EUROPEAN CENTRAL BANK

EUROSYSTEM

March 2017
ECB staff macroeconomic projections for the euro area[1]

The economic recovery in the euro area is projected to firm further, at a pace slightly above previous expectations. 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.

The recent oil price rise is expected to lead to HICP inflation averaging 1.7% this year. However, underlying inflationary pressures are seen to be rising only gradually over the projection horizon.

1 Real economy

Short-term indicators suggest continued robust growth in the near term. Real GDP rose by 0.4% in the fourth quarter of 2016. The recovery is becoming more broad-based, both across sectors and across countries within the euro area. Labour market conditions have continued to improve in recent months, with unemployment rates falling slightly more than expected. While indicators of economic policy uncertainty increased, indicators of financial and economic uncertainty remain low (see Box 1). In addition, confidence has continued to improve, suggesting resilient growth in the first half of 2017.

Over the projection horizon, real GDP is expected to grow by 1.8% in 2017, by 1.7% in 2018 and by 1.6% in 2019. Domestic demand has been the mainstay of the recovery since mid-2013, including robust private consumption and a positive contribution from investment. A number of favourable factors are expected to continue to support domestic demand over the projection horizon, underpinned by the ECB's very accommodative monetary policy stance. Euro area exports are also projected to strengthen over the projection horizon, supported by an expected recovery in global trade and the past weakening of the exchange rate of the euro.

[1] These macroeconomic projections produced by ECB staff are an input to the Governing Council's assessment of economic developments and the risks to price stability. The projections produced by ECB or Eurosystem staff are neither endorsed by the Governing Council nor do they necessarily reflect the views of the Governing Council on the outlook for the euro area. 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 for oil prices and exchange rates, was 14 February 2017 (see Box 2). The cut-off date for including other information in this exercise was 20 February 2017, with the exception of the quarterly national accounts release for Germany on 23 February, which has been included.
The current macroeconomic projection exercise covers the period 2016-19. Projections 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.

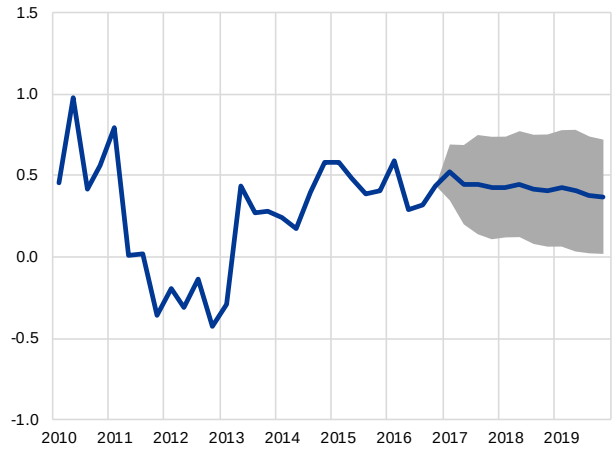
Chart 1

Macroeconomic projections[1)]

(quarterly data)

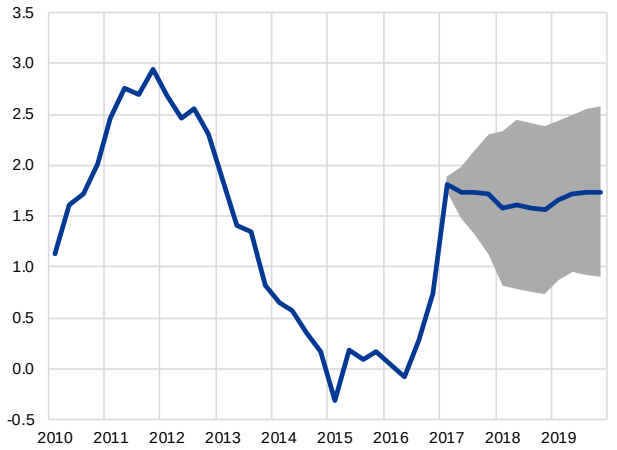
Euro area real GDP[2)]

(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.

Box 1

The relevance of economic policy uncertainty for the economic outlook in the euro area

A measure of economic policy uncertainty (EPU) has increased sharply in recent months.[2] This increase was likely related to the outcome of the referendum in the United Kingdom to leave the EU and the outcome of the US election. At present, this indicator may also reflect uncertainty regarding forthcoming elections in several euro area countries. This box discusses the EPU indicator, puts it into a broader context of uncertainty measures and concludes that its relevance to the economic outlook is likely to be rather limited at the current juncture.

