EUROPEAN CENTRAL BANK

EUROSYSTEM

SEPTEMBER 2015 ECB STAFF MACROECONOMIC PROJECTIONS FOR THE EURO AREA[1]

1. EURO AREA OUTLOOK: OVERVIEW AND KEY FEATURES

The recovery in activity in the euro area is expected to continue, albeit at a somewhat weaker pace than earlier expected, and this is reflected in some downward revisions to the growth outlook. The recovery will be supported by favourable domestic dynamics, while the external environment has become less favourable. Inflation is expected to remain very low in 2015 and is projected to rise over the projection horizon, reaching 1.7% in 2017. The increase in annual inflation rates is currently expected to materialise somewhat more slowly than expected in June. Thus, the projection for HICP inflation also entails downward revisions, largely due to lower oil prices.

The projections are based on oil price and exchange rate assumptions with a cut-off date of 12 August 2015. Developments in oil prices and in the exchange rate of the euro since the cut-off date point to downside risks to the staff macroeconomic projections for real GDP growth and HICP inflation.

The economic recovery is expected to continue, albeit at a somewhat weaker pace than expected earlier. Domestic dynamics should gradually strengthen, supported by the ECB's monetary policy, including the non-standard measures. At the global level the outlook has become less favourable, reflecting adverse developments in some emerging market economies. Overall, however, global growth is still expected to strengthen over the projection horizon, driven notably by favourable activity developments in advanced economies.

The contribution of external factors to euro area activity is expected to be weaker than entailed in the June 2015 projections. While the expected growth in advanced economies remains broadly unchanged compared with the June 2015 projections, the outlook for activity and imports in major emerging market economies has been revised down substantially. Accordingly, euro area foreign demand is projected to pick up at a noticeably weaker pace than entailed in the June 2015 projections. However, the past depreciation of the euro is still expected to exert a favourable impact on euro area export growth.

The favourable impact of the ECB's non-standard measures continues to be transmitted to the economy. Bank lending rates fell further in the second quarter of this year and are expected to remain historically low over the projection horizon. Aggregate demand and, notably, fixed capital formation and exports are expected to benefit from the very accommodative monetary policy stance.

The adjustment process of the economy, following the crisis, is continuing, supporting growth. Following many years of fiscal consolidation up to 2013, the fiscal stance – measured as a change in the cyclically adjusted primary balance net of government assistance to the financial sector – is expected to be slightly expansionary over the projection horizon. Credit supply conditions have further improved, as demonstrated by reports of a net easing of both credit standards and lending conditions in the latest bank lending survey for the euro area. Leverage of non-financial companies (measured as debt to equity)

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[1] ECB 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 Eurosystem staff macroeconomic projection exercises*, ECB, June 2001, which is available on the ECB's website. The cut-off date for technical assumptions such as oil prices and exchange rates was 12 August 2015 (see Box 2). The cut-off date for including other information in this exercise was 21 August 2015.
The current macroeconomic projection exercise covers the period 2015-17. 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.

continued to decline into early 2015, and has returned to pre-crisis levels. Households have made further progress in reducing their indebtedness and the net worth of households has continued to increase in recent quarters. At the same time, house prices appear to have bottomed out and have started to rise again on average and across most euro area countries. Finally, the labour market has seen a turnaround and is increasingly supporting private consumption growth.

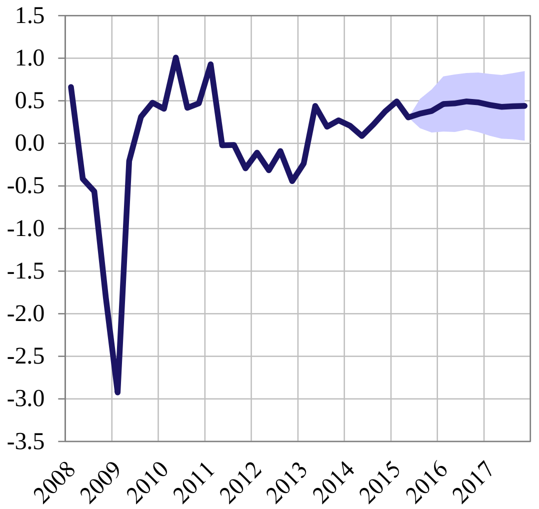
However, several factors continue to weigh on the growth outlook. Public and private sector indebtedness is still at very high levels in some countries. Structural unemployment also remains high, in particular in some stressed euro area countries. Concerns about the long-term growth potential and the slow progress in implementing structural reforms will continue to be a drag on investment spending. Finally, recent events in Greece imply a significant downward revision of the outlook for this country.

