



December 2016

Eurosystem staff macroeconomic projections for the euro area¹

The economic recovery in the euro area is expected to continue, broadly in line with the September 2016 projections. The expected global recovery and resilient domestic demand, supported by the very accommodative monetary policy stance, past progress made in deleveraging across sectors and a continued improvement in the labour market are projected to sustain the recovery over the projection horizon. In annual terms, real GDP is expected to grow by 1.7% in 2016 and 2017, and by 1.6% in 2018 and 2019.

HICP inflation is expected to increase significantly from 0.2% in 2016 to 1.3% in 2017, 1.5% in 2018 and 1.7% in 2019, boosted particularly in the short term by the turnaround in oil prices. Moreover, as labour market slack gradually abates, increases in wage and unit labour cost growth should also strengthen HICP inflation over the projection horizon.

1 Real economy

Real GDP rose by 0.3% in the third quarter of 2016, underpinned by domestic demand. Available information for the third quarter suggests that private consumption and fixed capital formation contributed positively to activity, while exports grew less than imports, yielding a negative contribution from net trade. Labour market conditions have continued to improve in recent months, with employment growth surprising on the upside and unemployment rates falling more than expected. Confidence continued to improve across sectors and countries, suggesting resilient growth in the near term.

Over the projection horizon, real GDP is expected to grow by 1.7% in 2016 and 2017 and by 1.6% in 2018 and 2019. Resilient domestic demand is expected to remain the mainstay of real GDP growth, underpinned by the ECB's very accommodative monetary policy stance. Exports are projected to gradually gain momentum on account of an expected gradual global recovery, resulting in a gradually improving net trade contribution over the projection horizon.

¹ Eurosystem staff macroeconomic projections are an input to the Governing Council's assessment of economic developments and the risks to price stability. Information on the procedures and techniques used is given in *A guide to the Eurosystem/ECB staff macroeconomic projection exercises*, ECB, July 2016, which is available on the ECB's website. The cut-off date for technical assumptions, such as oil prices and exchange rates, was 17 November 2016 (see Box 2). The cut-off date for including other information in this exercise was 24 November 2016.

The current macroeconomic projection exercise covers the period 2016-19. Projections for a period over such a long horizon are subject to very high uncertainty, and this should be borne in mind when interpreting them. See the article entitled "An assessment of Eurosystem staff macroeconomic projections" in the May 2013 issue of the ECB's Monthly Bulletin.

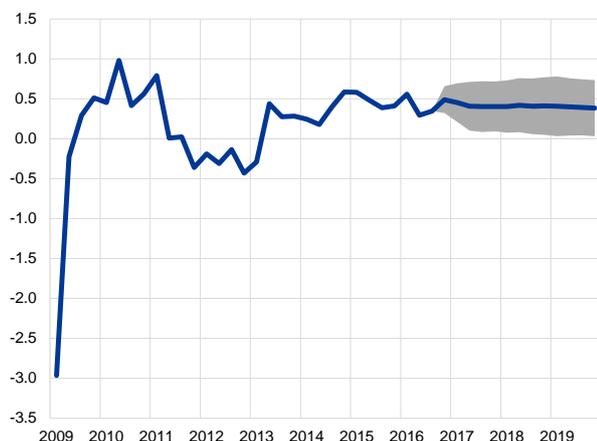
Chart 1

Macroeconomic projections¹⁾

(quarterly data)

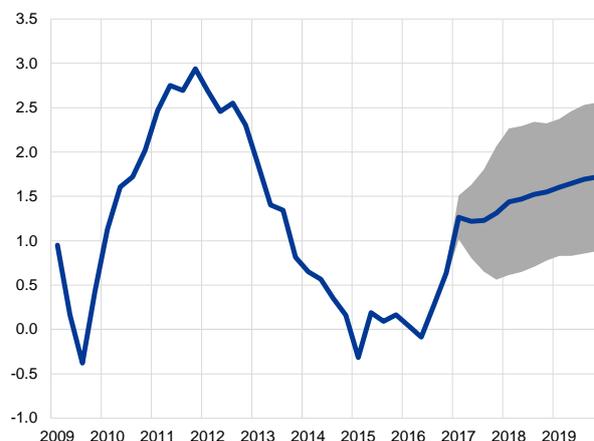
Euro area real GDP²⁾

(quarter-on-quarter percentage changes)



