1	1.7	0.5
Hourly labour productivity												
2013	103.5	1.2	4.7	0.9	2.3	0.7	2.6	-1.0	4.4	1.2	0.7	0.9
2014	103.8	0.3	3.6	0.4	0.9	0.8	1.0	0.5	0.7	-0.6	-0.6	0.6
2015	104.3	0.5	-0.2	1.1	-0.1	1.0	0.9	1.0	-0.9	-0.3	-0.1	0.1
2015 Q1	104.4	0.6	0.1	1.2	-0.4	1.1	1.8	2.0	-0.7	-0.2	-0.1	-0.3
Q2	104.4	0.6	-0.3	1.2	-0.7	1.6	1.5	1.3	-1.9	-0.2	-0.1	0.0
Q3	104.2	0.4	-0.6	1.1	0.3	1.0	-0.3	0.6	-1.7	-0.7	-0.3	-0.2
Q4	104.2	0.3	0.9	0.2	0.4	0.5	0.5	0.2	0.4	0.2	0.0	-0.2

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											
2013	909.7	4,476.3	5,386.1	1,683.3	2,142.8	3,826.1	9,212.1	121.4	418.1	86.5	626.0	9,838.1
2014	968.5	4,952.3	5,920.8	1,598.5	2,148.8	3,747.2	9,668.1	123.9	427.7	104.7	656.3	10,324.3
2015	1,034.5	5,569.8	6,604.3	1,447.5	2,160.6	3,608.1	10,212.4	77.1	479.2	71.0	627.4	10,839.8
2015 Q1	993.5	5,154.9	6,148.4	1,529.1	2,149.9	3,679.1	9,827.5	125.8	437.5	96.6	659.9	10,487.4
Q2	1,014.0	5,298.7	6,312.6	1,480.1	2,160.5	3,640.7	9,953.3	90.3	441.1	98.6	629.9	10,583.2
Q3	1,028.2	5,425.1	6,453.3	1,449.3	2,164.4	3,613.7	10,067.0	98.4	457.6	73.3	629.2	10,696.2
Q4	1,034.5	5,569.8	6,604.3	1,447.5	2,160.6	3,608.1	10,212.4	77.1	479.2	71.0	627.4	10,839.8
2015 Sep.	1,028.2	5,425.1	6,453.3	1,449.3	2,164.4	3,613.7	10,067.0	98.4	457.6	73.3	629.2	10,696.2
Oct.	1,029.9	5,487.7	6,517.6	1,438.5	2,164.3	3,602.8	10,120.4	106.8	473.5	76.9	657.1	10,777.5
Nov.	1,037.4	5,544.3	6,581.8	1,448.3	2,162.6	3,610.8	10,192.6	91.5	485.2	82.0	658.7	10,851.3
Dec.	1,034.5	5,569.8	6,604.3	1,447.5	2,160.6	3,608.1	10,212.4	77.1	479.2	71.0	627.4	10,839.8
2016 Jan.	1,044.5	5,622.6	6,667.1	1,450.2	2,156.8	3,607.0	10,274.0	86.1	471.1	78.7	635.9	10,909.9
Feb. [p)]	1,046.9	5,669.2	6,716.1	1,430.3	2,165.1	3,595.4	10,311.4	92.9	475.3	88.3	656.5	10,967.9