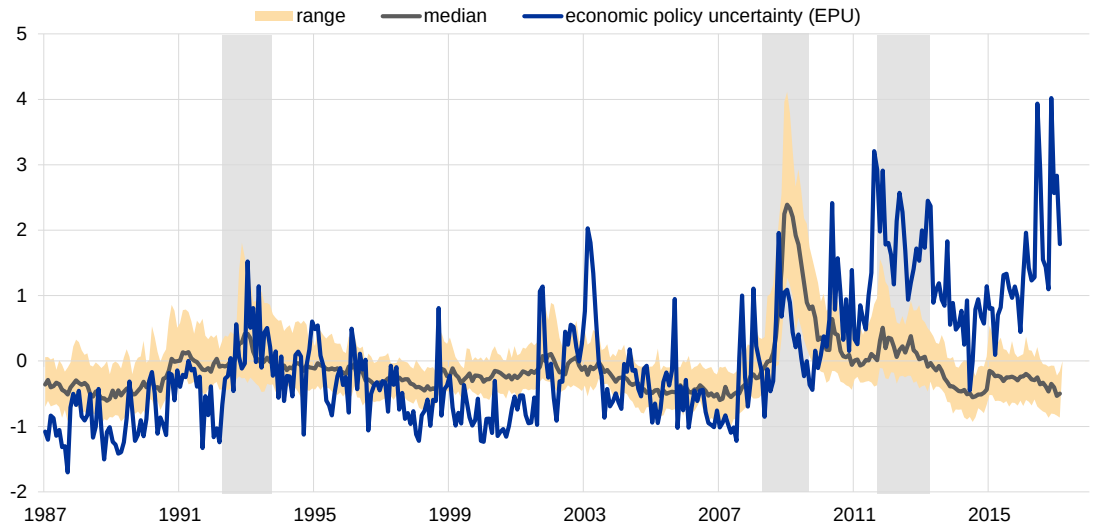
In principle, elevated economic policy uncertainty can have an adverse impact on activity, as it may lead enterprises to postpone or cancel investment decisions until uncertainty has declined. Similarly, uncertainty can adversely affect the decisions of households when it comes to major purchases. High uncertainty can, moreover, lead households to increase pre-cautionary savings. Finally, uncertainty can adversely affect activity through higher costs of financing attributable to increased risk premia, and it may reduce banks' incentives to provide loans to households and companies.[3]

2 The EPU indicator counts the frequency of articles containing the words "uncertain" or "uncertainty" and "economic" or "economics", and one of a number of policy words, such as "deficit" or "regulation", in leading newspapers. For more details see Baker, S., Bloom, N. and Davis, S., "Measuring economic policy uncertainty", *NBER Working Paper Series*, No 21633, October 2015.

3 For a discussion of various transmission channels of uncertainty, see Bloom, N., "Fluctuations in uncertainty", *Journal of Economic Perspectives*, Vol. 28, No 2, 2014, pp. 153-176.

Selected measures of uncertainty in the euro area

(standard deviation from mean)



Sources: Baker/Bloom/Davis; Consensus Economics; Eurostat; European Commission; ECB and ECB calculations.
Notes: grey areas reflect euro area recessions as identified by the CEPR. The range depicts the 25th to 75th percentiles of around 130 uncertainty indicators (covering financial, forecast, economic and policy uncertainty) estimated for the euro area.

However, despite the recent rise in economic policy uncertainty, the latest economic developments in the euro area appear to have become more robust. The economic recovery in the euro area is more broadly based than previous recoveries[4]; it is also mostly based on domestic demand, which makes it less vulnerable to foreign shocks. In addition, all institutional sectors are currently more robust than they were in the pre-crisis period, as leverage ratios have been reduced to more sustainable levels. Confidence among households and businesses remains at very high levels and financial markets do not appear to have priced in significant tail risks.