Euro area HICP

(year-on-year percentage changes)



1) The ranges shown around the central projections are based on the differences between actual outcomes and previous projections carried out over a number of years. The width of the ranges is twice the average absolute value of these differences. The method used for calculating the ranges, involving a correction for exceptional events, is documented in *New procedure for constructing Eurosystem and ECB staff projection ranges*, ECB, December 2009, available on the ECB's website.

2) Working day-adjusted data.

Private consumption expenditure is projected to broadly maintain its momentum over the projection horizon. Consumer confidence has improved again in recent months, on the back of improving general economic expectations and more favourable individual financial expectations.

The medium-term outlook for nominal disposable income growth remains positive. The contribution from gross wages and salaries is projected to increase over the projection period, as weaker employment growth is more than compensated for by a stronger acceleration in compensation per employee. Other personal income growth is projected to strengthen, broadly matching the profile of profits, while the contribution of net fiscal transfers is expected to be slightly negative. At the same time, real disposable income growth is expected to decelerate in 2017 owing to the rebound in consumer price inflation and to maintain its momentum thereafter.

Improving bank lending conditions, reinforced by the ECB's monetary policy measures, should support private consumption growth. While low interest rates have affected both the interest earnings and interest payments of households, they tend to redistribute resources from net savers to net borrowers. As the latter group typically has a higher marginal propensity to consume, this redistribution should further support aggregate private consumption. In addition, progress achieved in deleveraging and the projected rise in households' net worth, reflecting further increases in house prices, should also support consumption. Overall, annual growth in private consumption is projected to decelerate modestly from 1.7% in 2016 to 1.5% in both 2017 and 2018 and to 1.4% in 2019.

The saving ratio is expected to decline until mid-2017 and to remain flat thereafter. The saving ratio is estimated to have increased since mid-2015, most

likely because households saved part of the oil price-related income windfalls. This effect is expected to be temporary, and its unwinding is projected to imply a decline in the saving ratio during the course of 2017. The saving ratio is then projected to remain flat over the remainder of the projection horizon: declining unemployment, improving credit conditions and low interest rates would tend to reduce the saving ratio in some countries, while ongoing debt deleveraging needs and procyclical consumption smoothing would increase it.

Box 1

Technical assumptions about interest rates, exchange rates and commodity prices

Compared with the September projections, the changes in the technical assumptions include higher interest rates, higher US dollar-denominated oil prices and a small appreciation of the effective exchange rate of the euro. The technical assumptions about

interest rates and commodity prices are based on market expectations, with a cut-off date of 17 November 2016. Short-term rates refer to the three-month EURIBOR, with market expectations derived from futures rates. The methodology gives an average level for these short-term interest rates of -0.3% for 2016 and 2017, -0.2% for 2018 and 0.0% for 2019. The market expectations for euro area ten-year nominal government bond yields imply an average level of 0.8% in 2016, 1.2% in 2017, 1.5% in 2018 and 1.7% in 2019.² Reflecting the path of forward market interest rates and the gradual pass-through of changes in market rates to lending rates, composite bank lending rates on loans to the euro area non-financial private sector are expected to increase modestly in 2017 and rise further in 2018 and 2019. As regards commodity prices, on the basis of the path implied by futures markets by taking the average of the two-week period ending on the cut-off date of 17 November, the price of a barrel of Brent crude oil is assumed to fall from USD 52.4 in 2015 to USD 43.1 in 2016, before rising to USD 49.3 in 2017, USD 52.6 in 2018 and USD 54.6 in 2019, which is around USD 2 higher on average over 2017-18 than in the September projections. The prices of non-energy commodities in US dollars are assumed to fall somewhat in 2016 and to rise in 2017 and beyond.³ Bilateral exchange rates are assumed to remain unchanged over the projection horizon at the average levels prevailing in the two-week period ending on the cut-off date of 17 November. This implies an average exchange rate of USD 1.11 per euro in 2016 and USD 1.09 over 2017 to 2019, compared with USD 1.11 in the September projections. The effective exchange rate of the euro (against 38 trading partners) is 0.2% higher in 2016 and 0.4% higher in 2017 and 2018 than assumed in the September exercise.