	Transactions											
2013	45.6	250.4	295.9	-114.4	45.5	-68.9	227.0	-11.6	-48.7	-63.3	-123.6	103.4
2014	58.2	379.3	437.5	-90.9	3.2	-87.7	349.8	1.0	10.8	12.7	24.6	374.4
2015	64.8	576.6	641.4	-143.3	12.0	-131.3	510.1	-47.8	49.6	-26.4	-24.7	485.4
2015 Q1	23.8	166.6	190.4	-56.9	2.0	-54.8	135.6	0.6	5.6	-9.3	-3.0	132.6
Q2	20.5	151.9	172.3	-47.6	10.9	-36.7	135.6	-35.2	3.6	3.9	-27.6	108.0
Q3	14.3	129.0	143.3	-35.3	3.1	-32.3	111.0	8.2	18.7	-18.4	8.4	119.4
Q4	6.3	129.1	135.4	-3.5	-4.0	-7.5	127.9	-21.5	21.7	-2.6	-2.4	125.5
2015 Sep.	3.2	42.6	45.9	-12.2	-0.4	-12.6	33.3	-4.1	1.3	-3.9	-6.6	26.7
Oct.	1.7	49.4	51.1	-12.1	-0.2	-12.3	38.7	8.2	16.0	4.4	28.6	67.3
Nov.	7.6	48.3	55.8	7.4	-1.9	5.5	61.3	-15.7	11.8	5.2	1.3	62.6
Dec.	-3.0	31.4	28.5	1.2	-1.9	-0.6	27.9	-14.0	-6.1	-12.2	-32.3	-4.4
2016 Jan.	10.1	54.7	64.8	3.1	-3.7	-0.6	64.2	9.1	-2.7	4.7	11.1	75.3
Feb. [p)]	2.4	46.0	48.4	-18.2	8.3	-9.8	38.6	6.7	4.2	8.5	19.4	58.0
	Growth rates											
2013	5.3	5.9	5.8	-6.4	2.2	-1.8	2.5	-9.2	-10.4	-38.0	-16.1	1.0
2014	6.4	8.4	8.1	-5.4	0.1	-2.3	3.8	0.8	2.6	18.7	4.0	3.8
2015	6.7	11.6	10.8	-9.0	0.6	-3.5	5.3	-38.2	11.5	-26.2	-3.8	4.7
2015 Q1	7.3	10.6	10.1	-7.6	0.1	-3.3	4.6	5.1	5.3	11.7	5.6	4.7
Q2	8.8	12.4	11.8	-10.7	0.5	-4.4	5.2	-30.9	6.9	23.7	0.6	4.9
Q3	8.3	12.4	11.7	-11.4	0.5	-4.7	5.2	-23.0	9.0	-1.5	0.7	4.9
Q4	6.7	11.6	10.8	-9.0	0.6	-3.5	5.3	-38.2	11.5	-26.2	-3.8	4.7
2015 Sep.	8.3	12.4	11.7	-11.4	0.5	-4.7	5.2	-23.0	9.0	-1.5	0.7	4.9
Oct.	8.1	12.3	11.6	-10.9	0.6	-4.3	5.4	-18.8	10.1	6.6	3.2	5.2
Nov.	8.0	11.7	11.1	-9.9	0.3	-4.0	5.2	-29.6	12.3	7.3	2.7	5.0
Dec.	6.7	11.6	10.8	-9.0	0.6	-3.5	5.3	-38.2	11.5	-26.2	-3.8	4.7
2016 Jan.	6.1	11.3	10.5	-7.4	0.7	-2.7	5.5	-29.2	9.4	-16.1	-1.5	5.0
Feb. [p)]	5.7	11.2	10.3	-7.4	1.0	-2.5	5.4	-27.9	9.4	-12.4	-1.1	5.0

