Essential Reading

- The G**DP growth**, **output gap** and **CPI inflation** projections are similar to May (**Charts 1-3**) despite tighter monetary conditions. The **yield curve** is c35bps higher at year 3 (**Chart 4**)and **sterling** has appreciated by c3.5%.
- Quarterly GDP growth remains c0.6-0.7% throughout the forecast. The **output gap** starts at -0.5% in 2015 Q3, closing in early-2016 and edging up to 0.2% at Year 3. **CPI inflation** recovers rapidly at the end of this year as the effects of lower energy and food prices drop out. Thereafter, inflation rises back to 2.0% and 2.1% at Years 2 and 3, respectively, (identical to May) as the ongoing drag from import prices is offset by above average unit labour cost growth.
- The central projection assumes an agreement is reached on **Greece** and sticks over the forecast.
- We have made two material judgements in the August *Benchmark*. First, we now think **import prices** will fall by less in response to sterling's appreciation since 2013. This judgement largely offsets the effect of sterling's appreciation since May, leaving import prices and their contribution to CPI inflation little changed. Second, we have weakened our forecast for **non-labour income**. Given the low marginal propensity to consume from such income, the saving ratio is now downward sloping and the impact on GDP and inflation is negligible.
- **At the Benchmark meeting, we propose to take the Committee through this UK forecast update, the inflation narrative and the key risks to the inflation projection at the policy-relevant horizon.**[1]
- **In the Key Issues meetings, we will focus on the global outlook, as well as the impact of the fiscal consolidation.**

Chart 1: GDP growth (% QOQ)

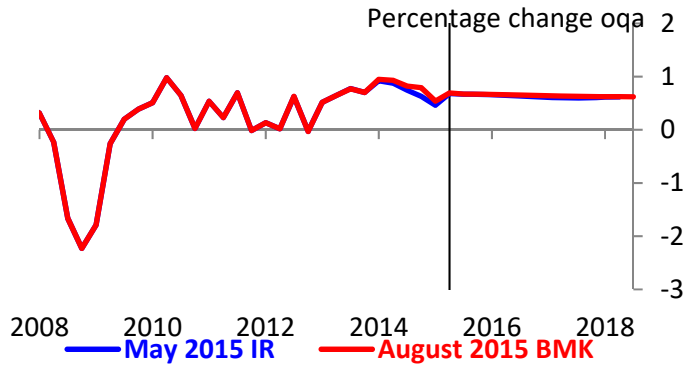


Chart 2: Annual CPI inflation

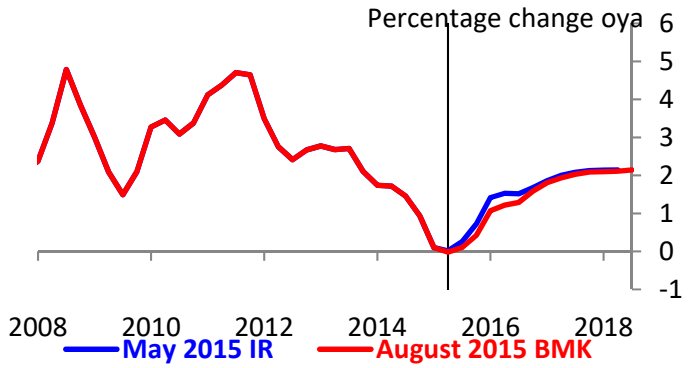


Chart 3: Output gap

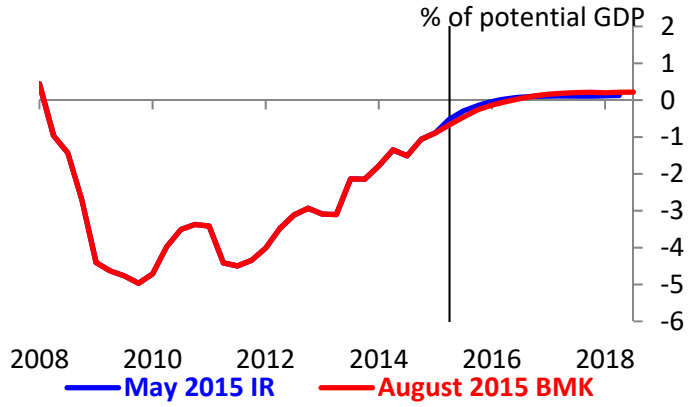
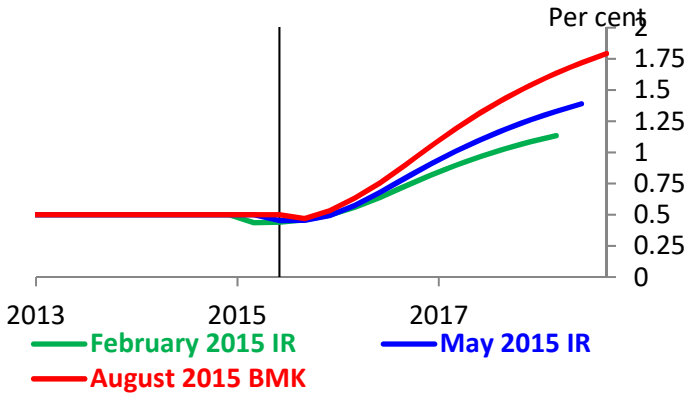


Chart 4: Bank Rate



[1] See 'The outlook for inflation'

This note contains three sections. The first describes the main changes since the May *IR*. The second sets out the narrative of the forecast. The third sets out our view of the key risks and how they've evolved since May.

SECTION 1: NEWS TO THE FORECAST SINCE THE MAY *IR*

1. GDP, income and expenditure

GDP growth was revised up in the **QNA** in each quarter 2014 Q2-2015 Q1. That largely reflected downward revisions to the construction deflator following methodological changes.[2] Given that and the latest surveys, we have not taken a signal for growth momentum: our nowcast is unchanged from May at 0.7% in both 2015 Q2 (0.6% preliminary) and 2015 Q3. Taken together, the level of GDP starts the forecast 0.4% higher than in May (**Chart 1**).

Monetary conditions are materially tighter since May: **sterling is up c3½** and the **yield curve 35bps higher** at Year 3.[3] Together with the impact of developments in **Greece**, these push down materially on the projections. However, consistent with much of the tightening reflecting stronger data news (for example, wages) and prospects and a post-Election reduction in uncertainty premia, the growth (and inflation) forecasts are little changed. That reflects boosts to GDP from: **lower credit spreads**; **the fall in oil prices**; a **stronger near-term outlook for the housing market**; a **slightly looser fiscal stance** in years 2 and 3 following the Budget; and a **judgement to raise import prices** and therefore lower import volumes (**Chart 19**). Indeed, **cumulative GDP growth** is 0.2pp stronger over the forecast (**Chart 1**).

Asset prices and financial conditions[4]

The **market path for Bank Rate** is higher than in May (**Chart 4**). A first 25bps rate rise is still priced in for **mid-2016**. Thereafter, however, the OIS curve is steeper, now reaching 1.8% at Year 3, as opposed to 1.4%. Long rates (10 year OIS) are around 40bps higher than the May *IR*. This tightening lowers the level of GDP by 0.3% at Year 3. In an absolute sense, though, the yield curve remains very flat, rising by around 10bps per quarter after the first rate rise. Around half of the impact of the higher yield curve is offset, however, by lower **credit spreads** as higher risk-free rates take time to feed into lending rates. Spreads are also lower reflecting a further easing in corporate credit conditions.[5]

The **sterling ERI** is c3½% higher than in May (**Chart 5**). On its own, this lowers the level of GDP by c0.2%. But this has been partly offset by a judgement to raise the level of import prices – and, therefore, lower import volumes – as we now think less of sterling's appreciation since 2013 and May will be reflected in lower import prices (see below).