Indeed, there is a significant gap at present between heightened economic policy uncertainty and rather subdued levels of other economic and financial uncertainty indicators. The chart shows the median of around 130 uncertainty measures estimated for the euro area, the 25th to 75th percentiles of these measures and the measure of EPU.[5] The median of all measures has the advantage over individual measures of uncertainty by better capturing various dimensions of uncertainty, while the swathe of the 25th to 75th percentiles accounts for the uncertainty around these uncertainty measures and excludes outliers. It can be seen that the median and the 25th to 75th percentiles of uncertainty measures for the euro area currently suggest low uncertainty. In contrast, the measure of EPU proves to be an outlier at the current juncture, even more so than it has been during the past six years.

The EPU indicator might not necessarily provide a reliable signal for heightened uncertainty at the current juncture. First, the EPU indicator does not distinguish between uncertainty about domestic policies and uncertainty about external policies. Accordingly, to the extent that businesses

4 See Box 1 entitled “Economic growth in the euro area is broadening”, *Economic Bulletin*, Issue 1, ECB, 2017.

5 For an overview, see the article entitled “The impact of uncertainty on activity in the euro area”, *Economic Bulletin*, Issue 8, ECB, 2016. See also Haddow, A., Hare, C., Hooley, J. and Shakir, T., “Macroeconomic uncertainty: what is it, how can we measure it and why does it matter?”, *Quarterly Bulletin*, Second Quarter, Bank of England, 2013.

and consumers distinguish between domestic and foreign sources of uncertainty and mostly focus on domestic sources of uncertainty, it might explain the relatively loose correlation of the EPU indicator to other measures of uncertainty and its limited empirical relevance for predicting euro area economic trends. Second, the EPU indicator is based on articles from only two leading newspapers per country; this small sample might not be representative of perceptions of the general public. Third, the EPU indicator is a much more volatile indicator of uncertainty than other measures and often exhibits spikes when other indicators remain moderate or when economic activity appears to have remained unaffected. All this suggests applying caution in using this indicator to project economic developments.[6]

Private consumption growth is projected to remain robust over the projection horizon. Consumer confidence has remained at elevated levels in recent months, on the back of improved general economic expectations and more favourable individual financial expectations. Taking the improving labour market conditions also into account, private consumption is expected to continue expanding in the near term.

Nominal disposable income growth remains robust. The contribution from gross wages and salaries to nominal disposable income growth is projected to increase over the projection period.

Favourable 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 private 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.

Higher oil prices, however, are having an adverse impact on real disposable income, even though consumption smoothing is expected to partly offset the impact on consumption. The saving ratio increased between mid-2015 and mid-2016, as households saved part of the oil price-related income windfalls. The unwinding of this temporary effect is estimated to have started in the second half of 2016 and is expected to continue during the course of 2017, amplified by the recent increase in oil prices. The saving ratio is then projected to remain flat over the remainder of the projection horizon as downward pressures from declining unemployment, improving credit conditions and low interest rates are offset by upward pressures from ongoing debt deleveraging needs and pro-cyclical consumption smoothing.

[6] See also Forbes, K., "Uncertainty about uncertainty", speech delivered at J.P. Morgan Cazenove "Best of British" Conference, London, 23 November 2016, which comes to similar conclusions for the United Kingdom.

Box 2

Technical assumptions about interest rates, exchange rates and commodity prices

Compared with the December 2016 projections, the technical assumptions include slightly higher long-term interest rates, significantly higher US dollar-denominated oil prices and a small depreciation 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 14 February 2017. 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 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 1.3% in 2017, 1.6% in 2018 and 1.9% in 2019.[7] Compared with the December 2016 projections, market expectations for short-term interest rates remain unchanged, while expectations for long-term rates have been revised up by 10-20 basis points. 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 remain broadly unchanged in 2017 and to rise somewhat 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 14 February, the price of a barrel of Brent crude oil is assumed to increase from USD 44.0 in 2016 to USD 56.4 in 2017 and to USD 56.5 in 2018, before declining to USD 55.9 in 2019. This path implies that, in comparison with the December 2016 projections, oil prices in USD are higher by 14.3% in 2017, by 7.3% in 2018 and by 2.5% in 2019. The prices of non-energy commodities in US dollars are assumed to rise substantially in 2017 and more moderately beyond.[8]

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 14 February. This implies an average exchange rate of USD 1.07 per euro over 2017-19, compared with USD 1.09 in the December 2016 projections. The effective exchange rate of the euro (against 38 trading partners) is 1.3% lower over 2017-19 than assumed in the December 2016 exercise.

7 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.

8 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 first quarter of 2018 and thereafter to evolve in line with global economic activity.

