1 Macro-financial and credit environment

Macro-financial conditions *have improved further in the euro area, with the economic expansion becoming more robust alongside continued favourable financing conditions, upbeat economic and financial market sentiment, as well as low macroeconomic and declining political uncertainty. Shaping developments in the euro area, global growth is being supported by both advanced and emerging economies amid increasingly synchronised growth patterns. That said, uncertainties regarding the timing and pace of withdrawal of monetary accommodation in major advanced economies, coupled with elevated geopolitical tensions, have the potential to spark an increase in global risk aversion and a disorderly unwinding of global search-for-yield flows, thereby weighing on the underlying global and euro area growth momentum.*

Sovereign stress *conditions have improved in the euro area in recent months as political uncertainties surrounding national elections in individual euro area countries have subsided. Cyclical tailwinds coupled with benign financing conditions underpin an improved fiscal outlook, but also mask underlying fiscal vulnerabilities in some euro area sovereigns. Above all, sovereign debt sustainability concerns remain given a slowdown in fiscal and structural reform efforts against the backdrop of increasing political fragmentation, and the risk of a reversal of bond risk premia.*

The euro area ***non-financial private sector*** *continued to recover in line with the ongoing cyclical upturn of the euro area economy, but legacy balance sheet concerns continue to linger in several countries. Improving income and earnings prospects for households and non-financial firms, coupled with continued benign financing conditions, should help support the ongoing process of deleveraging and mitigate debt servicing concerns in countries with elevated levels of household and/or non-financial corporate debt. That said, an abrupt rise in long-term interest rates, triggered primarily by a global risk repricing, may have the potential to spark renewed debt sustainability concerns.*

The upturn in euro area residential and commercial ***property markets*** *has remained intact. While this upturn is gradually becoming more broad-based, heterogeneity across countries, regions and property types remains. Overall, residential property price valuations appear to be broadly in line with fundamentals for the euro area as a whole, while prime commercial property valuations have departed further away from long-term averages. Favourable financing conditions coupled with an improved economic outlook should underpin the sustainability of the recovery, but buoyant developments in some countries and asset classes may warrant closer monitoring in the current low-yield environment.*

1.1 Euro area economic expansion is becoming increasingly resilient, with risks to the outlook broadly balanced

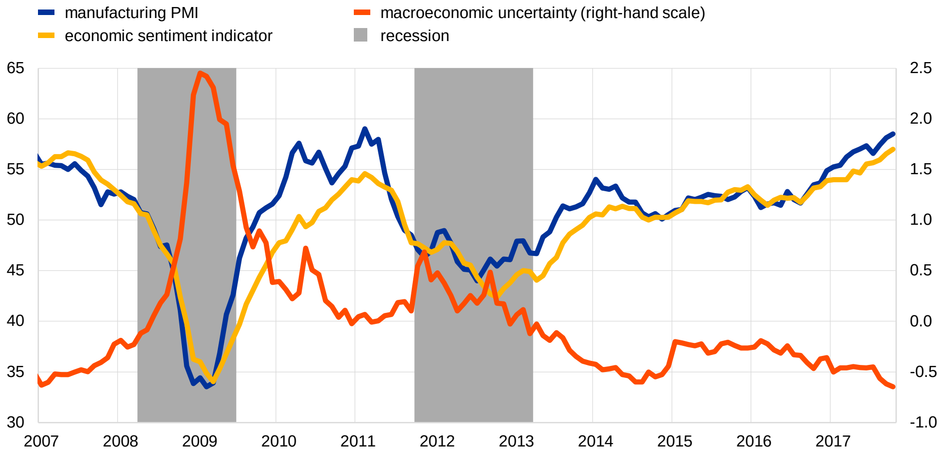
Economic activity has gathered momentum in the euro area. In the first half of 2017, domestic demand continued to be the main engine of economic growth, along with a small positive contribution from net exports. Favourable financing conditions, reinforced by the ECB's very accommodative monetary policy stance, the ongoing recovery in labour and housing markets, as well as improved income and earnings prospects for euro area households and non-financial corporations, continue to lend support to private consumption and the recovery in business and residential investment. At the same time, the strengthening of global economic activity underpins euro area foreign demand. The cyclical upturn in the euro area is bolstered by upbeat business and consumer sentiment, as well as record low macroeconomic uncertainty (see **Chart 1.1**). In particular, the lingering political uncertainties surrounding a number of national elections in major euro area countries in the earlier part of 2017 have gradually receded, even if being partly offset by increased geopolitical concerns across the globe (see Chart 10 in the Overview).

Chart 1.1

Economic sentiment has improved considerably in the euro area amid low macroeconomic uncertainty

Composite index of macroeconomic uncertainty, economic sentiment indicator and manufacturing Purchasing Managers' Index in the euro area

(Jan. 2007 – Oct. 2017, standard deviations from mean, index points, diffusion index: 50+ = expansion)



Sources: Markit, European Commission (DG ECFIN) and ECB calculations.
Notes: Macroeconomic uncertainty is captured by examining a number of measures of uncertainty compiled from various sources, including: (i) measures of economic agents' perceived uncertainty about the future economic situation based on surveys; (ii) measures of uncertainty or of risk aversion based on financial market indicators; and (iii) measures of economic policy uncertainty. For further details of the methodology, see "The impact of uncertainty on activity in the euro area", *Economic Bulletin,* Issue 8, ECB, 2016. The grey areas reflect euro area recessions as identified by the Centre for Economic Policy Research (CEPR). For scaling purposes, the original economic sentiment indicator has been divided by two.

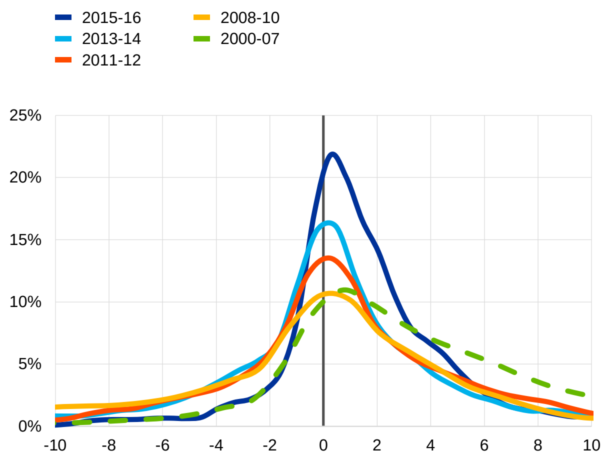
Economic growth in the euro area is becoming increasingly resilient amid narrowing cross-country dispersion. The distribution of growth rates across euro area countries and sectors has narrowed further compared with earlier stages of the euro area recovery. The rightward shift of the distribution reflects a broadening of the economic recovery, even though the current distribution still indicates some convergence towards lower average growth rates when compared with the pre-crisis period (see **Chart 1.2**). Nonetheless, this overall decline in cross-country dispersion underpins the resilience of the economic expansion in the euro area. In line with overall economic activity, labour market conditions have continued to improve. Employment gains have been broad-based across countries and sectors, with the number of employed even surpassing the pre-crisis peak recorded in 2008. At the same time, the aggregate euro area unemployment rate has dropped to levels last seen in early 2009, but heterogeneity across countries remains elevated. Although there still seems to be considerable underutilisation in the labour market, signs of labour shortages in some sectors and countries are increasing.

Chart 1.2

Economic growth has become more broad-based across countries and sectors

Distribution of real value-added growth rates across euro area countries and sectors

(unweighted kernel densities)



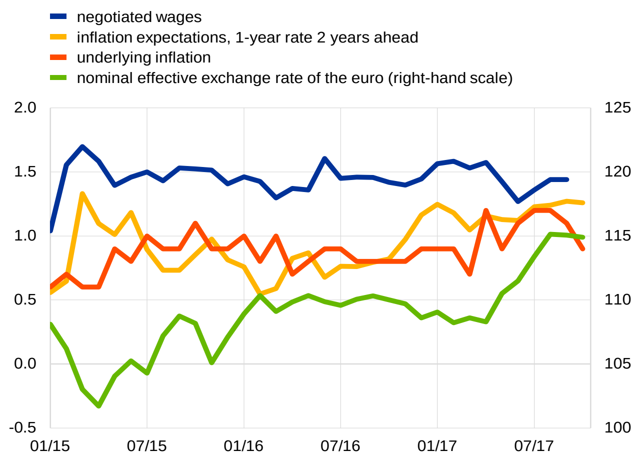
Sources: Eurostat and ECB calculations.
Note: The distributions are calculated for each period using the year-on-year growth rates for 162 country-sector pairs (9 sectors across 18 countries).

Chart 1.3

Moderate nominal developments in the euro area amid a recent appreciation of the euro exchange rate

Developments in the HICP excluding energy and food prices, market-based inflation expectations, negotiated wages and the nominal effective exchange rate of the euro

(Jan. 2015 – Oct. 2017, percentages, annual percentage changes)



Sources: Bloomberg, Eurostat, ECB and ECB calculations.
Note: The nominal effective exchange rate of the euro is measured against the currencies of 38 of the euro area's most important trading partners.

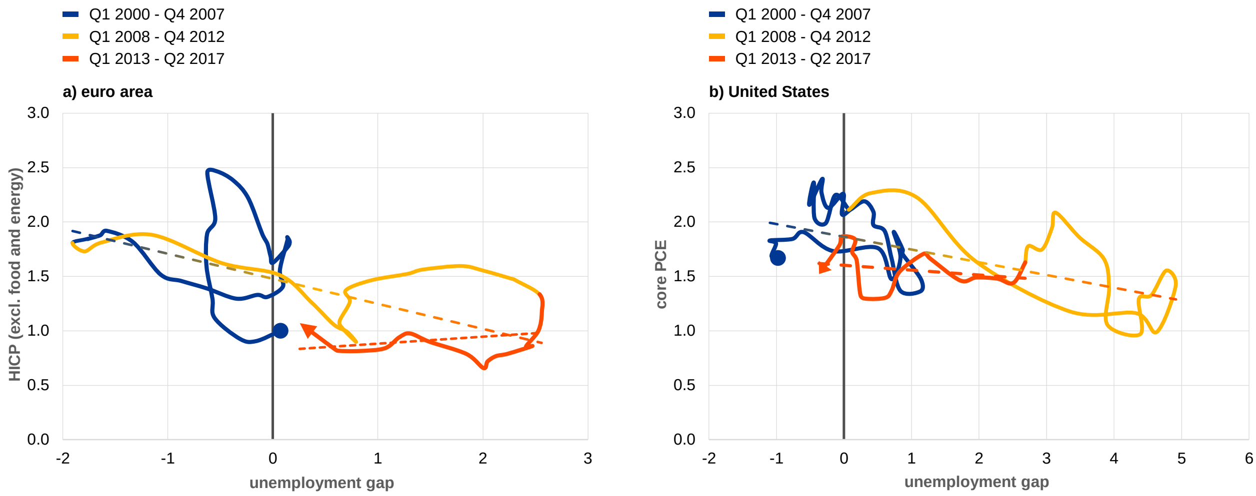
Euro area nominal growth prospects are also set to improve gradually. Following the spike at the turn of 2016-17, euro area HICP inflation has been broadly stable since the publication of the previous FSR, but is likely to temporarily decline towards the end of 2017, mainly reflecting base effects in energy prices. Having ticked up moderately in recent months, measures of underlying inflation have yet to show convincing signs of a sustained upward trend, as domestic cost pressures, including wage growth, are still subdued (see **Chart 1.3**). The recent appreciation of the euro exchange rate implies some moderation in price pressures, but nominal growth prospects are envisaged to improve gradually as underlying inflation picks up, supported by monetary policy measures, the continuing economic expansion and the corresponding gradual absorption of economic slack. Regarding the relationship between economic slack and underlying inflation, past regularities may prove less reliable in the post-crisis environment, as reflected by tentative signs of a flattening of the Phillips curve, in particular in the euro area, but to a lesser extent also in the United States (see **Chart 1.4**). This may hamper market participants' ability to use the outlook for real economic activity to extract signals regarding the timing and pattern of the normalisation of monetary policies. All in all, according to the September 2017 ECB staff macroeconomic projections for the euro area, headline inflation is foreseen to average 1.5% in 2017 and to decline to 1.2% in 2018, mainly driven by base effects in the energy component, before rising to 1.5% in 2019.

