

Box 1.4: Main drivers of growth in 2016

Economic growth in the euro area this year has been supported by strong tailwind factors, including exchange rate depreciation, low oil prices and quantitative easing (QE) by the ECB. The impact of these factors on the GDP *growth rate* in 2016, however, is projected to subside, and other factors are expected to come into play. This box provides a rough quantification of the different factors affecting growth in 2016 based on simulations with the Commission's QUEST model and a growth accounting exercise with a new estimated macro model. It should be noted that these decompositions are derived from models and are not necessarily identical with the impact of the same factors in the forecast, which is based on expert judgement.

Table 1:

Euro area GDP growth decomposition

	2016
Euro area GDP growth	1.8
. Potential output growth	1.0
. Natural closing of output gap	0.3
. Oil price decline	0.2
. QE	0.1
. Euro appreciation	-0.1
. Lower growth emerging markets	-0.2
. Fiscal impact of asylum seekers	0.1
. Other factors	0.4

Table 1 shows the GDP growth decomposition based on the QUEST model. The euro area's potential GDP growth is calculated at 1.0% in 2016, according to the agreed EU methodology. Output growth, however, is expected to be boosted beyond this by a number of positive shocks. Output gaps are set to gradually narrow through automatic stabilising mechanisms, including price and wage adjustments. Based on historical estimates of the average closing speed of output gaps, this is expected to add 0.3 pps. to growth in 2016. However, this estimate is surrounded by large uncertainties, as it is based on average *past* speeds of output gap closures, and may be overly optimistic at the current juncture given that financial markets are still somewhat impaired and that some deleveraging is expected to continue.

Oil prices have fallen significantly since 2014 and this has been an important stimulus to growth in 2015. Oil prices have continued to fall in the second half of this year and the assumption is that the rebound in 2016 will be moderate and gradual, resulting in an average price for the year that will be slightly lower than in 2015. Lower oil prices boost household disposable income and reduce

costs for firms. This factor is expected to raise GDP growth in 2016 by 0.2 pps.

Quantitative easing (QE), which the ECB embarked upon earlier in 2015, affects euro area growth in the simulations through a lower term premium, higher demand for riskier assets and via the exchange rate of the euro. Although the main growth effect will take place in 2015, the direct impact of QE on funding costs is expected to boost growth by another 0.1 pps. in 2016. Given the forecast on accelerating investment growth, this may be an underestimate of the impact of QE on growth.

However, a set of negative shocks are set to weigh on the euro area's growth outlook in 2016. While the euro depreciated strongly in the first half of 2015, this has been partly reversed since the spring, and the technical assumption is of a 1.8% appreciation in the nominal effective exchange rate in 2016. According to the model, euro's appreciation should lower growth by approximately 0.1 pps. in 2016.

An additional negative factor is the slowdown in emerging markets. The slowdown in growth in China, and other emerging markets, is expected to have a mildly negative impact on growth in the euro area next year, estimated at 0.2 pps. It should be noted that the estimated spillover effect includes the impact on trade as well as the depreciation of the CNY, which could lead to some double counting of the euro appreciation described above. As the slowdown has not been restricted to China but has in some cases been even more severe in other emerging markets, spillovers across countries may even amplify the overall impact. However, the impact has been muted by the beneficial effects from the fall in commodity prices (see below).

The large numbers of asylum seekers arriving in the EU is leading to higher government spending for shelter and food and increases in the labour supply. Although this has obvious detrimental effects on budget balances, the expected increase in government spending is set to have a positive impact on the growth outlook and should boost GDP growth by 0.1 pps. This assumes no offsetting reductions in other spending components, and is based on preliminary estimates of the inflow and costs per migrant.

Other factors contribute +0.4 pps. to growth. On the upside, there is the impact of lower commodity

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Box (continued)

prices on emerging markets, which could partly offset the negative impact of the slowdown in activity. Also, the positive second-year effects of the euro's depreciation up until mid-2015, which work through only with a delay, could still add to growth in 2016. In addition, the forecast also suggests a positive contribution of the labour market to growth. On the downside, there are continuing deleveraging pressures, geopolitical tensions and elevated uncertainty over the global outlook and further negative effects from the extension of the sanctions on Russia.