Chart 1 Macroeconomic projections[1)]

(quarterly data)

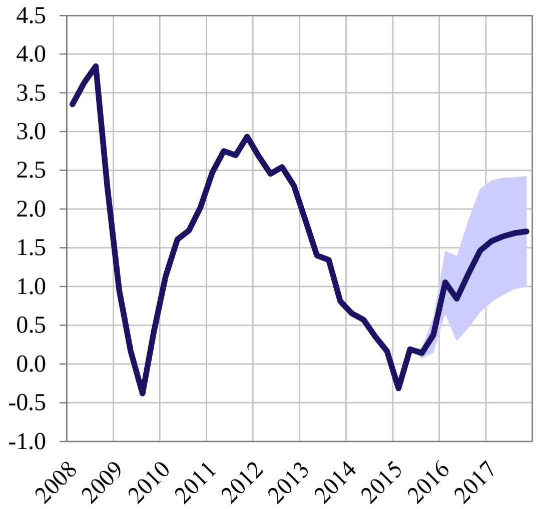
Euro area real GDP[2)]

(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.

HICP inflation has broadly stabilised at low positive rates in recent months. Headline inflation hovered around 0.2% over the months to August 2015, after a recovery from the trough of -0.6% in January 2015. The broadly unchanged headline inflation rate over the past few months conceals offsetting developments across its components. The decrease in the inflation rates for energy and food reflects declines in oil and food commodity prices, which in the case of oil prices were partly mitigated by a surge in refining margins for petrol. By contrast, HICP inflation excluding energy and food has edged up somewhat over the past few months, driven by non-energy industrial goods price inflation, while services price inflation was fairly stable.

HICP inflation is projected to remain low in the near term and to rise towards the end of 2015. While it is expected to average 0.1% in 2015, it should increase to 1.1% in 2016 and 1.7% in 2017. Upward base effects, together with the assumed rise in oil prices in euro terms, are expected to lead to an easing in the downward contribution from the HICP energy component from the fourth quarter of 2015 onwards. However, positive contributions from the energy component to headline HICP inflation are projected to arise only as of the fourth quarter of 2016. HICP inflation excluding energy is expected to strengthen gradually over the projection horizon, reflecting a firming in both wage and profit margin growth. Reductions in economic and labour market slack and tighter labour market conditions, as reflected in a drop in the unemployment rate to a level of 10.1% in 2017, are expected to push up underlying inflation over the next few years. Moreover, rising external price pressures in view of the protracted exchange rate pass-through to consumer prices and upward effects from the assumed rise in energy and non-energy commodity prices will contribute to the rebound in underlying inflation.

2. REAL ECONOMY

The recovery in euro area activity is envisaged to continue, albeit at a somewhat weaker pace than earlier expected. After the strong boost from lower oil prices at the turn of the year 2014/15, activity in the second quarter of 2015 did not fully maintain the momentum seen earlier this year. Real GDP growth eased to 0.3% in the second quarter, and it is expected to grow at broadly similar rates in the second half of 2015. While the weak trade outlook dampens the growth momentum in the euro area, the past depreciation of the effective exchange rate of the euro and low interest rates are likely to support business investment, while favourable labour market developments and lower energy prices will support consumption. However, given the weaker growth outlook in emerging market economies and lower foreign demand, the cyclical recovery will be weaker than previously expected and the negative output gap will be somewhat more persistent. In terms of annual averages, real GDP growth is projected to increase substantially, rising from 0.9% in 2014 to 1.4% in 2015, 1.7% in 2016 and 1.8% in 2017.

Private consumption expenditure is expected to remain the key driver of the recovery. The near-term outlook for growth in real disposable income remains favourable, supported by the impact of the renewed decline in energy prices on real income. Thereafter, wage income is expected to pick up against a background of steady employment growth and accelerating nominal compensation per employee, while an increase in other personal income is also expected as the overall economy recovers. Low financing costs and easing financing conditions, reinforced by the ECB's non-standard measures, should support private consumption, as well as, to some extent, rising household net worth – reflecting increases in financial asset prices in 2015 and further improvements in housing markets in the period 2016-17. Overall, annual growth in private consumption is projected to average 1.7% over the projection horizon (following an increase of 1.0% in 2014).