Chart 1.4

Tentative signs of a flattening of the Phillips curve, mainly in the euro area, but to a lesser extent also in the United States

Unemployment gap and the HICP/PCE (excluding food and energy) in the euro area and the United States

(Q1 2000 – Q2 2017, percentage points, annual percentage change)



Sources: European Commission (AMECO database), ECB and ECB calculations.
Notes: The unemployment gap is calculated as the difference between the unemployment rate and the non-accelerating inflation rate of unemployment. PCE stands for personal consumption expenditure.

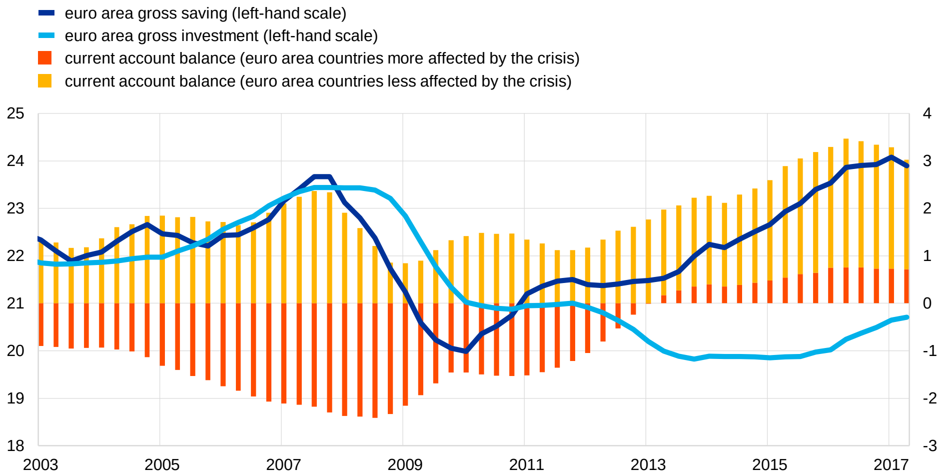
External rebalancing appears to have slowed down in the euro area more recently. Following sharp current account reversals in euro area countries which entered the crisis with large current account deficits and a further strengthening of external positions in countries with sizeable pre-crisis surpluses (e.g. Germany), the current account surplus for the euro area as a whole appears to have stabilised at above 3% of GDP at the turn of 2016-17. This reflects a pick-up in investment which broadly offset the continued rise in gross saving, after a prolonged period when the saving-investment gap widened (see **Chart 1.5**). Although the net international investment position of most countries with large net foreign liabilities has stabilised thanks to the current account improvements of recent years, stock imbalances continue to be high in some euro area countries that were more affected by the crisis. Looking ahead, downward pressures on current account balances may stem from the cyclical upturn in economic activity in the euro area, the recent appreciation of the euro and higher commodity prices, potentially delaying the transition towards more balanced external positions in some euro area countries with continued rebalancing needs of a more structural nature.

Chart 1.5

Euro area current account surpluses have stabilised at high levels with the pick-up in investment

Gross saving and gross fixed capital formation in the euro area

(Q1 2003 – Q2 2017, percentage of GDP, four-quarter moving sums)



Sources: ECB and ECB calculations.
Note: Euro area countries that were more affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain, while countries that were less affected by the crisis comprise all other euro area countries.

Risks surrounding the euro area growth outlook are broadly balanced. The very accommodative monetary policy stance, past progress in deleveraging across sectors and the continued improvement in the labour market and bank lending conditions are projected to sustain domestic demand, while a gradually firming global recovery is expected to support exports despite the recent appreciation of the euro. Following a post-crisis peak of 2.2% in 2017, the September 2017 ECB staff macroeconomic projections for the euro area envisage real GDP growth of 1.8% on average in 2018 and 2019. The risks surrounding this outlook seem to be broadly balanced. On the upside, the current positive cyclical momentum, as mirrored by favourable business and consumer sentiment, increases the chances of a stronger than expected economic upswing. At the same time, downside risks primarily relate to global factors, such as a potential disorderly tightening of global financial conditions or a further rise in (geo)political uncertainties. That said, a sluggish pace of structural reform implementation, further balance sheet adjustment needs in the public and/or non-financial private sectors, as well as elevated political and policy uncertainties (including those related to the ongoing negotiations on the future relationship between the United Kingdom and the European Union) may weigh on the cyclical momentum in individual euro area countries.

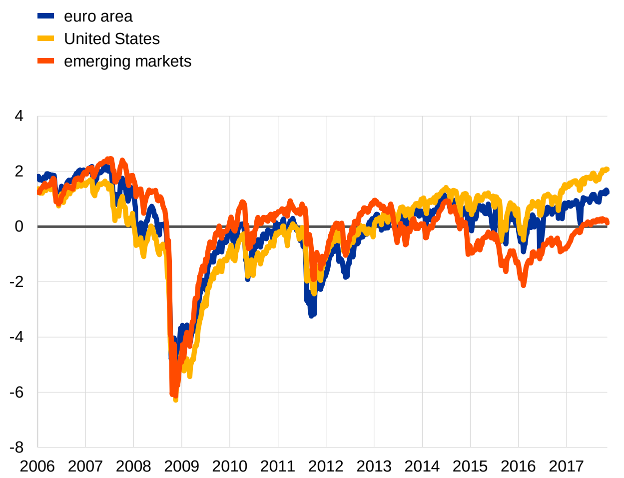
Underpinning developments in the euro area, the global economy continued along a sustained growth path. Underlying growth trajectories have become more synchronised across advanced and emerging economies against the backdrop of overall supportive global financial conditions, as well as a continued rise in global risk appetite (see **Chart 1.6**). Global economic activity is projected to accelerate moderately, but the pace of expansion will remain below pre-crisis rates, in line with lower potential growth estimates for most advanced and emerging economies. While the upbeat consumer and business sentiment may underpin a stronger cyclical momentum, the risks to the outlook remain skewed to the downside and relate, in particular, to the possibility of an increase in trade protectionism, a potential disorderly tightening of global financial conditions, possible disruptions associated with China's reform and liberalisation process, as well as heightened (geo)political uncertainties.

Chart 1.6

Positive risk sentiment in advanced and emerging economies underpins the recovery in global growth

Composite financial risk indices for the euro area, emerging markets and the United States

(Jan. 2006 – Nov. 2017, standard deviation from mean)



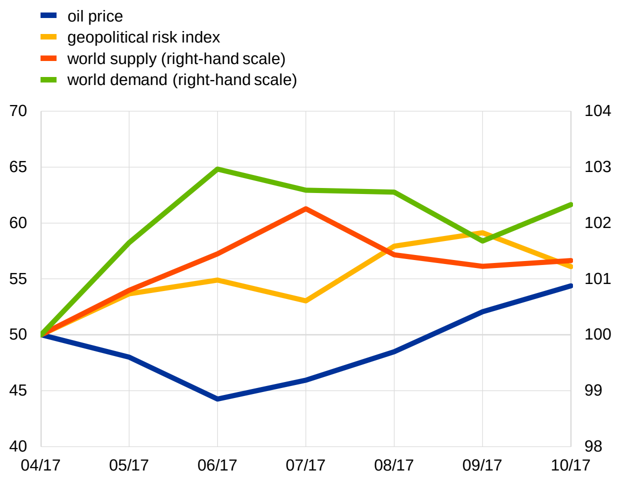
Sources: Bloomberg and ECB calculations.
Notes: The negative of the first principal component score is used to condense the information from several market risk measures via principal component analysis whereby a higher risk index indicates an increase in risk appetite. For the euro area, three components are included: the EURO STOXX 50 volatility index, the euro area corporate BBB spread against ten-year euro area government bonds, as well as the equity-to-bond market return ratio capturing overall risk perception, hedging demand, investor sentiment and valuation concerns. Similarly, for the United States, the CBOE VIX index, the US corporate BBB spread and the ratio of the S&P 500 return to the US bond market return are used. The emerging market index captures an emerging market currency volatility index, the EMBIG spread and a modified version of the equity-to-bond market return ratio. The underlying series are weekly averages of closing prices and each component is z-standardised.

Chart 1.7

Oil prices have picked up recently, driven by both increased demand and geopolitical concerns

Oil price, world supply and demand, as well as geopolitical risk index for commodity exporters

(Apr. 2017 – Oct. 2017; index: Apr. 2017 = 50 (left-hand scale) and 100 (right-hand scale))



Sources: Bloomberg, Haver Analytics and ECB calculations.
Note: The geopolitical risk index for commodity exporters shows a six-month moving average. For further details, see Caldara, D. and Iacoviello, M., "Measuring geopolitical risk", working paper, Board of Governors of the Federal Reserve System, August 2017.

Global commodity prices have edged up amid continued low volatility. Oil prices (Brent) have trended upwards since mid-2017, hitting almost USD 65 per barrel in mid-November, the highest level since mid-2015. The recovery in oil prices helps attenuate financial stability concerns surrounding the oil industry and to ease macro-fiscal pressures on oil-exporting emerging economies. Oil market fundamentals have played a key role in shaping this development, as stronger than expected oil demand and, on the supply side, somewhat stronger compliance with the OPEC production cut agreement (see **Chart 1.7**) have both contributed to tighter market conditions. At the same time, geopolitical uncertainties appear to have risen, bearing upside risks to oil prices in the event of unexpected supply disruptions. By contrast, a larger than expected rise in US shale oil production remains the largest downside risk.

The cyclical upswing in advanced economies is ongoing amid continued policy support. Economic activity in advanced economies outside the euro area is supported by fairly benign macro-financial sentiment, improving labour market conditions, a steady recovery in housing markets and receding headwinds from private sector deleveraging in several countries. While remaining supportive overall, monetary policies continued to diverge across major advanced economies, as the prospect of further withdrawal of monetary support in the United States contrasts with continued monetary accommodation in Japan and the United Kingdom. The outlook for advanced economies entails a modest expansion and output gaps that gradually turn positive, underpinned by prolonged monetary and fiscal support.

While growth prospects in advanced economies appear resilient, downside risks to the medium-term growth outlook remain. Overall, policy uncertainties remain elevated in advanced economies and continue to relate, in particular, to the medium-term growth prospects of the UK economy following the withdrawal from the European Union, as well as the eventual fiscal and monetary policy mix in the United States and its implications for the US and global economies. At the same time, a possible further strengthening of protectionist tendencies across advanced economies could adversely impact global trade and growth, while a potential escalation of geopolitical conflicts may have a severe impact on the global economy via deteriorating sentiment and a rise in risk aversion.