Chart 5: Sterling ERI

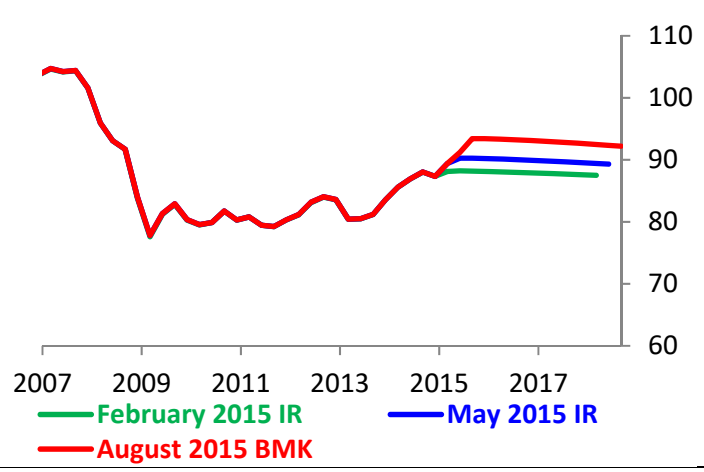
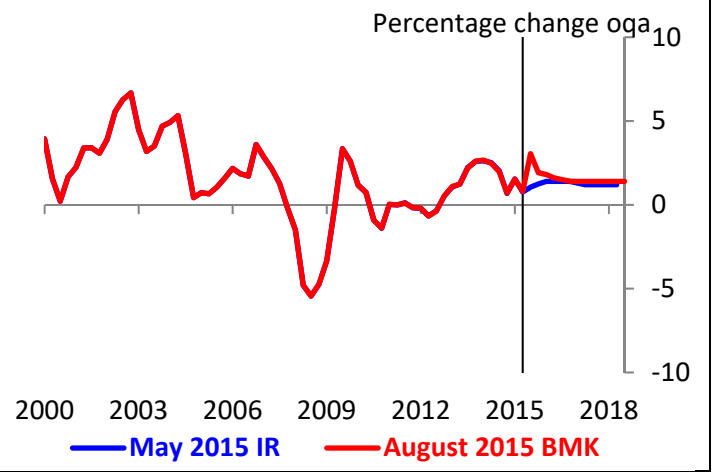


Chart 6: House prices



[2] See July 2015 UK Demand & Output Monthly

Prospects for **housing market activity** have improved a little since the May *IR*. Recent outturns for mortgage approvals and house prices have exceeded expectations, with an increase in newer buyer enquiries of late. We have taken a small signal from these developments and pushed up on our forecast for near-term mortgage approvals and house price inflation (**Chart 6**). **House prices** end the forecast 5% higher than in May. This boosts consumption through a collateral channel, raising the level of GDP by 0.1%.

Lower **energy prices** also provide a fillip to GDP (of around 0.1%) since May reflecting the fall in sterling oil prices of over 10% and revised utility price assumptions (see below) following the cut of 5% by British Gas.

Greece and the world economy

The outlook for the **world economy** is little changed since May, with the level of world GDP ending a little over 0.2% lower with minimal impact on the UK projections. Prospects for the euro area and China are both a little weaker reflecting the assumed fallout from the crisis in **Greece** and from falls in Chinese equity prices. Lower oil prices provide a partial offset, however.[6]

The central projection assumes a Greek agreement is finalised and sticks over the forecast period.7 That said, we have built in a small downward effect on UK GDP from the escalation of the crisis (of around 0.1%) through three channels. First, through the direct impact of weaker euro-area demand. Second, from UK credit spreads being a little more elevated than they would otherwise be. And, third, through a small UK uncertainty effect in late-2015 dampening consumption and business investment slightly.

The Budget

The revised fiscal plans announced in the July **Budget** mean that the fiscal stance (as summarised by the cyclically adjusted budget deficit) is slightly tighter in 2015/6 but slightly looser thereafter (**Chart 7**) as a higher path for government spending (smoothing out the 'roller-coaster') outweigh the measures to cut welfare payments and increase taxes (**Chart 8**). This pushes down slightly on GDP growth in 2015/6 and, taking account of different multipliers for the different measures, up slightly on growth in 2016/7, raising the level of GDP by 0.2% by the end of the forecast.

Chart 7: News in OBR's estimate of year-on-year changes in cyclically-adjusted net borrowing

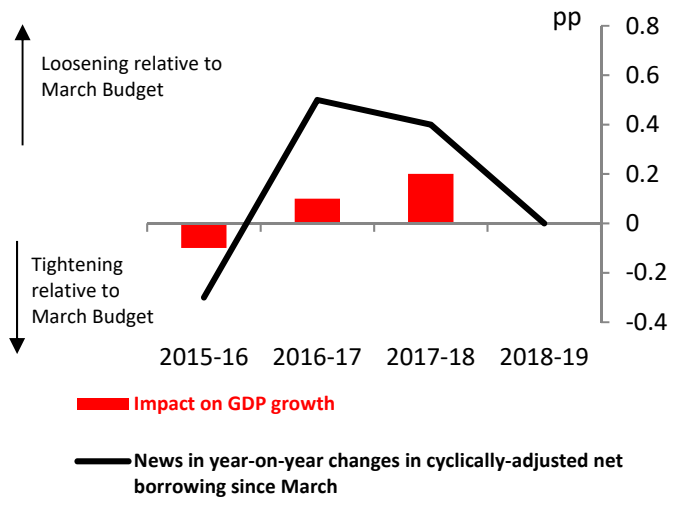
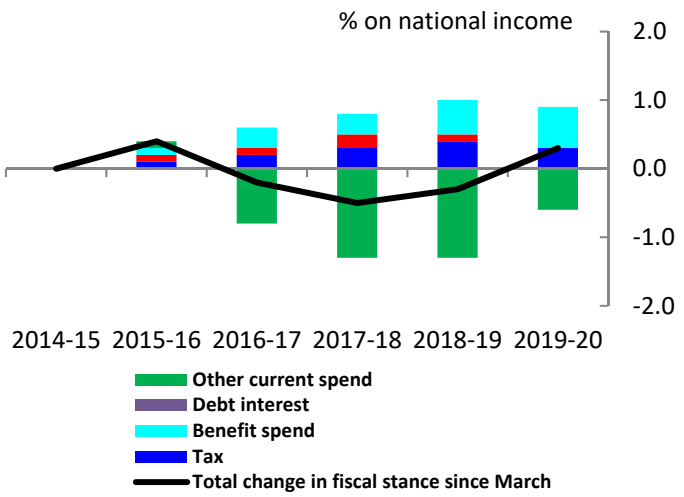


Chart 8: Change in fiscal stance since March Budget (positive = tightening)

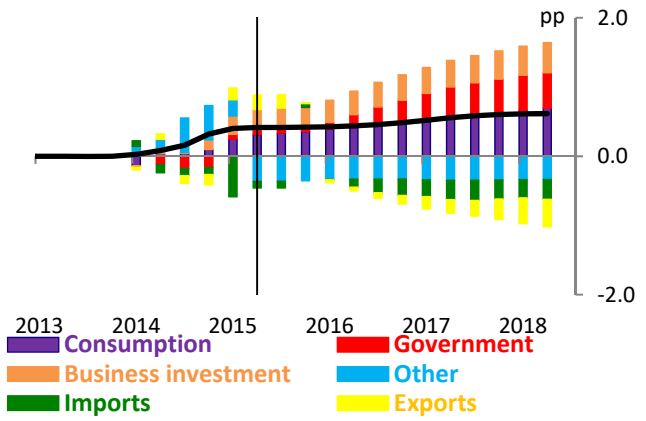


[6] See and

[7] See

Expenditure components

Chart 9: GDP news by expenditure component



The upside news in GDP in 2015 Q1 was accounted for by stronger than expected consumption, business investment, housing investment, government spending and stockbuilding (**Chart 9**). These were partially offset by a large negative contribution from the alignment adjustment (-0.9pp) and weaker net trade. This expenditure news is largely locked in over 2015 Q2 and Q3 as our expectation for overall GDP growth remains in line with the May *IR* of 0.7%.

Beyond the near-term, consumption and investment growth are a little stronger than in May. That reflects lower oil prices, which both provide a boost to real incomes, the lower uncertainty premia following the Election and the impact of the stronger outlook for the housing market.

The **saving rate** in 2015 Q1 was c1pp lower than in the May *IR* at 4.9%, reflecting downside news in income. Thereafter, the saving ratio is now a little downward-sloping, as opposed to broadly flat in May (**Chart 10**). That is because we have revised down household income to reflect a new MASD model which projects **non-labour income** at a more granular level. We think this is a better approach and our forecast errors on non-labour income would have been lower had this model been previously available.[8] Given this represents a reallocation of income between the corporate and household sectors and the marginal propensity to spend out of this type of income is very small, this change has had a negligible impact on the GDP and inflation projections. The household saving ratio now ends the forecast close to 4%, around 1.5pp lower than the May *IR*. By this metric, consumption looks somewhat more stretched than was previously the case, though consumption to *labour* income ratio and the *overall* private sector financial balance are unchanged as a result of this judgement.

The **UK export share** is more downward-sloping (**Chart 11)** and the net trade contribution are more negative than in May given sterling's appreciation since then.