The saving ratio is expected to show a hump-shaped pattern over the next few quarters, reflecting some consumption smoothing in the face of the recent weak oil price developments. Following a small rise in the saving ratio in the course of 2015, as some of the income windfall due to lower oil prices is being saved, a small decline in the saving ratio is expected in the course of 2016 as this effect is unwound. Apart from this temporary effect, the savings rate is expected to remain broadly unchanged over the rest of the horizon, reflecting compensatory effects. On the one hand, very low interest returns tend to discourage savings via an inter-temporal substitution effect. Moreover, in some countries, a further improvement in consumer confidence, in conjunction with gradually declining unemployment, could result in lower precautionary savings. In addition, households might increasingly undertake major purchases that were previously postponed, thereby reducing the saving ratio. On the other hand, high unemployment and debt levels are expected to maintain some upward pressure on savings. Moreover, the very low interest rates might result in the need for additional savings for pension purposes in some countries.

Residential investment in the euro area is expected to pick up, albeit from a low level. Following a severe recession over eight years and an accumulated decline of more than 25%, residential investment is expected to stabilise in 2015. Looking ahead, residential investment should gain momentum over the projection horizon, supported by sustained growth in real disposable income, very low mortgage rates and easing financing conditions, reinforced by the ECB's non-standard measures. This should result in stronger household loan growth. However, high levels of household debt in some countries and unfavourable demographic effects in others are likely to prevent a stronger increase in residential investment.

Business investment is set to gain momentum gradually, supported by the ECB's non-standard measures and the cyclical recovery. The conditions are set for a gradual recovery. Demand trends, the need to modernise the capital stock after several years of subdued investment, the very accommodative monetary policy stance, and a strengthening of profit mark-ups are projected to support capital spending. Moreover, the overall pressure from corporate deleveraging in the euro area should, over the forecast horizon, be less of a constraint for business investment than in the past. However, the recovery of business investment will still be held back by remaining financial bottlenecks and high indebtedness levels in some countries, as well as expectations of weaker potential output growth than in the past.

Euro area foreign demand is expected to gradually strengthen over the projection horizon, but its pace will be slower than previously expected owing to substantially weaker import growth in emerging market economies. The momentum of euro area foreign demand is projected to fall well short of its pre-crisis pace, reflecting both lower global activity and a lower global trade elasticity to growth, the latter largely reflecting a downward revision of the expected import content of growth in emerging market economies (see Box 1).

Extra-euro area export growth should nevertheless recover moderately over the projection horizon, also benefiting from the past depreciation of the exchange rate of the euro. Extra-euro area export market shares are projected to increase. Extra-euro area import growth is expected to increase gradually over the projection horizon, reflecting the strengthening of total demand in the euro area. The current account surplus is expected to increase from 2.1% of GDP in 2014 to 3.0% in 2015 on account of terms of trade developments, before decreasing to 2.7% in 2017.

The output gap is expected to narrow, mostly against the background of weak potential output growth. Potential output growth is estimated to be around 1% over the projection horizon, remaining clearly below its pre-crisis rate. With projected real GDP growth being above potential, the negative output gap is projected to narrow gradually over the projection horizon.

Box 1

THE INTERNATIONAL ENVIRONMENT

Global growth remains gradual and uneven. It was moderate in the first quarter of the year, and the latest indicators and data point to subdued global activity also in the near term. Looking ahead, global growth is expected to strengthen. Low oil prices, continued accommodative financing conditions at the global level, waning fiscal consolidation, improving labour market conditions and rising confidence should support a pick-up in growth in advanced economies. By contrast, the outlook has worsened considerably in emerging market economies, as some of the downside risks identified in previous projections have materialised. Structural impediments and macroeconomic imbalances are restraining growth in some emerging market economies, while others are being adversely affected by lower commodity prices, political uncertainty and tighter external financing conditions. After the weak start to the year, global GDP growth (excluding the euro area) is projected to accelerate from 3.2% in 2015 to 4% by 2017.

Global trade lost significant momentum in the first half of 2015 and is expected to strengthen only gradually over the projection horizon. Substantial falls in imports in some large emerging market economies have dampened global imports, although trade relating to advanced economies has been more resilient. Following persistent downside surprises in global trade over the past four years, and with the subdued outlook for the imports of emerging market economies expected to persist, global trade is no longer projected to stage a strong rebound; surveys and short-term models point to a very modest recovery during the remainder of this year. Thereafter, global imports are projected to grow in line with global GDP. Euro area foreign demand is expected to accelerate from 1.5% in 2015 to 4.1% by 2017.