The United Kingdom's decision to withdraw from the European Union could have adverse financial stability implications for the euro area, but the risk that access to wholesale and retail financial services would be materially restricted for the euro area economy appears limited. This notwithstanding, the impact of this decision will likely differ across euro area countries depending on the size of financial and real economy linkages with the United Kingdom. While a number of crucial financial services for the euro area economy are currently provided in the United Kingdom, euro area entities will most likely retain sufficient access to financial services in a new equilibrium following the United Kingdom's withdrawal from the European Union. Some services can continue to be provided from the United Kingdom, some will be provided by EU-domiciled entities instead and some of the entities currently providing financial services out of the United Kingdom will relocate to the EU27 to continue serving their EU27 clients.[5]

The impact on financial services is likely to be reflected more in the cost of financial services and in costs for financial institutions than in a reduction in the availability of services. Moving from a centralised wholesale banking market based in London towards a potentially more fragmented landscape, and thereby forgoing synergies reaped from the economies of scale and scope of the City of London, could indeed increase the cost of financial services and lead to higher costs for banks and other financial institutions. One-off costs for financial institutions stemming from, for example, relocating activities and reviewing and revising financial

5 See the box entitled "Preparing for Brexit to secure the smooth provision of financial services to the euro area economy", *Financial Stability Review*, ECB, May 2017.

contracts could add to the profitability challenges currently facing euro area financial institutions.

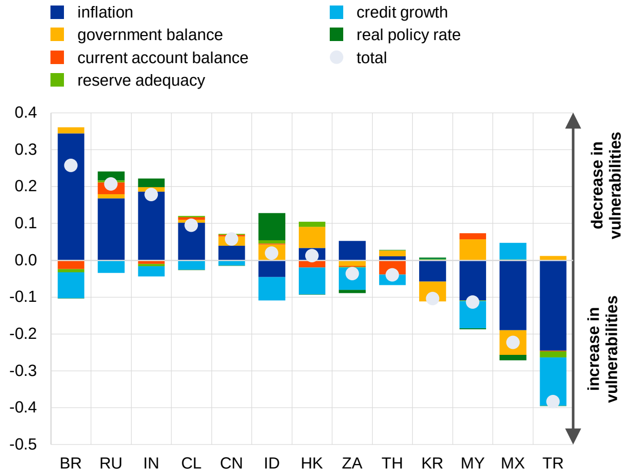
The ECB underlines the need for the affected banks and other financial institutions to undertake all necessary preparations in a timely manner, in order to avoid any remaining "cliff" effects. A well-managed transition will be particularly important in areas such as wholesale financial services and central clearing where the City of London currently plays an important role. A relocation of capacity during the transition from the current situation to the new equilibrium could in some cases cause frictions if such a transition is not adequately managed. Therefore, in order to minimise the risk of potential cliff effects, affected entities should adequately plan for all contingencies.

Chart 1.8

Emerging markets appear to be less vulnerable overall, but imbalances remain in some countries

Annual change in the emerging market vulnerability index

(Q2 2016 vs Q2 2017, percentage changes, percentage point contributions to change)



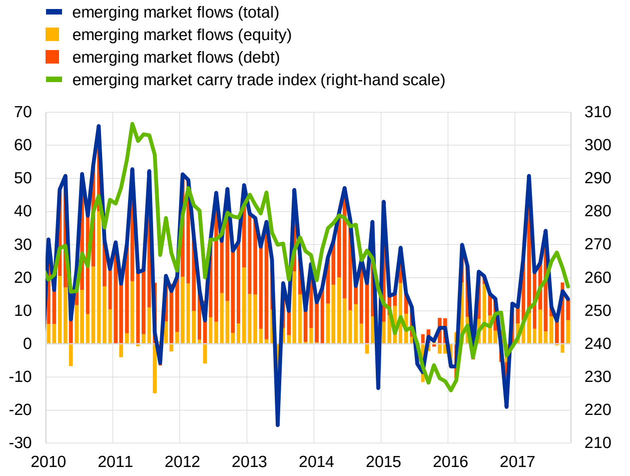
Sources: Haver Analytics and ECB calculations.
Notes: The vulnerability index is based on an average of six standardised indicators (i.e. inflation, the budget balance, the current account balance, nominal credit growth, the real monetary policy rate and a measure of foreign reserve adequacy) of macroeconomic fragility selected from a larger set of variables based on the degree of correlation with changes in the nominal effective exchange rates of 15 major emerging market currencies during the "taper tantrum" (May-September 2013). The countries captured are Brazil (BR), Russia (RU), India (IN), Chile (CL), China (CN), Indonesia (ID), Hong Kong (HK), Thailand (TH), South Africa (ZA), South Korea (KR), Malaysia (MY), Mexico (MX) and Turkey (TR).

Chart 1.9

Financial conditions have improved in emerging markets, driven by a recovery of portfolio flows

Portfolio flows to emerging economies by asset class and emerging market carry trade index

(Jan. 2010 – Oct. 2017, USD billions, index points)



Sources: Bloomberg, Institute of International Finance and ECB calculations.
Notes: Bloomberg's emerging market carry trade index captures the cumulative total return of a buy-and-hold carry trade position that is long in eight emerging market currencies (Brazilian real, Mexican peso, Indian rupee, Indonesian rupiah, South African rand, Turkish lira, Hungarian forint, Polish zloty) and that is fully funded with short positions in the US dollar. It is assumed that the investment is in three-month money market securities, with each of the eight emerging market currencies assigned an equal weight in the currency basket.

Fundamentals have improved in emerging markets, but some countries remain vulnerable. Economic activity in emerging markets is being supported by a rebound in growth in major commodity exporters, such as Brazil and Russia, after deep recessions, while economic growth has remained fairly resilient in China and India. Overall, macro-financial vulnerabilities have continued to recede in major emerging economies (the BRICs), which are in an increasingly robust position to withstand external financial shocks (see **Chart 1.8**). That said, vulnerabilities appear to have increased in other countries, such as Mexico, which faced marked capital outflows in the aftermath of the US presidential election, and Turkey, where corporate leverage has risen significantly and is increasingly sourced from wholesale markets. Emerging market portfolio flows (mainly in fixed income securities) remained resilient against a backdrop of further improving global financial conditions, a low volatility environment, the depreciation of the US dollar and solid carry trade returns (see **Chart 1.9**).

The economic recovery in emerging markets remains on track, but headwinds persist. In particular, a potential disorderly tightening of global financial conditions may expose emerging markets to the risk of a broad-based sell-off, thereby posing downside risks to growth in more vulnerable emerging economies. A shift towards higher interest rates triggered by a shock to term premia or expectations of tighter monetary policies in major advanced economies could disrupt financial markets and adversely impact emerging economies with lingering domestic and external imbalances, in particular if it was accompanied by an appreciation of the US dollar, which would affect those emerging economies with notable unhedged US dollar exposures. In addition, China's reform and liberalisation process which is navigating the economy towards more market-based structures could produce financial and real shocks with negative spillovers at the global level. While China retains policy space to cushion against potential adverse shocks, continued high credit growth has increased economy-wide debt levels, including government debt, reducing buffers available to deal with future shocks.

All in all, financial stability could be challenged, should downside risks materialise. While the economic expansion is expected to sustain momentum at both the euro area and global levels, the cyclical upswing may be put to the test by the potential adverse ramifications of increasingly divergent monetary policies across major advanced economies, the ongoing structural rebalancing towards a more moderate growth path in some major emerging economies and further rising geopolitical risks. These factors may not only undermine the sustainability of the global and euro area recovery, they also have the potential to trigger tensions in global financial markets and prompt a disorderly unwinding of global search-for-yield flows. At the same time, a weaker than expected growth environment could itself trigger the materialisation of any of the main risks to euro area financial stability (see the Overview) and reinforce global risk repricing, further challenge bank profitability or fuel debt sustainability concerns.

1.2 Favourable economic and sovereign financing conditions mask underlying vulnerabilities

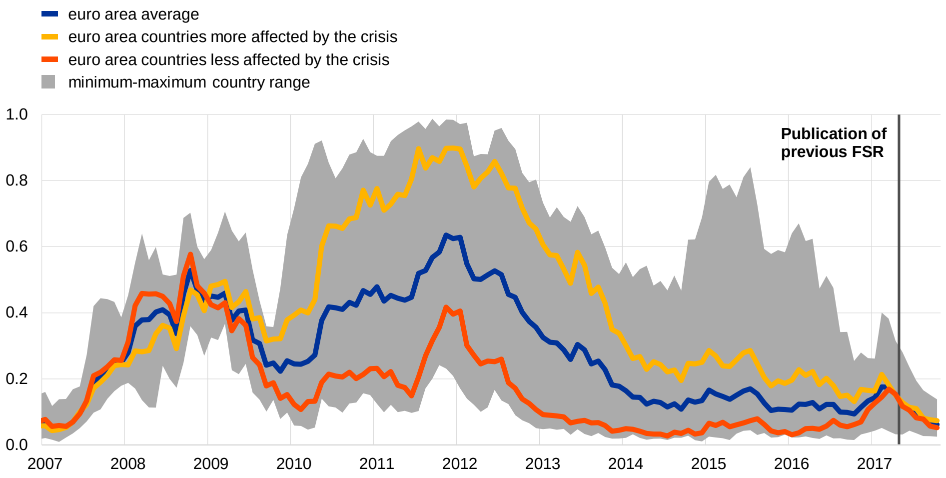
Stress in euro area sovereign debt markets has subsided further on account of improving growth prospects and waning political risks. The composite indicator of systemic stress in euro area sovereign bond markets has fallen considerably since the publication of the previous FSR, back to the levels seen before the spike in early 2017 (see **Chart 1.10**). In terms of the underlying contributing factors, bond market volatility has come down markedly as uncertainties surrounding possible electoral outcomes in major euro area countries (i.e. the Netherlands and France) gradually dissipated and in line with the exceptionally low global volatility environment across different asset classes. Moreover, liquidity conditions in government bond markets have remained benign against the backdrop of the ECB's public sector purchase programme, while specific developments at the country level, such as the conclusion of the second programme review in Greece, have contributed to lowering sovereign credit risk in some euro area countries. The recent improvement in overall euro area sovereign stress metrics went hand in hand with considerably reduced cross-country dispersion. On aggregate, stress in euro area countries that were more affected by the crisis in terms of their perceived riskiness converged towards that in countries that were less affected – a pattern last observed prior to the eruption of the global financial crisis.

Chart 1.10

Sovereign bond market tensions have come down in the euro area amid markedly declining cross-country heterogeneity

Composite indicator of systemic stress in euro area sovereign bond markets

(Jan. 2007 – Oct. 2017)



Sources: ECB and ECB calculations.
Notes: The SovCISS is available for the euro area as a whole and for 11 euro area countries. Euro area countries that were more affected by the crisis comprise Greece, Ireland, Italy, Portugal and Spain, while euro area countries that were less affected by the crisis include Austria, Belgium, Germany, Finland, France and the Netherlands. The SovCISS combines data from the short end and the long end of the yield curve (two-year and ten-year bonds) for each country, i.e. two spreads between the sovereign yield and the euro swap interest rate, two realised yield volatilities and two bid-ask bond price spreads. The aggregation into country-specific and euro area aggregate SovCISS is based on time-varying cross-correlations between all homogenised individual stress indicators pertaining to each SovCISS variant following the CISS methodology developed in Hollo, D., Kremer, M. and Lo Duca, M., "CISS – a composite indicator of systemic stress in the financial system", *Working Paper Series*, No 1426, ECB, March 2012.