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													
2013	1,710.5	1,186.7	397.8	109.8	16.2	5,413.6	2,539.7	874.7	1,994.5	4.7	804.8	194.9	300.1
2014	1,815.2	1,318.7	365.8	111.6	19.2	5,556.6	2,751.2	809.6	1,992.8	3.0	895.8	222.7	333.1
2015	1,927.4	1,480.9	321.8	116.5	8.2	5,751.1	3,061.0	694.3	1,993.1	2.6	989.4	224.6	362.5
2015 Q1	1,848.5	1,381.7	340.2	111.8	14.9	5,597.8	2,839.3	762.8	1,991.9	3.8	947.6	225.7	340.2
Q2	1,858.2	1,410.7	322.6	112.8	12.2	5,646.7	2,910.7	735.1	1,998.1	2.8	955.7	228.1	340.9
Q3	1,901.0	1,451.1	324.0	115.8	10.1	5,695.4	2,987.9	707.4	1,997.0	3.0	966.6	218.0	356.2
Q4	1,927.4	1,480.9	321.8	116.5	8.2	5,751.1	3,061.0	694.3	1,993.1	2.6	989.4	224.6	362.5
2015 Sep.	1,901.0	1,451.1	324.0	115.8	10.1	5,695.4	2,987.9	707.4	1,997.0	3.0	966.6	218.0	356.2
Oct.	1,937.3	1,493.6	316.7	116.9	10.1	5,706.8	3,003.6	705.6	1,994.2	3.5	964.5	222.4	366.1
Nov.	1,934.2	1,486.9	321.4	116.8	9.1	5,728.0	3,033.3	698.5	1,992.2	3.9	990.4	222.4	371.7
Dec.	1,927.4	1,480.9	321.8	116.5	8.2	5,751.1	3,061.0	694.3	1,993.1	2.6	989.4	224.6	362.5
2016 Jan.	1,966.2	1,521.0	319.9	115.5	9.8	5,764.6	3,077.4	694.5	1,989.1	3.6	983.0	224.2	377.7
Feb. [p]	1,977.4	1,530.9	320.9	116.0	9.6	5,795.1	3,102.8	693.4	1,996.0	3.0	979.6	232.0	373.4
Transactions													
2013	98.2	90.1	-6.9	9.1	5.9	107.9	182.4	-100.1	31.9	-6.2	-15.1	-13.3	-7.8
2014	69.5	91.2	-25.5	1.5	2.4	140.5	209.8	-65.7	-1.8	-1.7	53.4	7.5	21.7
2015	99.8	140.2	-34.1	4.9	-11.2	194.8	302.8	-108.2	0.7	-0.4	76.7	-1.7	27.9
2015 Q1	29.5	48.9	-14.9	0.1	-4.6	39.0	79.1	-41.1	0.2	0.8	35.0	1.5	7.5
Q2	13.3	31.7	-16.8	1.0	-2.6	50.7	73.3	-28.0	6.4	-1.0	12.3	2.8	0.9
Q3	42.5	41.0	0.4	3.1	-2.1	48.9	78.3	-27.7	-1.9	0.2	10.3	-10.2	13.4
Q4	14.5	18.6	-2.8	0.7	-2.0	56.2	72.1	-11.4	-4.0	-0.5	19.1	4.2	6.1
2015 Sep.	12.4	9.5	-0.4	1.4	2.0	21.3	28.9	-7.3	-0.2	-0.1	-3.0	-6.6	1.9
Oct.	25.2	31.9	-7.8	1.1	0.0	10.6	15.0	-2.0	-2.9	0.5	-4.5	4.5	9.5
Nov.	-7.6	-10.1	3.8	-0.1	-1.2	21.4	28.6	-5.5	-2.1	0.4	21.1	-2.4	5.5
Dec.	-3.1	-3.3	1.3	-0.3	-0.8	24.2	28.4	-3.9	1.0	-1.3	2.5	2.1	-8.8
2016 Jan.	40.3	41.2	-1.6	-0.9	1.6	13.9	16.4	0.5	-4.0	1.0	-5.7	-0.5	15.0
Feb. [p]	10.9	9.5	1.1	0.5	-0.1	30.4	25.2	-1.1	6.8	-0.6	-3.7	7.9	-2.7
Growth rates													
2013	6.1	8.2	-1.7	8.9	56.4	2.0	7.7	-10.3	1.6	-56.7	-1.9	-6.4	-2.5
2014	4.0	7.6	-6.4	1.3	14.4	2.6	8.3	-7.5	-0.1	-36.9	6.3	4.0	7.3
2015	5.5	10.6	-9.5	4.4	-57.9	3.5	11.0	-13.4	0.0	-14.2	8.4	-0.8	8.3
2015 Q1	4.7	9.9	-9.8	0.8	-5.4	2.8	9.7	-11.2	0.0	-31.2	14.6	-0.5	5.2
Q2	4.3	10.6	-13.9	1.3	-23.5	3.0	10.8	-13.9	0.1	-37.8	13.7	-1.1	5.3
Q3	5.1	10.8	-12.3	2.3	-32.3	3.0	11.1	-15.5	0.0	-37.7	14.2	-4.9	5.8
Q4	5.5	10.6	-9.5	4.4	-57.9	3.5	11.0	-13.4	0.0	-14.2	8.4	-0.8	8.3
2015 Sep.	5.1	10.8	-12.3	2.3	-32.3	3.0	11.1	-15.5	0.0	-37.7	14.2	-4.9	5.8
Oct.	6.6	12.2	-11.5	2.4	-26.4	3.1	11.0	-14.8	0.0	-25.6	10.8	-3.7	9.8
Nov.	5.0	10.0	-11.0	1.9	-31.7	3.3	10.9	-14.5	0.1	-18.1	9.7	-4.7	10.9
Dec.	5.5	10.6	-9.5	4.4	-57.9	3.5	11.0	-13.4	0.0	-14.2	8.4	-0.8	8.3
2016 Jan.	6.5	10.8	-9.0	4.4	-17.6	3.8	10.5	-11.3	0.2	-12.4	9.2	-3.1	9.8
Feb. [p]	6.5	10.5	-7.5	4.7	-28.8	4.0	10.5	-10.1	0.4	-25.5	7.0	1.8	7.8