Chart 10: Household saving ratio

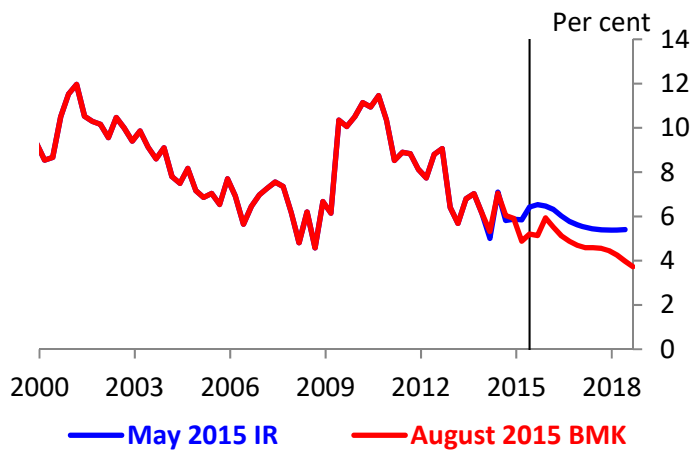
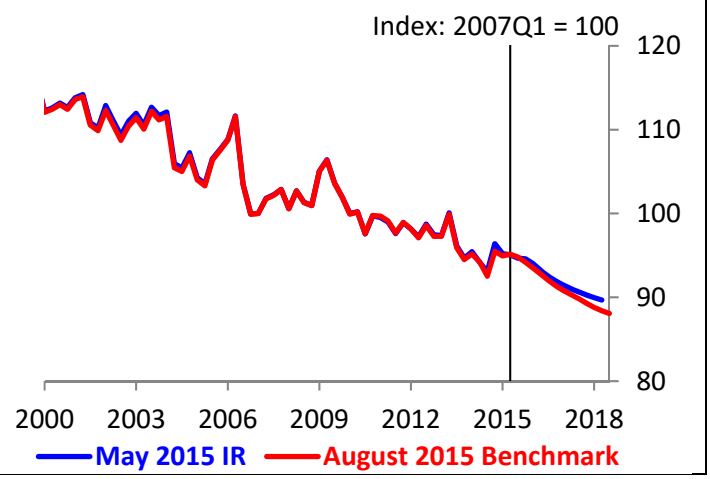


Chart 11: Export share



[8] See for more information

2. *Supply and spare capacity*

Perhaps the biggest piece of news since May has been the labour market quantities data: total hours worked start the forecast in 2015 Q3 0.7% lower than expected than in May and with the upside news in GDP, the level of **productivity** (output per hour) is 1.1% higher. We think annual productivity growth was 1.5% in 2015 Q2, which would be the highest rate since 2011. The **unemployment rate** in 2015 Q3 is projected to be 5.6%, 0.3pp higher than in the May *IR*.

On their own, the starting news in hours at the start of the forecast would have implied an output gap of -1.2% in 2015 Q2 and -0.8% in 2015 Q3. However, following the Committee's feedback last round for us to take a more holistic approach and not to move our estimates of the output gap around too much in rounds when we're not doing a supply stocktake, we have only widened the **starting level of the output gap** by 0.2pp in 2015 Q2 and Q3 to -0.7% and -0.5%, respectively (see **Box** on page 6). This represents a compromise between, on the one hand, maintaining the Committee's view from May and SEAD's new top-down filter estimates implying little news since then and, on the other, moving a little closer to those estimates in an absolute sense – they suggest spare capacity of around ½-1% in 2015 Q2 and Q3 – and putting some weight on the labour market quantities data. As we have kept the star variables unchanged from last round's supply stocktake, in order to partially offset the news in the labour market quantities data for the output gap we have pushed up on **capacity utilisation within firms** by 0.4pp and therefore treated some of the news in productivity as cyclical. The logical consequence of that is that productivity growth is a little weaker over the forecast than in May (**Chart 12**) as that unwinds and unemployment is therefore more downward-sloping ending at a very similar rate to May (**Chart 13**). We are therefore building in less of a dogleg in unemployment than in May even though one may be emerging in the latest data with the pick-up in productivity.

The starting output gap of -0.5% in 2015 Q3 means that the "broadly in the region of ½%" language used in the May *IR* remains appropriate.

Given these changes, we have interpreted the 0.4% starting news in GDP in 2015 Q3 as reflecting 0.6% higher potential supply and a 0.2pp wider output gap. And, as is our usual convention, that supply news has been locked it into the level of GDP. With slightly stronger GDP growth over the forecast and potential supply growth little changed, the output gap is a little more upward sloping than in May. It closes in early-2016 before becoming slightly positive by end-2018, reaching 0.2%, compared with 0.1% in May (**Chart 3**).

Chart 12: Productivity (output per hour)

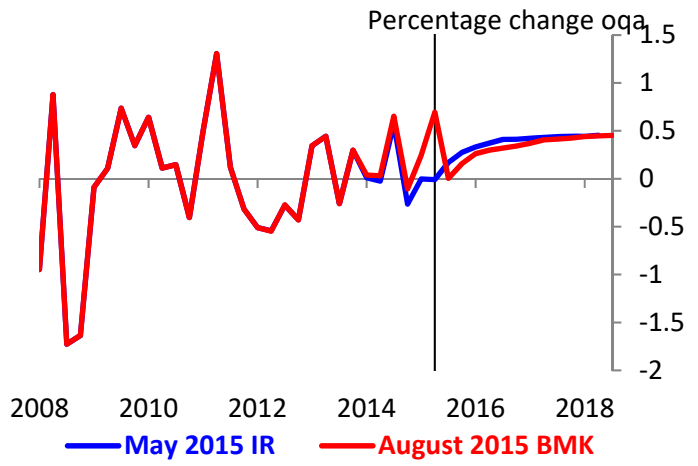
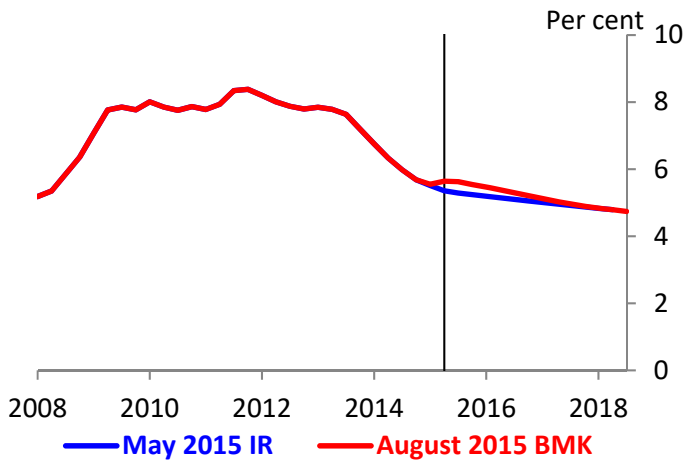


Chart 13: Unemployment



BOX: OUTPUT GAP JUDGEMENT IN THE BENCHMARK FORECAST

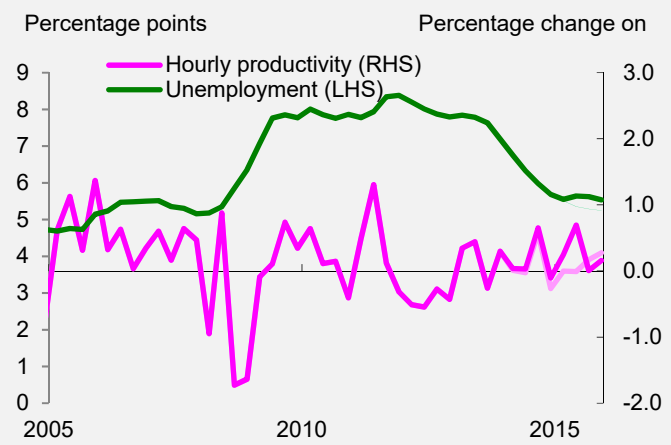
- **The estimate of the output gap in the Benchmark is informed by the staff's latest bottom-up and top-down estimates.**
- **The output gap estimate from our top-down model is highly uncertain, but is slightly larger than that assumed in the May IR at 0.9% in Q2 (Table 1).** Since the May Inflation Report, staff have been working on top-down estimates of the output gap to complement the bottom-up estimates. As discussed at Friday's research awayday, research is still ongoing. But, subject to further research, our current preferred model is an unobserved components model that seeks to estimate potential output using information from real GDP, core inflation, unemployment, long-term unemployment and a financial conditions index. To produce estimates of the output gap at the start of the forecast (currently Q3 2015) we use either Benchmark forecast constraints or simple conditioning assumptions (such as assuming continued falls in long-term unemployment in line with recent trends). Despite news in GDP and unemployment, using May IR data would not change the output gap estimate from the top-down filter.