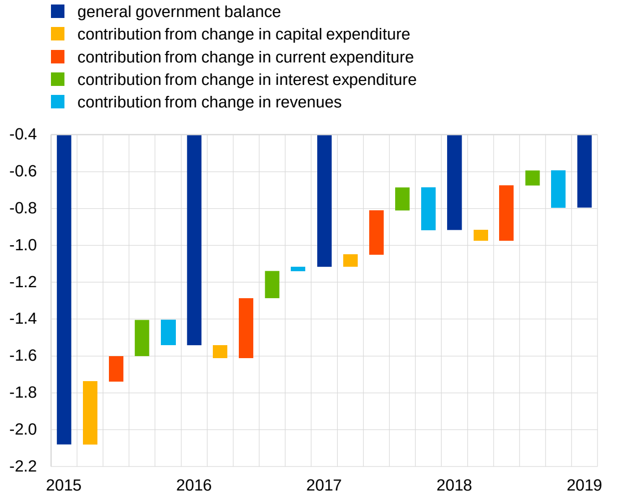
Favourable cyclical conditions mask underlying fiscal vulnerabilities. Following considerable improvements in recent years, the aggregate euro area headline fiscal balance is set to improve further gradually over the 2017-19 horizon. According to the European Commission, the euro area headline deficit is forecast to drop from 1.5% of GDP in 2016 to 1.1% in 2017, 0.9% in 2018 and 0.8% in 2019 (see **Chart 1.11**). At the country level, headline balances are expected to fall below the Maastricht Treaty deficit reference value of 3% of GDP by 2018 in all countries. Against the backdrop of the low interest rate environment, the improvement in the aggregate euro area fiscal balance over the period 2017-19 continues to be underpinned by lower interest expenditures, but also falling current expenditures, as automatic stabilisers (e.g. lower social transfers) activate amid better economic and labour market conditions. That said, improving headline balances mask underlying fiscal vulnerabilities and an overall slight loosening in the fiscal stance for the euro area over the 2017-19 horizon. Fiscal efforts continue to fall short of commitments under the Stability and Growth Pact in several euro area countries (see **Chart 1.12**). The projected deterioration of structural balances in 2017-19 in a number of countries may further challenge compliance with the medium-term objectives specified in national stability programmes. In addition, structural reforms appear to have lost further momentum lately, in particular in countries that were more affected by the crisis (see **Chart 1.13**). Reforms are under way in several countries to rationalise public expenditures. Nevertheless, all euro area countries would benefit from further efforts towards achieving a more growth-friendly composition of public finances. Shifting expenditure to the most growth-enhancing categories or the tax burden to less distortive taxes can positively affect output growth and strengthen fiscal buffers.[6]

Chart 1.11

Euro area headline fiscal balance is set to improve gradually…

General government balance in the euro area

(2015-19, percentage of GDP, percentage point contributions)



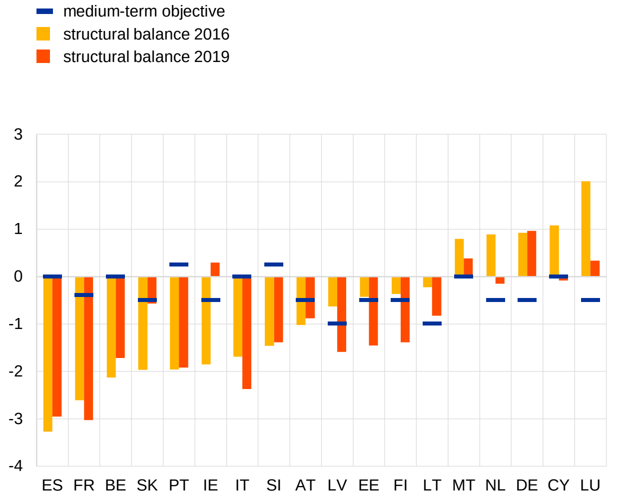
Sources: European Commission (AMECO database) and ECB calculations.

Chart 1.12

…but fiscal adjustment needs are projected to increase in several euro area countries

Structural fiscal balances and medium-term objectives in individual euro area countries

(2016, 2019, percentage of GDP)



Sources: European Commission and national stability programmes.
Notes: Under the preventive arm of the Stability and Growth Pact, countries are required to ensure convergence towards their respective medium-term objectives. These objectives are set by individual euro area countries in their national stability programmes and the envisaged date of compliance differs from country to country. Greece is not shown in the chart as it is subject to an economic adjustment programme and is thus outside the European Semester.

The euro area general government debt-to-GDP ratio is expected to continue declining gradually. Having been on a downward trajectory since the peak in 2014, the aggregate euro area government debt-to-GDP ratio is projected by the European Commission to decline further to 89.3% in 2017, 87.2% in 2018 and 85.2% in 2019. In particular, euro area countries with debt levels exceeding the 60% of GDP Maastricht Treaty threshold are projected to see a further decrease or stabilisation in their government debt ratios by 2019. At the euro area aggregate level and in most

[6] See the article entitled "The composition of public finances in the euro area", *Economic Bulletin*, Issue 5, ECB, 2017.

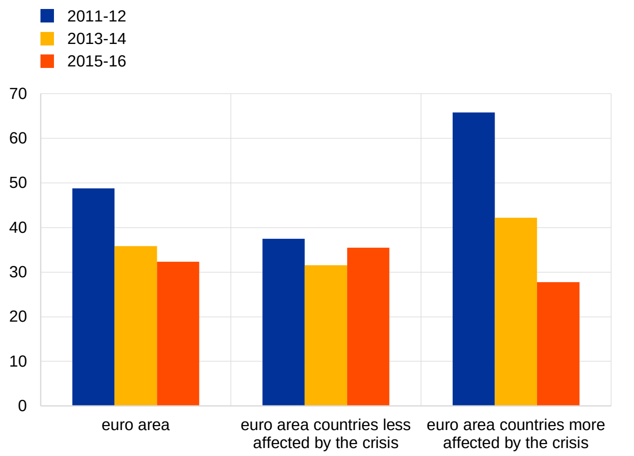
individual countries, the gradual transition towards lower debt ratios is underpinned by projected primary surpluses and a favourable “snowball effect” (i.e. a negative interest rate-growth differential).[7]

Chart 1.13

Structural reform efforts have overall continued to lose momentum in the euro area

Responsiveness to Going for Growth recommendations

(2011-16, share of implemented *Going for Growth* recommendations)



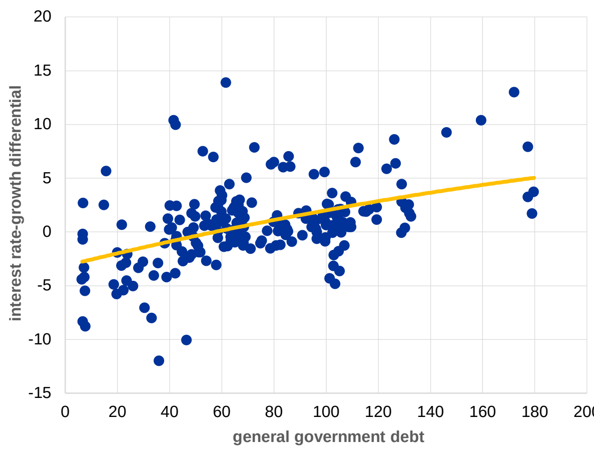
Sources: OECD and ECB calculations.
Notes: The reform responsiveness indicators measure the extent to which countries have followed up on the OECD’s *Going for Growth* recommendations, but they do not aim to assess overall reform intensity per se, as they do not take into account reforms carried out in non-priority areas and do not quantify the importance of each individual measure. For methodological details, see Annex 2.A1 of *Going for Growth 2010*, OECD, March 2010. Euro area countries that were less affected by the crisis comprise Austria, Belgium, Estonia, Finland, France, Germany, Luxembourg, the Netherlands and Slovakia. Euro area countries that were more affected by the crisis include Greece, Ireland, Italy, Portugal, Slovenia and Spain. The two country groups are constructed using a simple average of the underlying country values.

Chart 1.14

Euro area countries with higher debt levels tend to have higher interest rate-growth differentials

General government debt levels and interest rate-growth differentials across selected euro area countries

(1999-2016; x-axis: percentage of GDP; y-axis: percentage points)



Sources: European Commission and ECB calculations.
Notes: The sample includes 12 euro area countries (the first to have joined EMU), namely Austria, Belgium, Germany, Spain, Finland, France, Greece, Ireland, Italy, Luxembourg, the Netherlands and Portugal. The average interest rate-growth differential for the 12 countries over the EMU period so far (1999-2016) is 0.7 percentage point, with all countries, except Ireland and Luxembourg, recording positive values on average. The sample excludes the 2015 point observations for Ireland.

The current favourable snowball effect may reverse once interest rates normalise. As a corollary of the low interest rate environment and the positive underlying economic momentum, the snowball effect contributes to the projected debt reduction in almost all euro area countries. Only Italy is currently projected to record positive, albeit diminishing, snowball effects by 2019. Given that, traditionally, advanced mature economies tend to have positive interest rate-growth differentials on average over the longer run,[8] the currently negative and declining snowball effect may not be a structural feature. In fact, since the 1970s, the underlying trend in the interest rate-growth differential has been sharply upwards in the euro area, with the overall decline in nominal growth more than compensating for the reduction in the implicit interest rate. Over the EMU period, the increasing trend and the country

7 The “snowball effect” refers to the differential between the implicit interest rate paid on the stock of government debt and the nominal growth rate of the economy, which is a key concept in assessing fiscal sustainability. If the interest rate is lower than the nominal growth rate, there is a negative interest rate-growth differential, which contributes to reducing the stock of government debt.

8 See Escolano, J., “A Practical Guide to Public Debt Dynamics, Fiscal Sustainability, and Cyclical Adjustment of Budgetary Aggregates”, IMF Technical Note and Manual No 2010/02, 2010, and Escolano, J., Shabunina, A. and Woo, J., “The Puzzle of Persistently Negative Interest-Rate-Growth Differentials: Financial Repression or Income Catch-Up?”, *Fiscal Studies*, Vol. 38, 2017, pp. 179-217.

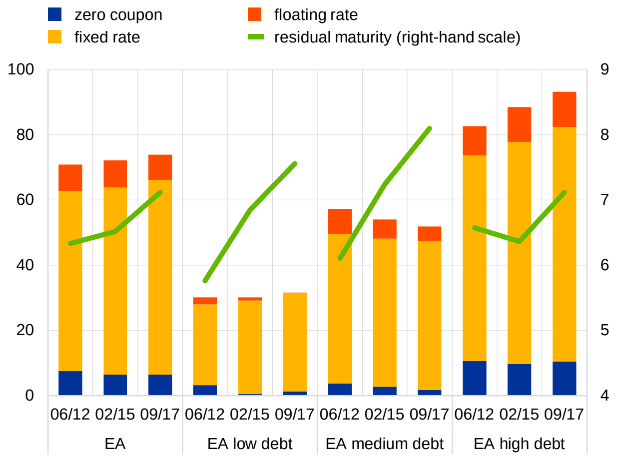
volatility moderated significantly, and started to reverse after the spike during the financial and sovereign debt crisis. At the same time, more indebted countries tend to have higher interest rate-growth differentials (see **Chart 1.14**), which could make putting debt ratios on a sustainable downward path challenging.