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) 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								
	Total	Loans	Debt securities	Total	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		
						Adjusted for loan sales and securitisation [2)]						
	1	2	3	4	5	6	7	8	9	10	11	12
Outstanding amounts												
2013	3,404.9	1,096.7	2,308.2	12,709.1	10,544.4	10,929.5	4,353.6	5,222.8	869.2	98.7	1,364.7	800.0
2014	3,605.5	1,131.8	2,473.7	12,562.3	10,510.7	10,920.7	4,271.7	5,200.4	909.8	128.9	1,276.9	774.7
2015	3,893.3	1,109.5	2,783.9	12,679.6	10,591.7	10,989.6	4,273.4	5,307.5	887.3	123.6	1,301.1	786.8
2015 Q1	3,671.7	1,148.5	2,523.2	12,674.1	10,611.8	11,008.5	4,301.5	5,234.0	941.6	134.7	1,274.1	788.2
Q2	3,680.4	1,137.4	2,543.0	12,636.4	10,592.2	10,986.5	4,291.3	5,258.5	906.8	135.5	1,254.8	789.4
Q3	3,815.9	1,127.1	2,688.8	12,652.5	10,564.8	10,963.1	4,274.9	5,277.6	891.1	121.2	1,310.4	777.3
Q4	3,893.3	1,109.5	2,783.9	12,679.6	10,591.7	10,989.6	4,273.4	5,307.5	887.3	123.6	1,301.1	786.8
2015 Sep.	3,815.9	1,127.1	2,688.8	12,652.5	10,564.8	10,963.1	4,274.9	5,277.6	891.1	121.2	1,310.4	777.3
Oct.	3,835.6	1,119.8	2,715.8	12,695.5	10,607.1	11,003.3	4,290.2	5,301.9	890.6	124.3	1,296.6	791.8
Nov.	3,877.8	1,118.4	2,759.4	12,736.0	10,650.2	11,046.6	4,307.5	5,310.0	908.2	124.4	1,287.6	798.2
Dec.	3,893.3	1,109.5	2,783.9	12,679.6	10,591.7	10,989.6	4,273.4	5,307.5	887.3	123.6	1,301.1	786.8
2016 Jan.	3,965.3	1,117.2	2,848.1	12,689.8	10,617.5	11,013.8	4,289.2	5,312.0	890.8	125.5	1,306.0	766.3
Feb. [(p)]	4,005.6	1,117.7	2,888.0	12,728.2	10,658.6	11,043.9	4,301.6	5,330.8	899.8	126.4	1,308.7	760.9
Transactions												
2013	-25.0	-73.5	48.5	-305.7	-248.1	-268.7	-132.9	-4.0	-120.9	9.7	-72.7	15.1
2014	72.0	16.0	56.1	-104.0	-50.3	-32.1	-60.9	-15.4	14.3	11.7	-90.0	36.2
2015	283.8	-20.7	304.6	96.7	68.5	48.5	0.7	98.0	-24.7	-5.5	24.2	4.0
2015 Q1	40.3	16.5	23.8	34.1	45.2	31.7	8.3	19.2	12.4	5.3	-3.5	-7.5
Q2	58.0	-10.7	68.6	0.2	7.6	1.5	-0.3	30.7	-23.8	1.0	-14.1	6.7
Q3	112.2	-10.2	122.3	54.8	-7.9	-2.8	-6.0	24.7	-12.3	-14.4	64.3	-1.6
Q4	73.4	-16.4	89.8	7.6	23.5	18.1	-1.4	23.4	-1.0	2.6	-22.4	6.5
2015 Sep.	35.0	-6.1	41.1	-29.7	-26.0	-27.4	-10.4	11.4	-19.6	-7.4	5.6	-9.3
Oct.	10.1	-7.7	17.8	16.2	27.3	25.3	7.0	15.0	2.2	3.1	-19.1	8.0
Nov.	36.6	-1.5	38.1	18.7	35.4	31.3	12.5	8.3	14.6	0.0	-20.4	3.7
Dec.	26.7	-7.1	33.9	-27.3	-39.1	-38.6	-20.9	0.1	-17.9	-0.5	17.1	-5.2
2016 Jan.	61.5	5.1	56.4	26.8	35.9	33.0	22.3	6.7	4.9	2.0	7.0	-16.0
Feb. [(p)]	36.7	0.1	36.6	44.6	43.2	40.7	15.0	18.8	8.6	0.8	3.8	-2.4
Growth rates												
2013	-0.7	-6.3	2.2	-2.3	-2.3	-2.4	-2.9	-0.1	-12.3	10.9	-5.1	1.9
2014	2.1	1.5	2.4	-0.8	-0.5	-0.3	-1.4	-0.3	1.5	11.9	-6.6	4.5
2015	7.9	-1.8	12.3	0.8	0.6	0.4	0.0	1.9	-2.7	-4.2	1.9	0.5
2015 Q1	2.8	1.9	3.1	-0.2	0.1	0.2	-0.6	0.0	2.4	14.1	-4.9	3.2
Q2	5.1	1.6	6.7	0.2	0.6	0.3	-0.2	1.2	-1.0	17.8	-5.2	3.0
Q3	7.2	0.5	10.2	0.7	0.6	0.4	0.1	1.6	-2.0	-1.4	1.0	1.9
Q4	7.9	-1.8	12.3	0.8	0.6	0.4	0.0	1.9	-2.7	-4.2	1.9	0.5
2015 Sep.	7.2	0.5	10.2	0.7	0.6	0.4	0.1	1.6	-2.0	-1.4	1.0	1.9
Oct.	6.9	0.2	9.9	0.9	0.9	0.7	0.3	1.8	-1.5	2.0	0.0	2.5
Nov.	7.8	-0.7	11.7	1.1	1.2	0.9	0.7	1.9	-0.2	-1.4	-0.7	3.4
Dec.	7.9	-1.8	12.3	0.8	0.6	0.4	0.0	1.9	-2.7	-4.2	1.9	0.5
2016 Jan.	8.7	-2.5	13.8	0.9	0.8	0.6	0.5	1.9	-2.5	-9.6	2.4	-0.3
Feb. [(p)]	10.1	-2.4	15.9	1.2	1.1	0.9	0.6	2.2	-1.5	-6.9	2.9	-1.4