Compared with the staff projections published in June, global activity has been revised downwards over the entire projection horizon, reflecting the weaker outlook for emerging market economies. Euro area foreign demand has also been revised substantially downwards, reflecting the view that weak activity in emerging market economies will weigh more sharply on imports than previously anticipated.

The international environment

(annual percentage changes)

	September 2015				June 2015			Revisions since June 2015		
	2014	2015	2016	2017	2015	2016	2017	2015	2016	2017
World (excluding euro area) real GDP	3.7	3.2	3.8	4.0	3.4	4.1	4.1	-0.2	-0.3	-0.1
Global (excluding euro area) trade[1)]	3.2	1.4	3.3	4.1	2.0	4.8	5.2	-0.6	-1.5	-1.1
Euro area foreign demand[2)]	3.3	1.5	3.3	4.1	2.2	4.6	5.0	-0.7	-1.2	-0.9

Note: Revisions are calculated from unrounded data.
1) Calculated as a weighted average of imports.
2) Calculated as a weighted average of imports of euro area trade partners.

The improvement in euro area labour market conditions is expected to continue over the projection horizon. Employment in the first half of 2015 was up by 1.9 million from its trough in mid-2013, while still being 3.9 million below its pre-crisis peak level. Headcount employment is estimated to continue to recover significantly over the projection horizon, mainly driven by the economic recovery, and in some countries also supported by fiscal incentives, wage moderation and past labour market reforms. The number of hours worked per person employed is projected to increase somewhat over the projection horizon, but still to remain far below pre-crisis levels. The labour force is expected to expand only moderately, dampened by discouragement effects from still high unemployment in some countries and adverse demographics in others. The unemployment rate, which has edged down to 11.1% in the second quarter of 2015, is expected to decline to 10.1% in 2017.

Box 2

TECHNICAL ASSUMPTIONS ABOUT INTEREST RATES, EXCHANGE RATES AND COMMODITY PRICES

Compared with the June projections, the changes in the technical assumptions include considerably lower US dollar-denominated oil and non-energy commodity prices and slightly lower interest rates in the euro area.

The technical assumptions about interest rates and commodity prices are based on market expectations, with a cut-off date of 12 August 2015. 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 0.0% for 2015 and 2016 and 0.1% for 2017. The market expectations for euro area ten-year nominal government bond yields imply an average level of 1.3% in 2015, 1.6% in 2016 and 1.8% in 2017.[1] 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 decline somewhat in 2015, before rising modestly in the course of 2016 and 2017. As regards commodity prices, on the basis of the path implied by futures markets in the two-week period ending on the cut-off date of 12 August, the price of a barrel of Brent crude oil is assumed to fall from USD 98.9 in 2014 to USD 55.3 in 2015, before rising to USD 56.1 in 2016 and USD 60.9 in 2017. The prices of non-energy commodities in US dollars are assumed to decrease substantially in 2015 and 2016 and to rise somewhat in 2017.[2] 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 12 August. This implies an exchange rate of USD 1.10 per euro over the projection horizon.

Technical assumptions

	September 2015				June 2015			Revisions since June 2015[1)]		
	2014	2015	2016	2017	2015	2016	2017	2015	2016	2017
Three-month EURIBOR (percentage per annum)	0.2	0.0	0.0	0.1	0.0	0.0	0.2	0.0	-0.1	-0.1
Ten-year government bond yields (percentage per annum)	2.0	1.3	1.6	1.8	1.3	1.7	1.9	0.0	-0.1	-0.1
Oil price (in USD/barrel)	98.9	55.3	56.1	60.9	63.8	71.0	73.1	-13.3	-21.0	-16.7
Non-energy commodity prices, in USD (annual percentage change)	-8.6	-19.7	-4.6	4.4	-13.6	2.9	4.9	-6.1	-7.5	-0.5
USD/EUR exchange rate	1.33	1.11	1.10	1.10	1.12	1.12	1.12	-0.9	-1.9	-1.9
Euro nominal effective exchange rate (EER19) (annual percentage change)	0.6	-9.8	-0.2	0.0	-9.5	-0.2	0.0	-0.3	0.0	0.0

1) Revisions are calculated from unrounded data and expressed as percentages for levels, differences for growth rates and percentage points for interest rates and bond yields.

1 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.

2 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 third quarter of 2016 and thereafter to evolve in line with global economic activity.