Technical assumptions

	March 2017				December 2016			
	2016	2017	2018	2019	2016	2017	2018	2019
Three-month EURIBOR (percentage per annum)	-0.3	-0.3	-0.2	0.0	-0.3	-0.3	-0.2	0.0
Ten-year government bond yields (percentage per annum)	0.8	1.3	1.6	1.9	0.8	1.2	1.5	1.7
Oil price (in USD/barrel)	44.0	56.4	56.5	55.9	43.1	49.3	52.6	54.6
Non-energy commodity prices, in USD (annual percentage change)	-3.9	13.2	3.5	4.6	-4.0	6.6	3.8	4.5
USD/EUR exchange rate	1.11	1.07	1.07	1.07	1.11	1.09	1.09	1.09
Euro nominal effective exchange rate (EER38) (annual percentage change)	3.7	-1.0	0.0	0.0	3.8	0.1	0.0	0.0

The recovery in residential investment in the euro area is expected to continue. Housing investment recovered markedly in 2016, supported by strong growth of disposable income and favourable financing conditions. Looking ahead, the projected increase in nominal disposable income, very low mortgage rates and limited other investment opportunities are expected to support a further recovery in 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. In addition, adjustment processes in the housing markets of some euro area countries appear to have come to an end and house prices have been increasing in several countries. Nonetheless, high unemployment and remaining deleveraging needs in some countries are expected to continue to hold back residential investment. Already high levels of residential investment relative to disposable income and adverse demographic developments are projected to dampen the momentum of residential investment in other countries.

Business investment is expected to recover. A number of factors are expected to support business investment developments: business confidence has continued to improve on the back of favourable production expectations, rising order books and a turnaround in selling price expectations; capacity utilisation exceeds its average pre-crisis levels; financing conditions remain very supportive; domestic demand is expected to remain resilient and external demand is expected to strengthen; there is a need 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 average debt-to-total assets ratio in the NFC sector to historical lows. However, the recovery of business investment will still be held back by rigidities in product markets, expectations of weaker potential output growth than in the past and remaining needs for deleveraging in some euro area countries. In addition, low bank profitability and the still high stock of non-performing loans on banks' balance sheets in a number of countries continue to weigh on the intermediation capacity of some banking sectors.

Box 3
The international environment

Global activity growth is expected to continue to recover. Recent data releases confirm the expected improvement in global activity in the second half of 2016 and point to continued growth in the near term. The outlook among both advanced and emerging market economies, however, remains somewhat mixed. Among advanced economies, favourable financial conditions, improving labour markets and fiscal policy stimuli are expected to support activity in the United States, while heightened uncertainty is expected to weigh on the medium-term growth prospects of the UK economy and the pace of expansion is expected to remain moderate in Japan. In emerging markets, resilient growth in some big economies, together with the gradual easing of deep recessions in some of the larger commodity exporters, constitute the main support to global growth, while the gradual deceleration of the Chinese economy remains a drag. The increase in oil prices is expected to have a limited overall impact on global activity: although it provides some support to activity for oil producers, these economies still face a period of considerable adjustment needs (including fiscal consolidation) given the significant decline in the oil price since 2014. At the same time, consumers in commodity-importing countries are expected to absorb part of the shock via lower saving ratios. Global activity (excluding the euro area) is projected to accelerate from 3.1% in 2016 to 3.5% in 2017 and to 3.8% in 2018 and 2019, revised upwards slightly compared with the previous projection exercise.

The international environment

(annual percentage changes)

	March 2017				December 2016			
	2016	2017	2018	2019	2016	2017	2018	2019
World (excluding euro area) real GDP	3.1	3.5	3.8	3.8	3.0	3.5	3.7	3.8
Global (excluding euro area) trade[1)]	1.2	3.4	3.7	3.8	0.9	2.8	3.7	3.8
Euro area foreign demand[2)]	1.6	2.8	3.4	3.5	1.5	2.4	3.4	3.6

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

Global trade improved in the second half of 2016 and is expected to maintain its momentum over the projection horizon. Over the medium term, world trade is expected to expand in line with the recovery in global activity (see table). Compared with the December 2016 projections, euro area foreign demand has been revised up by 0.4 percentage point for 2017 and been left broadly unchanged thereafter.

