

Box 1.5: The treatment of the impact of the UK's leave vote in the current forecast

This box focuses on the technical treatment of the consequences of the leave vote in the autumn 2016 forecast, to the extent they can be perceived today. It describes the judgement about the short-term impact embedded in this forecast. The box also briefly recalls the available economic assessments of medium and long term impacts of different scenarios, but without attempting new original analysis at this stage. As events unfold, the impact of both the process of leaving and that of a future regime will become clearer and will have to be revisited in future forecast rounds. In the meantime, uncertainty is likely to remain high.

The UK referendum on leaving the EU has produced political and economic uncertainty around the future economic relationship between the UK and the EU, and over the path to new arrangements. The future regime (for e.g. trade in goods and services and migration) is at this stage uncertain, and uncertainty also surrounds the available assessments of the long-term impact of various possible regimes.

A moderate near-term impact of the UK leave vote

In line with assessments of the short-run impact of the UK leave vote that were prepared prior to the referendum, the Commission's scenario analysis in July focussed on increased uncertainty.⁽¹⁾ Economic and policy uncertainty is expected to affect demand (investment and consumption) and increase asset risk premia. A dampening of housing demand has also been identified as a possible channel.

So far, growth in the UK following the 23 June referendum has been resilient. Third-quarter growth in 2016 is estimated by the UK's Office for National Statistics at 0.5%. Financial-market volatility in the aftermath of the referendum quickly abated, though the initial depreciation of sterling has been followed by further falls. The monetary easing by the Bank of England in early August appears to have supported financial markets and domestic demand. Survey indicators have rebounded after sharp losses in July, but remain consistent with a coming softening of growth. The depreciation of sterling is likely to help exporters while increasing consumer prices and thus decreasing purchasing power.

A drop in investment driven by heightened uncertainty is expected in the coming quarters. It is set to weigh heavily on UK growth in 2017, and to a lesser extent in 2018. Real household income growth and private consumption are set to soften

⁽¹⁾ European Commission (2016). 'The Economic Outlook after the UK Referendum, A first Assessment for the Euro Area and the EU'. *European Economy Institutional Paper* 32, July 2016. See also UK Treasury (2016). 'HM Treasury analysis: the immediate economic impact of leaving the EU'. London. IMF (2016). 'United Kingdom: Selected Issues.' *IMF Country Report* No. 16/169.

through the forecast period as a response to higher inflation and a weaker labour market. In the present forecast, GDP growth for the UK has therefore been revised down to 1.0% in 2017 and 1.2% in 2018. The impact on other EU Member States is assessed to be small in the baseline forecast, but there are downside risks, in particular for Member States with sizeable trade exposures.

The longer-term impact of the end of the UK's EU membership is not yet clear

Beyond the short-run impact of the referendum result, the end of the UK's membership of the EU (the actual 'Brexit') could affect the UK economy's trend growth. This will be dependent on the future relationship between the UK, the EU and the rest of the world. While any supply-side effects will largely be felt after 2018, anticipation effects could start to materialise within the forecast horizon and constitute a downside risk to the forecast.

Ex-ante assessments of the longer-term implications of Brexit have used different methodologies, but have mostly centred on the direct and indirect supply-side implications of potential barriers to trade, foreign direct investment, competition and labour mobility.⁽²⁾ A general conclusion is that the looser the UK's future economic relationship with the EU, the larger the likely negative impact on the UK economy.

The absolute and relative impact of these different factors crucially depends on the regime for trade, migration etc. that the UK will eventually set up outside the EU. At this stage, this future regime is unknown.

Although it is likely that the shape of the future regime will start gradually emerging over the forecast horizon, the present forecast is not the right place to speculate about it. In the autumn 2016 forecast, the longer-term economic impact of the leave vote is therefore captured mostly through the macroeconomic impact of increased uncertainty on demand.

⁽²⁾ IMF (2016) op. cit. appendix 3 offers an overview. See also OECD (2016). 'The economic consequences of BREXIT: A taxing decision'. *Economic Policy Paper* 16, April 2016. UK Treasury (2016). 'HM Treasury analysis: long-term economic impact of EU membership and the alternatives'. London.

Box 1.6: Some technical elements behind the forecast

The cut-off date for taking new information into account in this European Economic Forecast was 31 October. The forecast incorporates validated public finance data as published in Eurostat's News Release 204/2016 of 21 October 2016.