The growth outlook has been revised down compared with the previous projection exercise. This revision primarily reflects a less favourable path of external demand – mainly owing to weaker growth in emerging markets – which has led to weaker exports and, in 2016 and 2017, lower investment growth. Another factor is the recent crisis in Greece, which has led to substantial downward revisions to the growth outlook for that country over the horizon.

3. PRICES AND COSTS

HICP inflation is projected to average 0.1% in 2015 and to pick up to 1.1% in 2016 and 1.7% in 2017. The HICP inflation rate is expected to remain low in the coming months but to increase around the turn of the year, reflecting to a large extent upward base effects in the energy component as well as the assumed increase in oil prices. This should significantly increase the contribution from HICP energy prices and also lead to some gradually emerging upward price pressures in the HICP excluding energy. Overall, the expected increase in HICP inflation over the projection horizon reflects rising domestic prices in view of the declining economic and labour market slack and the gradual narrowing of the output gap as well as a strengthening of external price pressures stemming from the lagged pass-through of the earlier depreciation of the exchange rate of the euro to consumer prices and from the assumed increases in energy and non-energy commodity prices.

Upward base effects in energy prices and the past depreciation of the exchange rate of the euro are envisaged to contribute to an increase in annual inflation rates as of late 2015. A turnaround from downward to upward external price pressures is a key factor behind the expected pick-up in HICP inflation. The past falls in energy and non-energy commodity prices and lagged effects of the past appreciation of the euro account, to a large extent, for the current very low levels of inflation. The recent further sharp decline in the oil price will put additional downward pressure on inflation, especially in the near term. Thereafter, upward base effects and the assumed increases in energy and non-energy commodity prices will contribute to rising consumer prices over the projection horizon, as will the effects of the past depreciation of the euro.

Domestic price pressures are envisaged to rise over the projection horizon as labour market conditions improve and economic slack abates. As the economy continues to recover and demand strengthens, declining unemployment rates and increases in the pricing power of corporations are expected to be reflected in a pick-up in both wage growth and profit margins.

A number of factors are expected to contain the pick-up in wage growth during the ongoing economic recovery. These include the low level of inflation, the remaining degree of labour market slack over the next two years, and a likely dampening impact on wage growth during the current recovery stemming from structural labour market reforms that were implemented during the crisis with the aim of increasing labour market flexibility. In addition, ongoing cost competitiveness adjustment processes in some euro area countries are expected to continue to exert a dampening impact on euro area wage growth.

The moderate wage growth and a cyclical strengthening in productivity will influence the pattern of unit labour cost growth over the projection horizon. Unit labour cost growth is envisaged to remain at a similar level in 2017 (1.1%) as in 2014 (1.2%). The projected cyclical acceleration in productivity, which occurs earlier than that for wages, implies a temporary dip in unit labour cost growth in 2015 and 2016.

The projected economic recovery allows for a strengthening in profit margins up to 2017. Following protracted weakness over the past few years, profit margins are expected to rise over the projection horizon. Increases in the pricing power of corporations in view of the strengthening in demand and windfall gains related to the past strong drop in oil prices are expected to benefit profit margins over the projection horizon. However, increased competition in view of structural product market reforms, implemented during and after the crisis, is expected to have a dampening impact on the outlook for profit margins.

Compared with the June projections, the outlook for HICP inflation has been revised down, largely owing to lower oil prices. Headline inflation has been revised down in 2015 and 2016, mainly on account of weaker developments in HICP energy inflation given the downward effects of the lower assumed path of USD oil prices, which are only partly mitigated by a somewhat weaker USD/EUR exchange rate. For 2017, the downward revision to HICP inflation reflects the slightly weaker GDP growth outlook and some lagged indirect effects from lower oil prices on underlying inflation.

4. FISCAL OUTLOOK

The fiscal stance, as measured by the change in the cyclically adjusted primary balance, is expected to make a small positive contribution to demand over the projection period. While discretionary fiscal policy measures are assumed to be broadly neutral, there will be a slight contribution towards fiscal loosening from non-discretionary factors, namely a slight decline in the share of the main macroeconomic tax bases in GDP in 2015 (GDP composition effect) and a slight decline in non-tax revenue in 2016.[2]

The government deficit and debt ratios are projected to decline. The decline in the general government deficit-to-GDP ratio is entirely due to the cyclical improvement in the euro area economy and declining interest expenditure, while the structural primary budget balance is projected to deteriorate somewhat over the projection horizon. The general government debt-to-GDP ratio is projected to start declining from 2015 onwards.