Table 1: Estimates of the output gap

	May IR	Top-down	*Aug Bmk*
2014 Q1	-1.8	-1.8	-1.8
2014 Q2	-1.3	-1.4	-1.3
2014 Q3	-1.5	-1.2	-1.5
2014 Q4	-1.1	-1.0	-1.1
2015 Q1	-0.9	-1.0	-0.9
2015 Q2	-0.5	-0.9	-0.7
2015 Q3	-0.3	-0.8	-0.5

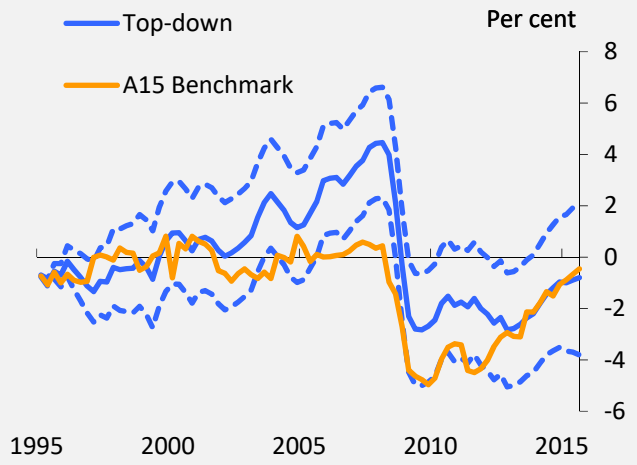
- **Since the May *Inflation Report* lower than expected total hours would, at face value, point to more slack in the labour market, with the arithmetically related increase in productivity pointing to commensurately less slack within firms.** The latest data (covering the period up to May) suggest total hours worked in Q2 will probably be 0.9% lower than expected in the May *Inflation Report*. There are, however, reasons to want to aim off the mechanical impact of the hours data on both our estimates of the labour gap and of the degree of factor utilisation within firms. In the labour market, measure of tightness such as surveys and do not point to a significant loosening in labour market conditions. In the product market, survey estimates of capacity utilisation have ticked up in Q2, but by no means to the same extent as would have been implied by the news in the productivity data, especially once the upside news to GDP is also taken into account.
- **It is possible that the latest data point to either a more or less slack. In the Benchmark forecast we have assumed there is 0.7% of slack in 2015 Q2 and 0.5% in 2015 Q3 (the latter is the quarter reported in the August *Inflation Report*): about 0.2pp larger than assumed in May.** We continue to use the MPC May judgement as an anchor for our forecast. The slight upward revision can be thought of as placing slightly more weight on a) the new estimates of the level of the slack from the top-down model and the implications of news in the employment quantities for the degree of labour market slack, than on b) the implications for our estimates of factor utilisation within firms of the upside news in the GDP and productivity data.

Chart 1: Unemployment and productivity are both higher than expected



Lighter lines are May IR.

Chart 2: Bmk and top-down estimates of the output gap



Dotted lines indicate 90% confidence interval

3. *Inflation and costs*

An accompanying note discusses wages, import prices and the broader inflation outlook in detail.[9]

CPI inflation was 0.0% in June, as expected. The STIF is 0.3pp lower than in the May *IR*, however, largely as a result of the lower sterling oil curve and reduced utilities bills associated with British Gas's 5% price cut (**Chart 14**).

In the May *IR*, we judged that around 3/4 of the 2pp shortfall of headline CPI inflation relative to target at that time (March CPI data) could be explained by lower energy, food and other goods prices, with the other 1/4 reflecting subdued generalised inflationary pressures. That view is unchanged in the August *Benchmark*.

The CPI projection is identical to May at years 2 and 3 reaching 2.0% and 2.1%, respectively (**Chart 2**) as the output gap is very similar and the downward price level impact of sterling's appreciation since May is offset by a Staff judgement to raise the level of import prices, such that **non-fuel import prices** are little changed since May (**Chart 12**).

As discussed in the February round, we've been surprised by the strength of UK import prices since sterling's appreciation since 2013. John Lewis's analysis at the micro level suggests c85% of a change in sterling is typically reflected in UK import prices. However, equations mapping aggregate (non-fuel) import prices to world prices and sterling imply smaller effects – of c60%. We think this reflects compositional differences between the world exports, ERI and UK import baskets which dampen the observed relationship between these series at the aggregate level. We think using this aggregate mapping relationship is a better approach to forecasting UK import prices, given these compositional differences. Adopting this new mapping has two implications for the forecast. First, the appreciation since May has less of a downward impact on UK import prices. Second, we no longer expect lagged import price falls in response to the *previous* exchange rate appreciation since 2013. Both these raise the level of UK import prices over the forecast and, by coincidence, offset the impact of sterling's appreciation since May. So, the profile for non-fuel import prices is little changed from the May *IR* (**Chart 15**) and so also is the contribution of import prices to inflation (**Chart 16**).

Chart 14: News in near-term inflation

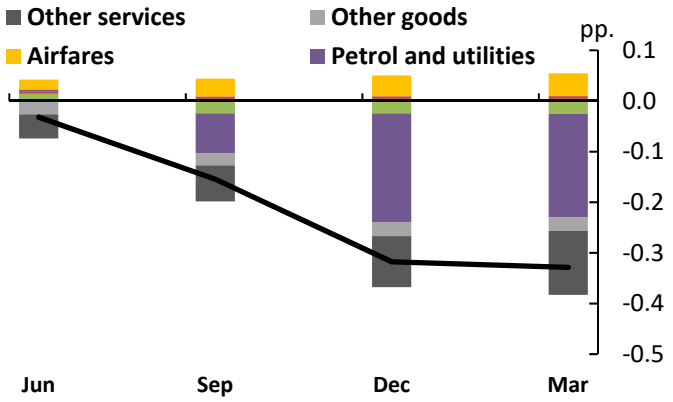


Chart 15: Non-fuel import prices

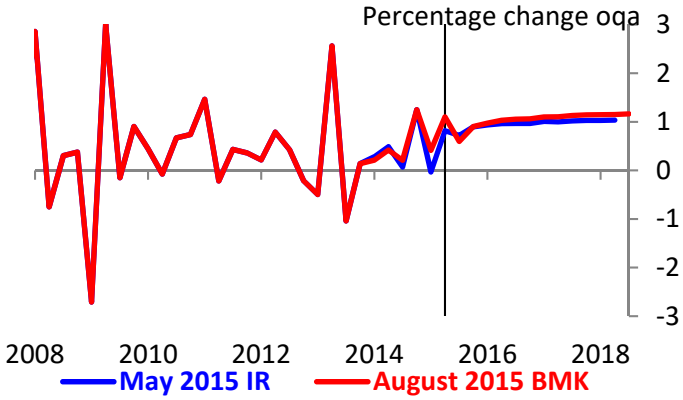
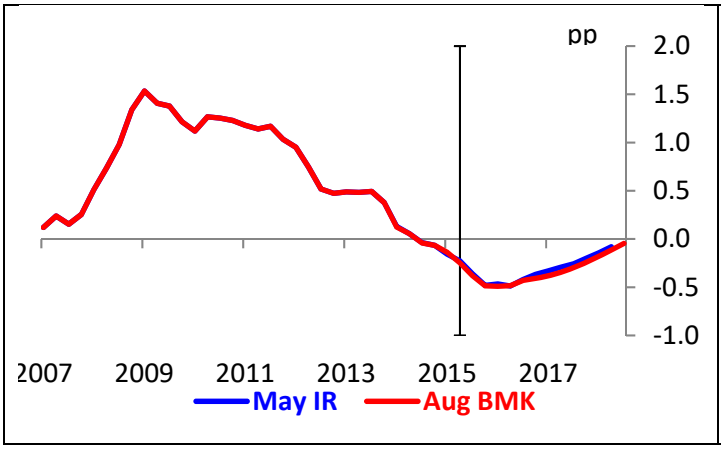


Chart 16: Contribution of non-fuel import prices to annual CPI inflation

Wage growth has surprised significantly on the upside since the May *IR*. Following revisions, annual private economy wage growth in 2015 Q1 was 2.8%, 0.5pp higher than expected in May. Further strength in the April labour market outturn mean this news builds into Q2. Overall, the starting news in private sector wages (in Q3) is 0.8%. Given the upside news in productivity, however, the news in unit labour costs is actually to the downside –

[9] See 'Benchmark meeting: the outlook for inflation'



though the amount of news in ULCs depends on the precise definition used and varies between whole economy and private sector space. Table A sets out news in key labour cost variables.

A key issue that we will discuss at the Benchmark meeting is what signal to take from the wages news for the inflation outlook. On the one hand: it has been more than matched by upside news in productivity and may partly reflect the unwinding of compositional effects (unfortunately, we can't assess this yet, because the data necessary to update our estimates for compositional effects will not be available until after the August *IR*); and some of the news in wages reflects bonuses, which we think don't represent a marginal cost. On the other, wage and unit labour cost growth have picked up materially in recent months and there is a risk that they do so by more than we're expecting.

