

2. The UK economic outlook

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Summary

- Despite a number of tailwinds, including ‘noflation’ and strong growth in real incomes, drags from net trade and inventories meant that the UK economy put in a disappointing performance in 2015, with growth coming in at a sub-par 2.2%. Prospects for 2016 look similar, with GDP set to grow by 2.2% again. The forces fuelling buoyant consumer spending growth last year are still present and the environment for business investment remains favourable. Moreover, UK exporters’ focus on traditional markets will offer some insulation from problems in emerging economies.
- We estimate that the UK has a relatively large output gap of around 2¾% of potential output. The prospects for potential output growth are favourable, with labour supply set to be boosted by sustained strength in inward migration and further increases in the state pension age, while robust growth in business investment will deepen the capital stock. This will provide the conditions for firm growth and low inflation over the medium term, with GDP growth expected to average 2.3% a year from 2016 to 2020. Our forecasts for growth are similar to those of the Office for Budget Responsibility, but while the OBR expects the output gap to close relatively quickly, we believe that a sizeable amount of spare capacity will remain in the economy in 2020.
- The risks around our forecast are heavily skewed to the downside. Domestically, the upcoming referendum on the UK’s membership of the EU has the potential to generate the greatest degree of uncertainty, should there be a vote in favour of leaving, while there are also longer-term question marks surrounding household indebtedness and productivity growth. But external events provide the most potential to alter the short-term UK outlook. The most likely upside scenario would involve a further, supply-driven, fall in the oil price, which would drive stronger UK GDP growth by boosting household spending power and strengthening world trade growth. On the downside, the scenario with the highest probability shows the Fed raising US interest rates more quickly than the market anticipates, triggering equity price falls and damaging sentiment. The UK’s large financial sector means that it would be particularly exposed.

2.1 Introduction

In this chapter, we discuss the outlook for the UK economy, beginning in Section 2.2 with short-term prospects, where we assess whether an underwhelming economic performance in 2015 augurs another year of sub-par growth in 2016.

Moving our focus beyond the short term, we consider prospects for the 2016–20 period as a whole. As part of this, we look at our estimates of the output gap, before moving on to discuss the prospects for potential output growth over the next five years (Section 2.3). Having set out our baseline forecast, we then assess how this compares with the most recent forecast from the Office for Budget Responsibility (OBR) and those of other independent forecasters (Section 2.4).

Section 2.5 analyses the risks around the baseline forecast and looks in detail at the potential impact of alternative global scenarios on the UK economy, including an upside scenario ‘Oil prices plunge as global growth surges’ and a downside scenario ‘The Fed tightens amid global headwinds’. Section 2.6 concludes.

2.2 Short-term outlook

Growth disappointed in 2015

On the face of it, the tailwinds to economic activity in 2015 – ‘noflation’, cheap oil, high levels of consumer confidence and strong growth in real incomes – might have been expected to deliver a golden year for the UK economy. Indeed, at the beginning of last year, we expected GDP to expand by 3% for 2015 as a whole, above the economy’s long-run average and implying that output would make up some of the ground lost relative to the pre-crisis trend.¹

So that growth came in at a modest 2.2% has to be classed as a disappointment. Granted, there seems a reasonable possibility that the Office for National Statistics (ONS) will revise up this figure in the future. But as things stand, 2015’s rate of expansion was both a sharp slowdown on the 2.9% rise in GDP recorded in 2014 and below the 2.5% average annual growth rate achieved over the post-war period. Moreover, 2015’s soft performance represented the first time since 2009 that growth had come in below the average economists’ forecasts surveyed by the Treasury at the beginning of the year.² And there was an even more noticeable fall-off in the performance of nominal GDP – which is of particular importance for tax revenues – with growth slowing from 4.7% in 2014 to 2.7% in 2015. Only 2008 and 2009 have seen a weaker year-on-year rise in the cash measure of output since official records began in 1956.

That said, while the headline rise in GDP pointed to an economy still failing to replicate the sustained bursts of above-trend growth seen in past expansions, the details of 2015’s performance showed at least some components of demand in a healthy light. Notably, consumer spending put in a strong performance, rising by 3.0% for the year as a whole, the strongest rate since 2007. Contrary to the perceptions of some that the expansion since 2009 has been overwhelmingly driven by the consumer, 2015’s performance was unusual; last year was the first since 2012 to see growth in consumer spending outstrip overall GDP growth.

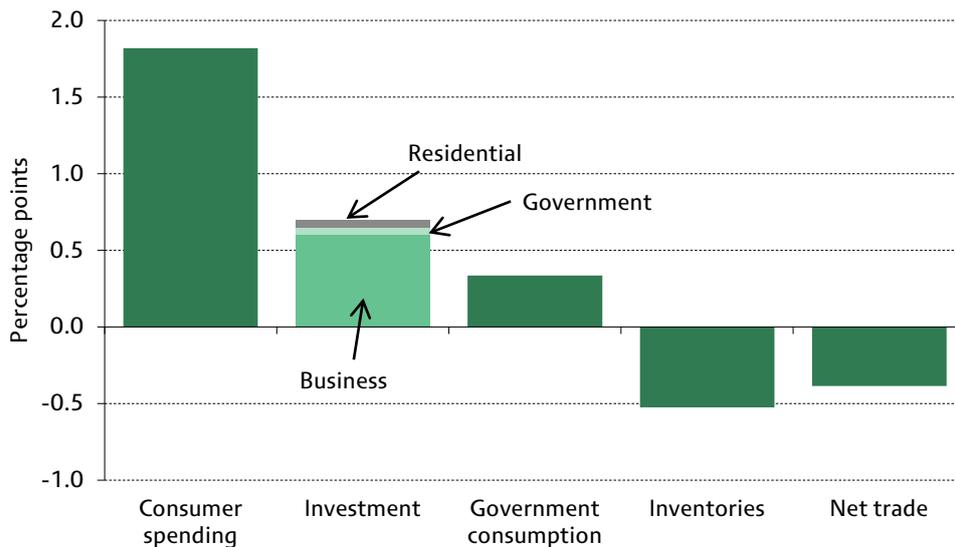
Alongside consumer spending, investment, particularly business investment, was another component of GDP that punched above its weight in driving output. Overall investment was up by 4.5% on 2014’s level and the business component grew by 6.4%. This rise took business investment’s share of GDP to 10% in 2015, the highest ratio in 14 years.

However, the strength of domestic demand was negated in part by a drag from net trade, as Figure 2.1 illustrates. Although export volumes increased at a robust rate, imports rose even faster, assisted by the strength of sterling (particularly against the euro) and the appetite of UK consumers to spend on imported goods and services. Output growth also

¹ See A. Goodwin and M. Beck, ‘The UK economic outlook’, in C. Emmerson, P. Johnson and R. Joyce (eds), *The IFS Green Budget: February 2015*, <http://www.ifs.org.uk/publications/7530>.

² HM Treasury, ‘Forecasts for the UK economy: a comparison of independent forecasts’, January 2015, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/396864/forecomp_201501.pdf.

Figure 2.1. Contributions to UK GDP growth in 2015



Source: Haver Analytics, Oxford Economics.

suffered from a sharp fall in inventories, with stockbuilding running at 0.4% of GDP in 2015 compared with 1% in the previous year.

Props to consumer spending set to continue ...

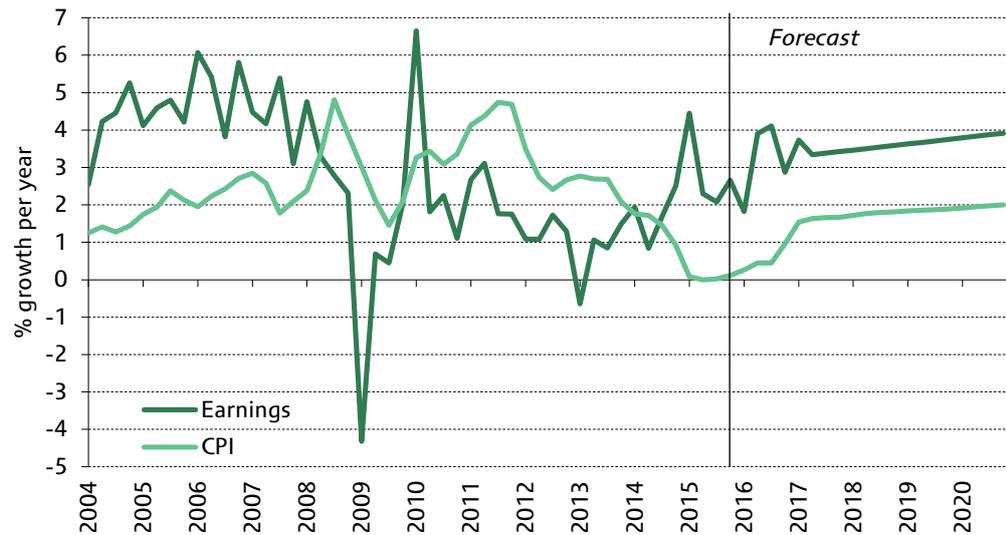
The factors that fuelled strong growth in consumer spending in 2015 – healthy rises in real incomes, easier credit availability and high levels of consumer confidence – are likely to remain supportive this year.

Recent falls in the price of oil (down by a quarter in sterling terms in the three months to the middle of January) and other commodities will mean that inflation rises more slowly than was previously expected, even as the effect of the collapse in energy prices at the end of 2014 ceases to affect the annual comparison. As of the middle of January 2016, the average price of a litre of petrol was 13% down on the recent peak reached last July and close to falling below the £1 per litre level for the first time since 2009.

Reflecting cheaper fuel and disinflation across much of the consumer spending basket, the annual Consumer Prices Index (CPI) measure is forecast to reach only 0.5% by the middle of 2016, and end the year at 1%, still only halfway to the Monetary Policy Committee's (MPC's) 2% inflation target (see Figure 2.2). This in turn will lessen the drag on real incomes from rising prices. At the same time, a tighter labour market should support pay growth. Labour force data for the three months to November showed the International Labour Organisation (ILO) unemployment rate falling to 5.1%, the lowest in a decade, and the *employment* rate rising to a record high of 74.0%. And the number of unemployed people per job vacancy fell to 2.2, below the 2003–07 average.

That said, the spur to pay growth from falling unemployment may prove to be less than some expect. This is because the 'Phillips curve', which captures the association between joblessness and pay growth, seems to have shifted down. For example, a jobless rate of 5.1% in the three months to November 2015 was equal to the rate averaged from 2003 to 2007. But annual average earnings growth of 1.9% (in cash terms and excluding bonus-related distortions) was only half the rate averaged over the same pre-crisis period.

Figure 2.2. Inflation and earnings growth



Source: Haver Analytics, Oxford Economics.

We expect the unemployment rate to drop to around 5% by the end of 2016, with the relatively modest fall from end-2015 levels reflecting a further recovery in labour productivity, the incentive provided by cheaper energy to invest in labour-saving capital equipment and another year of strong growth in the supply of workers. But while this fall will be sufficient to take the jobless rate down to around the MPC's estimate of the long-term equilibrium unemployment rate, annual growth in nominal average earnings (including bonuses) is forecast to run at 3.2% this year, only modestly up on the 2.9% seen in 2015 as a whole and still some way below the pre-crisis norm.

