Office for Budget Responsibility

23 November 2016

Supplementary forecast information release

Long-term economic determinants

1.1 Due to the uncertainty that followed the result of the 23 June referendum on the UK's membership of the European Union, we decided to cancel the *Fiscal sustainability report (FSR)* that we had planned to publish on 12 July. Since then we have published five analytical papers containing material that would have been included in that *FSR*. On 17 January 2017, we will publish updated long-term fiscal projections that will build on the medium-term forecasts in our November 2016 *Economic and fiscal outlook (EFO)*.

1.2 The economic determinants that underpin our long-term fiscal projections are used by organisations inside and outside government to inform their own long-term modelling. We have received a number of requests for these determinants since we cancelled July's *FSR*. We are therefore presenting the determinants that will underpin our forthcoming projections now. Table 1.1 lists the updated long-term assumptions that are consistent with our new medium-term forecast.

Table 1.1: Long-term economic determinants

Annual growth rate, unless otherwise stated		
Labour productivity	2.0	OBR assumption
Prices and earnings		
Average earnings	4.3	Product of labour productivity and GDP deflator
Public sector earnings	4.3	Assumed to grow in line with private sector
GDP deflator	2.3	Constant from end of forecast
CPI	2.0	Constant from end of forecast at inflation target
RPI	3.0	Calculated as CPI plus 1.0 percentage points
RPIX	2.8	Calculated as CPI plus 0.8 percentage points
'Triple lock'	4.6	Calculated as average earnings plus 0.34 percentage points
Interest rates (per cent)		
Gilt rate	4.9	Calculated as nominal GDP growth plus 0.2 percentage points
Bank Rate	4.9	Calculated as nominal GDP growth plus 0.2 percentage points
Employment growth		
Public sector workforce growth	0.35	Broadly in line with total employment growth
Memo: average real GDP growth	*2.4*	*Product of labour productivity and employment growth*
Memo: average nominal GDP growth	*4.7*	*Product of real GDP growth and GDP deflator*

1.3 Our November forecast extends the medium-term horizon to 2021-22, so these long-term assumptions are now applied from 2022-23 onwards. The exceptions to that are:

- **interest rates**, which are assumed to stabilise in 2036-37;
- **RPI inflation**, which is assumed to stabilise at the rate determined by the long-term wedge relative to CPI once interest rates reach a steady state in 2036-37;
- **productivity growth**, which is assumed to converge to its steady-state rate by 2026-27; and
- **average earnings growth**, which is assumed to stabilise once productivity growth reaches a steady state in 2026-27.

1.4 Our latest economic forecast shows the gap between actual and potential output closing by the end of the medium term, and we assume the output gap remains closed thereafter.

Labour productivity

1.5 Relative to last year's *FSR*, we have revised down our long-term assumption for productivity growth. That reflects successive downward revisions to the assumptions underpinning our medium-term forecasts. In March 2016, we revised down trend productivity growth in light of disappointing data, deciding to place a little more weight on the recent period of weak productivity growth rather than assuming productivity would return to its pre-crisis trend within five years. In our latest forecast we have revised it down again due to the effects of uncertainty on investment and productivity growth in the run-up to – and in the transition phase after – the UK's exit from the EU.

1.6 By 2020, we assume that trend hourly productivity growth will reach 1.8 per cent, down from 2.0 per cent in March and 2.2 per cent in our November 2015 forecast. Since our latest revision is associated with an extended transition period, for the purposes of our long-term projections we assume that productivity growth will return to the 2.0 per cent that underpinned our March forecast, but not until 2026-27. That is down from 2.2 per cent in our 2015 *FSR*. There is greater-than-usual uncertainty around any judgements made about the path of potential output when we do not yet know post-exit policy settings or the impact of those arrangements on productivity in the long term.

Employment growth

1.7 We project long-run employment growth by combining ONS population projections with our participation and employment rate projections. We calculate an employment rate consistent with an assumed non-accelerating inflation rate of unemployment (NAIRU) of 5.35 per cent of the labour force. Since last year, we have adjusted participation rates for changes in our projections for the State Pension age (SPA), which in turn are driven by updated ONS population projections and our assumptions about the operation of the longevity link. These were set out in our July fiscal sustainability analytical paper: *Population projections and pensions spending update*.

1.8 We have also updated the methodology we use for modelling labour market entry and exit rates in our cohort model. The most important change has been to base entry and exit rates in this year's model on averages from the 19-year period up to 2015, whereas last year's model used a pre-crisis average from 1997 to 2008. This has led us to revise up the overall employment rate. When combined with the latest population projections, it has meant that employment growth has been revised up by around 0.1 percentage points a year relative to last year's *FSR*.

Prices and earnings

1.9 We have not changed our assumption for long-term growth in the GDP deflator of 2.3 per cent a year. This figure is constructed bottom-up using assumptions relating to each of the expenditure components of GDP. We also continue to assume that CPI inflation remains at 2.0 per cent in the long term, consistent with the Bank of England's inflation target, and a long-run wedge between RPI and CPI inflation of 1.0 percentage point, giving a long-term assumption for RPI inflation of 3.0 per cent a year.

1.10 We assume that the labour share of national income is constant in the long run. As a consequence, average earnings growth is equal to the product of labour productivity growth and whole economy inflation. It rises at 4.3 per cent a year from 2026-27 onwards.

1.11 For the purposes of our long-term projections, we assume that the triple lock on state pensions uprating continues to apply. We have revised down the extent to which we assume that it will, on average, exceed earnings growth in the long term to 0.34 percentage points a year. This figure is calculated as the average additional uprating each year if the triple lock had been applied rather than earnings from 1991 to the end of our medium-term forecast in 2021-22. It is lower than last year's assumption of 0.39 per cent, reflecting the higher-than-forecast earnings growth in 2015-16, as well as adding two more forecast years into the period being averaged, when earnings growth is forecast to exceed 2.5 per cent.

Interest rates

1.12 Market expectations for interest rates continue to lie well below our projections for nominal GDP growth. As in last year's *FSR*, we have kept the difference between the long-term nominal interest rate and nominal output growth at 0.2 percentage points, leaving interest rates close to but above our growth rate projections. As a result, we have revised down our assumption for the long-term nominal interest rate to 4.9 per cent. This reflects the downward revision to productivity growth being less than offset by an upward revision to employment growth in the long term.