Extra-euro area exports are projected to be supported by the recovery in global demand and by the slightly weaker exchange rate of the euro. Euro area foreign demand is expected to maintain its recent momentum throughout the projection horizon, 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 dampen the momentum in euro area foreign demand. Overall, the projected growth rates in foreign demand will remain well below pre-crisis levels. Extra-euro area exports are projected to outpace the momentum of foreign demand, notably in 2017, on the back of the weaker exchange rate of the euro. Extra-euro area imports are expected to grow faster than extra-euro

area exports and in line with their historical elasticity to total demand. The current account surplus is expected to remain broadly stable at around 3.1-3.3% of GDP over the projection horizon.

The negative output gap is expected to narrow steadily over the projection horizon, reflecting only moderate potential growth. Potential output growth is estimated to be slightly above 1% over the projection horizon and therefore to remain clearly below projected actual real GDP growth of around 1.7%. The subdued momentum of potential output reflects primarily a rather low contribution from capital following a protracted period of historically low investment. The contribution from labour is projected to increase, reflecting a growing working age population in the context of the inflow of migrants 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 of the population. The contribution from total factor productivity is expected to be only slightly below its pre-crisis level.

Euro area labour market conditions should continue to improve over the projection horizon. Employment is projected to continue increasing over the projection horizon, albeit gradually losing some momentum. In the short term, this reflects mainly the fading of some favourable temporary factors affecting employment growth. Over the remainder of the horizon, skilled labour supply shortages are projected to become increasingly a constraint in some countries, dampening employment growth and leading to an increase in the number of hours worked per employee. These developments in employment imply a pick-up in labour productivity growth from 0.4% in 2016 to 0.8% in 2019, reflecting a procyclical pattern with increasing utilisation of both capital and labour. 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 December 2016 projections, real GDP growth has been revised upwards slightly in 2017 and 2018. Slightly stronger foreign demand in the near term, the weaker exchange rate of the euro and more favourable economic sentiment are estimated to more than offset the adverse impact of higher oil prices on activity.

2 Prices and costs

The near-term outlook for headline inflation has been revised upwards significantly following the recent rise in oil prices, with inflation now expected to average 1.7% over 2017-19. However, there are contrasting patterns in energy and non-energy inflation. Between 2016 and 2017, energy prices are expected to account for 1.2 percentage points of the strengthening in HICP inflation. Upward base effects, together with recent significant increases in oil prices, account for the sharp turnaround – from large negative to sizable positive rates – in energy price inflation. The broadly flat profile of the oil price futures curve over the horizon,

however, implies that the energy component will have a smaller positive contribution to headline inflation in 2018 and 2019.

In contrast to energy inflation, the expected pick-up in HICP inflation excluding energy and food is much more gradual over the projection horizon. HICP inflation excluding energy and food is envisaged to average 1.1% in 2017 and to rise to 1.5% and 1.8% in 2018 and 2019 respectively. A main factor behind this gradual pick-up is the envisaged increase in unit labour costs as the recovery progresses and consolidates. Declining labour market slack and a gradual fading of crisis-related factors that have held down wage growth over the past few years are expected to lead to a rebound in growth in compensation per employee and, given a more modest projected recovery in productivity, in unit labour cost growth. In addition, the rebound in oil prices is expected to add indirectly to these upward cost pressures through higher production costs and repercussions on nominal wages. Profit margins are expected to expand steadily, being somewhat dampened by rising labour costs and the recent terms of trade losses.

Rising oil and non-energy commodity prices are the main factors behind the turnaround in external price pressures. Following a period of four years of receding import prices related particularly to the past sharp drop in commodity prices, the annual growth rate of import prices is expected to turn positive in 2017. Key elements of this turnaround in import prices are the rebound in oil and non-energy commodity prices. Over time, gradually rising global inflationary pressures are also expected to add to these developments. Diminishing global slack is seen as slowly pushing up global production costs beyond the impact of commodity prices. Global price pressures are nevertheless projected to remain moderate given the still considerable global spare capacity and the high degree of competition with low cost countries.