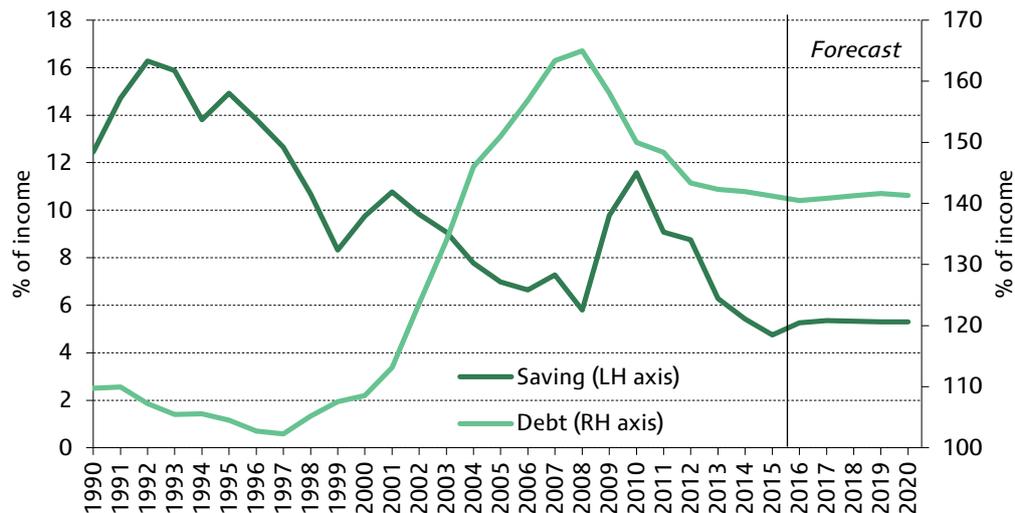
... with the 'National Living Wage' supporting pay growth

That said, the drag on incomes from an environment where pay is less responsive to unemployment will be partly compensated for by two policy measures. In July 2015, the government announced a 'National Living Wage' (NLW) for workers aged 25 and above. The NLW will initially be set at £7.20 when it is introduced in April 2016, with a target of it reaching 60% of median hourly earnings by 2020. The Office for Budget Responsibility (OBR) estimates that around $\frac{3}{4}$ million employees otherwise earning the NMW and around 2 million people moving from above the NMW to at least the NLW will gain from the NLW. The OBR also anticipates a wage 'spillover' for employees, as firms seek to maintain pay differentials, affecting $3\frac{1}{4}$ million people. That said, the NLW will also have a dampening effect on pay growth to the extent that it raises unemployment. Modelling by the OBR suggests that joblessness will ultimately be around 60,000 higher and real GDP lower by 0.1% than in the absence of the NLW.

Second, alongside the NLW, some UK workers will also benefit from an above-inflation increase in the income tax personal allowance in April. The allowance is set to rise from £10,600 to £11,000, providing an additional boost to net incomes. Meanwhile, the higher-rate threshold will see an increase from £42,385 to £43,000. Overall, these two measures will boost household incomes by around £2.9 billion per year.

Under the plans set out by the government in the Budget of July 2015, part of the boost to incomes from the NLW and more generous tax allowances would have been offset by cuts to tax credits that were due to take effect this April. But last November's Autumn

Figure 2.3. Personal debt and saving ratio



Source: Haver Analytics, Oxford Economics.

Statement saw the Chancellor choose to delay what would have been a £3.4 billion reduction in payments to affected lower-income households. So household incomes will see a stay of execution from what would have been a sizeable drag for affected families. However, the cuts will still apply to universal credit, so as the new benefit is rolled out across the country an increasing proportion of households in receipt of working-age benefits will ultimately receive less than they would have received under the old system (see Chapter 10).

Overall, an assessment of the various forces acting on household income growth leads us to expect a rise in real terms of 3.0% in 2016. While this would be slower than the 3.3% increase achieved last year, 2015's rise was exceptional (the strongest since 2001). Moreover, growth of 3% would be well above the 2.1% averaged from 2003 to 2007, implying that, at least on this metric, the economy is making up lost ground.

With consumer confidence at a high level and interest rates unlikely to rise until the end of the year, households might be inclined to spend predicted real income gains. However, 2015 saw the household saving ratio fall to only 4.8%, the lowest since records began in 1963. Granted, a measure of savings excluding households' net equity in pension funds shows less of a deviation from the historical norm. But with memories of the financial crisis still fresh and some households suffering a loss of wealth from recent falls in equity prices, we think that households are likely to exercise more prudence than may have been the case before 2008. The same factor also implies a slowdown in the rapid growth in consumer credit seen in the second half of 2015. As a result, growth in consumer spending of 2.9% in 2016 is set to fall slightly short of rises in incomes, implying a modest increase in the saving ratio (see Figure 2.3).

No change in rates likely until the end of the year ...

With CPI inflation forecast to end 2016 at only 1%, the global economic outlook clouded with uncertainty and the UK economy set to grow broadly in line with its trend rate this year, a majority of MPC members are unlikely to favour a rise in Bank Rate until the end of 2016 at the earliest. Certainly, the recent mood music of the MPC has been firmly dovish. For example, having signalled in mid 2015 that he expected to be considering

raising interest rates around the turn of this year, the Governor of the Bank of England, Mark Carney, has said that this timetable will slip because of weaker world growth and a slowdown in the UK's expansion.³ And other Committee members have highlighted the absence of sustained stronger wage growth as a reason to hold back on a rate hike.⁴

Meanwhile, the slowdown in the economy in both real and nominal terms seen during 2015 is another reason to expect a further period of unchanged interest rates. Downward revisions to recent GDP growth estimates mean that the economy remains a long way from one of the Governor's three publicly-stated criteria for considering a rate hike – sustained growth of above 0.6% per quarter.⁵ And the two other conditions stated by Governor Carney – stronger growth in unit labour costs and a sustained rise in core inflation – are also presently lacking.

Granted, some of the more hawkish members of the MPC have argued in favour of an immediate rate rise or a hike 'sooner rather than later' in order to head off nascent inflationary pressures.⁶ But with the Bank's own November *Inflation Report* forecast predicting CPI inflation will not breach 1% until the second half of the year – a forecast which predated the latest collapse in the oil price – an urgent need for a pre-emptive monetary strike is lacking.

Consequently, we do not expect the first post-crisis hike in Bank Rate until the last quarter of 2016, with the risks, both domestic and global, suggesting that an even more prolonged period of record low rates is not out of the question. As stressed by the MPC, subsequent rises in interest rates are set to be slow and gradual. As such, we expect Bank Rate to only reach 1% by the middle of 2017 and end next year at 1¼%.

... supporting further growth in house prices

Continued low borrowing costs no doubt played a role in a gradual pick-up in housing market activity in the latter part of 2015. Monthly mortgage approvals for house purchases rose to 70,410 in November, only just shy of August's 18-month high, while net mortgage lending of £3.9 billion was the highest since April 2008. That said, these numbers were still well below the 2000–07 average of 107,000 approvals and £7 billion of monthly net mortgage lending.

The recent data on house prices have been harder to read but, by and large, they suggest that stronger activity has not yet had a marked effect on house price growth. Both the Nationwide and Halifax report prices ended 2015 up by a little over 1% on a three-month-on-three-month basis, broadly in line with nominal income growth, although the ONS series was running at roughly twice that pace. Admittedly, on an annual basis, the

³ 'The turn of the year', speech given by Mark Carney, Governor of the Bank of England, Peston Lecture, Queen Mary University of London, 19 January 2016, <http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech873.pdf>.

⁴ 'Treading carefully', speech given by Minouche Shafik, Deputy Governor, Markets & Banking, Institute of Directors, 14 December 2015, <http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech870.pdf>.

⁵ 'From Lincoln to Lothbury: Magna Carta and the Bank of England', speech given by Mark Carney, Governor of the Bank of England, Lincoln Cathedral, 16 July 2015, <http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech832.pdf>.

⁶ For example, see 'Growing your business in the global economy: not all doom and gloom', speech given by Kristin Forbes, External MPC member, Brighton, 16 October 2015, <http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech848.pdf>.

different measures have generally told a more heated story, with the Nationwide and Halifax measures in December up by 4.4% and 9.9% respectively.

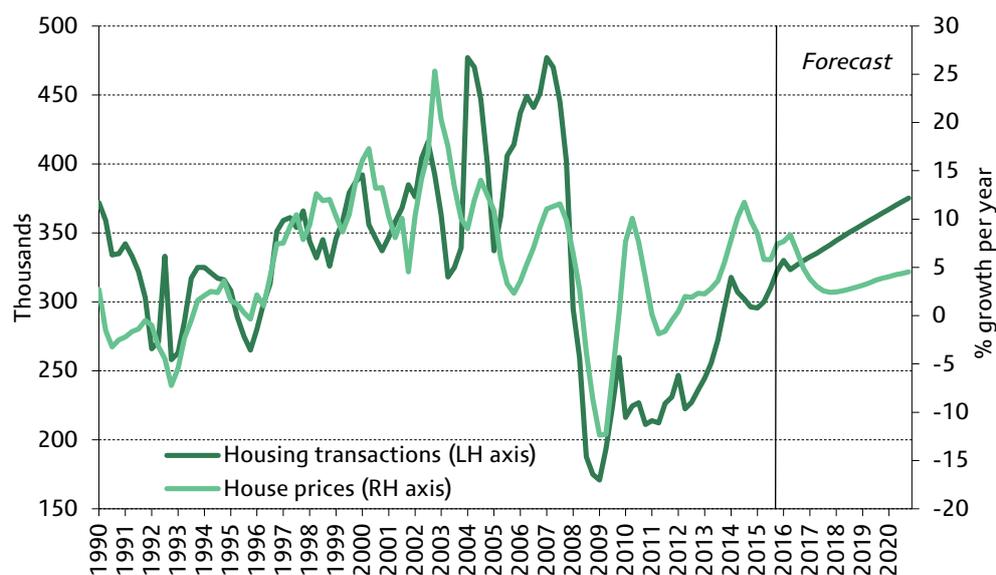
But there have been some tentative signs of late that demand may be starting to level off. In particular, the balance for new buyer enquiries from the Royal Institution of Chartered Surveyors (RICS) survey fell in November 2015 for the fourth successive month, signalling only modest increases in demand. This was consistent with the Bank of England’s Credit Conditions Survey for Q4, which reported that while households’ appetite for unsecured loans had risen, the increase was much smaller than the previous two quarters.

However, with household incomes set to continue to grow strongly and interest rates likely to be on hold for some time yet, the chances of demand for housing falling back to any great extent look remote. In particular, demand is likely to remain buoyant during the first quarter of 2016 as buy-to-let landlords anticipate the additional rate of stamp duty that they will face in April. But, combined with a phasing-out of mortgage interest tax relief, this is then likely to slow the buy-to-let market (which accounted for around 16% of the overall mortgage stock in 2015Q3, a 9 percentage point (ppt) rise on the share five years earlier).

