# Conditioning assumptions, MPC key judgements, and indicative projections November 2015

This document contains four tables of projections:

- Table 1 shows the conditioning assumptions used for the MPC's projections;
- Table 2 shows the MPC's mean projections for GDP, CPI inflation and LFS unemployment;
- Table 3 shows profiles that illustrate the MPC's key judgements as described in Section 5; and
- Table 4 shows indicative projections produced for the MPC by Bank staff to be consistent with the MPC's modal projections for GDP, inflation and unemployment.

The projections in Tables 2, 3 and 4 have been conditioned on the paths shown in Table 1, and the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period.

The '*Inflation Report* fan charts November 2015' document is available at www.bankofengland.co.uk/publications/Documents/inflationreport/2015/novfc.pdf.

The quarterly market interest rate paths are available at www.bankofengland.co.uk/publications/Documents/inflationreport/market_profiles.xlsx.

## Table 1 Forecast conditioning assumptions[a][b]

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| Bank Rate[c] | 5.0 | 0.5 | 0.6 | 1 | 1.3 |
| Sterling effective exchange rate[d] | 100 | 92 | 91 | 91 | 91 |
| Oil prices[e] | 39 | 49 | 56 | 59 | 62 |
| Gas prices[f] | 29 | 41 | 42 | 42 | 43 |
| Nominal government expenditure[g] | 7¼ | 1 | 1½ | 1 | 1 |

Sources: Bank of England, Bloomberg, Office for Budget Responsibility, ONS, Thomson Reuters Datastream and Bank calculations.

(a) The table shows the projections for financial market prices, wholesale energy prices and government spending projections that are used as conditioning assumptions for the MPC's projections for CPI inflation, GDP growth and the unemployment rate.
(b) Financial market data are based on averages in the fifteen working days to 28 October 2015. Figures show the average level in Q4 of each year, unless otherwise stated.
(c) Per cent. The path for Bank Rate implied by forward market interest rates. The curves are based on overnight index swap rates.
(d) Index. January 2005 = 100. The convention is that the sterling exchange rate follows a path that is half way between the starting level of the sterling ERI and a path implied by interest rate differentials.
(e) Dollars per barrel. Projection based on monthly Brent futures prices.
(f) Pence per therm. Projection based on monthly natural gas futures.
(g) Calendar-year growth rate. Nominal general government consumption and investment. Projections are taken from the Office for Budget Responsibility's *Economic and Fiscal Outlook* associated with the *Summer Budget 2015*. Historical data based on NMRP+D7QK.

## Table 2 The MPC's mean projections for GDP, CPI inflation and LFS unemployment

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| GDP[a] | 3.0 | 2.7 | 2.5 | 2.6 | 2.5 |
| CPI inflation[b] | 1.6 | 0.1 | 1.1 | 2.0 | 2.2 |
| LFS unemployment[c] | 5.3 | 5.3 | 5.2 | 5.0 | 4.8 |

(a) Calendar-year growth in real GDP consistent with the main projection for four-quarter growth in real GDP. The MPC's projections are based on its backcast for GDP.
(b) Four-quarter inflation rate in Q4.
(c) LFS unemployment rate in Q4.

## Table 3 MPC key judgements[a][b]

**Key Judgement 1: global growth remains well below past average rates as emerging-economy growth recovers only a little from current weak rates and advanced-economy growth remains modest**

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| World GDP (UK-weighted)[c] | 3 | 2¼ (2¼) | 2¼ (2¾) | 2½ (2¾) | 2¼ |
| World GDP (PPP-weighted)[d] | 4 | 3 (3¼) | 3¼ (3¾) | 3¼ (3½) | 3¼ |
| Euro-area GDP[e] | 2¼ | 1½ (1½) | 1¾ (1¾) | 1¾ (1¾) | 1½ |
| US GDP[f] | 3 | 2½ (2½) | 2½ (2¾) | 2¼ (2¼) | 2 |
| Dollar oil prices[g] | 39 | 49 (57) | 56 (62) | 59 (66) | 62 |