² The assumption for euro area ten-year nominal government bond yields is based on the weighted average of countries' ten-year benchmark bond yields, weighted by annual GDP figures and extended by the forward path derived from the ECB's euro area all-bonds ten-year par yield, with the initial discrepancy between the two series kept constant over the projection horizon. The spreads between country-specific government bond yields and the corresponding euro area average are assumed to be constant over the projection horizon.

³ Oil and food commodity price assumptions are based on futures prices up to the end of the projection horizon. The prices of other non-energy hard commodities are assumed to follow futures until the fourth quarter of 2017 and thereafter to evolve in line with global economic activity.

Technical assumptions

	December 2016				September 2016		
	2016	2017	2018	2019	2016	2017	2018
Three-month EURIBOR (percentage per annum)	-0.3	-0.3	-0.2	0.0	-0.3	-0.4	-0.4
Ten-year government bond yields (percentage per annum)	0.8	1.2	1.5	1.7	0.7	0.6	0.8
Oil price (in USD/barrel)	43.1	49.3	52.6	54.6	42.8	47.4	50.6
Non-energy commodity prices, in USD (annual percentage change)	-4.0	6.6	3.8	4.5	-3.0	5.3	4.2
USD/EUR exchange rate	1.11	1.09	1.09	1.09	1.11	1.11	1.11
Euro nominal effective exchange rate (EER38) (annual percentage change)	3.8	0.1	0.0	0.0	3.6	-0.1	0.0

Residential investment in the euro area is expected to continue to expand. The projected acceleration of nominal disposable income, very low mortgage rates and limited other investment opportunities are expected to support a sustained recovery of residential investment. This favourable outlook for residential investment is also evidenced by rising building permits and increasing demand for loans for house purchase in a context of improved bank lending conditions, notably via lower margins on average loans. In addition, adjustment processes in the housing markets of some countries appear to have come to an end and house prices have started to increase. Nonetheless, the dampening impact of high unemployment and high levels of household debt in some countries on residential investment is expected to fade only gradually. Already high levels of residential investment relative to disposable income and adverse demographic developments dampen the growth of residential investment in other countries.

Business investment is expected to show steady growth. A number of factors are expected to support business investment developments: business confidence continues to improve on the back of favourable production expectations, rising order books and a turnaround in selling price expectations; capacity utilisation is already at its highest level since mid-2008; financing conditions remain very supportive, reinforced by the ECB's non-standard policy measures; domestic demand is expected to remain resilient and external demand is expected to strengthen; a need has arisen to modernise the capital stock after several years of subdued investment; and profit mark-ups are expected to pick up in the context of an already cash-rich non-financial corporations (NFC) sector. Moreover, the observed strong recovery in stock prices over the past few years and moderate debt financing growth have brought the leverage ratio (debt to total assets) in the NFC sector close to historical lows. However, the recovery of business investment will still be held back by rigidities in product markets and expectations of weaker potential output growth than in the past.

Extra-euro area exports are projected to accelerate over the projection horizon, broadly in line with foreign demand. Foreign demand is expected to gather momentum from end-2016 onwards, as import demand increases in both advanced and emerging market economies (including Russia and Brazil). However,

subdued import growth in the United Kingdom is expected to prevent a stronger increase in euro area foreign demand. Overall, the projected growth rates in foreign demand will remain well below pre-crisis levels.⁴ Extra-euro area exports are expected to gain momentum from the fourth quarter of 2016 onwards, broadly matching the pace of foreign demand. Extra-euro area imports are expected to grow slightly faster than extra-euro area exports and in line with their historical elasticity to total demand. The net trade contribution to real GDP growth is expected to turn more favourable over the projection horizon. The current account surplus is expected to stay constant at around 3.1% of GDP.