Meanwhile, the RICS survey suggests that the number of new sellers has continued to shrink. Indeed, as of November 2015, the survey’s new instructions balance had remained in negative territory for 10 consecutive months, the longest sustained run of negative readings since 2008–09. And levels of housebuilding remain well short of what would be needed to keep up with demographic changes, let alone what would be required to compensate for the persistent shortfalls since the financial crisis. New housing starts in England in the year to 2015Q3 amounted to 136,830, a fall on the 138,000 recorded a year earlier and a quarter below the immediate pre-crisis peak of 183,000 seen at the end of 2007. So supply remains very constrained, particularly in London and parts of southern England.

This fundamental imbalance between supply and demand should ensure that house prices continue to rise. However, we expect that the high current price of property

Figure 2.4. House prices and transactions



Source: Haver Analytics, Oxford Economics.

relative to incomes – the Halifax reported that the price-to-income ratio was 5.6 in December, the highest since early 2008 – will prevent house price growth accelerating. As Figure 2.4 shows, our forecast sees house price growth running at 6.9% in 2016, broadly unchanged from the rate of growth recorded last year. However, weaker household income growth, reflecting rising inflation, welfare cuts and a levelling-off in the jobless rate, is then forecast to cause a substantial slowdown to average below 3% a year in 2017–18.

Investment should continue to punch above its weight ...

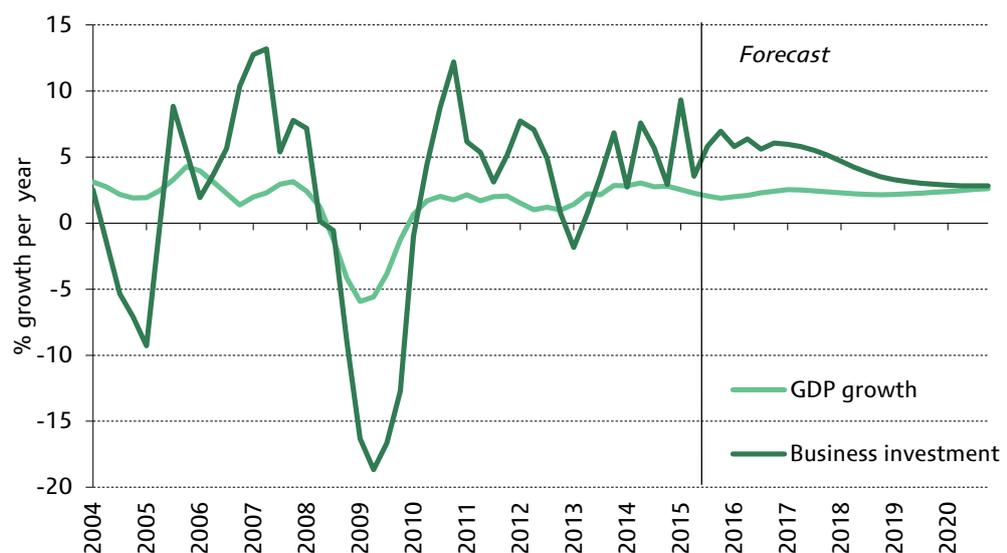
For those advocating a more balanced expansion, 2015 offered some hope in the form of growth in domestic demand being far from solely a consumer-driven affair. The rise in business investment significantly outpaced growth in overall GDP last year. And a generally benign investment climate augurs for 2016 being another year where spending by firms punches above its weight in driving the expansion.

2015 saw real business investment rise by 6.4%, the fastest rate since 2007. As a result, the share of GDP accounted for by this component of expenditure reached 10%, the first time this threshold had been breached since 2001 (excluding the effect of data reclassifications).

Continued robust growth in consumer spending should support a healthy environment for business investment in 2016. Indeed, surveys of investment intentions remain firm and the CBI’s Industrial Trends Survey points to traditional constraints on investment, including access to external finance and uncertainty over the level of demand, remaining modest.

Moreover, firms have the resources to fund more capital spending. The ratio of profits to GDP for the private non-financial corporate sector rose from 18.3% in 2015Q2 to 18.9% in Q3, a ratio exceeded only three times in the previous 10 years. And the availability of external finance also looks more positive. The second half of 2015 saw growth in lending to companies by UK banks turn consistently positive on an annual basis for the first time since 2009. That said, firms in net terms are still in saving mode. UK corporations ran a

Figure 2.5. Business investment and GDP growth



Source: Haver Analytics.

financial surplus of 2.9% of GDP in 2015Q3, the largest in more than three years. So companies are still displaying some risk aversion, which may be exacerbated by uncertainty generated by a 'Brexit' referendum in 2016 or 2017.

Meanwhile, resources for investment will face competition from other demands. The NLW and its upward effect on pay bills will come into effect in April and, for large companies, the Apprenticeship Levy, due to be introduced in April 2017, represents another additional burden. Moreover, the recent further fall in oil prices may further undermine investment in the North Sea sector. That said, rising labour costs should encourage firms to invest in labour-saving technology. This, and the influence of other factors supporting spending by firms, leads us to forecast that business investment will grow by 6% in 2016, followed by 5.6% next year. So, as Figure 2.5 illustrates, companies should continue to contribute more than their fair share in driving GDP growth.

... while focus on traditional markets will support exports

The sources of demand in the world economy have seen something of a shift over the last year. Having compensated for weak activity in advanced economies during and in the immediate aftermath of the financial crisis, rapid growth in emerging economies has recently seen a slowdown at the same time as the pace of expansion in the major advanced economies has modestly picked up. The good news, relatively speaking, is that given the focus of the UK's exports on traditional markets in Europe and North America, the UK is likely to be less impacted by global economic instability than other advanced economies with more exposure to emerging economies such as China.

Granted, net trade looks to have exerted a small drag on GDP last year, a reversal of the modest boost provided in 2014. But the drag in 2015 disguised a surprisingly strong 5.4% rise in export volumes, up from growth of only 1.2% in the previous year. While some rise was likely given a reasonable performance from the US economy and a pick-up in eurozone activity (the two economies collectively account for almost 60% of UK exports), the strength of the rise was somewhat at odds with the weakness of the business surveys and raises some doubts around the robustness of the trade data (note that the ONS's trade numbers had their status as a National Statistic suspended in November 2014, a suspension which has yet to be lifted). But against a background of strong rises in (import-intensive) consumption and capital spending, growth in overseas sales was more than offset by an even stronger rise in import volumes of 6.1%.

The international environment for UK exporters offers some cause for positivity in 2016. One reason is a cheaper currency. Having strengthened by close to 10% over the course of 2014 and 2015, sterling's trade-weighted value has recently fallen back, helped by an MPC in no hurry to raise interest rates, the onset of rising borrowing costs in the US and a less-dovish-than-expected European Central Bank. Against the dollar, January saw the pound drop to \$1.41, the lowest since 2009. And having reached an eight-year high against the euro in November, sterling fell by over 6% against the common currency in the space of only two months. Looking forward, the hawkishness of the US Fed vis-à-vis the MPC is likely to mean that sterling's relative weakness against the US currency persists. Meanwhile, a period of stability against the euro is forecast for most of 2016, with the pound expected to strengthen towards the end of the year as attention focuses on a possible UK rate rise.

The effect of a cheaper pound will add to the support to UK exports from a continuation of reasonable growth in activity in the US and eurozone economies, supported by the

Figure 2.6. Exports and world trade growth



Source: Haver Analytics, Oxford Economics.

boost from the renewed drop in oil prices. GDP growth in the US is forecast to come in at 2.4% this year, similar to the 2015 out-turn, while eurozone growth is expected to strengthen from 1.5% in 2015 to 1.8%. Admittedly, weakness in emerging economies, particularly China, will hinder overseas sales. But while UK exports to these markets have been fast-growing, emergers still represent a relatively small market. For example, in 2014, the value of UK exports to the Republic of Ireland (population: 4.6 million) was nearly 50% higher than the value of exports to China (population: 1.4 billion). As such, growth in world trade (weighted by UK export shares) is forecast to accelerate from 3.8% in 2015 to 4.6% this year and 4.7% in 2017 (see Figure 2.6).

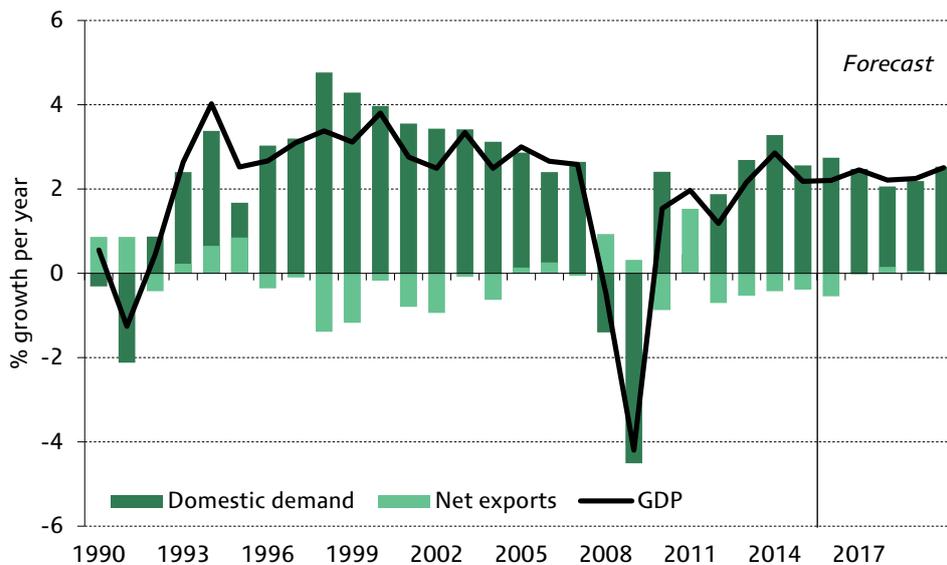
But despite some reasons for optimism, net trade is still set to remain the bridesmaid of the UK economy rather than the bride. With the lagged effect of the pound's previous strength still in play, we expect export volumes to rise by 2.6% this year. But in light of consumers' appetite to spend remaining undiminished, import growth of 4% will outstrip the rise in exports. That said, while this will, all else equal, push up the UK's current account deficit, which ran at just over 4% of GDP in 2015, improvements in other elements of the UK's overseas accounts, particularly net investment income from abroad, lead us to expect the current account deficit to narrow to 3.7% of GDP this year.

Some pick-up in growth, but expansion to remain unspectacular

Given the extent to which the economy has fallen behind the level of GDP implied by the pre-financial crisis trend (an issue explored in detail in Section 2.3) and the putative boost to activity from 'noflation', falling unemployment and rising real incomes, the modest growth of 2.2% recorded in 2015 was underwhelming.

