



## **European Commission projections for the 2014 EU-wide stress tests baseline scenario**

The Directorate General for Economic and Financial Affairs (DG ECFIN) of the European Commission produces under its own responsibility, three fully-fledged European Economic Forecasts per year – in winter, spring and autumn. The most recent of these is the winter 2014 forecast, published on 25 February 2014. These forecasts cover the principal macroeconomic aggregates for the EU Member States, the candidate countries and the European Union as a whole, as well as the euro area and the international environment.

**The projections for the 2014 EU-wide stress test baseline scenario are based on the winter 2014 forecast extended through a model-based approach or following technical assumptions to cover the year 2016, which is outside the 2-year horizon of the winter forecast.** Thus, the projections for 2016 are not a part of the published European Economic Forecast and have only been derived for the purpose of this exercise. Projections for house prices for the period 2014 to 2016 have also been obtained through a model-based approach and are not part of any published forecast.

### **Winter 2014 forecast highlights**

The winter 2014 forecast foresees a continuation of the economic recovery in most Member States and in the EU as a whole. After exiting recession in spring 2013 and three consecutive quarters of subdued recovery, the outlook is a moderate step-up in economic growth. Following real GDP growth of 1.5% in the EU and 1.2% in the euro area in 2014, activity is expected to accelerate in 2015 to 2.0% in the EU and 1.8% in the euro area. These figures each represent an upward revision of 0.1 percentage points compared with the autumn 2013 forecast. The forecast remains based on the assumption that the implementation of agreed policy measures at EU and Member State level sustains improvements in confidence as well as financial conditions and advances the necessary economic adjustment in Member States, by increasing their growth potential.

The labour market is characterised by slowly stabilising employment, with unemployment remaining high, as labour market developments typically lag those in GDP by half a year or more. In keeping with this pattern, the outlook is for a modest rise in employment from this year onwards and a decline in the unemployment rate towards 10.4% in the EU and 11.7% in the euro area by 2015, with cross-country differences remaining very large.

Subdued consumer-price inflation is expected to prevail in the EU and the euro area in 2014 at rates of 1.2% and 1.0% respectively, before rising slightly by about ¼pp. in 2015 when economic growth gains momentum.

### **The model-based projections (outside the regular EC forecast) for key economic variables for 2016 and house price projections for 2014-2016**

For 2016 the model-based estimates project GDP growth of 1.8% in EU and 1.7% in the euro area. Unemployment is projected to reach 10.1% in the EU and 11.3% in the euro area. Inflation is expected to move up to 1.5% in the euro area and at 1.7% in the EU. Nominal house prices are expected to evolve along the following path during 2014-2016 in the EU: 0.9% in 2014, 2.7% in 2015 and 3.8% in 2016; whilst in the euro area the estimated increases in house prices will be more moderate over the forecast horizon: -0.2% in 2014, 2.1% in 2015 and 3.8% in 2016.

### **Concepts, sources and assumptions**

The cut-off date for taking new information into account for the winter 2014 forecast was 17 February. The forecast incorporates validated annual public finance data as published in Eurostat's News Release 152/2013 of 21 October 2013.

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 31 January and 13 February) were used for exchange and interest rates, and for oil prices.

The technical assumption as regards exchange rates was standardised using fixed nominal exchange rates for all currencies.

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.

For 2014, budgets adopted or presented to national parliaments and all other measures known in sufficient detail are taken into consideration. In particular, all the information included in the Draft Budgetary Plans submitted by 15 October is reflected in this forecast. For 2015, 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.

## **The methodology for projecting house prices for 2014-2016**

For the house prices projection over the scenario horizon, the Commission Services used an error-correction model estimated on an EU Member States panel. The model was initially developed by the ZEW institute for the Commission, using a sample of large EU and non-EU countries. Commission services have re-estimated the model using a newly constructed annual panel dataset for most EU Member States (except for Croatia, Latvia, Hungary, Austria, Poland, Germany and Romania) covering the period 1970-2012 for five fundamental variables (the starting year depending on availability of data for each country). The model uses five fundamental variables: the inflation-adjusted or relative house price, total population, real housing investment, the real disposable income per capita and the real long-term interest rate.

A relative house price projection consistent with the 2014 winter forecast was calculated as the response of house prices conditional on i. changes in fundamental variables implied by the winter forecast and ii. the most recent house price changes and gap with respect to the equilibrium level. The corresponding nominal house price growth rate was obtained using the 2014 winter forecast for the consumption deflator.<sup>1</sup> A common panel estimate of the model parameters was used, in order to ensure higher consistency across Member States and to mitigate the risk of estimation error due to short data series. Some country specificities were taken into account via adjustments to two model parameters. First, the parameter guiding the speed of reversal to the equilibrium house price was reduced for countries with less reliable estimate of the fundamental gap (like Poland) or where a more gradual return to the equilibrium price is expected (like Germany). Second, the parameter guiding the inertia in house price changes was reduced for countries where a sharp house price correction has recently occurred (like Greece or Croatia). Lastly, the projections benefitted from expert insights by national authorities: the UK projection was adjusted for the recent market momentum, while the downward inertia was further reduced for Greece and Cyprus.

## **The model-based approach used for estimating 2016 GDP growth, unemployment rates and HICP inflation**

In contrast to the judgemental forecasts, based on country desk economists' assessments, used for the European Economic Forecast and covering the 2014-2015 period of the baseline, Commission services relied on a non-judgemental, model-based approach for carrying out the baseline projections for 2016. This approach is justified, in the view of Commission services, given substantial evidence that the errors associated with judgemental forecasts tend to increase the longer the projected time horizon. In essence, the approach adopted by

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<sup>1</sup> The assumption made for the 2016 consumption deflator was to take the 5-year trailing average of its annual growth rate.

Commission services seeks to incorporate both the supply and demand side effects on expected developments in 2016. With respect to the supply side, the technology, employment and capital formation determinants of potential output are all taken into account, with trends in all of these three areas derived from applying well-established trend extraction methods. Demand side determinants, on the other hand, are driven by the closure of the output gap, and the unemployment gap with the forecast for the 2016 output and unemployment gap based on an estimated AR model. The GDP forecast uses information from potential output and the output gap, while inflation is projected by making use of the output gap. The unemployment rate forecast is based on NAWRU and unemployment gap projections. Explicitly incorporating both trend and cyclical (i.e. output gap) elements into the overall forecasting methodology for 2016 provides not only a credible forecasting framework but also ensures a level of internal consistency between the forecasts for the three target variables: GDP, unemployment and inflation.