**Key Judgement 2: domestically, productivity growth supports supply as the growth in labour supply slows**

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| Productivity[h] | 2¼ | 1¼ (1) | 1 (1) | 1½ (1½) | 1¾ |
| Participation rate[i] | 63 | 63½ (63½) | 63½ (63½) | 63½ (63½) | 63½ |
| Average hours[j] | 32¼ | 32 (32¼) | 32¼ (32½) | 32¼ (32¼) | 32¼ |

**Key Judgement 3: UK private demand remains resilient in the face of developments abroad and the continuing fiscal consolidation at home**

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| Credit spreads[k] | ¾[l] | 2¼ (2) | 2 (2) | 2 (2) | 2 |
| Household saving ratio[m] | 8¾ | 4¾ (5¼) | 4 (5) | 3¼ (4½) | 2¾ |
| Business investment to GDP ratio[n] | 9¾ | 9¾ (10¾) | 10¼ (11¼) | 10¾ (12) | 11¼ |

**Key Judgement 4: the drag on CPI inflation from external factors gradually dissipates and wage and domestic cost growth strengthen**

| | Average 1998–2007 | Projections | | | |
|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 |
| UK import prices[o] | ¼ | -4¾ (-5½) | ¾ (¾) | 1 (¾) | 1 |
| Unit labour costs[p] | 3 | 2 (2) | 2¾ (3) | 2¾ (3) | 2¾ |

Sources: Bank of England, BDRC Continental *SME Finance Monitor*, Bloomberg, BofA Merrill Lynch Global Research, British Household Panel Survey, Department for Business, Innovation and Skills, Eurostat, IMF *World Economic Outlook* (*WEO*), ONS, US Bureau of Economic Analysis and Bank calculations.

(a) The MPC's projections for GDP growth, CPI inflation and unemployment (as presented in the fan charts) are underpinned by four key judgements. The mapping from the key judgements to individual variables is not precise, but the profiles in the table should be viewed as broadly consistent with the MPC's key judgements.
(b) Figures show calendar-year growth rates unless otherwise stated. Figures in parentheses show the corresponding projections in the August 2015 *Inflation Report*, which were only available to 2017. Calculations for back data based on ONS data are shown using ONS series identifiers.
(c) Chained-volume measure. Constructed using real GDP growth rates of 146 countries weighted according to their shares in UK exports.
(d) Chained-volume measure. Constructed using real GDP growth rates of 147 countries weighted according to their shares in world GDP using the IMF's purchasing power parity (PPP) weights.
(e) Chained-volume measure.
(f) Chained-volume measure.
(g) Average level in Q4. Dollars per barrel. Projection based on monthly Brent futures prices.
(h) GDP per hour worked. GDP at market prices is based on the mode of the MPC's backcast. Hours worked based on YBUS up to 2013, subsequent data have been adjusted for Bank staff's assumption for population growth, as explained in the May 2015 *Report*.
(i) Level in Q4. Percentage of the 16+ population. Based on MGWG.
(j) Level in Q4. Average weekly hours worked, in main job and second job. Based on YBUS/MGRZ.
(k) Level in Q4. Percentage point spread over reference rates. Based on a weighted average of household and corporate loan and deposit spreads over appropriate risk-free rates. Indexed to equal zero in 2007 Q3.
(l) Based on the weighted average of spreads for households and large companies over 2003 and 2004 relative to the level in 2007 Q3. Data used to construct the SME spread are not available for that period. The period is chosen as broadly representative of one where spreads were neither unusually tight nor unusually loose.
(m) Calendar-year average. Percentage of total available household resources. Based on NRJS.
(n) Calendar-year average. Chained-volume business investment as a percentage of GDP. Business investment data based on GAN8. GDP data based on ABMI.
(o) Four-quarter inflation rate in Q4. Excludes the impact of missing trader intra-community fraud. Prior to 1998 based on IKBI/IKBL. Since 1998 based on (IKBI-OFNN)/(IKBL-OFNN/(BOKH/BQKO)).
(p) Four-quarter growth in unit labour costs in Q4. Whole-economy total labour costs divided by GDP at market prices, based on the mode of the MPC's GDP backcast. Total labour costs comprise compensation of employees and the labour share multiplied by mixed income.