Chart 1.15

The shift towards long-term fixed rate debt issuance and the related maturity prolongation have continued

Outstanding amount of government debt securities in the euro area

(left-hand scale: percentage of GDP; right-hand scale: years)



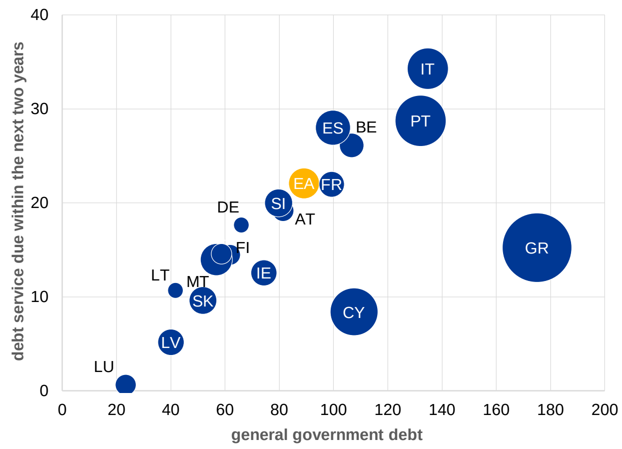
Source: ECB (Government Finance Statistics).
Notes: The "low debt" category covers euro area countries with public debt levels below 60% of GDP (i.e. Estonia, Latvia, Lithuania, Luxembourg, Malta and Slovakia) as at year-end 2016. Countries with public debt levels of between 60% and 90% of GDP (i.e. Austria, Finland, Germany, Ireland, the Netherlands and Slovenia) are labelled "medium debt" countries, while countries with debt levels of over 90% (i.e. Belgium, Cyprus, France, Greece, Italy, Portugal and Spain) are referred to as "high debt" countries. Figures are shown as at June 2012 (the height of the euro area sovereign debt crisis), February 2015 (the month preceding the start of the ECB's public sector purchase programme) and September 2017, i.e. the most recent observation.

Chart 1.16

Debt servicing needs remain substantial for several euro area countries, highlighting rollover risks

Public debt levels and debt service due within the next two years

(x-axis: Q2 2017; y-axis: Sep. 2017; percentage of GDP)



Source: ECB (Government Finance Statistics).
Notes: Data on government debt service over the next two years only reflect existing maturing securities (principal and interest). The scheduled (future) redemptions are calculated based on the maturity date for each debt security. The amounts do not include government loans or redemptions of debt securities covering future budget deficits or redemptions of debt securities that will be issued in the future. The size of the bubble reflects the 2017 year-to-date average ten-year government bond yield.

Sovereign financing conditions have remained favourable in terms of both pricing and duration. Pricing conditions have continued to be fairly benign for euro area governments against the backdrop of ongoing Eurosystem asset purchases and a low volatility environment (see Section 2). In terms of duration, the continued strong issuance activity targeting the long end of the yield curve has led to a further increase of the average residual maturity of outstanding euro area government debt securities (see **Chart 1.15**). Concerning the underlying interest rate structure, a reduction in zero-coupon and floating rate debt, in particular in euro area countries with low or medium levels of debt, and the concurrent increase in fixed rate debt allow governments to lock in long-term financing at low costs and to capitalise on historically low interest rates. The overall shift in issuance activity towards longer durations has helped to reduce the gross financing needs of euro area governments. Still, debt servicing needs remain high for several – in particular highly indebted – euro area countries (see **Chart 1.16**), suggesting possible rollover risks, in terms of both the availability and cost of funding, in the event of a sovereign risk repricing.

Higher long-term interest rates and a repricing of sovereign risk may reignite government debt sustainability concerns in the absence of further reforms and

consolidation efforts. Several factors may challenge the sustainability of public finances in the euro area in the short term. First, a rise in long-term interest rates (in the absence of a commensurate improvement in macroeconomic conditions) may reignite pressures on more vulnerable sovereigns, thereby triggering a sovereign risk repricing. The fact that for a number of countries the current yield on new funding is below the average cost of outstanding debt provides a buffer to absorb rate increases before they actually result in a higher overall interest bill. Nevertheless, simulation results suggest that in the event of an interest rate shock, this buffer would be significantly depleted (see Chart 11 in the Overview). This holds particularly for countries with shorter debt maturities. In addition, highly indebted euro area sovereigns are more vulnerable to rising financing costs than countries with lower debt levels. Second, while bail-in and bank resolution rules have weakened the sovereign-bank nexus since the height of the euro area sovereign debt crisis, residual risks remain, not least as individual banks in some jurisdictions remain vulnerable. Third, while the most imminent market concerns regarding political risks have abated as the electoral calendar proceeds, growing fragmentation of the political landscape (in the sense of a greater difficulty to establish political consensus) in several euro area countries and the ensuing potential difficulties in governance may lead to a further slowdown of fiscal and structural reform efforts. These short-term challenges continue to be accentuated in the medium-to-long run by vulnerabilities related to lower potential GDP growth and ageing-related costs.

All in all, sovereign risks appear to have remained broadly unchanged since the last FSR. While the improving economic outlook and favourable sovereign financing conditions mitigate sovereign risks, fiscal fragilities remain at the country level. Looking ahead, higher long-term interest rates, waning structural and fiscal reform efforts, as well as pockets of risks surrounding the sovereign-bank nexus in some countries may challenge public finances. The materialisation of any of these vulnerabilities – in isolation or in combination – may trigger a repricing of sovereign risk and reignite concerns regarding public debt sustainability.

1.3 Sustained recovery of the euro area non-financial private sector, but headwinds remain

Households and non-financial corporations

The income position of euro area households is strengthening gradually, in line with improving cyclical conditions. Households' nominal income growth is primarily bolstered by improving labour market conditions and the related robust growth in labour income (see **Chart 1.17**). To a lesser extent, it is also being supported by positive profit and property income developments. That said, higher inflation outturns somewhat contained households' real purchasing power around the turn of 2016-17. At the same time, household net worth increased further, owing largely to continued improvements in housing markets and associated valuation gains on property holdings, as well as capital gains on direct securities and mutual fund share holdings. Looking ahead, euro area households' income position is expected to recover further, buttressed by improving labour market conditions, even though in some countries continued labour market slack may weigh on households' income prospects.

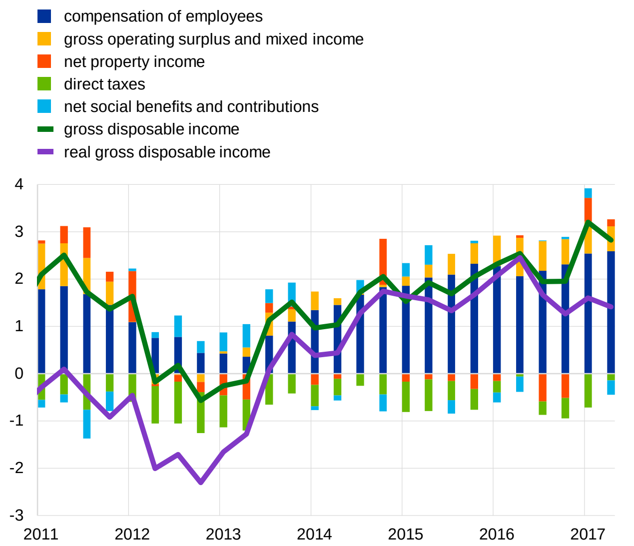
Non-financial corporate earnings are set to improve. With growth becoming more broad-based across countries and sectors, the earnings-generating capacity of euro area non-financial corporations (NFCs) has improved, but corporate profitability has remained muted by historical standards. Business sentiment and confidence are ebullient, while order books and capacity utilisation are increasing (see **Chart 1.18**). Coupled with still moderate cost pressures from typical cyclical headwinds, such as higher wages and interest rates, these developments bode well for a recovery in corporate profitability, thereby also alleviating pressures on more vulnerable firms facing debt servicing difficulties (see **Box 1**).

Chart 1.17

A gradually improving income position underpins households' debt servicing ability

Euro area households' real and gross disposable income

(Q1 2011 – Q2 2017, annual percentage changes, percentage point contributions)



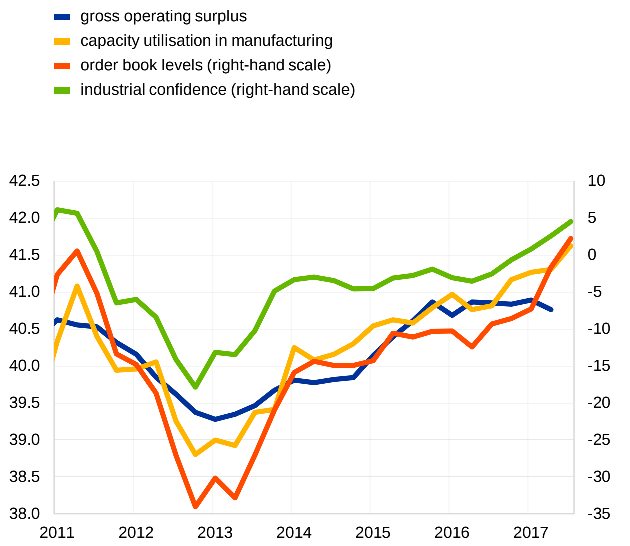
Sources: Eurostat and ECB.

Chart 1.18

Improved business environment is expected to translate into higher corporate profitability

Euro area NFC gross operating surplus and order book levels, capacity utilisation and industrial confidence

(Q1 2011 – Q3 2017, percentage of gross value added, percentage of capacity utilisation, percentage balances)



Sources: European Commission (DG ECFIN) and ECB calculations.
Note: For scaling purposes, the original time series provided for capacity utilisation in manufacturing have been divided by two.

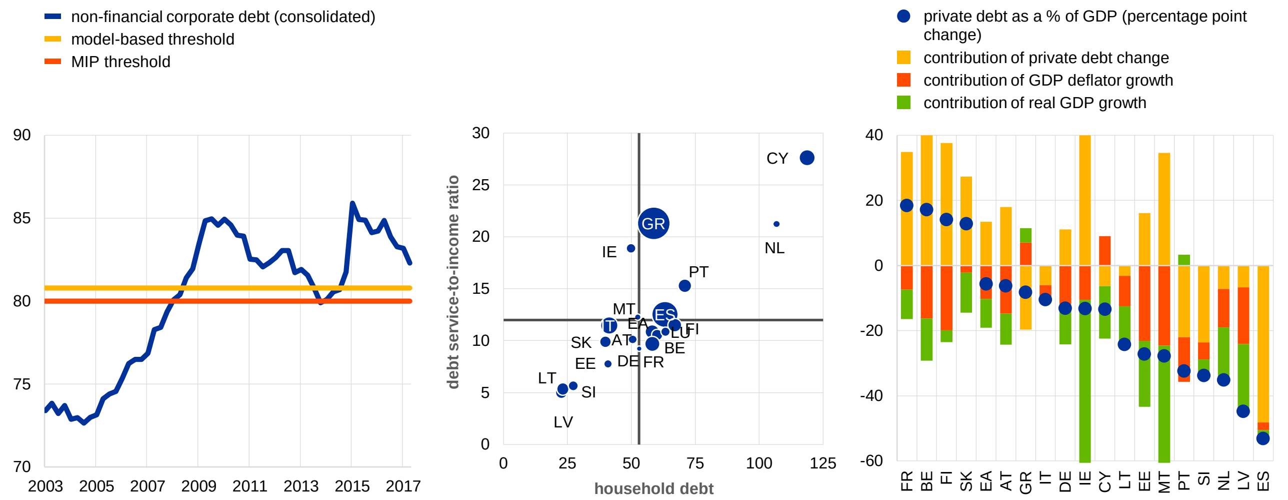
A large stock of legacy debt continues to weigh on the euro area non-financial private sector. On aggregate, the indebtedness of euro area households has decreased somewhat further to 58.1% of GDP as at mid-2017, a level last observed in late 2006. At the same time, the level of non-financial corporate debt stood at 106.9% of GDP on an unconsolidated basis or 82.5% of GDP on a fully consolidated basis. These figures are still high by historical standards, as balance sheet repair in the non-financial private sector has proceeded only gradually at the aggregate euro area level. In fact, while having come down since the peak in early 2015, the indebtedness of euro area non-financial firms is still above – albeit gradually approaching – levels which can be associated with a debt overhang (see **Chart 1.19** – left panel). Similarly, continued elevated levels of household debt in some euro area countries, coupled with high debt service-to-income ratios, may render them more vulnerable than others (see **Chart 1.19** – middle panel). The pace of household debt adjustment to date has differed markedly across countries, with deleveraging being more forceful in countries (e.g. Ireland and Spain) which had accumulated large amounts of debt prior to the crisis (see **Chart 1.19** – right panel), with significant debt write-offs and renegotiations additionally helping to bring debt ratios down.