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 7 and 20 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 1.11 in 2016, and 1.10 in 2017 and 2018. The average JPY/EUR is 119.35 in 2016, 114.56 in 2017 and 2018.

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 -0.3% in 2016, 2017, and 2018 in the euro area. Long-term euro area interest rates are assumed to be 0.1% in 2016, and 0.2% in 2017, and 0.3% in 2018.

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 45.21 USD/bbl in 2016, 54.73 USD/bbl in 2017, and 56.82 USD/bbl in 2018. This would correspond to an oil price of 40.61 EUR/bbl in 2016, 49.58 EUR/bbl in 2017, and 51.47 EUR/bbl in 2018.

Budgetary data and forecasts

Data up to 2015 are based on data notified by Member States to the European Commission before 1 October and validated by Eurostat on 21 October 2016.

Eurostat is expressing a reservation on the quality of the data reported by Cyprus in relation to a series of technical issues, such as the recording of EU flows, the basis for the working balance of central government, incomplete use of source data for accrual reporting and the absence of reporting of statistical discrepancy in EDP tables, which were not clarified in a satisfactory manner during the October 2016 data assessment. Eurostat will investigate these issues with the Cypriot statistical authorities.

Eurostat is maintaining the reservation on the quality of the data reported by Belgium in relation to the sector classification of hospitals. Eurostat considers that, in line with ESA 2010, government controlled hospitals in Belgium should be classified inside government. This is currently not the case. A future reclassification will most likely result in a limited increase in government debt.

Eurostat is maintaining the reservation on the quality of the data reported by Hungary in relation to the sector classification of Eximbank (Hungarian Export-Import Bank Plc). Eximbank needs to be reclassified inside the general government sector which will result in an increase in government debt. Moreover, Eurostat is discussing with the Hungarian statistical authorities the possible rerouting of operations carried out by the Hungarian National Bank, deemed to be undertaken on behalf of government.

Eurostat is withdrawing the reservations on the quality of the data reported by France in relation to (1) the classification of the French Deposit Guarantee and Resolution Funds (Fonds de Garantie des Dépôts et de Résolution - FGDR), as the entity has been reclassified by INSEE inside government and (2) the recording chosen by INSEE of settlements costs related to the restructuring of complex debt instruments issued by local government, pending the results of ongoing consultations on this issue at EU level.

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

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Box (continued)

The public finance forecast is made under the ‘no-policy-change’ assumption, which extrapolates past revenue and expenditure trends and relationships in a way that is consistent with past policy orientations. This may also include the adoption of a limited number of working assumptions, especially to deal with possible structural breaks.

EU and euro area aggregates for general government debt in the forecast years 2016-18 are published on a non-consolidated basis (i.e. not corrected for intergovernmental loans, including those made through the European Financial Stability Facility). To ensure consistency in the time series, historical data are also published on the same basis. For 2015, this implies an aggregate debt-to-GDP ratio which is somewhat higher than the consolidated general government debt ratio published by Eurostat in its news release 204/2016 of 21 October 2016 (by 2.2 pps. in the euro area EA19 and by 1.6 pps. in the EU).

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.

Change to the NAWRU methodology used in the potential growth rate calculations for the autumn 2016 forecasts

Following the approval of the Member States, the Commission has introduced a change to the existing NAWRU methodology, which forms part of the overall production function methodology used for calculating potential growth and output gaps. The revised NAWRU approach, in essence, involves using additional long run information, specifically the structural unemployment rate from the T+10 calculations, to anchor the short and medium term NAWRU estimates. This change will result in methodological improvements, essentially less pro-cyclical NAWRU estimates. In addition, the previous model had a tendency to show a delayed reaction of the NAWRU to improvements in the labour market and was showing little reaction of the NAWRU in the current juncture, thereby resulting in the actual unemployment and NAWRU series tending to track each other too closely. With the new approach, this pro-cyclicality problem will be significantly alleviated. Moreover, by integrating the structural unemployment estimates from the T+10 exercise into the calculations for the short and medium term NAWRU estimates, a more comprehensive recognition will be given to the efforts of the Member States to implement structural reforms in their respective labour market. Since there will be more work done over the coming months on the NAWRU anchor estimate itself, a total of eight countries asked that the old NAWRU methodology would be retained as a short term measure for the autumn 2016 forecast. These countries are: Estonia, Ireland, Latvia, Lithuania, Malta, Poland, Romania and Slovakia.