

# Conditioning assumptions, MPC key judgements, and indicative projections November 2017

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This document contains five 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 a summary of the headline forecast variables;
- Table 4 shows profiles that illustrate the MPC's key judgements as described in Section 5; and
- Table 5 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 November 2017 projections in Tables 2, 3, 4 and 5 have been conditioned on the paths shown in Table 1, and the assumptions that the stock of purchased gilts remains at £435 billion and the stock of purchased corporate bonds remains at £10 billion throughout the forecast period, and on the Term Funding Scheme (TFS); all three of which are financed by the issuance of central bank reserves. The August 2017 projections were conditioned on the same asset purchase and TFS assumptions and market interest rates.

The '*Inflation Report fan charts November 2017*' document is available at [www.bankofengland.co.uk/publications/Documents/inflationreport/2017/novfc.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2017/novfc.pdf).

The quarterly market interest rate paths are available at [www.bankofengland.co.uk/publications/Documents/inflationreport/market\\_profiles.xlsx](http://www.bankofengland.co.uk/publications/Documents/inflationreport/market_profiles.xlsx).

**Table 1** Forecast conditioning assumptions<sup>(a)(b)</sup>

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
Bank Rate <sup>(c)</sup>	5.0	0.4	0.7	0.9	1.0
Sterling effective exchange rate <sup>(d)</sup>	100	77	77	77	77
Oil prices <sup>(e)</sup>	39	57	56	55	55
Gas prices <sup>(f)</sup>	29	49	48	46	44
Nominal government expenditure <sup>(g)</sup>	7¼	1¾	1¼	1¼	3

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 25 October 2017. 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 2017 *Budget*. Historical data based on NMRP+D7QK.

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

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
GDP <sup>(a)</sup>	2.9	1.6	1.6	1.7	1.7
CPI inflation <sup>(b)</sup>	1.6	3.0	2.4	2.2	2.1
LFS unemployment rate <sup>(c)</sup>	5.3	4.2	4.2	4.2	4.3

(a) Calendar-year growth in real GDP consistent with the mean 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** Forecast summary<sup>(a)</sup>

	Projections			
	2017 Q4	2018 Q4	2019 Q4	2020 Q4
GDP <sup>(b)</sup>	1.5 (1.3)	1.7 (1.8)	1.7 (1.7)	1.7
<i>Excluding backcast</i>	<i>1.4 (1.2)</i>	<i>1.7 (1.8)</i>	<i>1.7 (1.8)</i>	<i>1.7</i>
CPI inflation <sup>(c)</sup>	3.0 (2.8)	2.4 (2.5)	2.2 (2.2)	2.1
LFS unemployment rate	4.2 (4.4)	4.2 (4.5)	4.2 (4.5)	4.3
Bank Rate <sup>(d)</sup>	0.4 (0.3)	0.7 (0.5)	0.9 (0.7)	1.0

(a) Modal projections for GDP, CPI inflation and LFS unemployment. Figures in parentheses show the corresponding projections in the August 2017 *Inflation Report*. Projections were only available to 2020 Q3 in August.

(b) Four-quarter growth in real GDP. The MPC's projections are based on its backcast for GDP.

(c) Four-quarter inflation rate.

(d) Per cent. The path for Bank Rate implied by forward market interest rates. The curves are based on overnight index swap rates.

**Table 4** MPC key judgements<sup>(a)(b)</sup>**Key Judgement 1: global growth remains strong**

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
World GDP (UK-weighted) <sup>(c)</sup>	3	2¾ (2½)	2¾ (2½)	2½ (2½)	2¼
World GDP (PPP-weighted) <sup>(d)</sup>	4	3½ (3½)	3¾ (3½)	3½ (3½)	3½
Euro-area GDP <sup>(e)</sup>	2¼	2¼ (2¼)	2¼ (2)	2 (1¾)	1¾
US GDP <sup>(f)</sup>	3	2¼ (2)	2¼ (2)	2 (2¼)	1¾

**Key Judgement 2: investment and net trade support UK demand, while consumption growth remains subdued**

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
Business investment to GDP ratio <sup>(g)</sup>	9¾	9½ (9¼)	9½ (9½)	9½ (9½)	9¾
Credit spreads <sup>(h)</sup>	¾ <sup>(i)</sup>	1¾ (1¾)	1¾ (1¾)	1¾ (1¾)	2
Household saving ratio <sup>(j)</sup>	8½	5¼ (3)	5¼ (3)	4¾ (2¾)	4¾