We have taken little signal from the upside news in wages and, given our view of spare capacity is little changed, the projections for growth in whole economy wages (**Chart 17**) and unit labour costs (**Chart 18**) are little changed since May. We have made a small adjustment to boost pay in light of the National Living Wage announced in the Budget, but this is very small, raising annual wage growth by a small 0.1pp a year.

Chart 17: Whole economy wages

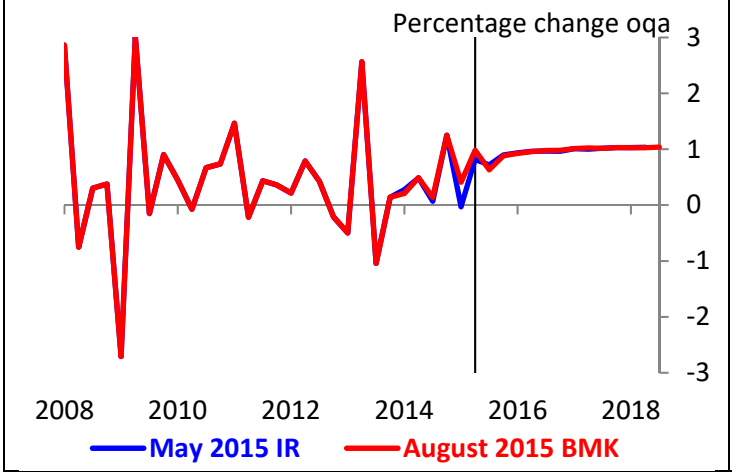


Chart 18: Whole economy ULCs

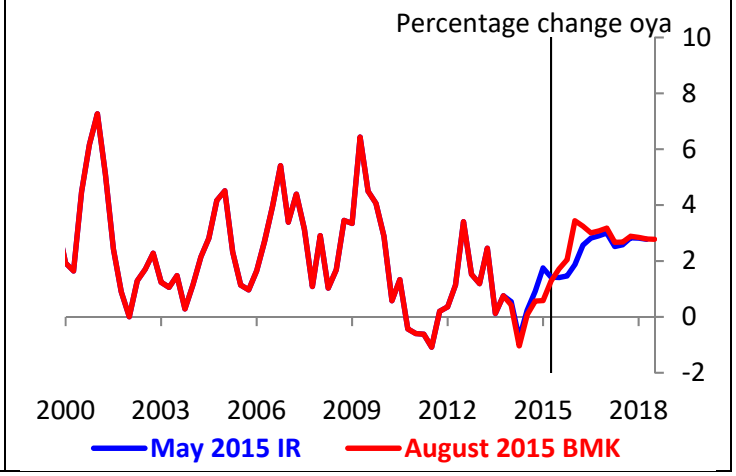
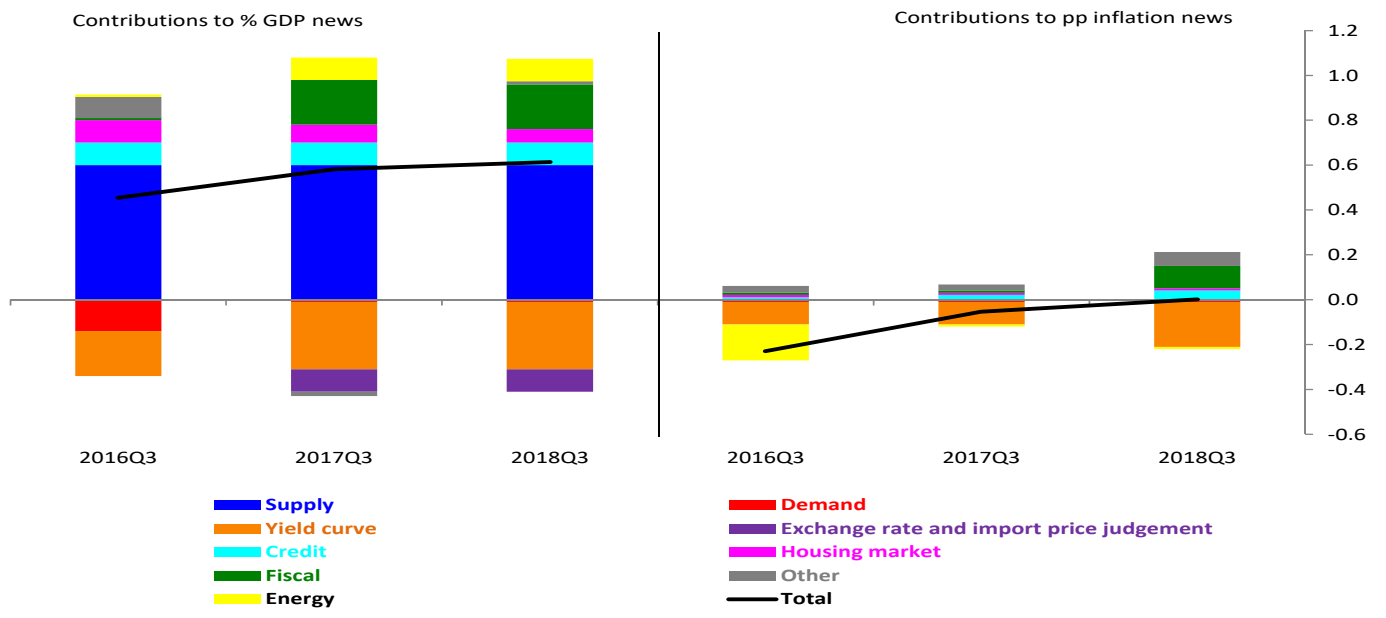


Table A: News in key labour cost variables

% oya	May IR		Aug BMK[(a)]		News	
	Q2	Q3	Q2	Q3	Q2	Q3
Whole economy						
AWE	2.1	2.8	2.8	3.3	+0.7	+0.5
Productivity (heads)	0.6	0.7	1.5	1.4	+0.9	+0.7
AWE / productivity	1.5	2.1	1.3	1.9	-0.1	-0.2
ULC (Nat Accounts)	1.4	1.4	1.3	1.7	-0.1	+0.3
Private sector						
AWE	2.5	2.8	3.1	3.7	+0.6	+0.9
Productivity (heads)	0.9	0.8	1.9	1.7	+1.0	+0.9
AWE / productivity	1.5	2.0	1.2	2.0	-0.3	0.0
ULC (Nat Accounts)	1.1	1.5	0.5	1.4	-0.6	-0.1

(a) Q2 numbers are forecasts.

Chart 19: Accounting for the news in GDP and inflation



SECTION 2: THE ABSOLUTE NARRATIVE

1. Demand

May IR Key Judgement 1: Global growth picks up slightly, particularly in the euro area

May IR Key Judgment 2: Robust domestic demand is sustained by the recovery in real incomes

We judge that the recovery in GDP growth since early-2013 to above average rates has been driven by the abatement of the interrelated headwinds from world demand, uncertainty and tight credit conditions and the large fall in oil prices – and despite the fiscal consolidation. Growth slows to around average rates as the boost from lower oil prices and reduced uncertainty dissipate while the impact of the ongoing fiscal consolidation (which detracts from growth in each year of the forecast) and is offset by further support from looser credit conditions and a pick-up in productivity growth – as the headwinds from the financial crisis continue to fade. The fiscal consolidation will be the focus of Key Issues 2.

We expect calendar year GDP growth to be 2.8% (2.6% excluding the backcast) in 2015, 2.7% in 2016 and 2.6% in 2017. The August *Benchmark* is well within the usual range of externals for 2016 and 2017. It is a little higher than the average external in 2015, but that simply reflects the upward effect of the backcast.

The main drivers of continued robust GDP growth over the forecast are private consumption and business investment growth (**Chart 16**). After the unexpected weakness in 2014Q4, consumption growth recovered to 0.9% in 2015Q1. That is in line with our expectation in the February *IR* that the peak effect of the oil price fall on consumption growth would occur in early-2015, and remains consistent with a marginal propensity to consume of around 0.8 from the oil shock.[10] While the boost to consumption growth from the oil price fall wanes from the start of the forecast, increases in household spending over 2015 are sustained by the real income boost from sterling's appreciation, with quarterly consumption growth remaining around 0.8%. Thereafter, despite slowing a little, consumption growth remains robust at around 0.7% per quarter from 2016 but begins to outstrip income growth and is, therefore, supported through a falling saving ratio (**Chart 21**).