Source: ECB.

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

2) Adjusted for the derecognition of loans on the MFI balance sheet on account of their sale or securitisation.

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 for loan sales and securitisation [4)]					Adjusted for loan sales and securitisation [4)]			
	1	2	3	4	5	6	7	8	9	10
	Outstanding amounts									
2013	4,353.6	4,407.7	1,065.7	740.9	2,547.0	5,222.8	5,546.6	573.6	3,853.7	795.5
2014	4,271.7	4,329.7	1,080.7	720.5	2,470.4	5,200.4	5,545.3	563.4	3,861.0	776.0
2015	4,273.4	4,333.7	1,038.2	758.5	2,476.7	5,307.5	5,639.0	595.6	3,948.3	763.6
2015 Q1	4,301.5	4,357.4	1,089.2	734.6	2,477.8	5,234.0	5,570.3	567.8	3,890.9	775.3
Q2	4,291.3	4,347.6	1,080.8	743.1	2,467.3	5,258.5	5,589.2	578.7	3,908.9	771.0
Q3	4,274.9	4,333.8	1,058.3	745.9	2,470.6	5,277.6	5,611.4	582.4	3,926.5	768.7
Q4	4,273.4	4,333.7	1,038.2	758.5	2,476.7	5,307.5	5,639.0	595.6	3,948.3	763.6
2015 Sep.	4,274.9	4,333.8	1,058.3	745.9	2,470.6	5,277.6	5,611.4	582.4	3,926.5	768.7
Oct.	4,290.2	4,350.6	1,062.6	755.6	2,472.1	5,301.9	5,630.1	594.9	3,940.6	766.5
Nov.	4,307.5	4,365.8	1,076.6	755.6	2,475.3	5,310.0	5,638.7	596.8	3,944.8	768.3
Dec.	4,273.4	4,333.7	1,038.2	758.5	2,476.7	5,307.5	5,639.0	595.6	3,948.3	763.6
2016 Jan.	4,289.2	4,352.3	1,048.5	765.8	2,475.0	5,312.0	5,643.3	596.4	3,953.2	762.4
Feb. [p]	4,301.6	4,360.5	1,051.1	775.8	2,474.8	5,330.8	5,651.7	602.5	3,966.7	761.6
	Transactions									
2013	-132.9	-145.1	-44.3	-44.6	-44.0	-4.0	-15.0	-18.2	27.4	-13.2
2014	-60.9	-64.0	-14.2	2.3	-48.9	-15.4	5.9	-2.9	-3.4	-9.1
2015	0.7	6.4	-45.7	32.3	14.1	98.0	76.7	21.6	80.1	-3.6
2015 Q1	8.3	5.7	-1.0	7.5	1.8	19.2	11.1	2.0	17.4	-0.2
Q2	-0.3	0.9	-3.0	7.3	-4.5	30.7	20.8	9.4	22.5	-1.2
Q3	-6.0	-0.7	-19.1	4.0	9.2	24.7	26.5	5.2	19.8	-0.3
Q4	-1.4	0.5	-22.6	13.5	7.6	23.4	18.3	5.1	20.3	-1.9
2015 Sep.	-10.4	-9.8	-24.0	3.6	10.0	11.4	9.7	1.3	10.2	-0.1
Oct.	7.0	10.2	-5.6	10.1	2.5	15.0	7.5	3.0	12.5	-0.6
Nov.	12.5	9.4	15.5	-2.4	-0.7	8.3	8.7	2.6	3.6	2.1
Dec.	-20.9	-19.0	-32.5	5.8	5.7	0.1	2.1	-0.6	4.2	-3.4
2016 Jan.	22.3	24.1	13.1	6.2	3.0	6.7	6.2	1.2	6.0	-0.6
Feb. [p]	15.0	17.9	3.5	11.4	0.1	18.8	9.4	6.3	13.2	-0.7
	Growth rates									
2013	-2.9	-3.2	-4.0	-5.6	-1.7	-0.1	-0.3	-3.0	0.7	-1.6
2014	-1.4	-1.4	-1.3	0.3	-1.9	-0.3	0.1	-0.5	-0.1	-1.1
2015	0.0	0.1	-4.2	4.4	0.6	1.9	1.4	3.8	2.1	-0.5
2015 Q1	-0.6	-0.7	-0.8	2.0	-1.3	0.0	0.3	-0.1	0.1	-0.8
Q2	-0.2	-0.4	-1.1	2.2	-0.5	1.2	0.6	1.8	1.6	-0.9
Q3	0.1	0.1	-2.7	3.6	0.2	1.6	1.1	2.6	1.8	-0.5
Q4	0.0	0.1	-4.2	4.4	0.6	1.9	1.4	3.8	2.1	-0.5
2015 Sep.	0.1	0.1	-2.7	3.6	0.2	1.6	1.1	2.6	1.8	-0.5
Oct.	0.3	0.4	-3.1	5.0	0.4	1.8	1.2	2.9	2.0	-0.4
Nov.	0.7	0.7	-0.9	3.5	0.5	1.9	1.4	3.6	2.1	-0.2
Dec.	0.0	0.1	-4.2	4.4	0.6	1.9	1.4	3.8	2.1	-0.5
2016 Jan.	0.5	0.6	-3.1	4.7	0.8	1.9	1.4	4.0	2.1	-0.5
Feb. [p]	0.6	0.9	-2.9	6.3	0.5	2.2	1.6	5.2	2.3	-0.3

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 the derecognition of loans on the MFI balance sheet on account of their sale or securitisation.

