Monetary Policy Report fan charts November 2022

The charts and tables in this document show the MPC's fan charts as described in Section 1 of the November 2022 Monetary Policy Report. They are based on a number of conditioning assumptions that are set out in more detail in the 'Conditioning assumptions, forecast summary, and indicative projections' document.

The charts and tables showing the November 2022 projections have been conditioned on: Bank Rate following a path implied by market yields (unless otherwise stated); the Term Funding Scheme and Term Funding Scheme with additional incentives for Small and Medium-sized Enterprises; the Recommendations of the Financial Policy Committee and the current regulatory plans of the Prudential Regulation Authority; commodity prices following market paths; the sterling exchange rate following a path that is half way between the starting level of the sterling ERI and a path implied by interest rate differentials; and the prevailing prices of a broad range of other assets, which embody market expectations of the future stocks of purchased gilts and corporate bonds. The Committee's projections are usually conditioned on announced fiscal policy. This forecast incorporates the announcements made by the Chancellor of the Exchequer up to and including 17 October, and, consistent with that, includes a working assumption of continued fiscal support for household energy bills, generating a stylised path for household energy prices over the first two years of the forecast period (see **Box A of the November 2022 Monetary Policy Report**). The MPC's forecast does not incorporate any further measures that may be announced at the Autumn Statement scheduled for 17 November.

The data behind the distributions in November 2022, the market interest rate paths underlying some of these projections and the 'Conditioning assumptions, forecast summary, and indicative projections' document are available at '**Monetary Policy Report – Download the chart slides and data – November 2022**'.

Projection of the level of GDP (wide bands) (a) (b) (c)

Projection of the level of GDP (narrow bands) (a) (b) (c)

Projection of the level of GDP based on constant nominal interest rates at 3% (wide bands) (a) (b) (c)

Projection of the level of GDP based on constant nominal interest rates at 3% (narrow bands) (a) (b) (c)

Four-quarter GDP growth projection (wide bands) (a) (b)

Four-quarter GDP growth projection (narrow bands) (a) (b)

Four-quarter GDP growth projection based on constant nominal interest rates at 3% (wide bands) [(a) (b)]

Four-quarter GDP growth projection based on constant nominal interest rates at 3% (narrow bands) [(a) (b)]

CPI inflation projection (wide bands) (a) (b)

CPI inflation projection (narrow bands) (a) (b)

CPI inflation projection based on constant nominal interest rates at 3% (wide bands) (a) (b)

CPI inflation projection based on constant nominal interest rates at 3% (narrow bands) (a) (b)

Projected probabilities of CPI inflation in 2023 Q4 (central 90% of the distribution) (a) (d)

Projected probabilities of CPI inflation in 2024 Q4 (central 90% of the distribution) (a) (d)

Inflation probabilities relative to the target (e)

Probability that two year ahead inflation will be above the target from successive Monetary Policy Report projections (f)

Projected cumulative probabilities of CPI inflation in 2024 Q4 (g)

Unemployment rate projection (a) (b) (h) (i)

Unemployment rate projection based on constant nominal interest rates at 3% (a) (b) (h) (i)

Endnotes

(a) The fan charts and associated cross-sections depict the probability of various outcomes for GDP, CPI inflation or the unemployment rate. In the GDP fan chart, the distribution to the left of the shaded area reflects uncertainty around revisions to the data over the past. To aid comparability with the official data, it does not include the backcast for expected revisions, which is available at '**Monetary Policy Report – Download the chart slides and data – November 2022**'. Over the forecast period, the distribution reflects uncertainty over the evolution of GDP, CPI inflation or the unemployment rate in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that CPI inflation, the unemployment rate or the mature estimate of GDP would lie within the darkest central band on only 10 of those occasions in the narrow-band fan charts and 30 of those occasions in the wide-band fan charts. The fan chart is constructed so that outturns are also expected to lie within each pair of the lighter coloured areas on 10 (narrow bands) and 30 (wide bands) occasions. In any particular quarter of the forecast period, GDP, CPI inflation or the unemployment rate are therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions they can fall anywhere outside the coloured area of the fan chart. Over the forecast period, this has been depicted by the shaded area marked as projection. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10% (narrow bands) and 30% (wide bands). See the box on pages 48–49 of the May 2002 Inflation Report for a fuller description of the fan chart and what it represents.

(b) The shaded areas marked as projection in the GDP, CPI inflation and unemployment fan charts show the forecast period.

(c) Chained-volume measure (reference year 2019). The width of this fan over the past has been calibrated under the assumption that revisions to GDP are independent of the revisions to previous quarters. This calibration also takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to GDP in one quarter will continue to have some effect on GDP in successive quarters.

(d) Cross-sections of the fan charts. The figures on the y-axis indicate the probability of CPI inflation being within ±0.05 percentage points of any given growth rate, specified to one decimal place; figures are average probability within each band.

(e) Assessed probabilities of inflation relative to the target in each quarter of the forecast period. The 5 percentage points width of the swathes reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as a confidence interval.

(f) Probability of above-target inflation at the respective two-year points of each Monetary Policy Report forecast based on successive market rate projections with the exception of August 2013 which shows the constant rate projection. Prior to November 2019, the Monetary Policy Report was called the Inflation Report.

(g) Probability of CPI inflation being at or below different points.

(h) LFS measure. The calibration of this projection takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to unemployment in one quarter will continue to have some effect on unemployment in successive quarters. 2022 Q3 is a staff projection for the unemployment rate, based in part on data for July and August.

(i) Over the forecast period, a significant proportion of this distribution lies below Bank staff's current estimate of the long-term equilibrium unemployment rate. There is therefore uncertainty about the precise calibration of this fan chart.