Box 2

The international environment

Global activity is expected to strengthen over the projection horizon. Data released since the previous projection exercise seem to confirm this assessment for the second half of the year, suggesting relatively stable growth in advanced economies and a slight improvement in emerging market economies. Looking ahead, global economic activity is expected to continue to strengthen, although remaining below its pre-crisis pace. The outlook among both advanced and emerging market economies remains mixed. Continued broadly accommodative policies and improving labour markets are expected to support activity in the United States, while in Japan the pace of expansion is expected to remain moderate, and heightened uncertainty is expected to weigh on the medium-term growth prospects of the UK economy. Moreover, the ongoing deceleration of Chinese growth is likely to weigh on the economic outlook of other emerging market economies, while the gradual easing of deep recessions in some of the larger commodity exporters remains a source of support to global growth looking ahead.

Global trade is also expected to have gained some momentum in the second half of this year, after the weakness observed in the first half. Excluding the euro area, global imports were revised slightly upwards in the first half of 2016 and available indicators point to positive signals regarding short-term prospects. Over the medium term, world trade is expected to strengthen, benefiting from the recovery in global activity. Euro area foreign demand is expected to increase by 1.5% in 2016, 2.4% in 2017, 3.4% in 2018 and 3.6% in 2019.

The international environment

(annual percentage changes)

	December 2016				September 2016		
	2016	2017	2018	2019	2016	2017	2018
World (excluding euro area) real GDP	3.0	3.5	3.7	3.8	3.0	3.5	3.7
Global (excluding euro area) trade ¹⁾	0.9	2.8	3.7	3.8	0.9	2.8	3.7
Euro area foreign demand ²⁾	1.5	2.4	3.4	3.6	1.6	2.6	3.5

1) Calculated as a weighted average of imports.

2) Calculated as a weighted average of imports of euro area trade partners.

⁴ See IRC Trade Task Force, "Understanding the weakness in global trade – What is the new normal?", *Occasional Paper Series*, No 178, ECB, September 2016.

Compared with the September 2016 projections, the outlook for the global recovery and foreign demand is little changed.

The negative output gap is expected to be closed by the end of the projection horizon, reflecting only moderate potential growth. Potential output growth is estimated to remain subdued over the horizon, and to remain well below its pre-crisis rate of around 1.7%. The modest momentum of potential output primarily reflects a rather low contribution from capital following a protracted period of very weak investment. The contribution from labour is projected to rise slightly, reflecting an increasing working age population and an increasing labour force participation on account of structural reforms. The contribution from labour will nevertheless remain somewhat below its pre-crisis average due to the ageing population. As actual growth is expected to be well above the moderate path of potential output, the negative output gap will narrow steadily and be closed by the end of the projection horizon.

Euro area labour market conditions should continue to improve over the projection horizon. Employment is projected to continue to rise over the projection horizon, albeit less rapidly than in recent quarters. In the short term, this mainly reflects a normalisation as some temporary supportive factors fade, whereas over the remainder of the horizon it mainly reflects that skilled labour supply shortages are assumed to become more binding in parts of the euro area. These developments in employment imply a pick-up in labour productivity growth from 0.3% in 2016 to 0.9% in 2019, reflecting a procyclical pattern with increasing utilisation of both capital and labour, an increase in the number of hours worked per person and some gains in total factor productivity. The unemployment rate is expected to decline, albeit at a slower pace than in the recent past, as employment growth slows more strongly than labour force growth.

Compared with the September 2016 projections, real GDP growth has been revised up slightly in the short term and is broadly unchanged thereafter. The improved near-term outlook reflects more favourable developments in short-term indicators and recent positive surprises relating to the labour and housing markets.

2 Prices and costs

HICP inflation is projected to increase significantly from 0.2% in 2016 to 1.3% in 2017 and somewhat further to 1.5% in 2018 and 1.7% in 2019. Energy prices are expected to account for about four-fifths of the pick-up in HICP inflation between 2016 and 2017. The fading of the strong dampening effect from past oil price falls, which weighed on headline inflation in 2015 and 2016, is expected to significantly boost headline inflation in 2017, in particular at the beginning of the year. Subsequently, the flattening profile of the oil price futures curve implies a mild decrease in the inflation rate of this HICP component in the remainder of 2017 and broadly flat developments thereafter.