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										
2013	261.7	7,311.0	2,371.2	91.5	2,507.2	2,341.1	1,146.5	150.2	183.8	121.9
2014	264.6	7,188.6	2,248.9	92.2	2,381.7	2,465.8	1,383.3	226.5	184.5	139.7
2015	278.3	7,069.6	2,184.2	79.8	2,254.1	2,551.6	1,331.3	283.5	205.9	135.6
2015 Q1	283.2	7,320.8	2,258.5	90.6	2,395.7	2,576.0	1,505.5	240.1	236.3	160.6
Q2	265.2	7,169.4	2,223.1	86.7	2,330.6	2,529.0	1,459.0	242.1	224.6	147.1
Q3	287.6	7,101.6	2,223.8	83.7	2,264.4	2,529.7	1,361.8	255.2	213.6	140.0
Q4	278.3	7,069.6	2,184.2	79.8	2,254.1	2,551.6	1,331.3	283.5	205.9	135.6
2015 Sep.	287.6	7,101.6	2,223.8	83.7	2,264.4	2,529.7	1,361.8	255.2	213.6	140.0
Oct.	347.8	7,107.3	2,207.4	82.2	2,257.1	2,560.5	1,396.2	305.3	196.4	144.9
Nov.	296.0	7,123.8	2,189.4	80.3	2,284.3	2,569.9	1,385.8	271.5	217.7	146.0
Dec.	278.3	7,069.6	2,184.2	79.8	2,254.1	2,551.6	1,331.3	283.5	205.9	135.6
2016 Jan.	306.2	7,049.6	2,174.2	78.6	2,221.8	2,575.0	1,308.2	302.4	215.0	141.7
Feb. [(p)]	294.6	7,074.4	2,185.3	77.6	2,193.1	2,618.4	1,305.8	297.2	246.6	142.5
Transactions										
2013	-44.9	-89.7	-19.0	-14.3	-137.3	80.9	362.0	-62.5	32.2	43.7
2014	-5.7	-162.5	-122.3	2.0	-151.4	109.1	238.4	-0.2	0.7	17.8
2015	7.5	-217.0	-104.0	-13.5	-203.6	104.1	-97.2	-7.4	21.4	-4.0
2015 Q1	15.5	-36.9	-27.8	-2.6	-52.3	45.8	3.4	33.3	51.7	21.0
Q2	-18.0	-87.3	-34.7	-3.9	-50.5	1.9	-0.2	-55.3	-11.8	-13.6
Q3	22.0	-37.6	6.1	-3.1	-58.5	17.9	-64.1	0.9	-11.0	-7.1
Q4	-11.9	-55.2	-47.5	-3.9	-42.3	38.5	-36.3	13.7	-7.7	-4.3
2015 Sep.	12.8	-19.9	-1.1	-0.6	-25.1	6.9	7.4	6.9	6.6	11.6
Oct.	58.0	-33.9	-23.4	-1.5	-17.5	8.6	10.7	54.4	-17.2	5.0
Nov.	-51.8	-11.2	-21.1	-1.9	-6.2	18.0	-15.3	-40.3	21.3	1.1
Dec.	-18.1	-10.1	-3.0	-0.5	-18.5	11.9	-31.8	-0.4	-11.7	-10.4
2016 Jan.	27.8	-33.3	-9.3	-1.1	-22.5	-0.4	-30.0	11.5	9.1	6.9
Feb. [(p)]	-11.5	-14.8	11.4	-1.0	-30.9	5.7	-49.9	0.3	31.6	0.9
Growth rates										
2013	-14.7	-1.2	-0.8	-13.5	-5.1	3.4	-	-	10.3	23.3
2014	-2.2	-2.2	-5.2	2.2	-6.0	4.6	-	-	0.4	14.6
2015	3.1	-3.0	-4.6	-14.4	-8.4	4.2	-	-	11.6	-2.9
2015 Q1	5.5	-2.7	-5.9	-0.1	-6.8	4.6	-	-	33.4	37.6
Q2	-6.0	-3.0	-5.3	-3.4	-8.1	4.3	-	-	31.0	23.5
Q3	11.8	-3.4	-3.7	-9.1	-9.3	3.0	-	-	30.5	15.0
Q4	3.1	-3.0	-4.6	-14.4	-8.4	4.2	-	-	11.6	-2.9
2015 Sep.	11.8	-3.4	-3.7	-9.1	-9.3	3.0	-	-	30.5	15.0
Oct.	29.6	-3.5	-4.2	-10.1	-9.0	3.0	-	-	7.2	19.6
Nov.	10.3	-3.4	-4.9	-11.4	-8.8	3.6	-	-	18.0	11.7
Dec.	3.1	-3.0	-4.6	-14.4	-8.4	4.2	-	-	11.6	-2.9
2016 Jan.	3.4	-3.3	-4.4	-15.3	-8.8	3.4	-	-	5.7	7.0
Feb. [(p)]	10.0	-3.4	-3.6	-15.5	-9.4	3.1	-	-	8.2	-1.8