But other metrics, not least the performance of the labour market, point to an economy that is in relatively good shape. With the tailwinds to consumer spending remaining plentiful, a healthy environment for business investment and some improvement in the UK's key overseas markets, 2016 should see GDP again growing by 2.2%, before a modest

Figure 2.7. Contributions to GDP growth



Source: Haver Analytics, Oxford Economics.

pickup to 2.5% in 2017 (see Figure 2.7). But the norm of past expansions – a burst of sustained above-trend growth – looks like it will remain elusive.

2.3 Medium-term outlook – steady but unspectacular growth

Over the medium term, we expect a steady, but unspectacular, pace of economic growth to continue. The combination of estimates of the current output gap and of potential growth going forwards drives our forecast for medium-term GDP growth.

How large is the output gap?

The question of the size of the output gap and forecasts for growth in potential output are crucially important to both fiscal and monetary policy. In terms of fiscal policy, though the Chancellor has now moved away from a cyclically-adjusted target for borrowing in favour of an absolute one, the projections for potential output are central to all of the OBR’s forecasts for the economy and the public finances. With regards to monetary policy, the MPC has been content to leave interest rates at their current very low level partly because of its belief that there is still some ‘slack’ in the economy, which can be used up before there is a risk of inflationary pressures building.

Estimating the size of the output gap requires a high degree of judgement

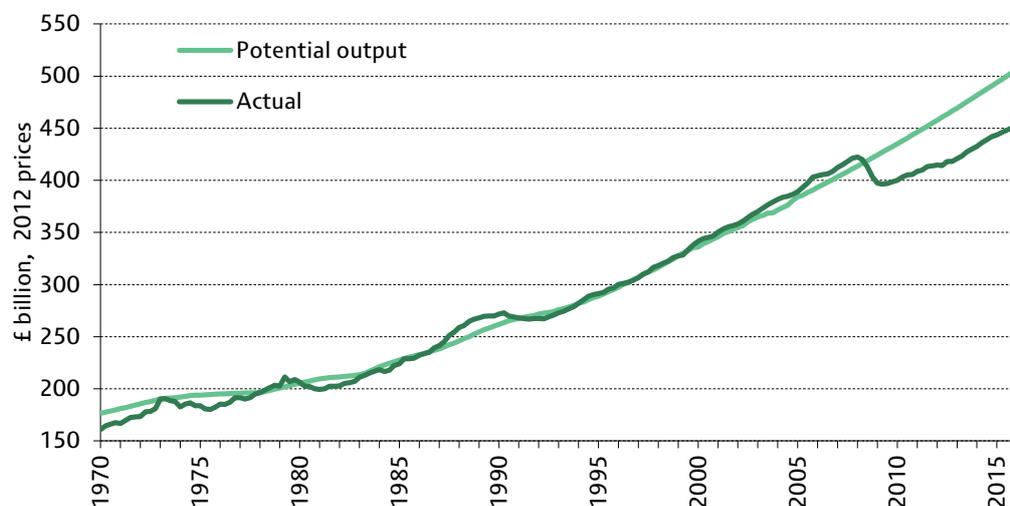
However, the size of the output gap and the strength of potential output growth cannot be measured directly. As such, most commentators agree that the best approach is to use a range of different indicators to try to proxy the level of spare capacity, although with these indicators not always corroborating one another, a high degree of judgement is often required on behalf of the forecaster. Furthermore, economic data can often be subject to revision for many years after the event, which makes ‘real-time’ estimates of the output gap particularly difficult. Indeed, a working paper from the External MPC Unit of the Bank of England found that estimates of the output gap have become progressively

more prone to revision and ‘unreliable’ over time, with the authors citing the difficulty of separating the trend from the cycle in economic data as being the main cause of this.⁷ This presents a significant challenge for policymakers.

Estimation of the output gap has proven particularly problematic since the financial crisis for two reasons. First, the depth of the recession and the relatively slow pace of the subsequent recovery have left the level of actual output well below where it would have been had pre-crisis trends continued. GDP fell by just over 6% from peak to trough during the recession and, eight years on, it is around 6¾% above the early-2008 level. Were we to assume that potential output had continued to grow at historic rates since 2007, it would suggest an output gap of around 11% (see Figure 2.8). Such a divergence between actual output and the level of output implied by long-run trends is by no means uncommon – a number of advanced economies are estimated to have double-digit output gaps if this approach is applied. However, most commentators agree that the financial crisis inflicted structural damage to potential output which will never be reversed, implying much smaller output gaps. But the extent is widely disputed.

Second, the degree to which the National Accounts data have been revised. In 2014, the ONS overhauled the UK National Accounts with the implementation of European System of Accounts 2010 (ESA10), which resulted in substantial revisions to the profile for GDP, particularly for the period since the financial crisis. This was followed in September 2015 by the revisions associated with the 2015 Blue Book. While the methodological improvements were not as fundamental as in the previous year, the impact of the methodological changes, the supply and use balancing,⁸ and the annual benchmarking to

Figure 2.8. Quarterly GDP relative to potential output estimated by extrapolating the pre-crisis trend in output



Note: Potential output series shows Oxford Economics estimates from 1970 to 2006. Potential output is then grown in line with the long-term average (2.5% a year) from 2007 to 2015.

Source: Haver Analytics, Oxford Economics.

⁷ A. Chiu and T. Wieladek, ‘Did output gap measurement improve over time?’, Bank of England, External MPC Unit, Discussion Paper 36, 2012, <http://www.bankofengland.co.uk/monetarypolicy/Documents/externalmpc/extmpcpaper0036.pdf>.

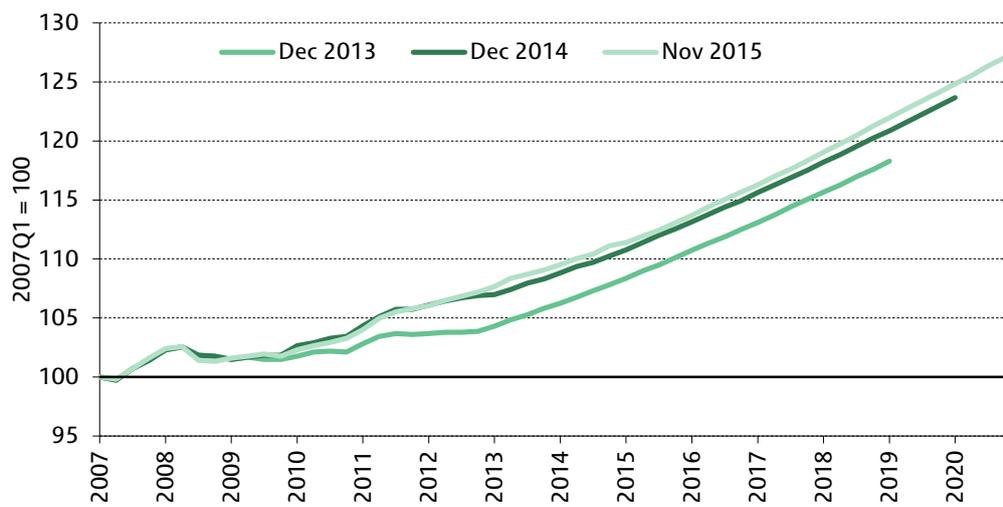
⁸ The supply and use balancing process enables the ONS to achieve consistency across the income, production and expenditure measures of GDP. This is achieved by balancing the supply and demand for goods and services and reconciling them with the corresponding value-added estimates.

other sources resulted in further upward revisions to both the level and year-on-year growth rates for GDP in the period since the crisis.

The OBR's efforts have been compromised by sizeable data revisions

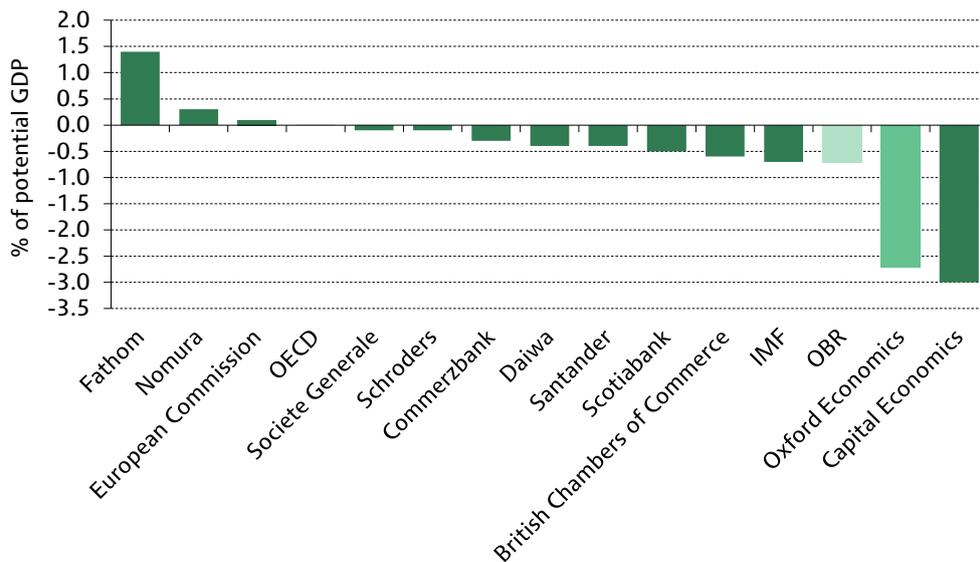
These data revisions have caused substantial problems for the OBR. It makes a judgement on the historical size of the output gap with reference to a number of different techniques. Combining these estimates of the output gap with the National Accounts data for GDP derives estimates of potential output. The OBR then uses a 'bottom-up' approach to forecast potential output out to 2020. However, because the GDP data have been so heavily revised, this means that the OBR's estimates of potential output have also been subject to substantial revision. The OBR's estimate of the level of potential output at the end of 2013 is now more than 3% higher than it was at the time of the 2013 Autumn Statement (see Figure 2.9).

Figure 2.9. OBR estimates for potential output



Source: Oxford Economics calculations using data and forecasts from the OBR.

Figure 2.10. Estimates of the output gap in 2015



Note: These estimates are taken from the January 2016 edition, apart from where institutions are missing in which case data from the December 2015 edition are quoted.

Source: HM Treasury, 'Forecasts for the UK economy', December 2015 and January 2016.

There is a wide spread of views amongst economists

These two factors make it very difficult to calibrate the estimates of potential output and are important in explaining why there is such a spread of views amongst forecasters about the size of the output gap. In the latest HM Treasury survey of independent forecasts, the estimates of the output gap in 2015 ranged from +1.4% of potential GDP to -3.0% of potential GDP (see Figure 2.10).

Our approach: estimating potential output via a production function approach

We prefer to estimate the level of potential output and then combine this with the actual GDP data to derive an estimate of the output gap. We use a production function approach to estimating potential output,⁹ which provides a framework that relates the level of potential output to contributions from factor inputs – labour and capital – and the efficiency with which those inputs are used (so-called ‘total factor productivity’). It also provides a consistent method for forecasting future growth in potential output, taking into account important changes such as demographic trends.