Improving labour market conditions are expected to be increasingly reflected in rising labour costs over the projection horizon. Growth in compensation per employee is expected to rise to 1.3% in 2016 and to reach 2.4% in 2019. A main factor behind this noticeable pick-up is the foreseen improvement in labour market conditions, with increasing labour supply shortages in some parts of the euro area. In addition, the significant recent increase in inflation, which implied a sharp fall in real wage growth, reduces the risk of negative second-round effects in the near term. In some countries higher inflation may, over time, also positively affect nominal wage developments, wherever wage bargaining processes include a notable backward looking element. However, for 2017 the potential for upward effects of higher inflation on negotiated wages is constrained by the fact that, in several countries, most of the negotiated wages for 2017 are already locked in for this year. Furthermore, it should be noted that, in some countries, the degree of wage indexation to inflation has been substantially reduced in the recent past. Moreover, in some euro area countries the remaining wage indexation schemes are based on inflation excluding imported energy prices, which has so far not picked up substantially. Beyond the impact from inflation, in some countries the need for wage moderation to regain price competitiveness, or pent-up wage restraint, should gradually abate over the projection horizon and thereby support wage growth. Dampening effects from labour

market reforms implemented in some euro area countries during the crisis may also become less pronounced as the cyclical recovery progresses and widens. Similarly, the dampening impact on wage growth from compositional effects should decrease as the economic recovery progresses, since employment gains are expected to become more widespread across sectors and less focused on low productivity and therefore low wage sectors, like in recent years.

Profit margins are envisaged to continue to expand over the projection horizon at a similar or slightly slower pace than recently seen. Over the projection horizon, profit margins are expected to benefit from the continued economic recovery. In the short term, however, the recent oil price increases could dampen profit margins, as companies may not fully pass on the increased costs, particularly as profit margins appear to have also benefitted from the previous drop in oil prices. In addition, the expansion in profit margins will be dampened over the projection horizon by the expected increases in unit labour cost growth.

Compared with the December 2016 projections, the outlook for HICP inflation has been revised upwards significantly for 2017 and slightly for 2018. A substantial upward revision of HICP energy inflation for 2017 relates to higher oil prices than assumed in the December 2016 projections. Thereafter, a much flatter oil price futures curve than in the December 2016 projections implies some small downward revisions of the energy component from 2018 onwards. In contrast, HICP inflation excluding energy and food is revised upwards slightly for 2018 and 2019, reflecting some indirect and second-round effects from higher oil prices, as well as some upward effects from the lower euro exchange rate. These upward effects are envisaged to be slightly larger than the effects of downward revisions to HICP energy inflation for 2018 and to broadly offset the downward revisions from the energy component for 2019.

3 Fiscal outlook

The fiscal stance is projected to be 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 mildly expansionary fiscal stance was mostly driven by discretionary fiscal measures, while non-discretionary factors played a smaller role and were mostly related to a small decline in non-tax revenues.

Over the projection horizon, the general government budget deficit and debt ratios are both projected to be on a downward path. In 2017-19, further declining interest payments and the improvement in the cyclical component entail a further reduction in the budget deficit. The cyclically adjusted primary balance is projected to remain broadly unchanged. The gradual reduction in government debt over the projection horizon is mainly supported by the favourable growth-interest rate differential. The projected primary surplus also has a favourable impact on the projected debt path.

Compared with the projections published in December 2016, the outlook for the deficit ratio is more favourable and the debt ratio path has been revised downwards. Over 2017-19, the improved deficit outlook reflects partly a positive carry-over from 2016 and partly lower expected primary expenditures. The downward revision to the debt-to-GDP ratio reflects the above-mentioned improved budgetary outlook and a larger contribution to debt reduction from the growth-interest rate differential, mainly in 2017, stemming from a better outlook for euro area nominal GDP.

Table 1

Macroeconomic projections for the euro area[1)]

(annual percentage changes)