[10] See 'Initial evidence on the impact of the fall in the price of oil on UK GDP'

The saving ratio fell back over 2011 and 2012 as the headwinds from the crisis – uncertainty, tight credit conditions and concerns over household balance sheets – began to fade. [11] Over the past two years the saving ratio has been broadly flat as uncertainty reverted to normal levels. Over the forecast, however, the saving ratio declines further, from around 6% in early-2015 to around 4% by late-2018. That would be its lowest level since the 1960s. That decline reflects the continuing support to spending from monetary policy and falling credit spreads and, together with the falling corporate financial balance, is the counterpart to the fiscal consolidation. It would also be consistent with an improvement in income expectations encouraging households to bring forward spending or, alternatively, households choosing to build up a lower flow of savings having built up a sufficient stock of precautionary savings over the past. Given its flatness over the past two years, the saving ratio may prove to be more stable than in the August *Benchmark*, suggesting a downside risk to consumption.

Real income growth has strengthened over the past year to around 3% in 2015 Q1, boosted by the fall in oil prices and sterling's appreciation. Real income growth is expected to slow from its current rate as the boost from lower energy and import prices fade, with inflation rising from late-2015, as well as a slight rise in labour income tax rates over 2016. Annual real income growth reaches a trough of 1.7% in mid-2016, before recovering back to 2.6% by the end of the forecast period as labour compensation is supported by small further increases in wage growth. The composition of labour income changes over the forecast as employment growth slows but is offset by a pickup in wage growth, given a tightening labour market and rising productivity growth.

Chart 20: Contributions to annual GDP growth

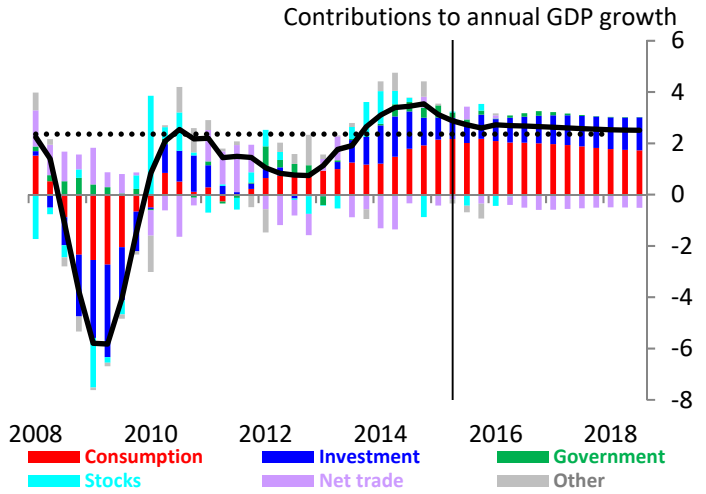
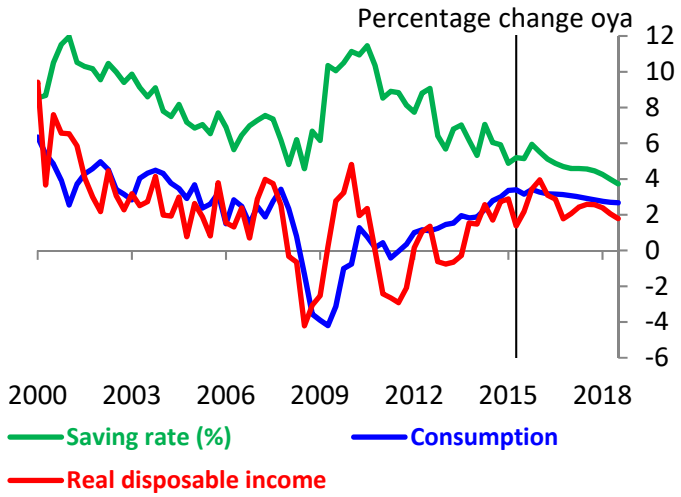


Chart 21: Household income, spending & saving



Our suite models suggest that business investment was inexplicably weak in the second half of 2014, relative to its determinants. Having picked up at the start of 2015, we expect business investment to continue growing at rates of around 8-9% per year, which is not exceptional by historical standards (**Chart 22**) and so have taken no signal from that previous weakness. Business investment growth is boosted by the low real cost of capital and robust demand. By the end of the forecast period, the business investment to GDP ratio rises to 13% of GDP, exceeding the previous high of 12% in 1998. As has been the case for some time, the Benchmark investment projection is above the swathe of our suite models, so risks to business investment are likely to continue to be to the downside, not least if corporate uncertainty increases given developments in Greece and in the run-up to the prospective EU Referendum.

Given strong house price inflation, dwellings investment has grown strongly over the past two years, contributing almost 0.5pp to annual GDP growth. Having slowed, the recent tick up in house price inflation is assumed to persist for

[11] See

the first year of the forecast, supporting further strong growth rates in housing investment. House price inflation slows over the second half of the forecast period as Bank Rate rises, but it remains in excess of nominal GDP growth and so continues to sustain robust rates of housing investment growth.

Net trade imparts a drag of around 0.5pp on annual GDP growth from 2016 given sterling's appreciation of over 10% since early-2013 (**Chart 23**). Relative demand is broadly neutral for net trade over the forecast period as UK and UK-weighted world GDP grow at similar rates in coming years. Risks to global growth are skewed to the downside, however, given risks associated with Greece and China, as well as vulnerabilities in other emerging markets.

The profiles for the sectoral financial balances over the forecast horizon shows that the counterpart to the 4pp of GDP further improvement in the government's net borrowing position is a further significant fall in the private sector financial balance (**Chart 24**), split roughly equally between the household and corporate balances. Given the ongoing drag on net trade from sterling's appreciation over the past two years and the assumption that net foreign income remains at its current negative level, the current account deficit remains flat over the forecast period at its historical high level of around 5.5% of GDP.

Chart 22: Business investment

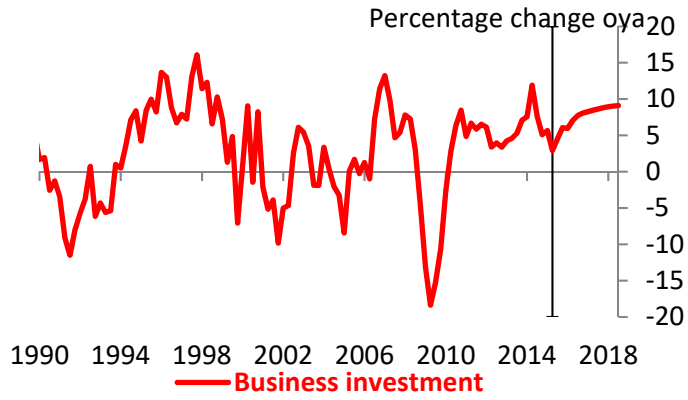


Chart 23: Net trade

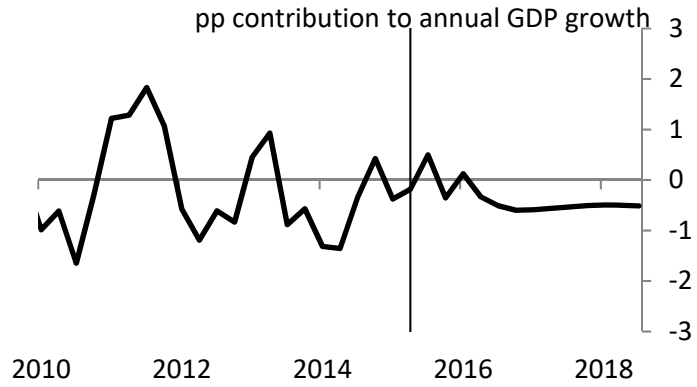
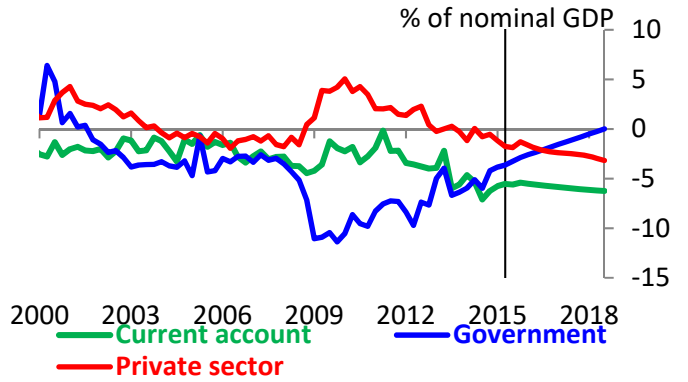


Chart 24: Sectoral financial balances



2. *Supply and spare capacity*

May IR Key Judgement 3: A recovery in productivity supports supply and real income growth

GDP has grown much faster than potential supply over the last 3 years, with our estimate of the output gap correspondingly narrowing from around -4.5% in late-2011 to around -0.5% in 2015 Q3.

On average, growth in **total potential supply** over that period has been more than accounted for by unusually strong growth in potential **labour supply**, with potential productivity falling over much of 2012-14 (**Chart 25**).