Capital stock: We use ONS data on the capital stock and labour supply to derive estimates of the contributions from factor inputs. The data on the capital stock, which now run to 2014, suggest that its contribution to potential output growth has been much weaker since the financial crisis than it was before. However, robust growth in capital spending in the period since 2014 – we estimate that last year saw business investment increase by 6.4%, the strongest out-turn since 2007 – suggests that its contribution has increased more recently.

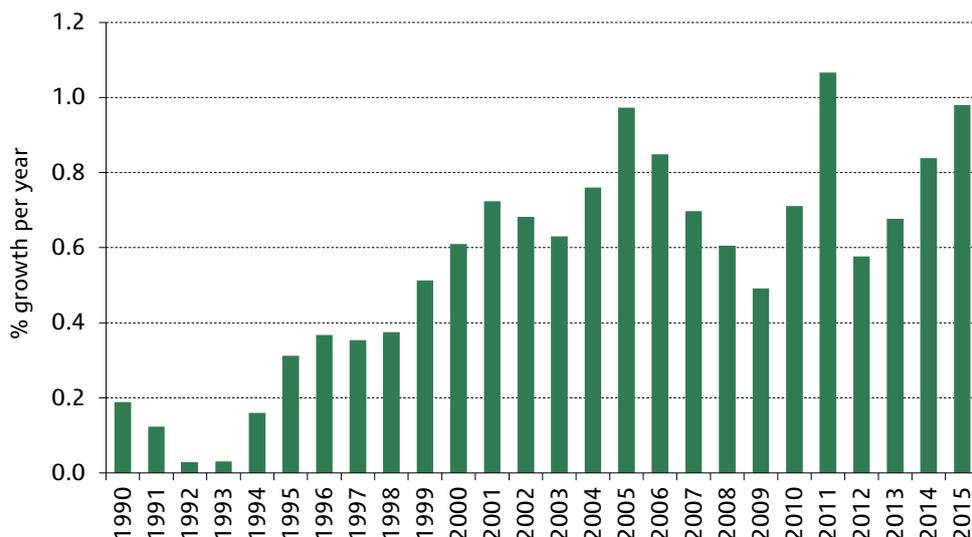
Labour supply: The news on the labour supply has been consistently firmer. In particular, labour supply has been boosted by very high levels of inward migration. The latest data reported that net long-term inward migration totalled 336,000 over the year to June 2015, equalling the record high of the previous quarter. This was the latest in a run of very strong figures for migration and since the financial crisis net inward migration has averaged around 230,000 a year, more than 20,000 higher than the decade prior to the 2008 financial crisis. Indeed, it is possible that these figures may understate the level of inward migration in recent years. The official long-term migration statistics are derived from the International Passenger Survey (IPS) and count those people who are intending to move for more than 12 months. However, other sources suggest that inflows could be much higher. For example, while the IPS suggested that 294,000 people immigrated for work in the year to June 2015, statistics from the Department for Work and Pensions reported that 917,000 new National Insurance numbers were allocated to overseas nationals over the same period.

The supply of workers has also been boosted by the steady increase in the female state pension age (SPA), which has risen from 60 at the beginning of the decade to reach nearly 63 at the end of 2015.

As a result of these two factors, we estimate that the population of working age has risen by 0.7% a year since the financial crisis, with growth reaching 1% in 2015; since 1990, it has risen this rapidly on an annual basis only twice before (see Figure 2.11). With participation rates also having risen in recent years, we estimate that growth in labour

⁹ In the Oxford Economics UK Model, we use a Cobb–Douglas production function, $Y^* = A + L^\alpha + K^{(1-\alpha)}$, where: Y^* is potential output; L is potential labour supply, which is equal to the labour supply at the NAIRU (non-accelerating inflation rate of unemployment); K is the capital stock; and A is total factor productivity (TFP). This is rewritten in natural logs, with α equal to 0.65: $\ln(Y^*) = \ln(A) + 0.65\ln(L) + 0.35\ln(K)$.

Figure 2.11. Working-age population growth



Source: Haver Analytics, Oxford Economics.

supply has continued to make solid contributions to potential output growth since the financial crisis, with the performance over the past few years having been particularly strong. Indeed, given that our estimates are based upon the IPS data on migration, it is possible that growth in labour supply may have been even stronger, if the IPS has been understating the degree of immigration.

Potential output growth: A key judgement call underpinning these estimates is the degree to which potential output was permanently damaged by the financial crisis. In previous Green Budgets, we studied this subject in detail,¹⁰ including a review of the literature on previous crises, and concluded that, as a result of factors related to the financial crisis, potential output is likely to remain permanently around 7–8% below where it would have been had the pre-crisis trend continued. This is towards the top of the range of estimates contained in the literature on previous crises. Given their estimates of the output gap, we believe that many other forecasters, including the OBR, have assumed that the permanent damage has been somewhat greater.

The literature tells us that a large proportion of the damage to potential output comes through weaker total factor productivity and that the full effects tend to be felt within five years. Our forecasts make fairly conservative assumptions for total factor productivity which are consistent with the literature. This leads us to conclude that potential output has grown by around 1.8% a year between 2012 and 2015.

Based upon the ONS's current estimate of actual GDP, this would suggest that the output gap narrowed from a peak of just over 5% of potential output at the end of 2012 to 2¾% in 2015Q4. However, the output gap could be wider if the IPS has been understating the degree of inward migration and the reality is closer to the picture painted by the data on the new National Insurance numbers, thus meaning that potential output growth has been stronger than our estimates would indicate. Conversely, as in previous years, we believe that there is a good chance that the ONS will revise up its estimates for GDP growth over the past few years, once the data have been through the Blue Book balancing

¹⁰ See pages 72–81 of A. Goodwin and O. Salmon, 'The UK economic outlook', in C. Emmerson, P. Johnson and H. Miller (eds), *The IFS Green Budget: February 2014*, <http://www.ifs.org.uk/budgets/gb2014/gb2014.pdf>.

process. Were it to do this, it would reduce our estimate of the output gap and, other things being equal, bring it closer to the OBR's estimate.

Potential output growth to remain firm over the next five years

Having estimated how much spare capacity we believe there is in the UK economy at present, we must make a judgement on how potential output will evolve, in order to determine the scope for actual GDP growth to recover. To do this, we again use the production function approach to consider how the contributions of the various factor inputs are likely to evolve.

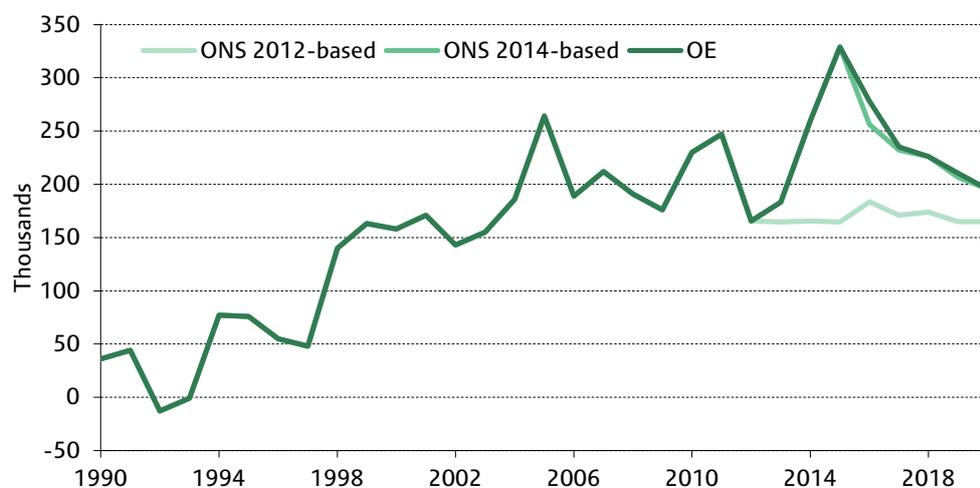
Capital stock

Our forecast shows continued strong growth in business investment. The financial position of the corporate sector remains very strong, with profitability above historical norms, cash holdings near to record highs and credit availability much improved. Rates of return on investment are at a record high in the services sector and relatively strong across the economy as a whole, suggesting that firms' appetite to spend should remain strong, and the prospect of rising labour costs, due to the introduction of the NLW, will provide further motivation. Furthermore, firm rates of economic growth will mean that firms also increasingly need to invest to expand capacity. This means that the contribution of the capital stock to potential output growth is expected to accelerate through the forecast period. Over the 2016–20 period as a whole, we expect it to contribute 0.9ppts per year to potential output growth, which is comparable to the performance in the 10 years prior to the financial crisis.

Labour supply

Prospects for growth in the labour supply will be heavily affected by demographic developments. The recent very high levels of net inward migration have surprised on the upside, which has led to the ONS raising its assumptions for migration in the principal population projections, which the OBR adopts for its forecast. The latest (2014-based) ONS projections show net inward migration slowing gradually from 329,000 in the year to mid 2015 to 196,000 in the year to mid 2020; the previous, 2012-based vintage assumed figures of 165,000 for both periods (see Figure 2.12).

Figure 2.12. Net inward migration assumptions



Source: ONS, Oxford Economics.

There are good reasons to expect the level of net inward migration to slow over the coming five years. As economic conditions in the eurozone continue to improve, unemployment there should fall back further, which will reduce the motivation for potential migrants to move to the UK. Alongside this, income differentials are steadily closing between countries in western Europe, such as the UK, and economies in central and eastern Europe, such as Poland. Though the introduction of the NLW will mitigate this to some extent, we expect the net effect to be to lessen the incentives for workers in central and eastern European economies to move to the UK and also to make it more attractive for those who have migrated from those countries over the past decade to return home. The government has also suggested that it would like to reduce the levels of inward migration into the UK over the next five years, although given that the bulk of migrants come from EU countries – total net inward migration was 336,000 in the year to June 2015, while net inflows from the EU were 180,000 – the government’s ability to reduce migration levels (while remaining in the EU) is somewhat limited. As such, in the short term we think that net inward migration is likely to slow less than it does under the ONS’s projections.

The population of working age will also be boosted by further increases in the SPA. By October 2020, the SPA will have reached 66 for both men and women, compared with the current levels of 65 for males and just under 63 for females. Overall, we expect the population of working age to grow by 1% a year from 2016 to 2020.

However, while we expect the population of working age to continue to grow strongly, a decline in the participation rate is likely to mean that the size of the workforce grows a little more slowly. The likely decline in participation is largely because the population is ageing and labour market participation is still substantially lower amongst those close to the SPA than amongst younger individuals. However, the downward pressures from this source should be partially offset by higher participation amongst ‘frustrated’ workers. In addition to the unemployed, there is a sizeable body of people who are either working part time but report wanting a full-time job or who are economically inactive but report wishing to work. Data from the ONS suggest that the number of people falling into these two categories currently totals around 3.5 million, which compares with a total of 2.9 million in 2007, the year before the financial crisis hit (see Figure 2.13). As the labour market continues to tighten, we would expect participation amongst this group to increase, echoing the experience of the past couple of years. This would take the form of part-timers working more hours and some of those who are currently inactive re-entering the labour market.