Chart 1.19

Continued high indebtedness of euro area non-financial firms and, in some countries, households indicates underlying vulnerabilities

Consolidated gross non-financial corporate debt in the euro area, indebtedness and debt service-to-income ratios of euro area households, and decomposition of changes in the non-financial private sector debt-to-GDP ratio from the peak until end-2016

(left panel: Q1 2003 – Q2 2017, percentage of GDP; middle panel: Q2 2017, Sep. 2017, percentage of GDP, percentages; right panel: percentage point changes and contributions)



Sources: Eurostat, ECB and ECB calculations.

Notes: Left panel: the threshold is computed with a Bayesian TVAR model with five variables, namely consolidated gross non-financial corporate debt, business investment, commodity prices, the HICP and corporate bond spreads (see Alessandri, P. and Mumtaz, H., "Financial Regimes and Uncertainty Shocks", Working Paper No 279, Queen Mary University of London, 2014). The estimation sample ranges from Jan. 1990 to Dec. 2016. Middle panel: the size of the bubble represents the unemployment rate. The vertical line represents the estimated macroeconomic imbalance procedure (MIP) benchmark of 53% of GDP for household debt. The 133% of GDP MIP limit for fully consolidated non-financial private sector debt is split between firms and households based on their average past shares in the stock of non-financial private sector debt. The debt service-to-income (DSTI) ratio is equal to the fixed debt service costs of an instalment loan, divided by income. Fixed debt service costs assume identical repayment of the principal during the average maturity of the debt and an average interest rate, and are a factor of outstanding debt. The threshold for the DSTI ratio is obtained from a univariate signalling model such that values exceeding the threshold have been associated with the onset of systemic financial crises in the following 5 to 12 quarters. The systemic financial crises are taken from "A new database for financial crises in European countries: ECB/ESRB EU crises database", *Occasional Paper Series*, No 13, European Systemic Risk Board, July 2017. Right panel: the peak in EA, EE, ES, LT, MT, NL, AT and PT was in 2009; in LV and SI in 2010; in IE, GR and IT in 2012; and in CY in 2014. The green bar is truncated for IE (-86.4 percentage points) and MT (-37.8 percentage points); the yellow bar is truncated for BE (+46.3 percentage points) and IE (+83.7 percentage points). Figures for IE are distorted by the revision of Irish GDP as of 2015 following the relocation of a limited number of multinational companies to Ireland which boosted both non-financial corporate debt and GDP.

A favourable interest rate environment currently alleviates debt sustainability concerns. The gradually improving income and earnings position of euro area households and non-financial firms coupled with record low interest payment burdens buttress borrowers' debt servicing capabilities. Nonetheless, continued high household and/or non-financial corporate debt levels point to additional deleveraging needs in a number of countries. Indeed, further balance sheet repair should help offset any risks related to an eventual normalisation of interest rates and the ensuing rise in debt servicing costs. That said, a higher debt service burden for borrowers in a rising interest rate environment is likely to be counterbalanced in part by the positive impact of improved macroeconomic conditions on households' and firms' income and earnings. In the event of an interest rate shock without a commensurate improvement in economic conditions, borrowers would face challenges primarily in countries where variable rate loans dominate. Non-financial firms are relatively more exposed in this regard than households.

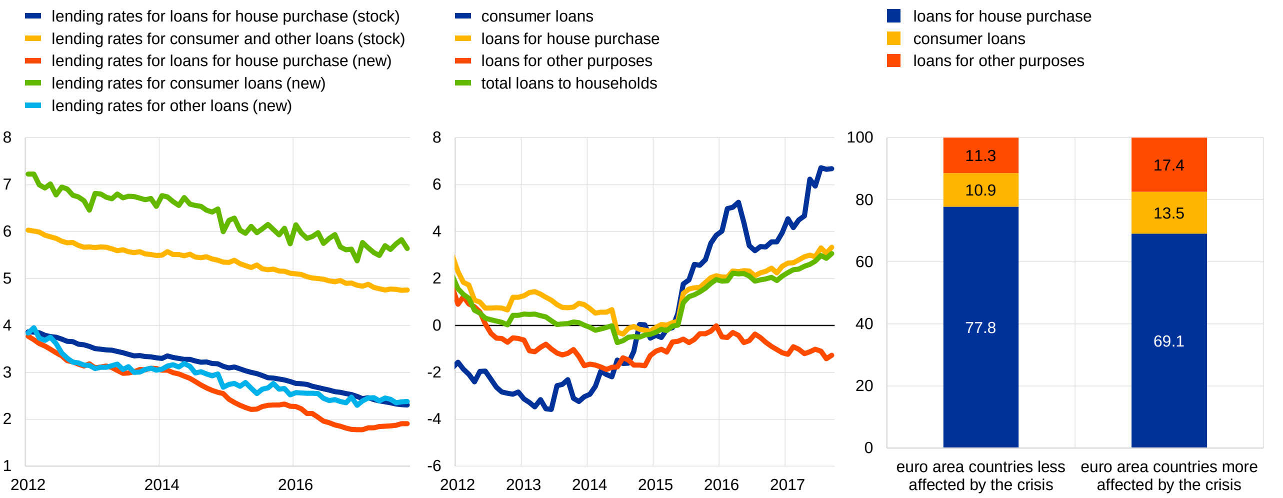
While remaining muted, bank lending flows to the non-financial private sector have continued to recover, amid record low lending rates. Overall, bank lending to euro area households and non-financial corporations has continued to strengthen gradually, supported by favourable demand and supply conditions. Credit standards eased for most lending categories, driven primarily by increased competitive pressures and banks' lower risk perceptions. On the demand side, the recovery in bank lending is supported by historically low bank lending rates across the maturity spectrum in almost all lending categories (see **Chart 1.20**, left panel, and **Chart 1.21**, right panel), as banks pass on lower funding costs to borrowers. Still, overall bank lending dynamics have remained muted, given residual deleveraging needs and the availability of ample alternative financing sources.

Chart 1.20

Consumer lending has picked up recently given still high business margins, but the share of consumer loans in total household loans is relatively small

Household lending rates by type of lending (left panel), annual growth in lending to euro area households (middle panel) and structure of loans to euro area households (right panel)

(left panel: Jan. 2012 – Sep. 2017, percentages; middle panel: Jan. 2012 – Sep. 2017, annual growth rates based on respective indices of notional stocks; right panel: Sep. 2017, percentage share in total loans to households)



Sources: ECB and ECB calculations.
Note: Euro area countries that were more affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain, while countries that were less affected by the crisis comprise all other euro area countries.

Bank lending dynamics continue to diverge across types of lending and countries. While loans to non-financial firms have continued to expand at a steady pace since the turn of 2016-17, growth in lending to households further accelerated as of the start of the year on account of consumer loans and, to a lesser extent, loans for house purchase (see **Chart 1.20** – middle panel). The rapid pace of expansion of consumer loans, in particular in countries that were more affected by the crisis, is not an immediate source of concern from a financial stability perspective given the relatively small share of consumer loans in total household loans on aggregate (see **Chart 1.20** – right panel). Nevertheless, it may point to a niche of increased risk-taking by banks due to the higher business margins in that particular segment (as reflected by the still comparatively high lending rates), and thus warrants monitoring going forward. At the country level, credit to the non-financial private sector continued to contract in some countries that were more affected by the crisis (e.g. Cyprus, Greece, Ireland, Portugal and Spain), while in other euro area countries (e.g. Belgium, Estonia, Lithuania, Luxembourg and Slovakia) developments were more buoyant.

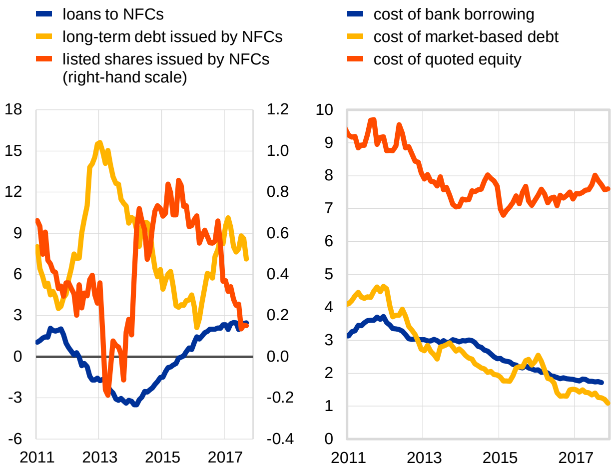
Financing conditions for non-financial corporations have remained favourable, also in terms of non-bank sources of external financing. Euro area non-financial firms' external financing from non-bank sources strengthened further in 2017, supported by historically low overall nominal costs of external financing. The net issuance of debt securities has remained relatively strong against the backdrop of the ECB's corporate sector purchase programme and the record low cost of market-based debt (see **Chart 1.21**). By contrast, the issuance of listed shares by NFCs continued to be relatively modest, given the comparatively high cost of quoted equity, while the issuance of unquoted shares remained buoyant.

Chart 1.21

External financing conditions remained favourable for euro area non-financial corporations

Loans to NFCs, issuance of long-term debt and listed shares by NFCs, and associated costs of financing

(Jan. 2011 – Oct. 2017; left panel: annual percentage changes; right panel: percentages)



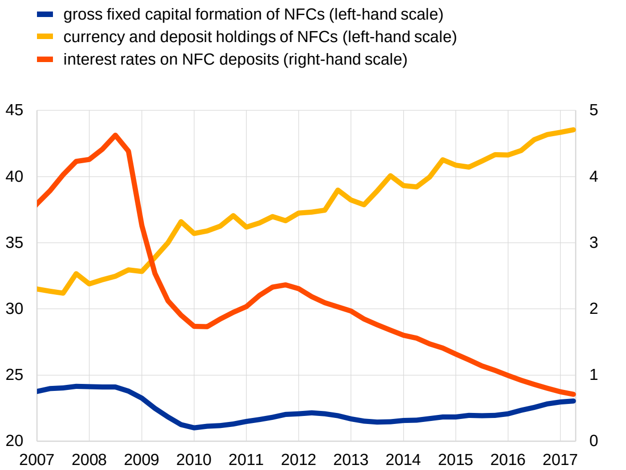
Sources: Eurostat, ECB, Dealogic and ECB calculations.
Note: Loans to non-financial corporations are adjusted for cash pooling activities, loan sales and securitisations.

Chart 1.22

Corporate liquidity holdings have risen further amid falling deposit rates and muted corporate investment

Deposit interest rates, gross fixed capital formation as well as currency and deposit holdings of NFCs

(Q1 2007 – Q2 2017, percentage of gross value added, percentages per annum)



Sources: Eurostat, ECB and ECB calculations.

Ample internal financing sources of euro area firms may underpin corporate deleveraging and investment activity. Corporate liquidity has increased further to new record highs (see **Chart 1.22**), suggesting that non-financial firms can also rely on internal funds as a financing source in addition to loans and debt securities. These high liquidity buffers may reflect a lack of investment opportunities, but they also reflect precautionary motives (i.e. mitigating the risk of limited access to external financing in the future), the low opportunity cost of holding liquid assets and continued credit supply constraints in some countries. That said, considerable savings and cash balances of euro area non-financial firms could make a significant contribution to both reducing leverage and financing the economic recovery by boosting investment.