Compared with the projections published in June, the fiscal outlook has somewhat worsened. The small downward revision to the general government balance is partly due to reduced consolidation measures and partly due to a somewhat less favourable evolution of some macroeconomic tax bases. The more pronounced upward revision to the government debt ratio is compounded by a downward revision to nominal GDP growth.

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[2] The fiscal assumptions reflect the information included in budget laws and supplementary budgets for 2015, as well as national medium-term budgetary plans and stability programme updates that were available on 21 August 2015. They include all policy measures that have already been approved by national parliaments or that have been defined in sufficient detail by governments and are likely to pass the legislative process.

Table 1 Macroeconomic projections for the euro area[1)]

(annual percentage changes)

	September 2015				June 2015			Revisions since June 2015[2)]		
	2014	2015	2016	2017	2015	2016	2017	2015	2016	2017
Real GDP[3)]	0.9	1.4	1.7	1.8	1.5	1.9	2.0	-0.1	-0.2	-0.1
		[1.3 - 1.5] [4)]	[0.8 - 2.6] [4)]	[0.6 - 3.0] [4)]	[1.2 - 1.8] [4)]	[0.8 - 3.0] [4)]	[0.7 - 3.3] [4)]			
Private consumption	1.0	1.7	1.7	1.7	1.9	1.6	1.6	-0.1	0.0	0.0
Government consumption	0.7	0.7	0.8	0.7	0.7	0.7	0.8	0.0	0.1	-0.1
Gross fixed capital formation	1.3	2.1	3.4	3.9	1.9	3.5	3.9	0.2	-0.1	0.0
Exports[5)]	3.8	4.5	4.9	5.2	4.2	5.4	5.6	0.3	-0.5	-0.5
Imports[5)]	4.2	4.7	5.4	5.7	4.8	5.8	5.9	-0.1	-0.3	-0.2
Employment	0.6	0.7	0.8	0.8	0.9	0.9	1.0	-0.1	-0.2	-0.1
Unemployment rate (percentage of labour force)	11.6	11.0	10.6	10.1	11.1	10.6	10.0	-0.1	0.1	0.2
HICP	0.4	0.1	1.1	1.7	0.3	1.5	1.8	-0.2	-0.3	-0.1
		[0.0 - 0.2] [4)]	[0.5 - 1.7] [4)]	[0.9 - 2.5] [4)]	[0.2 - 0.4] [4)]	[0.9 - 2.1] [4)]	[1.0 - 2.6] [4)]			
HICP excluding energy	0.7	0.9	1.3	1.6	0.9	1.4	1.7	0.0	-0.1	-0.2
HICP excluding energy and food	0.8	0.9	1.4	1.6	0.8	1.4	1.7	0.1	0.0	-0.2
HICP excluding energy, food and changes in indirect taxes[6)]	0.7	0.9	1.4	1.6	0.8	1.4	1.7	0.1	0.0	-0.2
Unit labour costs	1.2	1.0	0.6	1.1	0.8	0.7	1.3	0.2	-0.1	-0.2
Compensation per employee	1.5	1.6	1.6	2.1	1.4	1.7	2.3	0.2	-0.1	-0.2
Labour productivity	0.3	0.7	1.0	1.0	0.6	1.0	1.0	0.0	0.0	0.0
General government budget balance (percentage of GDP)	-2.4	-2.1	-2.0	-1.7	-2.1	-1.8	-1.5	-0.1	-0.1	-0.3
Structural budget balance (percentage of GDP)[7)]	-1.8	-1.8	-1.8	-1.7	-1.7	-1.7	-1.4	-0.1	-0.2	-0.3
General government gross debt (percentage of GDP)	91.7	91.6	90.7	89.4	91.5	90.2	88.4	0.1	0.5	1.0
Current account balance (percentage of GDP)	2.1	3.0	2.9	2.7	2.1	2.0	2.0	0.9	0.9	0.7

1) The data refer to the euro area including Lithuania, except for the HICP data for 2014. The average annual percentage change in the HICP for 2015 is based on a euro area composition in 2014 that already includes Lithuania.
2) Revisions are calculated from unrounded figures.
3) Working day-adjusted data.
4) 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.
5) Including intra-euro area trade.
6) 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.
7) 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 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 oil prices and exchange rates and the sensitivity of the projections with respect to these variables.