HICP inflation excluding energy and food is expected to rise gradually over the projection horizon in view of increasing domestic cost pressures.

Ongoing improvements in labour market conditions, as reflected in continued employment growth, are foreseen to lead to declining labour market slack. This is expected to contribute to a notable increase in wage as well as unit labour cost growth by 2019. Profit margins are also expected to expand further in line with a closing output gap, albeit at a broadly constant or slower pace than recently seen. In addition, the fading of the dampening effects from past oil price falls and the assumed increases in oil prices should contribute to the increase in HICP inflation excluding energy and food via indirect effects. By contrast, fading upward effects from the past euro depreciation together with downward effects from the subsequent euro appreciation dampen the outlook for HICP inflation excluding energy and food. Overall, HICP inflation excluding energy and food is expected to amount to 0.9% on average in 2016 and to rise gradually over the horizon to 1.7% in 2019. It is expected to be the main driver of the strengthening in HICP inflation from mid-2017 onwards.

The expected turnaround in import prices is a major factor behind the projected strengthening in inflation in the near term.

Following an unusually long period of successive declines in import prices, the annual growth rate of import prices is expected to turn positive in 2017. A key element of the envisaged turnaround is the assumed increase in commodity and, in particular, oil prices. Strong upward base effects also play a significant role in the turnaround in the annual growth rate of the import deflator from 2016 to 2017. Gradually rising global non-commodity inflationary pressures, supported by diminishing global spare capacity, should add to external price pressures in the euro area. Despite being expected to rise, global price pressures are projected to remain moderate, dampened by the still considerable global spare capacity, in both advanced and emerging market economies, and the resulting high degree of competition with low-cost countries.

Wage growth is envisaged to rise visibly throughout the horizon as labour market slack abates and other factors that weigh on wage growth gradually fade.

Compensation per employee growth is projected to rise from 1.2% in 2016 to 2.4% in 2019. Major factors behind this notable pick-up are the foreseen improvements in labour market conditions as well as the envisaged increase in inflation which should feed back into wage developments, given that wage bargaining processes include a significant backward-looking element in some euro area countries. Moreover, the need for wage moderation to regain price competitiveness in some countries or pent-up wage restraint should gradually abate over the projection horizon. In addition, the dampening effects from structural labour market reforms implemented in some euro area countries during the crisis might weigh less on wage growth as the cyclical recovery progresses and widens. In addition, compositional effects should fade as employment gains become more widespread and less focused on low productivity and, hence, low wage sectors than in recent years.

Profit margins are expected to continue to expand over the projection horizon, benefiting from the continued economic recovery, but at a much slower pace

than in 2015. Profit margins were boosted in 2015 by the sharp fall in oil prices, which does not seem to have been passed on fully to consumer prices, as well as by weak unit labour cost developments. As the oil price effect unwinds and unit labour cost growth picks up in 2016, a weakening of the expansion in profit margins is expected. The broadly unchanged and moderate pace of the increase in profit margins over the remainder of the projection horizon is consistent with the envisaged cyclical recovery and with some dampening effect from rising unit labour costs.

Compared with the September 2016 projections, the outlook for HICP inflation is broadly unchanged. While the path of underlying inflation is slightly weaker than in the previous projection exercise, this is more than offset in 2017 by higher energy price inflation.

3 Fiscal outlook

The fiscal stance is projected to be expansionary in 2016 and broadly neutral in 2017-19. The fiscal policy stance is measured as the change in the cyclically adjusted primary balance net of government support to the financial sector. In 2016 the expansionary fiscal stance is mostly driven by discretionary fiscal measures, while non-discretionary factors play a minor role and are mostly related to a small decline in non-tax revenues.