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	Socual security funds	
	1	2	3	4	5	6
2011	-4.2	-3.3	-0.7	-0.2	0.0	-1.2
2012	-3.7	-3.4	-0.3	0.0	0.0	-0.6
2013	-3.0	-2.6	-0.2	0.0	-0.1	-0.2
2014	-2.6	-2.2	-0.2	0.0	-0.1	0.1
2014 Q4	-2.6	.	.	.	.	0.1
2015 Q1	-2.5	.	.	.	.	0.1
Q2	-2.4	.	.	.	.	0.1
Q3	-2.1	.	.	.	.	0.3

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
2011	44.9	44.5	11.6	12.6	15.1	0.4	49.1	44.8	10.4	5.3	3.0	22.2	4.3
2012	46.1	45.6	12.2	12.9	15.3	0.4	49.7	45.2	10.4	5.4	3.0	22.6	4.5
2013	46.6	46.1	12.5	12.9	15.5	0.5	49.6	45.5	10.4	5.4	2.8	23.0	4.1
2014	46.8	46.3	12.5	13.1	15.5	0.5	49.4	45.4	10.3	5.3	2.7	23.1	3.9
2014 Q4	46.8	46.3	12.5	13.1	15.5	0.5	49.4	45.4	10.3	5.3	2.7	23.1	3.9
2015 Q1	46.7	46.2	12.5	13.1	15.5	0.5	49.2	45.3	10.3	5.3	2.6	23.1	3.9
Q2	46.6	46.2	12.6	13.1	15.5	0.5	49.0	45.2	10.3	5.3	2.5	23.1	3.8
Q3	46.6	46.1	12.6	13.1	15.4	0.5	48.7	45.0	10.2	5.3	2.5	23.1	3.7

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
2011	86.0	2.9	15.5	67.5	42.9	24.4	43.1	12.2	73.8	20.4	30.0	35.6	84.2	1.8
2012	89.3	3.0	17.4	68.9	45.5	26.2	43.8	11.4	78.0	19.7	31.7	37.9	87.2	2.2
2013	91.1	2.7	17.2	71.2	46.0	26.2	45.1	10.4	80.7	19.4	32.2	39.4	89.1	2.0
2014	92.1	2.7	17.0	72.4	45.3	26.0	46.8	10.1	82.0	19.0	32.1	41.0	90.1	2.0
2014 Q4	92.1	2.7	17.0	72.4	.	.	.	.	.	.	.	.	.	.
2015 Q1	92.9	2.7	16.8	73.4	.	.	.	.	.	.	.	.	.	.
Q2	92.3	2.8	16.2	73.3	.	.	.	.	.	.	.	.	.	.
Q3	91.6	2.7	16.1	72.8	.	.	.	.	.	.	.	.	.	.

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
2011	2.1	1.2	0.2	-0.4	0.2	-0.2	-0.2	-0.1	0.4	0.2	0.8	3.9
2012	3.4	0.6	0.0	1.0	0.3	0.3	-0.1	0.5	-1.3	0.3	2.7	5.0
2013	1.7	0.2	-0.3	-0.6	-0.5	-0.4	-0.1	0.3	-0.1	0.4	1.9	2.7
2014	1.0	-0.1	0.0	-0.1	0.3	-0.2	-0.3	0.0	0.0	0.1	1.1	2.6
2014 Q4	1.0	-0.1	0.0	-0.1	0.3	-0.1	-0.3	0.1	-0.1	0.2	1.1	2.7
2015 Q1	0.8	-0.1	0.0	0.0	0.3	-0.1	-0.2	0.0	-0.1	0.1	0.9	2.6
Q2	-0.6	-0.1	-0.9	-0.9	-0.3	-0.3	-0.2	-0.2	0.0	0.0	0.5	1.5
Q3	-0.6	-0.3	-0.5	-0.3	0.2	-0.3	-0.2	-0.1	0.0	-0.1	0.1	1.7