1) An alternative oil price path

Alternative oil price models show somewhat higher oil prices in 2017 than those indicated by futures. The technical assumptions for oil price developments underlying the baseline projections, based on futures markets, predict an increase in oil prices over the projection horizon (see Box 2). Alternative models used by ECB staff[1] to project oil prices over the projection horizon currently suggest a higher oil price over the projection horizon than assumed in the technical assumptions. This would be consistent with a stronger recovery of world oil demand in the medium term and with some reduction in oil supply owing to lower investment in the oil sector and thus a reduction in oil exploitation capacity in some countries, in response to the recent fall in oil prices. The impact of this alternative path, in which oil prices would be 8.1% higher than in the baseline by 2017, would slightly dampen real GDP growth (down by 0.1 percentage point in 2017), while entailing a somewhat faster increase in HICP inflation in 2016 and 2017 (up by about 0.1-0.2 percentage point in 2016 and 2017).

In contrast to the above-mentioned technical scenario which entails higher oil prices than in the baseline, oil prices have declined since the cut-off date for the technical assumptions, partly in connection with the very recent financial turmoil in some emerging market economies. When the oil price assumptions are updated on the basis of information available up to 1 September 2015,[2] the assumed oil price path is, on average, about 6% lower over the projection horizon than that included in the projections. This would indicate small upside risks to the growth projection and downside risks to the inflation projection.

2) An alternative exchange rate path

The very recent tension in financial markets implied a renewed strengthening of the effective exchange rate of the euro. In order to illustrate the related risks to the projection, this sensitivity analysis includes an alternative path of the euro to the baseline, implying a further appreciation. This has been derived from the 75th percentile of the distribution provided by the option-implied risk-neutral densities for the USD/EUR exchange rate on 12 August 2015. This path implies a gradual appreciation of the euro against the US dollar to an exchange rate of 1.21 in 2017, which is 10.6% above 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 results in a gradual upward divergence of the effective exchange rate of the euro from the baseline, bringing it to a level 5.3% above the baseline in 2017. In this scenario, the results from a number of staff macroeconomic models point to lower real GDP growth (down by 0.2-0.4 percentage point) and lower HICP inflation (down by 0.1-0.5 percentage point) in 2016 and 2017.

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

2 This update is based on the path implied by oil futures markets in the two-week period ending on 1 September.

Box 4

THE IMPACT OF A RISE IN GLOBAL UNCERTAINTY ON EURO AREA ACTIVITY

As has been clearly demonstrated by the very recent financial market tensions, the global outlook remains vulnerable to a number of uncertainties. In particular, as recent events have illustrated, growing concerns about the growth outlook in China and in other emerging market economies can very quickly lead to abrupt financial market developments that could adversely impact on the euro area outlook. This box illustrates, in an alternative scenario, the potential impact of selected global shocks on the outlook for growth in the euro area.

One source of global uncertainty relates to the extent of the growth slowdown in China. While the baseline already entails a slowdown in growth in China, a further unwinding of imbalances related to China's build-up of debt could lead to heightened financial stress and a steeper economic downturn. In such a scenario, the ability and willingness of Chinese banks to provide credit to the economy could be severely impaired, as the quality of their assets rapidly deteriorates. A possible catalyst for such a stronger than expected decline in bank credit provision could be adverse developments in the housing market (owing to banks' considerable exposure to highly leveraged property developers). In addition, equity prices in China could drop further, as domestic investors reassess equity risk premia. Deteriorating asset quality and higher risk premia would place upward pressure on sovereign bond yields, as the government would be forced to provide large-scale support to the banking sector. As a result, investment and – to a lesser extent – consumption would grow much more slowly than projected in the current baseline. Since a slowdown in growth would lead to a significant rise in unemployment, it is assumed that the Chinese authorities would heavily intervene, with monetary and fiscal stimulus measures as well as with a possible further depreciation of the renminbi, to prevent growth from falling much further. Overall, it is assumed in this scenario that growth in China is 1 percentage point lower in 2016 and 2017 than entailed in the baseline.

A second source of global uncertainty relates to the trajectory of normalisation of US monetary policy. Market expectations about US short-term interest rates, which are used as a technical assumption underlying the projections, currently point to an only very gradual rise in short-term interest rates, reaching just 1.6% at the end of 2017. However, if US rates follow the median interest rate projection of the Federal Open Market Committee (FOMC), they would rise faster than priced in by the markets. Moreover, despite the expected normalisation of US monetary policy, the US term premium remains close to record lows. In the event of a rise in global uncertainty, which would add to the uncertainty surrounding prospective US monetary policy, there is a risk of an abrupt upward adjustment in the US term premium. To capture the latter, in this scenario an increase in the US term premium of 130 basis points is assumed, which feeds through to higher US long-term rates. At the same time, higher US long-term rates would also spill over to higher long-term rates in other key advanced economies.