Over the projection horizon, the general government budget deficit and debt ratios are projected to be on a downward path. In 2016 lower interest payments and the improvement in the cyclical component more than offset the deterioration of the cyclically adjusted primary balance. From 2017 to 2019, further declining interest payments and the improvement in the cyclical component entail a further reduction in the budget deficit, while the cyclically adjusted primary balance remains unchanged. The gradual reduction in government debt over the projection horizon is mainly supported by the favourable growth-interest rate differential in the light of the projected economic recovery and assumed low interest rates. The primary surplus also has a favourable impact on the projected debt path.

Compared with the projections published in September, the fiscal outlook is broadly unchanged as regards the deficit ratio, while the debt ratio has been revised up in 2017-18. The upward revision to the debt-to-GDP ratio in 2017 and 2018 mainly reflects a smaller contribution to debt reduction from the growth-interest rate differential, stemming from a downward revision in euro area nominal GDP.

Table 1**Macroeconomic projections for the euro area¹⁾**

(annual percentage changes)

	December 2016				September 2016		
	2016	2017	2018	2019	2016	2017	2018
Real GDP ¹⁾	1.7	1.7	1.6	1.6	1.7	1.6	1.6
	[1.6 - 1.8] ²⁾	[1.1 - 2.3] ²⁾	[0.6 - 2.6] ²⁾	[0.4 - 2.8] ²⁾	[1.5 - 1.9] ²⁾	[0.7 - 2.5] ²⁾	[0.4 - 2.8] ²⁾
Private consumption	1.7	1.5	1.5	1.4	1.7	1.6	1.5
Government consumption	2.0	1.3	1.1	1.1	1.7	0.9	1.0
Gross fixed capital formation	3.0	3.1	3.1	2.7	3.1	3.3	3.3
Exports ³⁾	2.7	3.7	3.9	4.0	2.6	3.7	4.1
Imports ³⁾	3.3	4.1	4.3	4.1	3.3	4.4	4.7
Employment	1.4	1.1	0.8	0.8	1.3	0.8	0.7
Unemployment rate (percentage of labour force)	10.0	9.5	9.1	8.7	10.1	9.9	9.6
HICP	0.2	1.3	1.5	1.7	0.2	1.2	1.6
	[0.2 - 0.2] ²⁾	[0.8 - 1.8] ²⁾	[0.7 - 2.3] ²⁾	[0.9 - 2.5] ²⁾	[0.1 - 0.3] ²⁾	[0.6 - 1.8] ²⁾	[0.8 - 2.4] ²⁾
HICP excluding energy	0.9	1.1	1.4	1.7	0.9	1.2	1.5
HICP excluding energy and food	0.9	1.1	1.4	1.7	0.9	1.3	1.5
HICP excluding energy, food and changes in indirect taxes ⁴⁾	0.8	1.1	1.4	1.7	0.9	1.2	1.5
Unit labour costs	0.8	1.0	1.3	1.5	0.8	1.0	1.3
Compensation per employee	1.2	1.7	2.1	2.4	1.2	1.8	2.2
Labour productivity	0.3	0.6	0.8	0.9	0.4	0.7	0.9
General government budget balance (percentage of GDP)	-1.8	-1.6	-1.5	-1.2	-1.9	-1.7	-1.5
Structural budget balance (percentage of GDP) ⁵⁾	-1.8	-1.8	-1.6	-1.4	-1.9	-1.8	-1.6
General government gross debt (percentage of GDP)	89.4	88.5	87.3	85.7	89.5	88.4	87.0
Current account balance (percentage of GDP)	3.2	3.1	3.0	3.1	3.5	3.4	3.3

1) Working day-adjusted data.

2) The ranges shown around the projections are based on the differences between actual outcomes and previous projections carried out over a number of years. The width of the ranges is twice the average absolute value of these differences. The method used for calculating the ranges, involving a correction for exceptional events, is documented in *New procedure for constructing Eurosystem and ECB staff projection ranges*, ECB, December 2009, available on the ECB's website.

3) Including intra-euro area trade.

4) The sub-index is based on estimates of actual impacts of indirect taxes. This may differ from Eurostat data, which assume a full and immediate pass-through of tax impacts to the HICP.