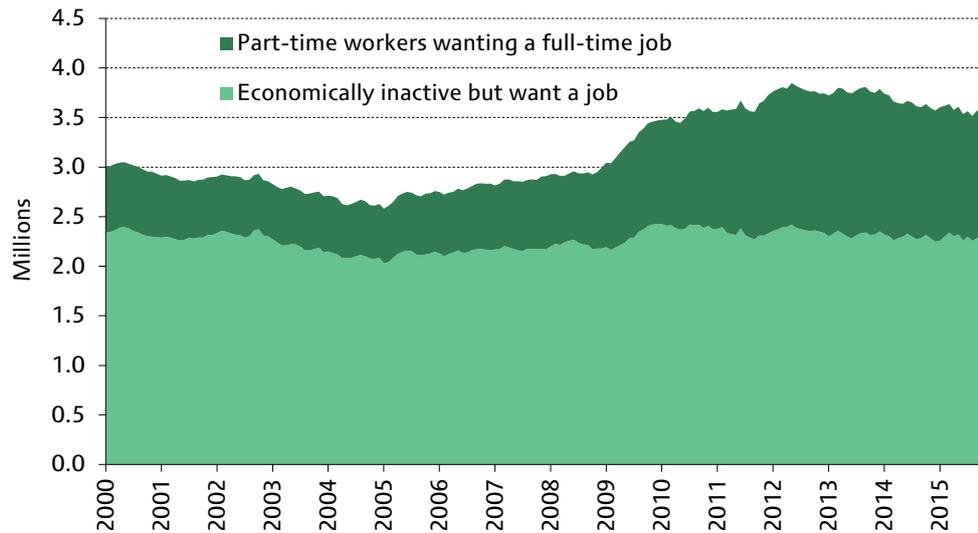
The other factor to affect the contribution of the labour supply to potential output growth is the level of the NAIRU.¹¹ Our forecasts assume that the NAIRU increased from 5% to 5¾% in the aftermath of the financial crisis, which is based upon empirical evidence – notably Blanchard and Summers (1986)¹² and Ball (2009)¹³ – which suggests that significant shifts in aggregate demand can lead to changes in the NAIRU through hysteresis. This is because those out of work for a prolonged period see the value of their

¹¹ NAIRU – non-accelerating inflation rate of unemployment. Even when the economy is operating at its long-run potential, there will still be some level of frictional unemployment – this is known as the NAIRU.

¹² O.J. Blanchard and L.H. Summers, ‘Hysteresis and the European unemployment problem’, in S. Fischer (ed.), *NBER Macroeconomics Annual*, volume 1, 1986, <http://www.nber.org/chapters/c4245.pdf>.

¹³ L.M. Ball, ‘Hysteresis in unemployment: old and new evidence’, National Bureau of Economic Research (NBER), Working Paper 14818, 2009, <http://www.nber.org/papers/w14818>.

Figure 2.13. Number of ‘frustrated’ workers

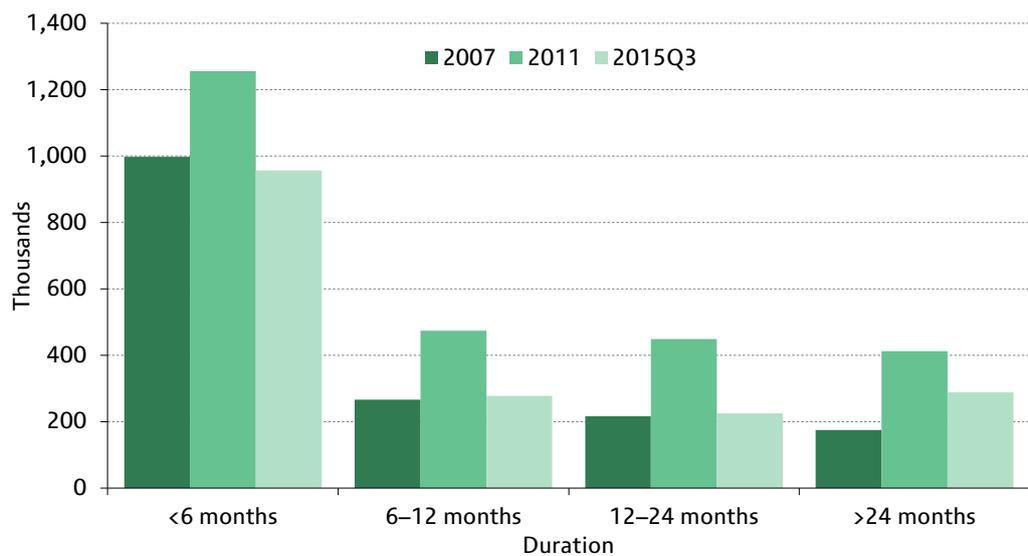


Source: Oxford Economics calculations using data from Haver Analytics.

skills eroded and become detached from the labour market, so the pool of available and suitably-skilled workers is reduced.

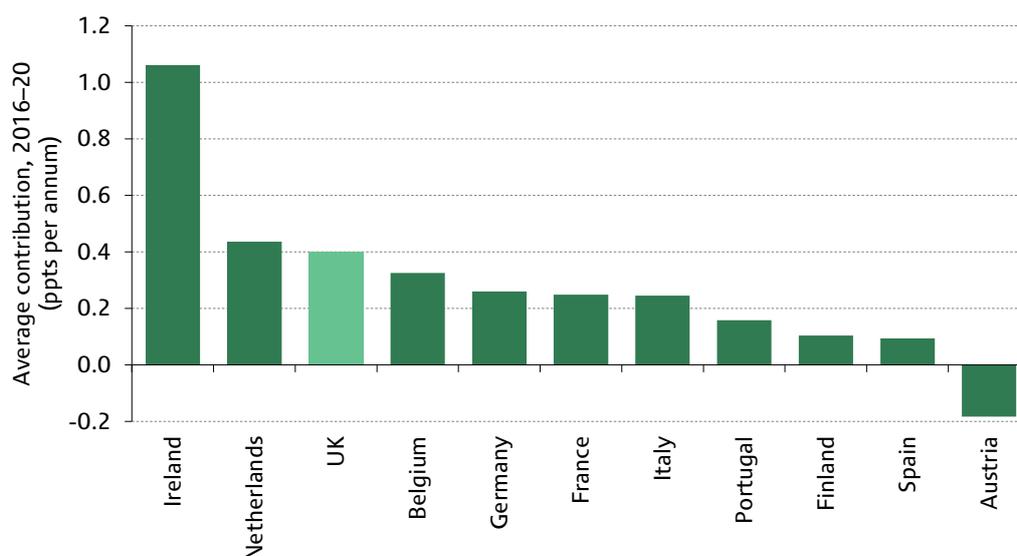
However, the rapid strengthening of the labour market over recent years would appear to suggest that the NAIRU has fallen back once more. In particular, there appears to have been a greater degree of success in reintegrating the long-term unemployed than had previously been feared. In Figure 2.14, we compare the levels of unemployment for various durations in 2007 (the year prior to the financial crisis), 2011 (the peak year of unemployment) and 2015Q3 (the latest data point). This shows that the number of people unemployed for 12–24 months is almost back at its pre-crisis level. And though the number unemployed for more than 24 months remains above its 2007 level, it has still fallen by 30% since 2011.

Figure 2.14. ILO unemployment by duration



Source: Haver Analytics.

Figure 2.15. Forecasts for the contribution of the labour supply to potential output growth in selected European countries, 2016–20



Source: Oxford Economics.

Further progress in reducing the NAIRU may be complicated by the shift in employment from the public to the private sector. This is because it could lead to a mismatch between skills and opportunities as the likelihood is that the regional pattern of public sector job losses – and private sector opportunities – will be uneven. However, on the other hand, the fact that increases in unemployment were more highly concentrated on the young than in past cycles might be reason to expect the NAIRU to fall back. This is because we would expect that the younger unemployed would be better placed to retrain and re-enter the workforce than those from older age groups. In addition, the fact that wage pressures have remained so muted, despite the unemployment rate having moved back to pre-crisis levels, also suggests that the NAIRU has dropped back. On balance, we think it reasonable to assume that the NAIRU steadily declines back to its original level of 5% by the end of the forecast horizon. This represents a point of difference with the OBR, whose forecast shows unemployment drifting upwards over the latter part of the forecast horizon, implying that it estimates the NAIRU to be a little higher.

Bringing together our forecasts for population growth, participation and the NAIRU, we find that the contribution of the labour supply to potential output growth is expected to be 0.4ppts a year over the period 2016–20. This is a little weaker than the average from 2007–15 (0.5ppts a year) and well down on the average contribution of 0.8ppts a year over 1996–2006. This reflects the assumption that inward migration will steadily slow and, as such, provide less of an offset to the impact of an ageing population.

Nevertheless, our forecast for the UK is still much stronger than those for most other European countries (see Figure 2.15), reflecting the much poorer demographics and much higher levels of long-term unemployment in many of these countries.

Total factor productivity

As we have established, the literature suggests that we should already have seen the bulk of any permanent damage to total factor productivity caused by the financial crisis. As such, we assume that the contribution of total factor productivity to potential output growth continues to move steadily back towards historical norms through the forecast

horizon. Over the 2016–20 period as a whole, we assume that total factor productivity contributes 0.9ppts per year to potential output growth.

A forecast of potential output and the output gap

Bringing these factors together, we expect growth in potential output to average 2.1% a year between 2016 and 2020 (Table 2.1). This is some way below the average of the decade prior to the financial crisis (2.8%) but it represents a clear step up on the average growth rate of 1.6% a year that we estimate was achieved between 2007 and 2015.

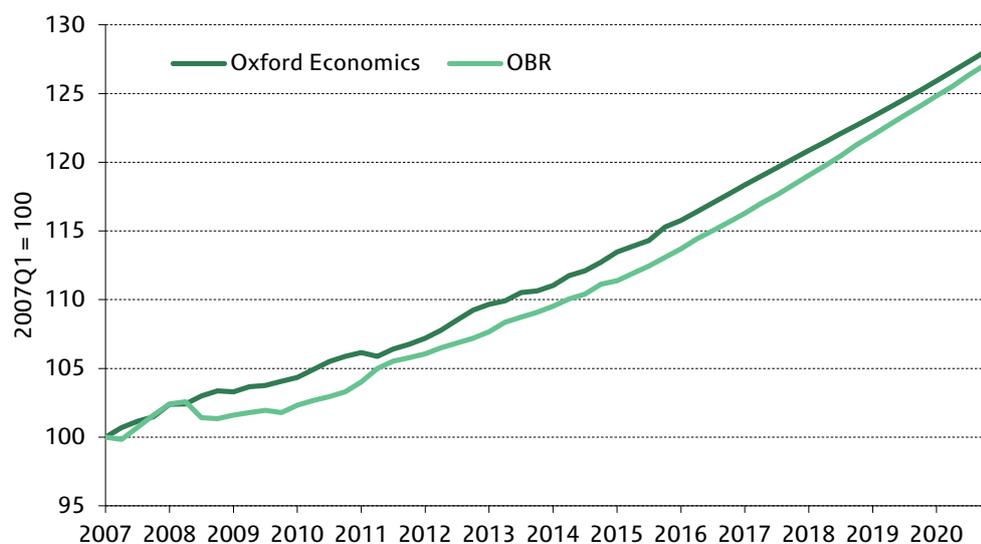
We expect GDP growth to average 2.3% a year over the 2016–20 period. Ordinarily, such a large output gap would be expected to foster stronger GDP growth, partly via more accommodative macroeconomic policy. However, the fiscal consolidation will weigh on GDP growth throughout the forecast horizon, with the OBR’s latest forecasts implying that it will exert an average drag of 0.9% a year until 2019–20. And the Bank of England appears to be taking a more pessimistic view of the economy’s ability to enjoy non-inflationary growth than we think is justified. So monetary policy may not be as supportive to the economy as circumstances suggest is appropriate. These factors, in turn, mean that it will take longer for the output gap to close. In our view, there is no

Table 2.1. Contributions to potential output growth (percentage points per annum)

	1996–2006	2007–15	2016–20
Labour supply	0.8	0.5	0.4
Capital stock	0.9	0.5	0.9
Total factor productivity	1.2	0.7	0.9
Potential output	2.8	1.6	2.1
Actual GDP	3.0	1.1	2.3

Note: Columns may not sum exactly due to rounding.
Source: Oxford Economics.