Growth in other emerging market economies is likely to be adversely affected by these shocks. Russia is in the midst of a deep recession and lower oil revenues are expected to lead to sharp falls in public expenditure. In Brazil, the outlook has significantly deteriorated amid rising inflation. A steeper slowdown in China could imply significant downside risks to the outlook, particularly for commodity exporters. Recent data point to a renewed slowing of capital flows towards emerging market economies, resembling the developments observed during the "taper tantrum" episode in mid-2013. Such reversals of capital flows vis-à-vis emerging market economies provide signs of heightened global uncertainty and a loss of investor confidence in the growth prospects of emerging market economies. In this environment, further downside surprises to China's growth outlook and/or an unexpected rise in US long-term interest rates could amplify capital outflows from emerging market economies, tighten financial conditions and thereby lower growth in these countries. In this scenario, the impact of a rise in global macroeconomic uncertainty on emerging market activity is captured by a two standard deviation shock applied to the implied volatility of the S&P 500 index option prices (VIX) which adversely affects domestic demand in these economies.

The increase in global uncertainty could affect the euro area economy via both trade and financial linkages. The rise in global uncertainty would lower demand in the United States (via higher US long-term rates) as well as in other major advanced and emerging market economies. This would impact global and euro area growth via the trade channel, on account of lower euro area foreign demand. Moreover, there would be adverse financial spillovers to long-term rates globally and in the euro area, thereby raising the cost of financing for firms, households and governments. As regards the effective exchange rate of the euro, rising interest rates in the United States could lead to an appreciation of the US dollar vis-à-vis the euro. At the same time, financial market volatility in emerging markets could induce an appreciation of the euro relative to emerging market currencies.

Higher global uncertainty, capturing all three sources described above, is estimated to reduce euro area growth by between 0.1 percentage point and 0.2 percentage point below baseline growth in 2016. Weaker euro area real GDP growth stems in part from a decrease in euro area foreign demand reflecting weaker developments in activity in the United States and other advanced economies as well as in China and other emerging markets. Moreover, adverse financial spillovers (reflected in higher euro area long-term interest rates) also adversely affect euro area growth prospects.

While the impact on the euro area is modest in the scenario described here, a number of caveats remain. For example, confidence channels at the firm or household level are not taken into account. Moreover, other asset prices, including stock markets, may be subject to stronger spillovers and downward corrections than those captured endogenously in the models. In addition, the models used are linear, whereas strong adverse financial market corrections can entail non-linear co-movements between variables, potentially leading to stronger impacts. Finally, the simulations do not fully take into consideration exchange rate effects or adverse impacts on commodity prices. At the same time, the unfavourable shocks to the euro area economy could be dampened if there were offsetting policy measures in emerging market economies or if the tightening of US monetary policy were to be postponed owing to the adverse spillovers from the increased weakness in emerging market economies.

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, most of the currently available forecasts from other institutions do not differ greatly from the point forecasts of the September ECB staff projections and are well within the ranges surrounding these 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		
		2015	2016	2017	2015	2016	2017
ECB staff projections	September 2015	1.4	1.7	1.8	0.1	1.1	1.7
		[1.3-1.5]	[0.8-2.6]	[0.6-3.0]	[0.0-0.2]	[0.5-1.7]	[0.9-2.5]
European Commission	May 2015	1.5	1.9	-	0.1	1.5	-
Euro Zone Barometer	August 2015	1.5	1.8	1.6	0.2	1.2	1.6
Consensus Economics Forecasts	August 2015	1.5	1.8	1.6	0.2	1.3	1.5
Survey of Professional Forecasters	August 2015	1.4	1.8	1.8	0.2	1.3	1.6
IMF	July 2015	1.5	1.7	-	0.1	1.0	-

Sources: European Commission's European Economic Forecast, Spring 2015; IMF World Economic Outlook, Update July 2015 (GDP), IMF World Economic Outlook, April 2015; Consensus Economics Forecasts; MJEconomics; and the ECB's Survey of Professional Forecasters.
Notes: The Eurosystem and ECB staff macroeconomic projections 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.

Address: Sonnemannstrasse 20, 60314 Frankfurt am Main, Germany

Postal address: 60640 Frankfurt am Main, Germany

Telephone: +49 69 1344 0

Fax: +49 69 1344 6000

Website: http://www.ecb.europa.eu