5) Calculated as the government balance net of transitory effects of the economic cycle and temporary measures taken by governments (for the ESCB approach, see *Working Paper Series*, No 77, ECB, September 2001, and *Working Paper Series*, No 579, ECB, January 2007). The projection of the structural balance is not derived from an aggregate measure of the output gap. Under the ESCB methodology, cyclical components are calculated separately for different revenue and spending items. For more details, see the box entitled "Cyclical adjustment of the government budget balance" in the March 2012 issue of the ECB's Monthly Bulletin and the box entitled "The structural balance as an indicator of the underlying fiscal position" in the September 2014 issue of the ECB's Monthly Bulletin.

Box 3

Sensitivity and scenario analyses

Projections rely heavily on technical assumptions regarding the evolution of certain key variables. Given that some of these variables can have a large impact on the projections for the euro area, examining the sensitivity of the latter with respect to alternative paths of these underlying assumptions can help in the analysis of risks around the projections. This box discusses the uncertainty around some key underlying assumptions and the sensitivity of the projections with respect to these variables. In addition, this box considers the implications of some of the potential policies of the new US administration for the US, global and euro area outlook.

1) An alternative oil price path

Alternative oil price models point to a risk of oil prices rising faster over the projection horizon than suggested by futures. The technical assumptions for oil price developments underlying the baseline projections, based on futures markets, predict an increasing path for oil prices, with the price per barrel of Brent crude oil reaching about USD 55 by the end of 2019. This path is consistent with a moderate recovery of world oil demand, a scenario associated with the global economic recovery gaining traction, and with a small decline in oil supply. A combination of alternative models used by Eurosystem staff⁵ to predict oil prices over the projection horizon currently suggests a higher oil price path over the projection horizon than assumed in the technical assumptions. The materialisation of an alternative path, in which oil prices were 19% higher than in the baseline by 2019, would marginally dampen real GDP growth, while entailing a faster increase in HICP inflation (up by 0.1 percentage point in 2017, 0.2 percentage point in 2018 and 0.3 percentage point in 2019).

Following the completion of this projection exercise, OPEC agreed on 30th November 2016 to reduce oil supply, which led to a steep rise in oil price futures in the short term followed by a slightly rising path for oil price futures later in the horizon. If this path of oil price futures were to materialise, it would result in stronger HICP inflation in 2017 but would have less of an impact on the inflation path in 2018 and 2019 compared with the path entailed in the baseline.

2) An alternative exchange rate path

This sensitivity analysis investigates, as an illustration, the impact of a lower path of the exchange rate of the euro compared with the baseline. Depreciation risks to the euro exchange rate mainly stem from a divergence in the monetary policy stance on either side of the Atlantic. In particular, a less gradual than expected rise in the US federal funds rate could put further downward pressure on the euro. This may reflect in particular rising inflation expectations in the United States amid expansive fiscal policies and a tight labour market. The alternative path of the exchange rate of the euro is based on the 25th percentile of the distribution provided by the option-implied risk-neutral densities for the USD/EUR exchange rate on 17 November 2016. This path implies a gradual depreciation of the euro vis-à-vis the US dollar to an exchange rate of 0.95 USD/EUR in 2019, which is 9.7% below the baseline assumption for that year. The corresponding assumptions for the nominal effective exchange rate of the euro reflect historical regularities, whereby changes in the USD/EUR exchange rate reflect changes in the effective exchange rate with an elasticity of

⁵ See the four-model combination presented in the article entitled "Forecasting the price of oil", *Economic Bulletin*, Issue 4, ECB, 2015.

around 50%. This assumption results in a gradual downward divergence of the effective exchange rate of the euro from the baseline, bringing it to a level 5.2% below the baseline in 2019. In this scenario, the average of the results from a number of staff macroeconomic models points to higher real GDP growth (up by 0.2-0.3 percentage point per year) and higher HICP inflation (up by 0.2 percentage point in 2017 and by 0.4-0.5 percentage point in 2018 and 2019).