All in all, the euro area non-financial private sector continues to enjoy favourable financing conditions, but risks remain. Reinforced by the ECB's very accommodative monetary policy stance, the financing conditions of euro area households and non-financial firms remain favourable and supportive of both domestic demand and debt servicing. However, rising interest rates (in the absence of a commensurate improvement in macroeconomic conditions) may spark renewed debt sustainability concerns in countries with elevated levels of household and corporate debt. Furthermore, the recent buoyancy of certain types of bank lending in some euro area countries may warrant monitoring.

Box 1
The prevalence of vulnerable firms in the euro area

The pre-crisis period was characterised by a debt-financed investment boom that ultimately proved unsustainable. Excessive borrowing coupled with overinvestment in some euro area economies in the run-up to the global financial crisis has rendered parts of the euro area non-financial corporate sector vulnerable to shocks. As the financial crisis unfolded and macroeconomic conditions deteriorated, vulnerabilities that were looming in corporate balance sheets became increasingly apparent, with many firms no longer able to service their financial obligations.

The health of non-financial firms is vital from a financial stability perspective, not least as debt servicing problems of firms may weigh on bank balance sheets via deteriorating asset quality. These banking sector problems, if unresolved, can incentivise banks to "evergreen" loans in order to avoid the realisation of losses.[9] If interest rates were to increase without an improvement in economic conditions, the interest subsidies required to keep troubled firms afloat would become more costly, which, in turn, would have an adverse impact on banks' profitability or even, in an extreme scenario, on their solvency.

Against this backdrop, this box examines the prevalence of vulnerable firms in the euro area and their ability to cope with stress, as reflected in an interest rate shock. In general, vulnerable firms are defined as those having persistent difficulties in meeting their interest payments.[10] More specifically, firms that have had an interest coverage ratio (ICR)[11] of below two

[9] "Evergreening" here refers to the provision of additional credit to weak borrowers to enable them to make interest payments on outstanding credit and thus avoid or delay bankruptcy. This mechanism was first documented in the context of Japan's experience during the 1990s by Peek, J. and Rosengren, E., "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan", *American Economic Review*, Vol. 95(4), September 2005, pp. 1144-1166. For more recent evidence relating to Europe, see Schivardi, F., Sette, E. and Tabellini, G., "Credit Misallocation During the European Financial Crisis", *CESifo Working Paper Series*, No 6406, April 2017. Shielding troubled firms from market pressures can impose costs on healthy firms, as the congestion created by firms kept alive by their banks reduces the profits of healthy firms, which discourages market entry and investment; see Caballero, R., Hoshi, T. and Kashyap, A., "Zombie Lending and Depressed Restructuring in Japan", *American Economic Review*, Vol. 98(5), December 2008, pp. 1943-1977.

[10] See McGowan, M., Andrews, D. and Millot, V., "The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries", *OECD Economics Department Working Papers*, No 1372, January 2017.

for three consecutive years are classified as vulnerable for the purposes of this box. Firms' ability to cope with an interest rate shock is examined by studying the sensitivity of ICRs to a 100 basis point increase in the cost of debt. The shock is applied to 2016 financial statements and thus does not assume a concurrent improvement in macroeconomic conditions. The analysis is based on Worldscope data, which cover listed firms in the euro area only and hence do not capture the full universe of vulnerable firms.[12] Accordingly, small and medium-sized enterprises, which account for the bulk of euro area employment and may be as susceptible to vulnerabilities – if not more so – as their listed counterparts, are not covered by the analysis.

The share of vulnerable firms increased markedly during the euro area sovereign debt crisis in those countries that were more affected by it. Since the peak in 2013, however, the share of vulnerable firms in these countries has almost halved (see **Chart A**), reflecting improving economic conditions, the easing of financing costs as monetary policy accommodation measures fed through and elevated delisting rates. The share of vulnerable firms in countries that were less affected by the crisis, on the other hand, has been less sensitive to the cycle. As listed firms are subject to capital market pressure, vulnerable firms have shown a greater propensity to delist than firms not considered vulnerable. In countries that were more affected by the crisis, since 2009 13% of vulnerable firms have delisted on average per annum, compared with only 4% for normal firms. For this reason, the recorded decline in the share of vulnerable firms may partially mask a migration of vulnerable firms to the non-listed segment, which is, however, beyond the scope of this box.

A 100 basis point increase in the cost of the stock of debt is significant when compared with past experience. To put the size of the hypothetical shock into perspective, it is helpful to recall that the median cost of the stock of debt of listed non-financial corporations increased by about 80 basis points over the last tightening cycle of the ECB prior to the financial crisis, despite the much larger increase in marginal funding costs.[13]

The sensitivity of ICRs to a higher cost of debt appears rather low. In 2016 about 23% of listed firms in euro area countries that were more affected by the crisis had ICRs of less than two, compared with 17% in other euro area countries. A rise in the cost of the stock of firms' debt by 100 basis points would increase the share of firms with debt at risk by two percentage points in euro area countries that were more affected by the crisis and by one percentage point in the remainder of the euro area (see **Chart B**). Thus, ICRs of listed firms appear relatively resilient across the euro area, which is consistent with the decline in the share of vulnerable firms observed since 2013.

[11] The ICR is defined as earnings before interest, taxes, depreciation and amortisation divided by interest expenses.

[12] The dataset comprises 32,290 firm-year observations from 2001 to 2016.

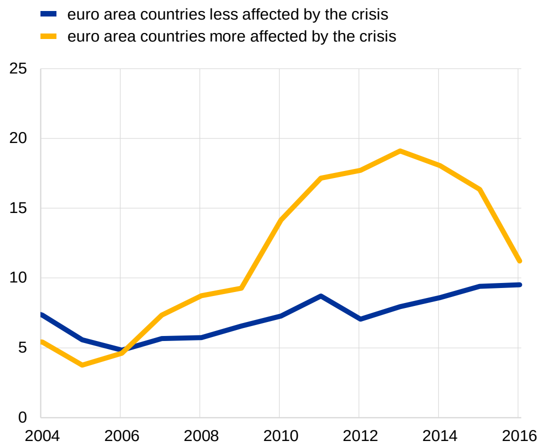
[13] The ECB increased the main refinancing operations rate by 225 basis points over the two-and-a-half-year period from December 2005 to July 2008.

Chart A

The share of vulnerable firms has come down markedly since the peak in 2013

Share of listed firms with ICRs of less than two for three consecutive years

(2004-16, percentages)



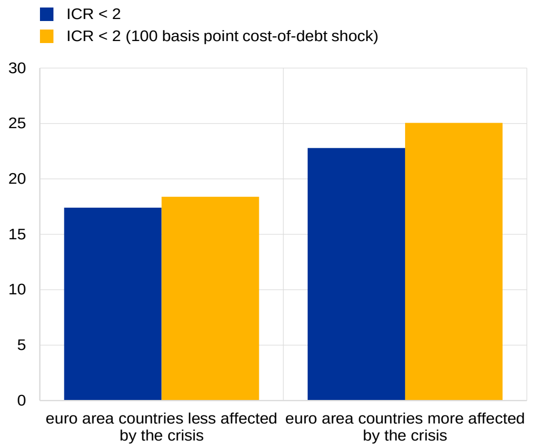
Sources: Worldscope and ECB calculations.
Notes: Firms with an ICR of less than two for three consecutive years are classified as vulnerable. Euro area countries that were more affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain.

Chart B

ICRs are more sensitive to a shock in countries more affected by the crisis

Share of listed firms with ICRs of less than two in 2016 and after an interest rate shock

(2016, percentages)



Sources: Worldscope and ECB calculations.
Notes: A +100 basis point interest rate shock is applied to 2016 balance sheets. Euro area countries that were more affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain.

In summary, improved macro-financial conditions are reflected in stronger corporate balance sheets. The share of vulnerable firms has declined in countries that were more affected by the crisis. Overall, the sensitivity of firms' debt service capacity to an interest rate shock appears to be limited, although cross-country heterogeneity remains. Going forward, it appears that the financial health of firms depends above all on a continued improvement in economic conditions.

Property markets

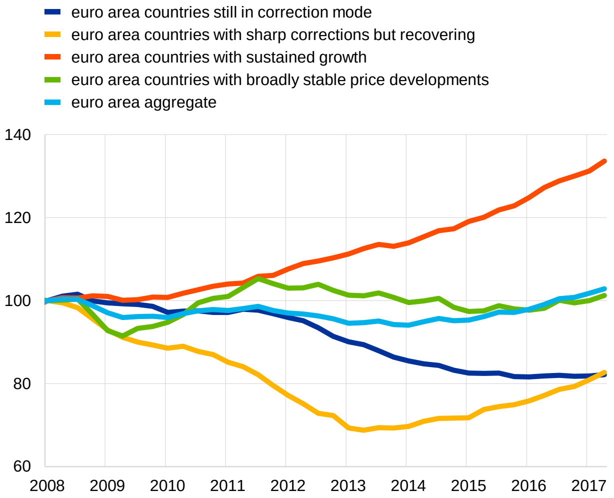
The cyclical upturn in residential and commercial property markets has continued in the euro area. In the residential segment, the house price cycle continued to firm up at the aggregate euro area level (see **Chart 1.23**), supported by a favourable interest rate environment and the ongoing economic recovery, with residential property prices recording the highest growth rate since the autumn of 2007. At the same time, euro area prime commercial property markets have maintained a strong underlying dynamic (see **Chart 1.24**). That said, in terms of property price valuations, residential property prices are estimated to be broadly in line with fundamentals, while valuation estimates for prime commercial properties have deviated further away from their long-term average in line with recent strong price increases (see **Chart 1.25**).[14]

Chart 1.23

Continued upturn in euro area residential property markets, but heterogeneity across countries remains

Residential property prices in the euro area and different country groups

(Q1 2008 – Q2 2017; index: Q1 2008 = 100)



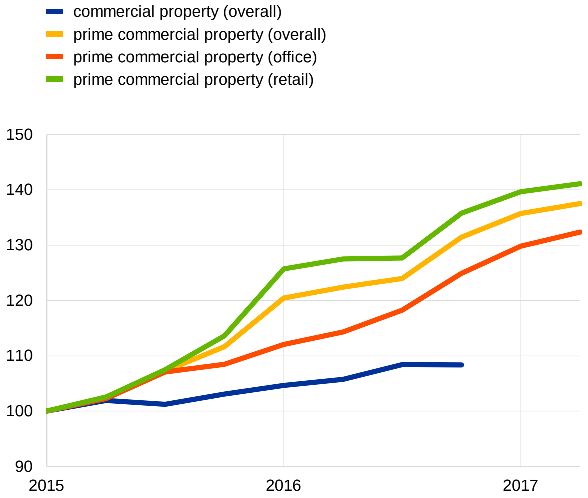
Sources: Eurostat, ECB and ECB calculations.
Notes: Euro area countries with sharp corrections but recovering cover Spain, the Netherlands, Estonia, Portugal, Ireland, Latvia and Lithuania. Euro area countries still in correction mode include Cyprus, Greece, Italy, Slovenia and Slovakia. Euro area countries with sustained growth comprise Germany, Belgium, Austria, Luxembourg and Malta, while euro area countries with broadly stable price developments include France and Finland.