Figure 2.16. Forecasts of potential output



Source: Oxford Economics, OBR.

reason why an output gap should have to close within a particular time frame, and in this case the headwinds to growth from the fiscal consolidation provide good reason to expect it to close at a slower pace than in previous cycles (when the deficit, and therefore fiscal tightening, was smaller).

Our forecast for potential output growth is a little weaker than that of the OBR over the 2016–20 period (2.1% a year versus 2.3% a year), which reflects our more conservative expectations for growth in business investment. However, because we estimate that the permanent damage to potential output during the financial crisis was smaller (we estimate that potential output grew by 1.6% a year from 2007 to 2015, compared with the OBR’s forecast of 1.4% a year), our forecast starts from a point where the level of potential output is higher than that of the OBR. As such, by the end of 2020, our estimate of the level of potential output is around 0.8ppts higher than that of the OBR (see Figure 2.16).

Recovery to remain firm over medium term but still weaker than previous upturns

The existence of a sizeable output gap should keep inflation low and create the conditions for growth to remain firm over the medium term. GDP growth is expected to average 2.3% a year over 2016–20 (see Table 2.2). Once the initial boost to consumer spending from very low inflation has fizzled out, growth slows as the welfare cuts, cuts to government spending and higher interest rates take effect. However, with fiscal consolidation due to be completed by fiscal year 2019–20, we expect growth to recover again in the last year of the forecast horizon.

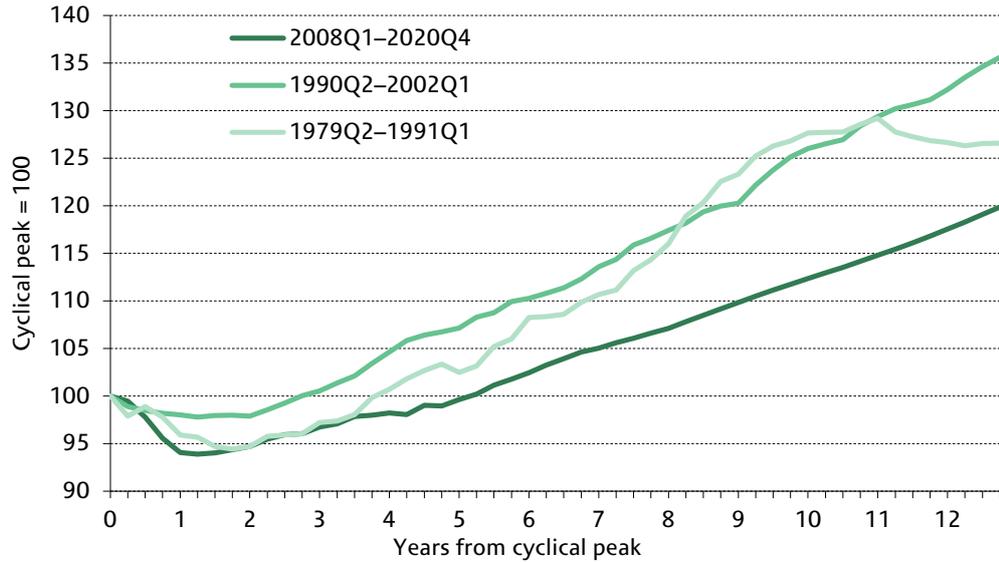
Our expectations for the current cycle are significantly weaker than for periods following other recent recessions, although this largely reflects the severity of the recession as well

Table 2.2. Oxford Economics UK forecast (annual % change unless stated)

	2014	2015	2016	2017	2018	2019	2020
Domestic demand	3.2	2.5	2.6	2.4	2.0	2.1	2.5
Private consumption	2.6	3.0	2.9	2.1	1.8	1.9	2.3
Fixed investment	7.3	4.5	4.9	5.1	3.9	3.6	3.0
Stockbuilding (% of GDP)	1.0	0.4	0.3	0.3	0.3	0.3	0.3
Government consumption	2.5	1.7	0.9	0.7	0.6	1.3	2.4
Exports of goods and services	1.2	5.4	2.6	4.1	4.4	4.1	4.0
Imports of goods and services	2.4	6.1	4.0	3.8	3.5	3.6	3.7
GDP	2.9	2.2	2.2	2.5	2.2	2.2	2.5
Industrial production	1.3	1.2	0.8	1.3	1.0	0.9	1.2
CPI	1.5	0.0	0.5	1.7	1.8	1.8	1.9
Current balance (% of GDP)	-5.1	-4.1	-3.7	-3.0	-2.7	-2.4	-2.3
Short-term interest rates (%)	0.54	0.55	0.61	1.05	1.57	2.10	2.63
Long-term interest rates (%)	2.57	1.90	2.14	2.63	3.08	3.48	3.88
Exchange rate (US\$ per £)	1.65	1.53	1.42	1.46	1.48	1.49	1.51
Exchange rate (euro per £)	1.24	1.38	1.34	1.37	1.36	1.34	1.33

Source: Oxford Economics.

Figure 2.17. Comparison of UK economic cycles

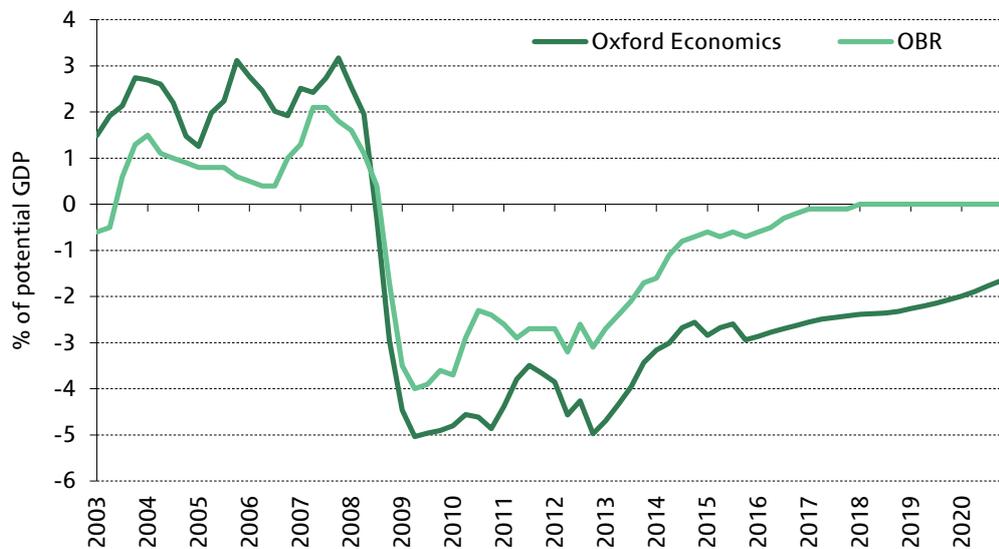


Source: Haver Analytics, Oxford Economics.

as the subdued nature of the subsequent recovery. As of end-2015, GDP was 6¾% above its 2008Q1 peak, which means that it is a long way behind where it was at the corresponding point of either of the previous two cycles (see Figure 2.17). Following the recession of the early 1990s, GDP was 16½% above its previous peak by this stage, while the recovery of the early 1980s saw GDP around 14¼% above its previous peak by the same point.

As we have already established, the output gap is estimated to have been 2¾% of potential output in 2015Q4. With the economy set to grow slightly faster than potential output over the next few years, the output gap should steadily narrow and by the end of 2020 we expect it to have fallen to around 1½% of potential GDP (see Figure 2.18). This forecast points to subdued inflationary pressures over the next few years, meaning that the Bank of England will have scope to keep Bank Rate at 0.5% until at least the latter part of this year and will subsequently be able to tighten policy at a very measured pace.

Figure 2.18. UK output gap



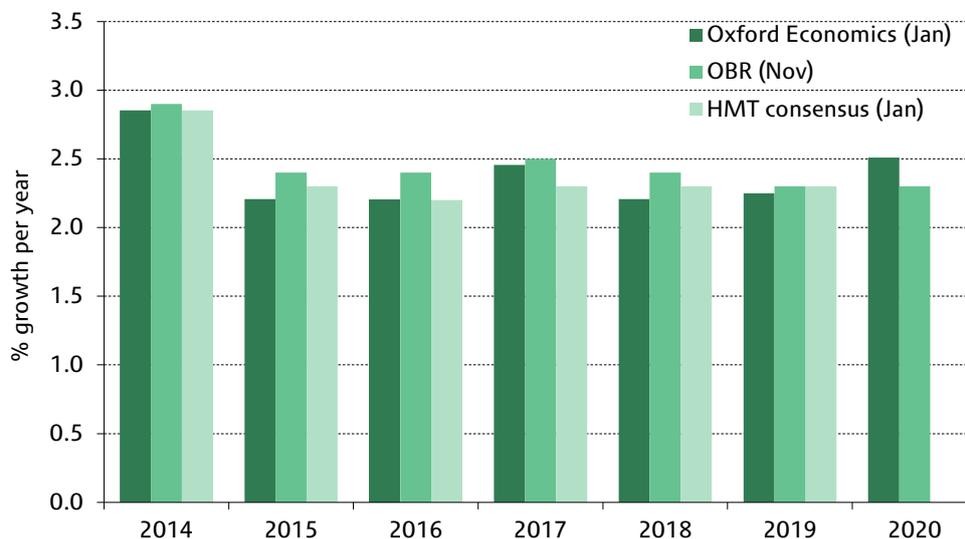
Source: Oxford Economics, OBR.