	March 2017				December 2016			
	2016	2017	2018	2019	2016	2017	2018	2019
Real GDP[1)]	1.7	1.8	1.7	1.6	1.7	1.7	1.6	1.6
		[1.5 - 2.1][2)]	[0.7 - 2.7][2)]	[0.5 - 2.7][2)]	[1.6 - 1.8][2)]	[1.1 - 2.3][2)]	[0.6 - 2.6][2)]	[0.4 - 2.8][2)]
Private consumption	1.9	1.4	1.4	1.4	1.7	1.5	1.5	1.4
Government consumption	2.0	1.1	1.0	1.1	2.0	1.3	1.1	1.1
Gross fixed capital formation	2.5	2.8	3.2	2.8	3.0	3.1	3.1	2.7
Exports[3)]	2.9	4.3	4.1	4.0	2.7	3.7	3.9	4.0
Imports[3)]	3.5	4.6	4.4	4.2	3.3	4.1	4.3	4.1
Employment	1.3	1.0	1.0	0.8	1.4	1.1	0.8	0.8
Unemployment rate (percentage of labour force)	10.0	9.4	8.9	8.4	10.0	9.5	9.1	8.7
HICP	0.2	1.7	1.6	1.7	0.2	1.3	1.5	1.7
		[1.4 - 2.0][2)]	[0.9 - 2.3][2)]	[0.8 - 2.6][2)]	[0.2 - 0.2][2)]	[0.8 - 1.8][2)]	[0.7 - 2.3][2)]	[0.9 - 2.5][2)]
HICP excluding energy	0.9	1.2	1.6	1.8	0.9	1.1	1.4	1.7
HICP excluding energy and food	0.9	1.1	1.5	1.8	0.9	1.1	1.4	1.7
HICP excluding energy, food and changes in indirect taxes[4)]	0.8	1.1	1.5	1.8	0.8	1.1	1.4	1.7
Unit labour costs	0.9	1.1	1.4	1.6	0.8	1.0	1.3	1.5
Compensation per employee	1.3	1.8	2.1	2.4	1.2	1.7	2.1	2.4
Labour productivity	0.4	0.7	0.7	0.8	0.3	0.6	0.8	0.9
General government budget balance (percentage of GDP)	-1.6	-1.4	-1.2	-0.9	-1.8	-1.6	-1.5	-1.2
Structural budget balance (percentage of GDP)[5)]	-1.7	-1.5	-1.4	-1.1	-1.8	-1.8	-1.6	-1.4
General government gross debt (percentage of GDP)	89.3	88.0	86.4	84.5	89.4	88.5	87.3	85.7
Current account balance (percentage of GDP)	3.4	3.1	3.2	3.3	3.2	3.1	3.0	3.1

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 4
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 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 a rather flat profile for oil prices, with the price per barrel of Brent crude oil hovering around USD 56 until the end of 2019. This path is consistent with a moderate recovery in world oil demand, a scenario associated with the global economic recovery gaining traction. Still, oil futures do not seem to price in a long-lasting upward effect from the OPEC agreement, probably due to the level of stocks, which is close to its record high, and the possible increase in the production of shale oil. A combination of alternative models used by ECB staff[9] 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 12.4% 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 and 0.2 percentage point in 2018 and 2019).

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 stem mainly from a stronger than currently expected divergence in the monetary policy stance on both sides 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, especially, 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 14 February 2017. This path implies a gradual depreciation of the euro vis-à-vis the US dollar to an exchange rate of 0.98 USD/EUR in 2019, which is 7.6% 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 around 52%. This assumption results in a gradual downward divergence of the effective exchange rate of the euro from the baseline, bringing it to a level 4% 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 0.1-0.3 percentage point per

[9] See the four-model combination presented in the article entitled “Forecasting the price of oil”, *Economic Bulletin*, Issue 4, ECB, 2015.

year) and higher HICP inflation (up by 0.1 percentage point in 2017 and by 0.3-0.4 percentage point in 2018 and 2019).

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

The US Republican party policy proposal of a "destination-based border-adjusted cash flow tax" (DBCFT) would represent a major overhaul of the US corporate tax system, which could have substantial implications for the US outlook with global and euro area spillovers.[10] This scenario discusses the potential impact of the proposed tax reform on the US, global and euro area economies.

The policy proposal contains four main elements: (i) a border-adjustment, namely a deduction of receipts from exports but no longer a deduction of costs of imports from taxable income; (ii) a shift from an origin-based system (where corporations are taxed based on their origin, that is, if they hold their assets in the United States) to a destination-based system (where corporations are only taxed on profits accrued on sales in the United States). This implies that profits made on sales outside the United States will no longer be taxed, regardless of where the assets of the company are located. This change would reduce incentives to shift profits to "tax haven" destinations and increase incentives for companies to locate foreign taxable income in the United States; (iii) a reduction in the corporate tax rate, from 35% to 20%; and (iv) tax incentives for new investment in the United States. This allows full deduction of investment spending and elimination of interest payment deduction from the income tax base.