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
2013	16.5	14.4	5.0	2.1	0.5	6.3	3.5	1.7	1.3	3.7	2.8	1.2	1.8
2014	15.9	13.9	5.1	2.0	0.5	6.4	3.1	1.5	0.5	3.5	2.7	0.8	1.6
2015	14.9	12.9	4.3	2.0	0.5	6.6	2.9	1.2	0.1	3.3	3.0	0.4	1.2
2014 Q4	15.9	13.9	5.1	2.0	0.5	6.4	3.1	1.5	0.5	3.5	2.7	0.8	1.6
2015 Q1	15.1	13.1	4.5	2.0	0.5	6.5	3.1	1.3	0.3	3.5	2.9	0.6	1.7
Q2	15.1	13.1	4.8	2.0	0.5	6.6	3.0	1.3	0.2	3.4	2.9	0.5	1.5
Q3	15.1	13.1	4.3	2.0	0.5	6.6	2.9	1.2	0.1	3.3	3.0	0.4	1.4
2015 Oct.	15.5	13.5	4.2	2.0	0.5	6.6	2.9	1.2	0.1	3.3	3.0	0.4	1.4
Nov.	15.6	13.6	4.5	2.0	0.5	6.5	2.9	1.2	0.1	3.3	3.0	0.4	1.4
Dec.	14.9	12.9	4.3	2.0	0.5	6.6	2.9	1.2	0.1	3.3	3.0	0.4	1.2
2016 Jan.	15.1	13.2	5.4	2.0	0.5	6.6	2.8	1.2	0.1	3.3	3.0	0.3	1.2
Feb.	15.4	13.5	4.9	1.9	0.5	6.6	2.8	1.2	0.0	3.2	3.0	0.3	1.2
Mar.	15.4	13.6	4.8	1.9	0.5	6.6	2.8	1.2	0.0	3.2	3.0	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 (+)								
2011	-4.1	-1.0	1.2	-12.5	-10.2	-9.5	-5.1	-3.5	-5.7
2012	-4.1	-0.1	-0.3	-8.0	-8.8	-10.4	-4.8	-3.0	-5.8
2013	-2.9	-0.1	-0.1	-5.7	-12.4	-6.9	-4.1	-2.9	-4.9
2014	-3.1	0.3	0.7	-3.9	-3.6	-5.9	-3.9	-3.0	-8.9
2014 Q4	-3.1	0.3	0.7	-3.9	-3.6	-5.9	-3.9	-3.0	-8.9
2015 Q1	-3.3	0.4	0.5	-3.6	-4.7	-5.9	-3.9	-3.0	-0.2
Q2	-3.1	0.4	0.6	-3.0	-5.3	-5.5	-3.9	-2.9	-0.4
Q3	-3.0	0.8	0.7	-2.5	-5.4	-5.3	-3.7	-2.8	-0.9
	Government debt								
2011	102.2	78.4	5.9	109.3	172.0	69.5	85.2	116.4	65.8
2012	104.1	79.7	9.5	120.2	159.4	85.4	89.6	123.2	79.3
2013	105.1	77.4	9.9	120.0	177.0	93.7	92.3	128.8	102.5
2014	106.7	74.9	10.4	107.5	178.6	99.3	95.6	132.3	108.2
2014 Q4	106.7	74.9	10.4	107.5	178.6	99.3	95.6	132.3	108.2
2015 Q1	110.9	74.3	10.0	104.7	169.9	99.7	97.5	135.3	107.5
Q2	109.3	72.5	9.9	102.1	168.9	99.3	97.7	136.0	110.4
Q3	108.7	71.9	9.8	99.4	171.0	99.3	97.0	134.6	109.6

	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovenia	Slovakia	Finland
	10	11	12	13	14	15	16	17	18	19
	Government deficit (-)/surplus (+)									
2011	-3.4	-8.9	0.5	-2.6	-4.3	-2.6	-7.4	-6.6	-4.1	-1.0
2012	-0.8	-3.1	0.2	-3.6	-3.9	-2.2	-5.7	-4.1	-4.2	-2.1
2013	-0.9	-2.6	0.7	-2.6	-2.4	-1.3	-4.8	-15.0	-2.6	-2.5
2014	-1.5	-0.7	1.4	-2.1	-2.4	-2.7	-7.2	-5.0	-2.8	-3.3
2014 Q4	-1.6	-0.7	1.4	-2.1	-2.4	-2.7	-7.2	-5.0	-2.8	-3.3
2015 Q1	-1.9	-0.8	0.7	-2.5	-2.0	-2.2	-7.2	-4.7	-2.8	-3.3
Q2	-2.0	0.3	0.5	-2.2	-1.9	-2.2	-6.4	-4.6	-2.8	-2.8
Q3	-2.0	0.0	0.2	-1.7	-1.7	-2.4	-3.2	-4.1	-2.6	-2.9
	Government debt									
2011	42.8	37.2	19.2	69.8	61.7	82.2	111.4	46.4	43.3	48.5
2012	41.4	39.8	22.1	67.6	66.4	81.6	126.2	53.7	51.9	52.9
2013	39.1	38.8	23.4	69.6	67.9	80.8	129.0	70.8	54.6	55.6
2014	40.6	40.7	23.0	68.3	68.2	84.2	130.2	80.8	53.5	59.3
2014 Q4	40.8	40.7	22.9	66.9	68.2	84.2	130.2	80.8	53.5	59.3
2015 Q1	35.6	38.0	22.2	68.5	69.2	84.9	130.3	81.8	53.9	60.6
Q2	35.3	37.6	21.6	67.4	67.1	86.3	128.6	80.8	54.3	62.4
Q3	36.4	38.1	21.3	66.3	66.3	85.3	130.5	84.1	53.5	61.2

Source: Eurostat.

Postal address 60640 Frankfurt am Main, Germany
Telephone +49 69 1344 0
Website www.ecb.europa.eu

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