Having peaked in early-2014, labour supply growth is estimated to have fallen over the past year, and is expected to fall back further over the forecast period (**Chart 26**).

ii) The working-age population has been boosted by strong migration in recent quarters and is estimated to have increased by around 450,000 in the year to 2015Q2. The recent strength in population growth is assumed to wane over the forecast period, such that it falls back to 0.6% per year by late-2018.

iii) Trend average hours are expected to fall back slightly over the forecast period as demographic effects are associated with older workers offering fewer average hours.

iv) Having fallen by over 1pp since the start of 2013, U* is expected to fall a little further over the forecast period to reach the estimated 5% natural rate of unemployment.

v) Trend participation is assumed to be flat over the forecast period as downward pressures from an ageing population are offset by increasing participation rates for older people.

Chart 25: Accounting contributions to GDP growth

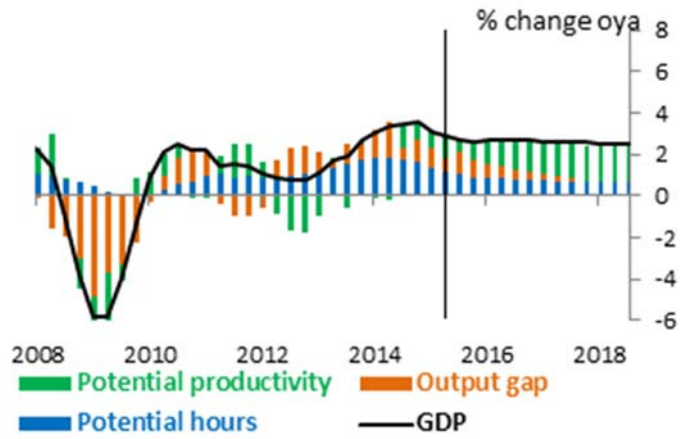
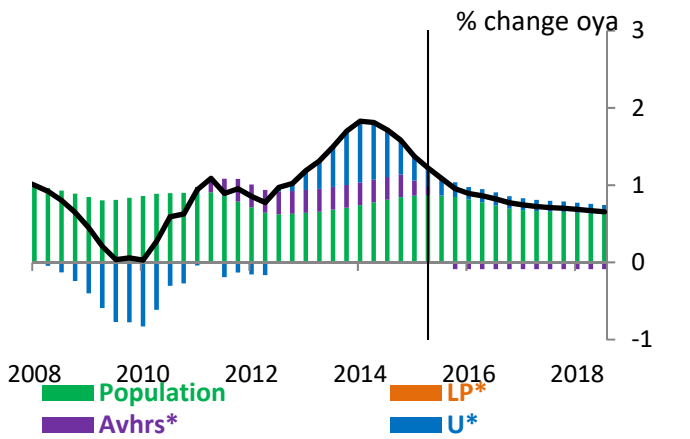


Chart 26: Contributions to labour supply growth



Potential productivity works in the opposite direction. Having been largely flat from 2008-13, we think potential productivity has strengthened more recently, growing by around 1.2% in the year to 2015Q1. Potential productivity growth is expected to pick up further over the forecast, reaching 1.8% at Year 3. This profile embodies the view that productivity will recover in coming years, but without growth rates reaching the average seen pre-crisis. From an accounting perspective, around half this recovery in potential productivity growth reflects increased capital deepening (given strong business investment), while the other half represents higher TFP growth (**Chart 27**). The recent pickup in productivity growth suggests that the risks to this projection are more balanced than they have been and, indeed, there's a risk that we should have interpreted more of the recovery as structural rather than cyclical and building in stronger productivity growth going forward.

From a starting point of -0.5% in 2015 Q3, the output gap is expected to close in early-2016 before flattening out at around 0.1-0.2% from late-2016 onwards (**Chart 3**). Compared with the rapid narrowing over the last 3 years, that much flatter profile over 2015-2017 is more than accounted for by an expected improvement in potential supply growth, from an average of around 1% over 2012-2014 to around 2.5% by the end of the forecast horizon. That strengthening in potential supply growth, in turn, is more than accounted for by expected improvements in potential productivity growth, from an average of around -0.5% over 2012-2014 to around 1.8% by the end of the forecast. As a result, the pace at which unemployment falls slows relative to the past 2-3 years. Though, as discussed above, it falls more rapidly than assumed in May as we have interpreted some of the recent pick-up in productivity growth as cyclical. Unemployment reaches 4.7% at year 3, just below our estimate of U* and the natural rate (**Chart 28**).

Chart 27: Contributions to potential productivity growth

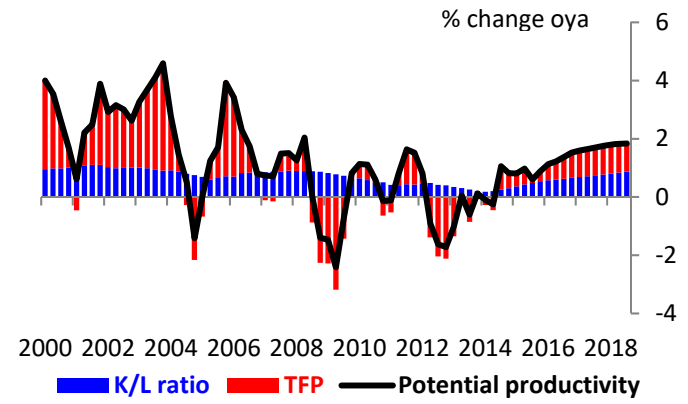
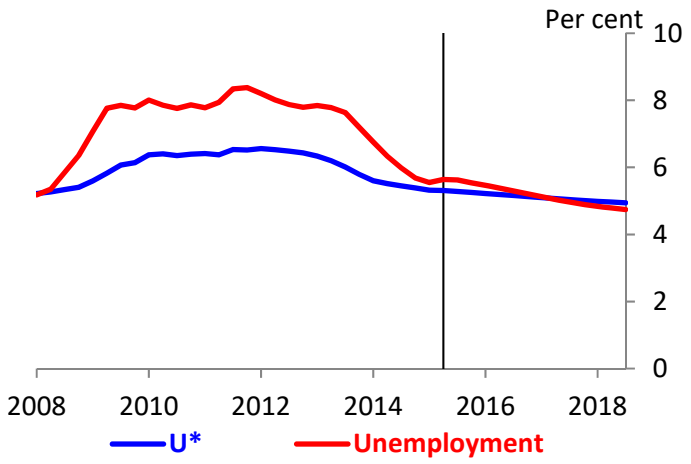


Chart 28: Unemployment



3. *Costs and inflation*

May IR Key Judgement 4: Wage growth picks up so that inflation returns to the 2% target as the price-level effects associated with lower energy, food and import prices dissipate

CPI inflation was 0.0% in June. Based on the June CPI data, energy, food and other goods prices account for around ¾ of the 2pp shortfall of inflation relative to target. The weakness of other goods prices is consistent with our view that non-energy import prices are currently dragging on CPI inflation following sterling's appreciation since 2013. The other ¼ of the deviation of inflation is attributable to subdued generalised inflationary pressures, linked to there still being an output gap and the weakness of wage growth.

The current drag on inflation of 0.5pp from petrol and utilities is expected to unwind to zero by early-2016 as oil price effects drop out of the annual comparison. A further unwind of the current drags from both food and other goods, respectively, means that inflation is expected to reach 1.1% in 2016Q1 (**Chart 29**).

Chart 29: Near-term inflation

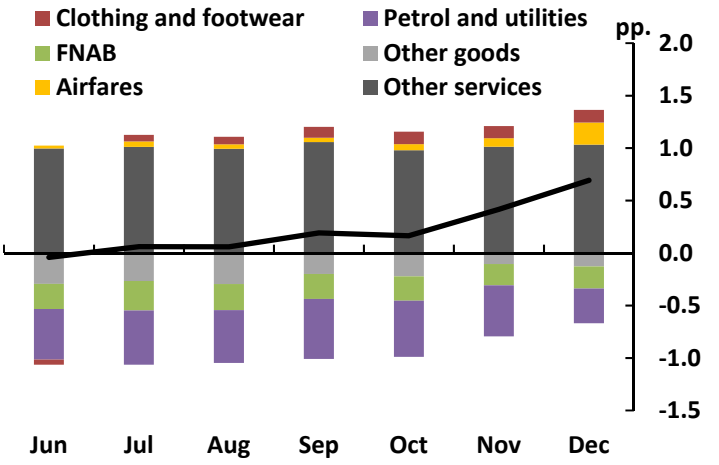
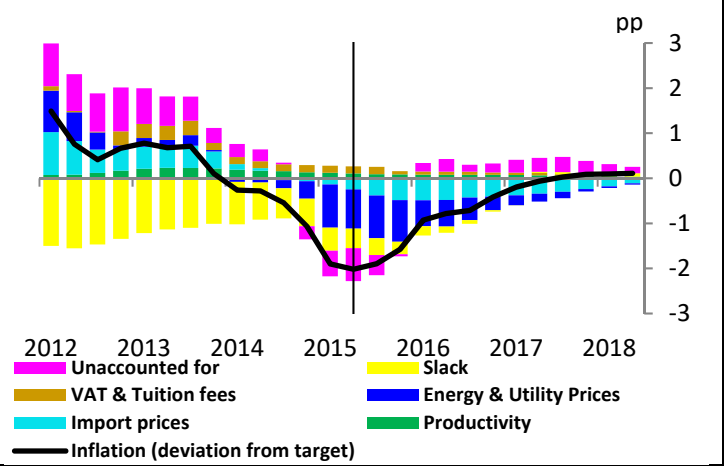