Shock decomposition from an estimated model

The analysis above is based on a detailed calibrated model which captures many transmission channels. This is compared to the results from a simpler but estimated model, fitted over historical data from 1999-Q1 to 2014-Q4,⁽¹⁾ which is extended with forecast data and which allows for a full decomposition of GDP growth into the underlying shocks. It should be noted that in this decomposition, not all shocks are directly interpretable, as in the case of the QUEST model. For example, the estimated reduction of the investment risk premium in 2016 could be due to various sources (including QE) and the model cannot really identify a specific source. One advantage of this methodology is that it uses all information in the dataset. For example, the size of the investment risk premium shock is selected in such a way that it fits not only the movement of GDP but especially also the movement of investment and other variables.

Table 2 shows the shock decomposition for 2016 from the estimated model. The deterministic trend component shows the attainable long-run growth rate if the euro area economy were to grow with the average growth rate of total factor productivity (TFP) and population of working age as observed over the period 1999 to 2014, which is 1.4%. Can the higher-than-average growth in 2016 be interpreted as a structural improvement of supply side conditions? In 2016, there is a slight negative contribution from TFP, which suggests that despite improved capacity utilisation, TFP growth remains subdued. Price and wage developments provide conflicting interpretations. Moderate wage growth with higher productivity growth and declining unemployment is interpreted by the model as a structural adjustment of wages in the euro area labour market which contributes towards an

increase in employment growth. However, this positive contribution is partly offset by a negative growth contribution of price mark-ups. This is implied by the GDP deflator rising more strongly than nominal unit labour cost over the forecast horizon.

Table 2:

Shock decomposition from an estimated model

	2016
Supply:	
Det. Trend	1.4
TFP	-0.1
Labour market/wages	0.5
Goods market mark up	-0.1
Demand:	
Foreign:	
RoW+US income	0.3
Exchange rate	-0.2
Domestic:	
Investment	-0.2
Consumption	0.0
Others	0.2
GDP (from forecast)	1.8

On the demand side, one can distinguish foreign and domestic factors. The contribution from growth in the rest of the world on euro area's GDP growth remains positive in 2016, which is consistent with gradually accelerating growth in the rest of the world. However, because of downward growth revisions for emerging economies, the rest of the world is contributing less to euro area's GDP growth than foreseen in the spring exercise. If one takes into account the negative contribution from the effective euro appreciation in 2016, the rest of the world contributes very little to growth in the euro area in 2016.

Although the largest domestic demand impulse is expected to come from investment, the model nevertheless regards the contribution of investment to growth as subdued, in comparison to the long-term average. This is consistent with a still low investment-to-GDP ratio. The low level of investment is captured by an above average risk premium, which peaked in 2009 and 2012 but is declining since then and continues to decline over the forecast horizon, leading to an acceleration of investment. These developments reflect improved financing conditions, partly due to QE measures. The contribution of private consumption to GDP is close to its long-term average and therefore appears as neutral, consistent with the fact that private consumption and real GDP grow at roughly equal rates.

⁽¹⁾ These results are based on the Global Multi Country (GM) model currently developed by DG ECFIN and the Joint Research Centre of the European Commission.

Box 1.5: Some technical elements behind the forecast

The cut-off date for taking new information into account in this European Economic Forecast was 22 October. The forecast incorporates validated public finance data as published in Eurostat's News Release 186/2015 of 21 October 2015.

External assumptions

This forecast is based on a set of external assumptions, reflecting market expectations at the time of the forecast. To shield the assumptions from possible volatility during any given trading day, averages from a 10-day reference period (between 5 and 16 October) were used for exchange and interest rates, and for oil prices.

Exchange and interest rates

The technical assumption regarding exchange rates was standardised using fixed nominal exchange rates for all currencies. This technical assumption leads to an implied average USD/EUR rate of 1.12 in 2015, and 1.13 in 2016 and 2017. The average JPY/EUR is 134.99 in 2015 and 135.67 in 2016 and 2017.

Interest-rate assumptions are market-based. Short-term interest rates for the euro area are derived from futures contracts. Long-term interest rates for the euro area, as well as short- and long-term interest rates for other Member States are calculated using implicit forward swap rates, corrected for the current spread between the interest rate and swap rate. In cases where no market instrument is available, the fixed spread vis-à-vis the euro area interest rate is taken for both short- and long-term rates. As a result, short-term interest rates are assumed to be 0.0% on average in 2015, -0.1% in 2016, and 0.0% in 2017 in the euro area. Long-term euro area interest rates are assumed to be 0.5% on average in 2015, 0.7% in 2016, and 0.9% in 2017.