The subsidy on exporters and taxes on importers would imply a substantial improvement in US competitiveness and a fall in US import demand, which could raise US GDP. However, it is likely that this would be partly compensated by an appreciation of the US dollar. At the same time, US inflation would rise, as importers passed on part of the additional cost from higher taxation to domestic prices and as stronger economic activity and increased employment led to a boost in domestic wages. Higher inflation could, however, lead to a decline in real private consumption. Overall, the tax reform could lead to a rebalancing of the US economy, with the US trade deficit falling, while US consumer welfare might decline as households consumed less.

Spillovers to the rest of the world would be negative as a result of the border adjustment. There would be two opposite effects at play, which would affect US foreign demand. On the one hand, the fiscal stimulus due to the lower tax rate would raise US demand and, accordingly, imports. On the other hand, owing to the new tax imposed on US imports, goods and services produced abroad would be less competitive in the United States. Overall, unless fully offset by exchange rate moves, the trade distortions introduced by the border adjustment would be likely to more than offset the positive impact of the fiscal stimulus on US imports.

In a scenario of coordinated retaliation against the US border adjustment, world trade would decline significantly more strongly, while the favourable impact on the US economy would diminish. In the light of the substantially negative impact on the world economy stemming from the imposition of the border adjustment, retaliation against the United States would be a possibility. If retaliation occurred, for example through tariffs on US goods in the rest of the world, growth in US

[10] See "A better way – our vision for a confident America", June 24, 2016 at https://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf

GDP would be adversely affected due to lost price competitiveness. However, the positive impact of the reduction in the domestic tax rate on US activity could compensate for the negative effect from trade retaliation. Nevertheless, world trade would decline significantly more strongly under this scenario.

Turning to euro area spillovers, the net economic effects would depend on the strength of the transmission channels of the US policy shock, its global spillovers and policy responses outside the United States. If there was no retaliation, the effect on euro area GDP would be clearly negative. The terms of trade for all US trading partners, including the euro area, would worsen. Overall, there would be lower foreign demand for euro area goods and services and lower competitor prices, worsening euro area export demand.

In a case of retaliation against the United States, the negative impact on euro area GDP would be smaller. The competitiveness effect of the export subsidy on the US economy might, to some extent, be offset by bilateral import tariffs imposed by other countries. Still, the direct negative effect stemming from reduced US import demand, coupled with negative growth effects in the rest of the world, would likely result in a decline in euro area foreign demand and euro area GDP.

Global spillovers could be amplified if strong US dollar movements and tighter financial conditions were to lead to severe financial stress in emerging market economies. The scenarios described above assume a limited strengthening of the US dollar and no further financial spillovers to emerging markets. Should the strengthening of the US dollar lead to severe financial stress in these economies, the global spillovers could be substantially more negative.

Box 5
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 ECB 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 within the ranges surrounding the ECB staff projections (shown in brackets in the table).

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

(annual percentage changes)

		GDP growth			HICP inflation		
	Date of release	2017	2018	2019	2017	2018	2019
ECB staff projections	March 2017	1.8	1.7	1.6	1.7	1.6	1.7
		[1.5-2.1]	[0.7-2.7]	[0.5-2.7]	[1.4-2.0]	[0.9-2.3]	[0.8-2.6]
European Commission	February 2017	1.6	1.8	-	1.7	1.4	-
OECD	March 2017/ November 2016	1.6	1.6	-	1.2	1.4	-
Euro Zone Barometer	February 2017	1.5	1.6	1.4	1.5	1.5	1.6
Consensus Economics Forecasts	February 2017	1.6	1.5	1.3	1.6	1.4	1.6
Survey of Professional Forecasters	January 2017	1.5	1.5	1.5	1.4	1.5	1.6
IMF	January 2017/ October 2016	1.6	1.6	-	1.1	1.3	1.5

Sources: European Commission's European Economic Forecast, Winter 2017; IMF World Economic Outlook, update January 2017 (real GDP); IMF World Economic Outlook, October 2016 (HICP); OECD Interim Economic Outlook, March 2017 (real GDP); OECD Economic Outlook, November 2016 (HICP); Consensus Economics Forecasts, February 2017; MJEconomics for the Euro Zone Barometer, February 2017; and the ECB's Survey of Professional Forecasters, January 2017.
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.

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

ISSN 2529-4466 (pdf)
EU catalogue No QB-CE-17-001-EN-N (pdf)