**Key Judgement 3: with little slack remaining and diminished growth in potential supply, modest demand growth is sufficient to restore domestic inflationary pressure**

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
Productivity <sup>(k)</sup>	2¼	¼ (½)	1¼ (1½)	1½ (1½)	1¼
Participation rate <sup>(l)</sup>	63	63½ (63½)	63½ (63½)	63½ (63¾)	63¾
Average hours <sup>(m)</sup>	32¼	32¼ (32)	32 (32)	31¾ (31¾)	31¾

**Key Judgement 4: significant upward pressure on inflation from import and energy prices eases over the forecast period and domestic inflationary pressures build**

	Average 1998– 2007	Projections			
		2017	2018	2019	2020
UK import prices <sup>(n)</sup>	¼	2½ (2)	1¾ (2)	½ (¾)	½
Dollar oil prices <sup>(o)</sup>	39	57 (49)	56 (51)	55 (53)	55
Unit labour costs <sup>(p)</sup>	3	1¾ (1¼)	2 (1¾)	2¼ (2¼)	2¼

Sources: Bank of America Merrill Lynch Global Research (used with permission), Bank of England, BDRG Continental *SME Finance Monitor*, Bloomberg, British Household Panel Survey, Department for Business, Energy and Industrial Strategy, 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 2017 *Inflation Report*. Projections were only available to 2019 in August. 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 180 countries weighted according to their shares in UK exports.
- (d) Chained-volume measure. Constructed using real GDP growth rates of 181 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) Calendar-year average. Chained-volume business investment as a percentage of GDP. Business investment data based on GANB. GDP data based on ABMI.
- (h) 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.
- (i) 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.
- (j) Calendar-year average. Percentage of total available household resources. Based on NRJS.
- (k) GDP per hour worked. GDP at market prices is based on the mode of the MPC's backcast. Hours worked based on YBUS.
- (l) Level in Q4. Percentage of the 16+ population. Based on MWGC.
- (m) Level in Q4. Average weekly hours worked, in main job and second job. Based on YBUS/MGRZ.
- (n) Four-quarter inflation rate in Q4.
- (o) Average level in Q4. Dollars per barrel. Projection based on monthly Brent futures prices.
- (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 5 Indicative projections consistent with MPC's modal projections<sup>(a)</sup>

	Average 1998– 2007	Projections				Memo: mean forecast error <sup>(b)</sup>	Memo: level in 2016 <sup>(c)</sup>
		2017	2018	2019	2020		
Household consumption <sup>(d)</sup>	3½	1½ (1¾)	1 (¾)	1¼ (1¼)	1½	1½	1,273
Business investment <sup>(e)</sup>	1¾	2½ (1)	2¾ (2¾)	3 (3½)	3	6¼	179
Housing investment <sup>(f)</sup>	3¼	4 (2¾)	1¼ (1¾)	¼ (1)	½	9¼	87
Exports <sup>(g)</sup>	4½	4¾ (3½)	2 (2¼)	1¼ (1¼)	½	4¾	522
Imports <sup>(h)</sup>	6	3 (3¼)	¼ (½)	-¼ (0)	-¼	4¾	572
Real post-tax household income <sup>(i)</sup>	3¼	-½ (-½)	1 (¾)	¾ (1)	1½	1¼	1,370
Employment <sup>(j)</sup>	1	1 (1)	¾ (½)	½ (¾)	¾	1	32 <sup>(k)</sup>
Average weekly earnings <sup>(l)</sup>	4¼	2¼ (2)	3 (3)	3¼ (3¼)	3¼	1¼	499 <sup>(m)</sup>

(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 2017 *Inflation Report*. Projections were only available to 2019 in August. Calculations for back data are shown using ONS series identifiers.

(b) Root mean squared errors of one year ahead forecasts made between February 2003 and February 2016.

(c) £ billion chained-volume measure (reference year 2015) in 2016 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. 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/((ABLQ+HAYE)/(ABJR+HAYO)).

(j) Four-quarter growth rate in Q4. Based on MGRZ.

(k) People aged 16+ employed in 2016 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 2016 Q4.