Commodity prices

Commodity price assumptions are also, as far as possible, based on market conditions. According to futures markets, prices for Brent oil are projected to be on average 54.8 USD/bbl in 2015, 54.2 USD/bbl in 2016, and 58.8 USD/bbl in 2017. This would correspond to an oil price of 49.0 EUR/bbl in 2015, 47.9 EUR/bbl in 2016, and 51.9 EUR/bbl in 2017.

Budgetary data

Data up to 2014 are based on data notified by Member States to the European Commission on

1 October and validated by Eurostat on 21 October 2015.

Eurostat is expressing a reservation on the quality of the data reported by Austria in relation to an insufficient adherence to the accrual rules of recording of expenditure and revenue, as required in ESA2010, notably at the budgetary central government level ("Bund"). Currently, a significant number of transactions are recorded on a cash basis in national accounts. This situation creates uncertainty on the quality of the figures and the risk that data will be revised in the April 2016 EDP exercise.

Eurostat is withdrawing the reservation on the quality of the data expressed in Eurostat's News Release of 21 April 2015 in relation to the sector classification of the Deposit Insurance Fund and to the impact on the government deficit of the fund's repayment of the guaranteed deposits in the Corporate Commercial Bank. Following an analysis by Eurostat in cooperation with the Bulgarian statistical authorities, the Deposit Insurance Fund has now been reclassified inside general government, leading to an increase in the deficit of 2.6 bn BGN and a decrease in the debt by 0.13 bn BGN in 2014.

Eurostat is withdrawing the reservation on the quality of the government deficit data for 2014 expressed in Eurostat's News Release of 21 April 2015, due to uncertainties of the statistical impact of the capitalisation of Novo Banco in 2014 for an amount of 4.9 bn euro. The deficit of Portugal for 2014 has been increased by that amount, as the sale of Novo Banco did not occur within one year after the capitalisation.

Eurostat has made no amendments to the data reported by Member States.

For the forecast, measures in support of financial stability have been recorded in line with the Eurostat Decision of 15 July 2009.⁽¹⁾ Unless reported otherwise by the Member State concerned, capital injections known in sufficient detail have been included in the forecast as financial

⁽¹⁾ Eurostat News Release N° 103/2009.

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Box (continued)

transactions, *i.e.* increasing the debt, but not the deficit. State guarantees on bank liabilities and deposits are not included as government expenditure, unless there is evidence that they have been called on at the time the forecast was finalised. Note, however, that loans granted to banks by the government, or by other entities classified in the government sector, usually add to government debt.

For 2016, budgets adopted or presented to national parliaments and all other measures known in sufficient detail are taken into consideration. In particular, the Draft Budgetary Plans submitted by euro-area Member States on 15 October are also reflected in this forecast. For 2017, the ‘no-policy-change’ assumption used in the forecasts implies the extrapolation of revenue and expenditure trends and the inclusion of measures that are known in sufficient detail.

European aggregates for general government debt in the forecast years 2015-17 are published on a non-consolidated basis (*i.e.* not corrected for intergovernmental loans). To ensure consistency in the time series, historical data are also published on the same basis. For 2014, this implies a debt-to-GDP ratio in the euro area (EA19) which is 2.4 pps. (1.8 pps. in the EU) higher than the consolidated general government debt ratio published by Eurostat in its news release 186/2015 of 21 October 2015. General government debt projections for individual Member States in 2015-17 include the impact of guarantees to the

EFSF,⁽²⁾ bilateral loans to other Member States, and the participation in the capital of the ESM as planned on the cut-off date of the forecast (subject to approval).

ESA 2010

The current forecast is based on the ESA 2010 system of national accounts for all Member States, the EU and the euro area aggregates.

Calendar effects on GDP growth and output gaps

The number of working days may differ from one year to another. The Commission’s annual GDP forecasts are not adjusted for the number of working days, but quarterly forecasts are.

However, the working-day effect in the EU and the euro area is estimated to be limited over the forecast horizon, implying that adjusted and unadjusted annual growth rates differ only marginally (by up to ± 0.1 pps.). The calculation of potential growth and the output gap does not adjust for working days. Since the working-day effect is considered as temporary, it should not affect the cyclically-adjusted balances.

⁽²⁾ In line with the Eurostat decision of 27 January 2011 on the statistical recording of operations undertaken by the European Financial Stability Facility, see http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-27012011-AP/EN/2-27012011-AP-EN.PDF.