

13 March 2019

Supplementary forecast information release

Long-term economic determinants

- 1.1 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.
- 1.2 Table 1.1 below presents our latest long-term assumptions, consistent with the central forecast in our March 2019 *Economic and fiscal outlook (EFO)*.

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	Sum 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'	4.7	Calculated as average earnings plus 0.36 percentage points
Interest rates (per cent)		
Gilt rate	4.7	Calculated as nominal GDP plus 0.2 percentage points
Bank Rate	4.7	Calculated as nominal GDP plus 0.2 percentage points
Employment		
Workforce growth	0.2	OBR assumption
<i>Memo: average real GDP</i>	2.2	<i>Sum of labour productivity and employment</i>
<i>Memo: average nominal GDP</i>	4.5	<i>Sum of real GDP and GDP deflator</i>

- 1.3 The long-term assumptions underpinning these determinants do not necessarily apply to the medium-term forecast that we present in the *EFO*, which is constructed using a different approach. The long-term assumptions apply from the first year after our five-year *EFO* forecast onwards. The exceptions to that are:
- **interest rates**, which are assumed to stabilise 15 years after the end of the medium-term forecast;
 - **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;
 - **productivity growth**, which is assumed to converge to its steady-state rate by 2030-31; and

- **average earnings growth**, which is assumed to stabilise once productivity growth reaches steady state.

1.4 Our latest forecast assumes the output gap closes within the forecast horizon, and we assume it remains closed thereafter in these long-term economic determinants.

1.5 We produce an average path for each determinant. The values actually taken by these variables will vary around their average paths – we make no attempt to predict this year-on-year variation. Further information on the methodology behind our long-term economic determinants can be found below.

Labour productivity

1.6 In November 2017, we revised down our medium-term trend productivity growth forecast significantly, having reassessed the hypotheses put forward to explain the weakness since the financial crisis. We assumed that trend hourly productivity growth would rise slowly from 0.7 per cent in 2018 to reach 1.2 per cent in 2022, significantly lower than the pre-crisis average of 2.1 per cent but higher than the post-crisis average of just 0.2 per cent.

1.7 We continue to assume that this post-crisis weakness will ultimately fade, so base our long-term projections on an assumption of 2.0 per cent a year trend productivity growth. We assume an extended period over which productivity growth will converge to that long-term assumption, reaching it by 2030-31.

1.8 As we discussed in Box 3.1 of our 2018 *Fiscal sustainability report*, there is significant uncertainty around any central assumption of productivity growth. We do not produce sensitivity analyses to show the effect of different productivity growth assumptions on our fiscal projections because, given the way they are produced, any alternative assumption would affect both the numerator and denominator in the debt-to-GDP ratio, so it would have only a modest effect on the fiscal projections. But that is not to downplay either the uncertainty around the trend productivity assumption or its importance for economic well-being, and where our productivity assumptions are used elsewhere for purposes other than producing long-term fiscal forecasts, it will be important to take account of that uncertainty.

Employment growth

1.9 We project long-run employment growth by combining ONS population projections with our employment rate projections, which in turn are derived from our projections of the unemployment rate and the participation rate. We calculate an employment rate consistent with an assumed equilibrium unemployment rate at the end of our medium-term forecast.

1.10 We adjust participation rates for changes in our projections for the State Pension age (SPA), reflecting the latest ONS population projections and our assumptions about the operation of the Government's 'longevity link'. In July 2017, the Government announced its intention to bring forward the SPA increase to 68 from the years 2044-46 to 2037-39, and to aim for

up to 32 per cent as the average proportion of adult life one should expect to spend in receipt of the state pension. We combine this stated aim with the latest population projections to produce our employment growth forecast of 0.2 per cent a year.

Prices and earnings

- 1.11 Our long-term GDP deflator inflation projection of 2.3 per cent a year is built bottom-up by weighting assumptions for each of the expenditure components of GDP. We 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.
- 1.12 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 sum of labour productivity growth and whole economy inflation.
- 1.13 For the purposes of our long-term projections, we assume that the triple lock on state pensions uprating continues to apply. We assume that it will, on average, exceed earnings growth in the long term by 0.36 percentage points a year. This figure is the average difference between average earnings growth and a 'triple lock' based on the highest of CPI inflation, average earnings growth and 2.5 per cent, calculated over the period from 1991 to the end of our medium-term forecast.

Interest rates

- 1.14 Market expectations for interest rates continue to lie well below our projections for nominal GDP growth. We assume a 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. It is assumed to take a little longer for the forces that have depressed safe interest rates over the past couple of decades to unwind than it does for productivity growth to revert to historical averages.