**Table 4** Indicative projections consistent with the MPC's modal projections[a]

| | Average 1998–2007 | Projections | | | | *Memo: mean forecast error*[b] | *Memo: level in 2014*[c] |
|---|---|---|---|---|---|---|---|
| | | 2015 | 2016 | 2017 | 2018 | | |
| Household consumption[d] | 3¾ | 3 (3¼) | 3 (3¼) | 3 (3) | 2¾ | 1½ | 1,132 |
| Business investment[e] | 2½ | 5½ (4¾) | 7½ (7¼) | 8¾ (8½) | 7¾ | 6¼ | 166 |
| Housing investment[f] | 3½ | ¼ (6½) | 4½ (4½) | 5¾ (4) | 4¾ | 9¼ | 83 |
| Exports[g] | 4½ | 3¾ (5½) | 2½ (2½) | 1¾ (2½) | 2½ | 5 | 516 |
| Imports[h] | 6 | 3 (4) | 3¾ (3¼) | 3¼ (4) | 3¼ | 5 | 565 |
| Real post-tax household income[i] | 3 | 3 (2½) | 2¼ (3) | 2¼ (2½) | 2¼ | 1¼ | 1,190 |
| Employment[j] | 1 | 1½ (1¼) | 1 (1¼) | 1 (1) | ¾ | 1 | 31[k] |
| Average weekly earnings[l] | 4¼ | 2½ (3) | 3¾ (3¾) | 4 (4¼) | 4¼ | 1¼ | 486[m] |

(a) These projections are produced by Bank staff for the MPC to be consistent with the MPC's modal projections for GDP growth, CPI inflation and unemployment. Figures show calendar-year growth rates unless otherwise stated. Figures in parentheses show the corresponding projections in the August 2015 *Inflation Report*, which were only available to 2017. Calculations for back data are shown using ONS series identifiers.
(b) Root mean squared errors of one year ahead forecasts made between February 2002 and February 2014.
(c) £ billion chained-volume measure (reference year 2012) in 2014 unless otherwise stated.
(d) Chained-volume measure. Includes non-profit institutions serving households. Based on ABJR+HAYO.
(e) Chained-volume measure. Based on GAN8.
(f) Chained-volume measure. Whole-economy measure. Includes new dwellings, improvements and spending on services associated with the sale and purchase of property. Based on DFEG+L635+L637.
(g) Chained-volume measure. The historical data exclude the impact of missing trader intra-community (MTIC) fraud. Official MTIC-adjusted data are not available for exports, so headline exports data have been adjusted by Bank staff for MTIC fraud by an amount equal to the ONS import adjustment. Since 1998 based on IKBK-OFNN/(BOKH/BQKO). Prior to 1998 based on IKBK.
(h) Chained-volume measure. The historical data exclude the impact of MTIC fraud. Since 1998 based on IKBL-OFNN/(BOKH/BQKO). Prior to 1998 based on IKBL.
(i) Total available household resources deflated by the consumer expenditure deflator. Based on RPQK/((ABJQ+HAYE)/(ABJR+HAYO)).
(j) Four-quarter growth rate in Q4. Based on MGRZ up to 2013, subsequent data have been adjusted for Bank staff's assumption for population growth as explained in the May 2015 *Report*.
(k) People aged 16+ employed in 2014 Q4, millions.
(l) Four-quarter growth in Q4 in whole-economy total pay. Growth rates since 2001 based on KAB9. Prior to 2001, growth rates are based on historical estimates of AWE, with ONS series identifier MD9M.
(m) Average pounds sterling earned per week in 2014 Q4.