Chart 1.24

Buoyant developments in prime commercial property markets have continued, predominantly driven by the retail segment

Commercial property price indices

(Q1 2015 – Q2 2017; index: Q1 2015 = 100)



Sources: Jones Lang Lasalle and experimental ECB estimates based on MSCI and national data.
Note: Retail establishments include inter alia restaurants, shopping centres and hotels.

Property price dynamics have become more broad-based, but heterogeneity prevails across countries, regions and property types. For residential property markets, the majority of euro area countries have entered the upturn phase of the housing cycle, as reflected by a decreasing dispersion of growth rates across countries. Still, developments have remained somewhat heterogeneous in the euro area, with country dynamics depending on the depth and length of the correction phase in the aftermath of the crisis (see **Chart 1.23**). Country-level developments are additionally nuanced by diverging regional residential price dynamics, with price developments in capital and/or large cities outpacing price trends at the national level in several countries. Cross-country variation is also falling in prime commercial property markets, as the adverse repercussions of multi-year corrections gradually recede at the country level. Price developments also diverged across various commercial property types (see **Chart 1.24**). In particular, the prime retail segment

[14] Valuation estimates are surrounded by a high degree of uncertainty, as reflected by the wide range of different valuation estimates, the interpretation of which may be complicated at the country level given national specificities such as fiscal treatment or structural factors (e.g. tenure status). Likewise, commercial property valuation measures need to be interpreted with caution given only limited, mainly survey-based data coverage with a focus on prime commercial property in large cities.

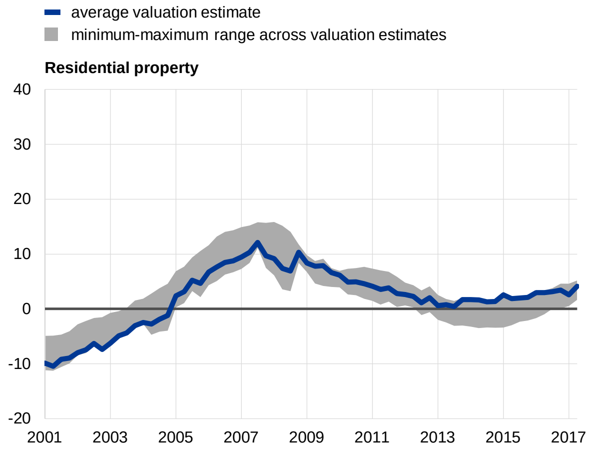
has remained buoyant in the context of the current low-yield environment and the ongoing search for yield.

Chart 1.25

Residential property prices are broadly in line with fundamentals, while commercial property prices have moved further away from their long-term average

Valuation estimates of residential and prime commercial property prices at the euro area level

(Q1 2001 – Q2 2017, percentages, average valuations, minimum-maximum range across valuation estimates)



Sources: ECB and ECB calculations.
Notes: Valuation estimates for residential property prices are based on four different valuation methods: the price-to-rent ratio, the price-to-income ratio and two model-based methods, i.e. an asset pricing model and a new model-based estimate (BVAR). For residential property, the average is based on the price-to-income ratio and the new model-based method. For details of the methodology, see Box 3 in *Financial Stability Review*, ECB, June 2011, as well as Box 3 in *Financial Stability Review*, ECB, November 2015. For more details on valuation estimates for prime commercial property, see Box 6 in *Financial Stability Review*, ECB, December 2011.

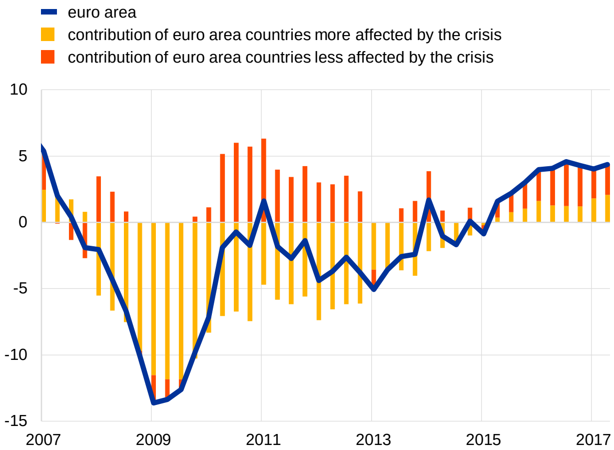
The positive property market momentum is set to bolster the real economy. Mirroring the ongoing upswing in residential property markets, residential investment as well as construction value added and employment have started to pick up more recently, even if still being considerably below pre-crisis levels. That said, residential investment is gradually picking up in euro area countries that were more affected by the crisis, with these countries providing a roughly equal contribution to overall growth in residential investment in the euro area to that of the other euro area countries (see **Chart 1.26**). Looking ahead, the ongoing economic upturn and favourable labour market trends appear to be supportive not only to continued growth in residential investment, but also to private consumption via wealth and collateral effects. Supply-side conditions are set to improve further, as indicated by rising confidence in the construction sector and the increasing number of building permits granted. At the same time, investment activity in euro area commercial property markets appears to have remained robust amid continued yield compression (see **Chart 1.27**) and relatively high (albeit decreasing) vacancy rates, raising concerns about the potential implications of a rise in long-term interest rates.

Chart 1.26

Residential investment has remained strong, with increasing contributions from countries that were more affected by the crisis

Residential investment in the euro area

(Q1 2007 – Q2 2017, annual percentage changes, percentage point contributions)



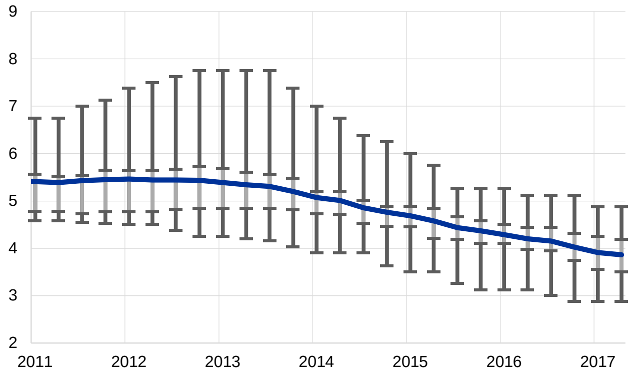
Sources: Eurostat and ECB calculations.
Note: Euro area countries that were more affected by the crisis comprise Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain, while countries that were less affected by the crisis include all other euro area countries.

Chart 1.27

Returns on prime commercial property have dropped to record lows amid continued signs of a search for yield

Yields on prime commercial property in the euro area

(Q1 2011 – Q2 2017, percentages; minimum, maximum, interquartile distribution and average)



Source: Jones Lang Lasalle.
Note: The euro area countries covered are Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

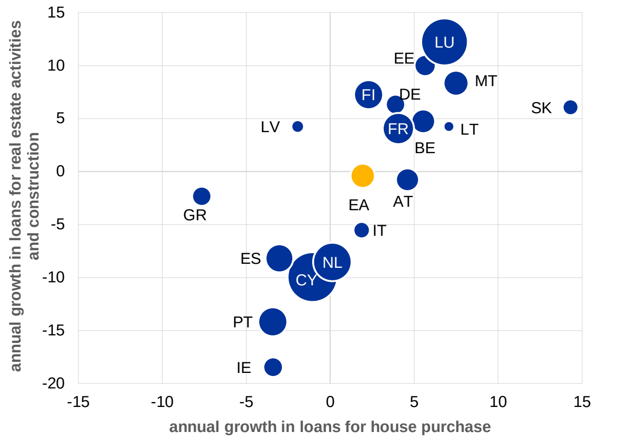
Benign financing conditions underpin the upturn in the housing cycle. Alongside improving labour market conditions and the related easing of affordability constraints, housing market developments are also supported by favourable credit conditions. Easing credit standards, coupled with higher loan demand amid record low interest rates on loans for house purchase and households' improving income situation, are contributing to the pick-up in new loans for house purchase. That said, the ongoing upturn in residential property markets has not translated into broad-based rapid housing loan growth at the aggregate euro area level so far. However, trends in property prices and credit may warrant closer monitoring in some countries, in particular countries with high property-related exposures in the banking sector (see **Chart 1.28**). Regarding commercial property, price increases in some of the countries with more buoyant developments appear to be primarily driven by direct investment by institutional investors and funds and less so by bank financing. In fact, real estate investment funds and real estate investment trusts seem to be gaining importance as vehicles through which US asset managers and foreign investors in search of yield in a low interest rate environment are channelling their investments into the sector. In principle, this should reduce the potential for direct adverse spillovers to the banking system stemming from a potential abrupt adjustment in commercial property valuations.

Chart 1.28

The expansion of property-related lending may warrant monitoring in some countries

Annual growth in loans for house purchase and in loans for real estate activities and construction

(Q2 2017, annual percentage changes, four-quarter averages)



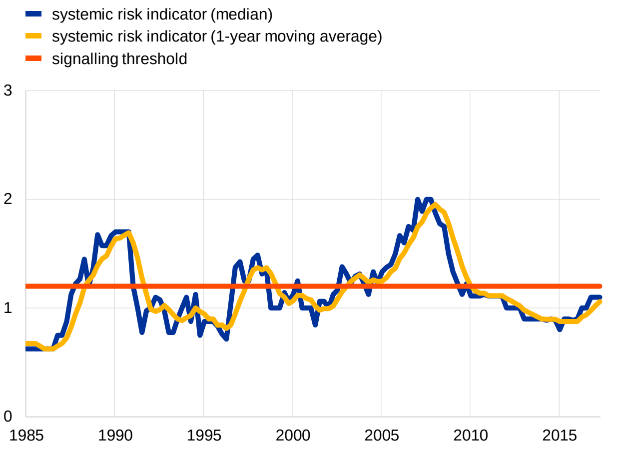
Sources: ECB and ECB calculations.
Notes: The size of the bubble represents the property-related lending exposures of MFIs as a percentage of GDP. Property-related exposures comprise MFI lending to households for house purchase and to non-financial corporations for real estate activities and construction. Data for loans for house purchase are adjusted for loan sales and securitisation.

Chart 1.29

Systemic risk in residential property markets has picked up somewhat since early 2015, but remains below the early warning threshold in the euro area

Systemic risk indicator for residential property markets

(Q1 1985 – Q2 2017, average risk rating)



Sources: ECB and ECB calculations.
Notes: For each euro area country, a composite residential property risk measure is computed based on a set of indicators comprising price and lending indicators as well as information on household balance sheets. The original data are transformed into discrete ratings on the basis of early warning thresholds such that a value of 0 (3) reflects no (high) risk. Based on this, a systemic risk indicator is calculated as the average across euro area countries.

All in all, there are no evident signs of widespread imbalances in residential property markets in the euro area. The composite indicator of systemic risk for residential property markets is below the threshold that would signal vulnerabilities (see **Chart 1.29**), even if potential pockets of risk may warrant closer monitoring.[15] That said, an adverse economic or financial shock may challenge the sustainability of the ongoing upturn in property markets. In particular, deteriorating economic growth prospects, tightening financing conditions or rising long-term interest rates could worsen the debt servicing capacity of households and commercial property investors, and may represent a risk for banks in countries with high property-related exposures. However, macroprudential policies can help to mitigate possible risks to financial stability at the country level. Given the underlying momentum in national (primarily residential) property markets, a number of countries have already introduced macroprudential measures to avoid a build-up of vulnerabilities. Given its macroprudential mandate, the ECB is monitoring property market developments closely too and, in accordance with the SSM Regulation, may top up national measures if needed.

15 For further details, see the box entitled "Monitoring euro area residential real estate markets from a macroprudential perspective", *Financial Stability Review*, ECB, November 2016.