3) Scenarios under the new US administration – implications for the US, global and euro area outlook

The potential policy changes under the new US administration headed by President-elect Donald Trump are still emerging. Although details of the forthcoming policies of the new administration are not yet known and are therefore not included in the baseline, during his campaign, Mr Trump outlined the following key policy plans: (i) a large fiscal stimulus package, possibly including a combination of personal and large corporate tax cuts, as well as spending increases on infrastructure and defence; (ii) a stricter immigration policy; and (iii) increased trade protectionism. Bearing in mind the caveats associated with the high uncertainty regarding these future policies, the impact of these three broad policy areas is discussed below.

The implications of such a policy package are likely to be inflationary in the United States, while the impact on activity depends on the actual measures chosen. The fiscal measures will boost real GDP growth and inflation, but this boost might be mitigated by higher interest rates and an appreciation of the US dollar. A stricter immigration policy could lead to a rather modest reduction in activity, if the decline in the labour force is to a large extent offset by a higher participation rate and increased employment in other parts of the domestic population. Protectionist trade policies, via higher import tariffs, might be reciprocated and could imply a decline in real US GDP over the projection horizon, owing to lower US exports.

The global effects depend on the relative strength of the various channels. Emerging market economies, if hit strongly by protectionist measures, are likely to see an adverse impact on their GDP growth, while other regions might initially benefit from the US fiscal stimulus and trade substitution effects.

Turning to the impact on the euro area, there are various channels at play. First, fiscal policy expansion in the United States would boost domestic demand in the United States, weaken the euro vis-à-vis the US dollar and lead to higher demand for euro area goods and services. Second, given that domestic activity and imports in the United States and emerging market economies could be reduced as a result of higher import tariffs and other trade policies, the direct demand effect from US trade policies could be negative for the euro area. However, if the euro area is not subject to higher import tariffs, it would gain in price competitiveness with respect to those countries that face higher import tariffs. This could imply a global substitution effect favouring the euro area. Overall, however, the effects on the euro area remain highly uncertain at this juncture and they depend on the specific policies chosen by the new US administration.

Box 4

Forecasts by other institutions

A number of forecasts for the euro area are available from both international organisations and private sector institutions. However, these forecasts are not strictly comparable with one another or with the Eurosystem staff macroeconomic projections, as they were finalised at different points in time. Additionally, they use different (partly unspecified) methods to derive assumptions for fiscal, financial and external variables, including oil and other commodity prices. Finally, there are differences in working day adjustment methods across different forecasts (see the table).

As indicated in the table, other institutions' currently available projections for real GDP growth and HICP inflation are overall well within the ranges surrounding the Eurosystem staff projections (shown in brackets in the table).

Comparison of forecasts for euro area real GDP growth and HICP inflation

(annual percentage changes)

	Date of release	GDP growth			HICP inflation		
		2016	2017	2018	2016	2017	2018
Eurosystem staff projections	December 2016	1.7 [1.6-1.8]	1.7 [1.1-2.3]	1.6 [0.6-2.6]	0.2 [0.2-0.2]	1.3 [0.8-1.8]	1.5 [0.7-2.3]
European Commission	November 2016	1.7	1.5	1.7	0.3	1.4	1.4
OECD	November 2016	1.7	1.6	1.7	0.2	1.2	1.4
Euro Zone Barometer	November 2016	1.6	1.3	1.4	0.3	1.3	1.6
Consensus Economics Forecasts	November 2016	1.6	1.3	1.4	0.2	1.3	1.5
Survey of Professional Forecasters	October 2016	1.6	1.4	1.5	0.2	1.2	1.4
IMF	October 2016	1.7	1.5	1.6	0.3	1.1	1.3

Sources: European Commission's European Economic Forecast, Autumn 2016; IMF World Economic Outlook, October 2016; OECD Economic Outlook, November 2016; Consensus Economics Forecasts, November 2016; MJEconomics for the Euro Zone Barometer, November 2016; and the ECB's Survey of Professional Forecasters, October 2016.

Notes: The Eurosystem and ECB staff macroeconomic projections and the OECD forecasts both report working day-adjusted annual growth rates, whereas the European Commission and the IMF report annual growth rates that are not adjusted for the number of working days per annum. Other forecasts do not specify whether they report working day-adjusted or non-working day-adjusted data.

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