Chart 30: Inflation accounting decomposition



With the exception of a small drag from the *indirect* effects of energy and utility prices, inflation from 2016 is largely the result of a tug-of-war between domestic and external cost pressures (**Chart 30**): at the 2 and 3 year policy-relevant horizon, the drag from import prices (turquoise bars) offsets above average private sector unit labour cost growth. The latter reflects the slightly positive output gap (yellow bars) and our assumption to unwind the inexplicable weakness in the level of wages over the past 18 months or so (captured within the pink bars).

(Non-fuel) import prices grow gently over the forecast period, given increasing sterling world export prices. Although 70% of changes are import price changes are passed into the *level* of consumer prices within two years, it takes four years for effects to full pass-through to CPI *inflation*. This means that sterling's appreciation since 2013 drags on

inflation throughout the forecast as past falls in non-fuel import prices continue to feed through to CPI. The peak drag on inflation from import prices is around 0.5pp in early-2016 before fading to 0pp at year 3, helping to bring inflation back to target (**Chart 16**).

Our suite of wage equations suggest that wage *growth* in 2015Q2 was broadly explicable (**Chart 31)**. That follows several quarters when wage growth was weaker than its determinants would suggest when we think real product wages had over-adjusted to the weakness in productivity. Over the forecast, wage growth is in line with the paths implied by our suite models (**Chart 32**) and therefore we are unwinding the past inexplicable weakness in the *level* of wages. As a result, growth in private sector wage and unit labour costs rise to 4.5% and 3.1% at the end of the forecast (**Chart 33**) – that's above their pre-crisis averages, despite the output gap being only mildly positive.

We will discuss the two-sided risks around our assumptions about import price pass-through and domestic cost pressures in the second half of the Benchmark meeting.

Chart 31: Residuals from private sector wage suite equations

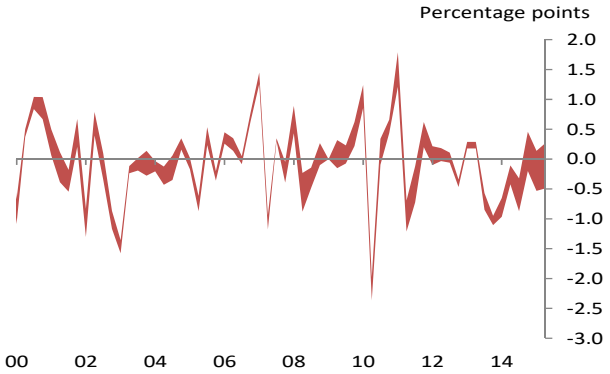


Chart 32: Forecasts for private sector pay growth from our suite of wage equations

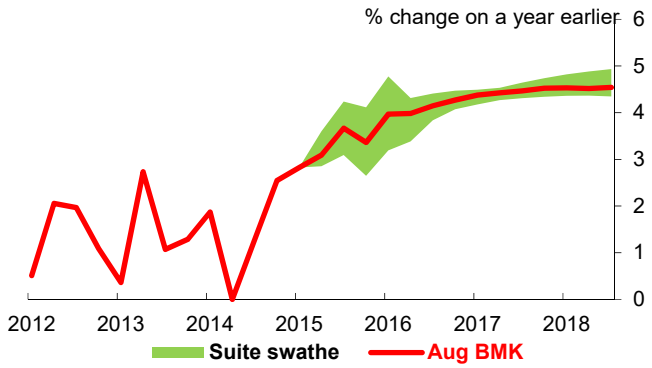
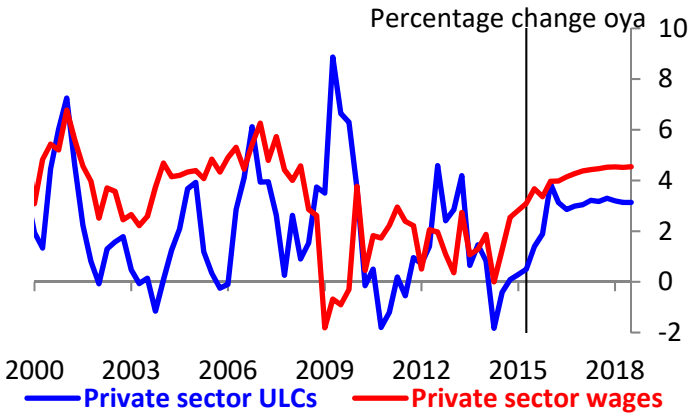


Chart 33: Private sector wages and ULCs



SECTION 3: KEY RISKS AROUND THE CENTRAL PROJECTION

- In May, the Committee judged that the risks to the CPI inflation outlook were slightly to the downside through to mid-2016, but broadly balanced thereafter. The risks to GDP growth were judged to be a little to the downside at Years 1 and 2 of the forecast horizon. **Table A summarises our latest views, Table B offers the details.**

Table A: Our view of the balance of risks around the forecast

	GDP risk	Inflation risk	Change since May *IR*
KJ1: Global growth	↓	↓	More pronounced
KJ2: Domestic demand growth	↓	↔	No significant change
KJ3: Supply and real incomes	↔	↔	No significant change
KJ4: Inflation	↔	↔	No significant change
Overall	↓	↓	No significant change

Table B: Risks around the May *IR* Key Judgements

	GDP risk (medium-term)	Inflation risk (near-term)	Inflation risk (medium-term)	Changes since May
Key Judgement 1: global growth picks up slightly, particularly in the euro area				
Risks to inflation from the oil price to downside in the near-term and upside further out	↓	↓	↑	No significant change: oil prices lower since May, but risks of supply boost (e.g. Iran) remain.
Euro-area policy actions insufficient to prevent low inflation becoming entrenched	↓		↓	No significant change: some more positive euro-area data, but events in Greece could escalate
Greece exits Euro with contagion limited by policy response	↓	↓	↓	Increased: negotiating positions have hardened, ahead of difficult debt repayments
Global risk sentiment worsens as a result of continued euro-area weakness and/or US monetary policy tightening	↓		↓	Unchanged: Better signs from euro area, but further weakness in US supply growth
Severe slowdown in China	↓		↓	More pronounced: further signs of slowing and volatility in equity markets
Rest of world receives stronger boost from falling oil prices	↑		↑	Balanced: oil effects on global growth broadly as expected
Key Judgement 2: robust domestic demand is sustained by the recovery in real incomes				
Households are unwilling to consume as much as in the central projection	↓		↓	Increased: downward-sloping saving ratio makes consumption look more stretched
Firms are unwilling/unable to invest as much as in the central projection	↓		↓	Unchanged: stronger investment data but more uncertainty from global economy and EU referendum possible
Key Judgement 3: A recovery in productivity supports supply and real income growth				
Productivity growth fails to pick up	↔		↔	Lower: expected productivity growth is now expected to be 0.7% in 2015Q2, rather than zero in May *IR*
Zero lower bound means policy is less well-placed to stimulate demand	↓		↓	Unchanged: 0.5% no longer seen as the lower bound
Key Judgement 4: wage growth picks up so that inflation returns to the 2% target as the price-level effects associated with lower energy, food & import prices dissipate				
Less of the effect of the appreciation on import prices is left to come, so import prices are higher	?	↔	↔	Lower: change in judgement on first-stage pass-through reduces risks of upside surprise in import prices
Quicker pass-through of the appreciation to import prices and CPI	?	↓	↑	Differential movements in $ and € could lead to different timing of pass-through to CPI
Labour supply could be stronger over the forecast	↑		↓	More balanced after May IR supply stocktake
Inflation expectations become less well anchored, given the weak near-term inflation outlook	↓	↓	↓	No significant change: market inflation expectations up a little, consumer measures mixed
Skews on MPC fan charts at Years 1, 2 and 3 from May IR				
	(-0.1,-0.1,0)		(-0.15,0.0,0.0)	