Our forecast shows a larger output gap than that of the OBR in 2015, to the tune of around 2ppts. This gap narrows through the forecast horizon because of the OBR's slightly stronger forecast for business investment and, therefore, potential output growth. However, the gap is still 1½ppts by the end of 2020. That our estimate for the size of the output gap is larger than the OBR's implies that there is scope for stronger economic growth to play a greater role in achieving the government's desired budget surplus. This stronger economic growth could be achieved if the government relaxed the pace of fiscal consolidation.

2.4 Comparison with other forecasts

Despite minor differences from year to year, for the period 2016–20 as a whole there is little difference between the GDP growth forecasts of ourselves (2.3% a year), the OBR (2.4% a year) and the market consensus (2.3% a year) – see Figure 2.19.

Figure 2.19. Comparison of GDP forecasts



Source: Oxford Economics, OBR, HM Treasury.

However, were the OBR or market consensus forecasts to run beyond 2020, then it is likely that they would show weaker growth than our forecast. This is because our forecast shows a modest negative output gap at the end of 2020 in the region of 1½% of potential GDP. This spare capacity would allow the economy to grow more strongly without causing inflationary pressures to build. Alternatively, if the government were to reassess its plan to move the budget into surplus and relax the planned fiscal consolidation, then this would allow the economy to achieve stronger economic growth during the 2016–20 period which, in turn, would allow the spare capacity to be used up more rapidly.

2.5 Risks heavily skewed to the downside: alternative scenarios for the UK economy

As we established in Chapter 1, the economy remains in a situation where the risks to economic growth are heavily skewed to the downside, with the most imminent threats being global in nature. Our baseline forecast is our view of the most likely – or modal –

outcome and we attach a probability of around 60% to an outcome similar to this baseline. We estimate there is a 10% probability of a better outcome, while the likelihood of one of the sources of downside risk playing out is put at 30%. Therefore, a risk-weighted – or mean – forecast would show a weaker profile for economic growth than our baseline forecast.

Domestic risks

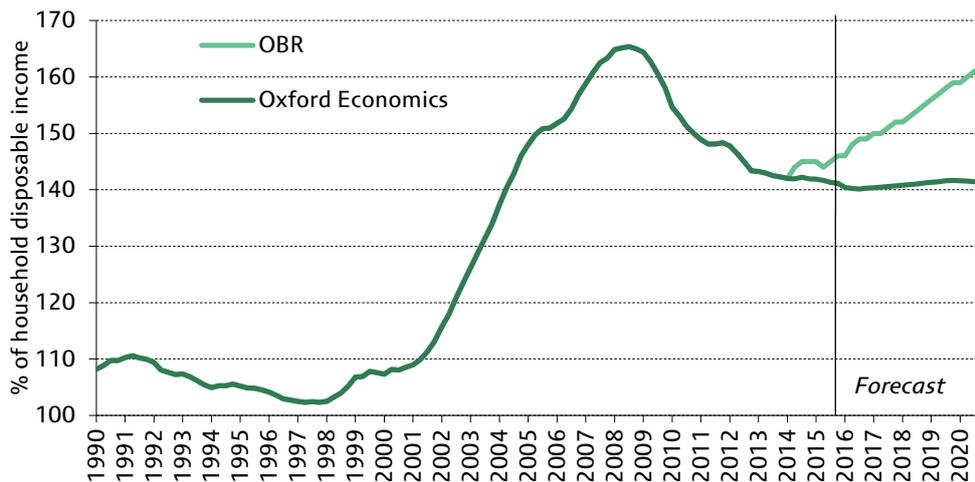
Domestically, a key uncertainty surrounds the upcoming referendum on the UK's membership of the EU. At the time of writing, the timing of the referendum was still to be announced, although there appeared to be a good chance that it would take place in the summer of 2016. Our baseline forecast is produced on the basis of current policy and therefore assumes that the UK remains a member of the EU. If the referendum were to result in a vote to leave the EU, the impact on the UK economy would be particularly uncertain. The UK may only have two years to complete the process of withdrawal and, during this period, uncertainty over the UK's future relationship with Europe could damage investment prospects. Beyond that, much would depend upon what kind of trade deal the government is able to agree. Our modelling work suggests that in scenarios where the government adopts a more liberal and pro-business approach – i.e. limited restrictions on free movement of labour and more aggressive deregulation – there is less damage to UK growth prospects.

There remains a high degree of uncertainty surrounding the household sector. Having deleveraged consistently since the beginning of the financial crisis, household debt levels remained broadly stable as a proportion of disposable incomes in 2015. While mortgage activity rose, it did so at a slower pace than household incomes, but unsecured lending rose sharply. Our forecast assumes that the level of household debt continues to increase broadly in line with household incomes, with the prospect of interest rate rises discouraging consumers from re-leveraging, but this outcome is far from certain. Indeed, the OBR's forecast assumes that consumers re-leverage to the extent that the debt-to-income ratio almost returns to its pre-crisis peak by the end of the forecast horizon (see Figure 2.20). However, the Bank of England has been taking a greater interest in several areas of lending growth of late, most notably unsecured lending and buy-to-let mortgages. Were either to continue to grow as strongly, there is a good chance that the Financial Policy Committee (FPC) would intervene, along the lines of its moves to limit high loan-to-income mortgage lending in 2014, which could cause lending growth to slow abruptly.

Which path the economy takes will have significant implications for the forecast. A debt build-up such as the one forecast by the OBR could generate faster growth in the short term and hasten more rapid progress towards budget surplus. However, it would also threaten an abrupt slowdown if interest rates rose and households struggled to manage the higher debt levels which, in turn, would threaten financial stability. In contrast, FPC intervention in 2016 could result in weaker growth in the short term, although it would leave consumers better placed to support growth further out.

There is also considerable uncertainty surrounding future trends in productivity and, by extension, employment. The productivity performance since the financial crisis has been dismal, with output per hour now around 14% below where it would have been had the pre-recession trend continued. During 2015, there were tentative signs that the situation might be starting to improve, and our forecast assumes that the economy will revert to achieving similar rates of productivity growth to those seen prior to the crisis, but that

Figure 2.20. Household debt-to-income ratio



Source: Haver Analytics, Oxford Economics.

the level of productivity remains well short of where it should be. However, some economists believe that not just the level of, but also the potential for growth in, productivity have been permanently damaged. If this is the case, then the scope for job creation in the short term may be higher as demand for labour remains strong, providing some upside for consumer spending. But on the flip side, if 2015 proves to be a false dawn and productivity growth regresses to the very slow pace seen since the financial crisis, this would imply weaker potential output growth and, as such, poorer medium-term growth prospects.

External risks

As we established in Chapter 1, the risks to the global outlook are skewed to the downside. The global financial market turbulence of recent weeks would represent a serious threat to growth prospects, if it were to continue for a prolonged period. But in the rest of this section, we look at the two alternative scenarios for the global economy set out in Chapter 1 and consider how they might affect the UK.

Oil prices plunge as global growth surges

Oil prices can be depressed even during a cyclical upturn in the global economy. That is the case in our upside scenario, where US and OPEC oil production is assumed to rise relative to the baseline, driving oil prices down further. The decline in oil prices acts as a tax cut for oil importers, amplifying strengthening private sector activity in the US and eurozone, and more than offsetting the adverse impact on oil exporters from lower oil revenues. Global growth surges forward as a result, although prospects diverge markedly across the world.

The UK would benefit from this scenario through two channels. First, lower inflation would boost the spending power of domestic consumers, supporting stronger growth in household consumption. Second, these conditions would generate stronger growth in world trade, with the UK's main trading partners, the US and the eurozone, at the forefront.

Under this scenario, we would expect the UK economy to grow by 2.7% this year and by 3.5% in 2017. We would attach a probability of around 10% to a scenario where oil prices fall further and stimulate stronger growth in advanced economies.

The Fed tightens amid global headwinds

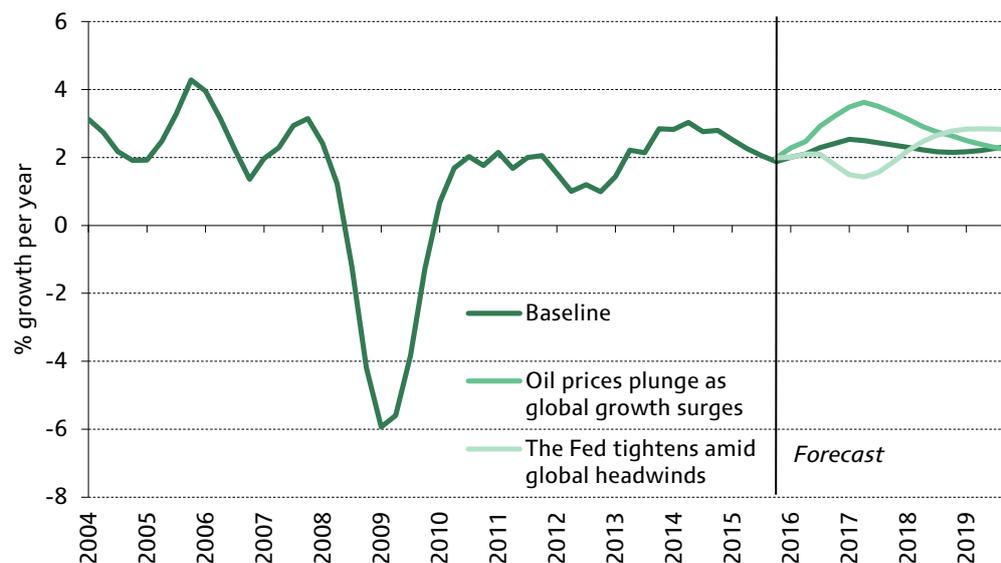
For some time, markets have appeared to anticipate a much lower path for future US monetary policy rates than that projected by Federal Open Market Committee (FOMC) members themselves. In this scenario, which we consider to be the most damaging of our global downside scenarios for the UK, we explore the possibility that the Fed is proved right and global financial markets must adjust accordingly.

In the US, the recent strength of the domestic economy persists and continues to offset global headwinds. Labour market conditions tighten and wage pressures increase. Growth and inflation out-turns in 2016 broadly match those currently anticipated by the Fed and, against this backdrop, the Fed tightens policy in line with its own projections (the so-called 'Dot Plot'). The tightening profile is a little more rapid than in the baseline – and a lot more rapid than anticipated by investors. This prompts a severe market reaction during 2016 as markets reassess the likely pace of future Fed tightening. Bond yields spike upwards and equity prices fall globally. Capital begins to flow out of emerging markets and risk premiums on emerging market debt increase. Confidence is shaken.

The Fed pauses its tightening cycle and takes stock of the impact of the market shake-out. It finds that, despite the turmoil, the shock to the US economy proves contained. Equity price falls, which reflect increased risk premiums rather than expectations of a weakening in future income flows, have a relatively limited impact and the knock to domestic consumer and business sentiment proves short-lived. With domestic activity recovering in 2018, and wage and inflationary pressures still evident, the Fed resumes its tightening policy. By contrast, the outlook for emerging markets deteriorates significantly. The market disruption is associated with significant exchange rate depreciations, prompting many central banks to raise policy rates in an attempt to staunch capital outflows and defend their currencies. Equity prices fall further and the shock to confidence proves far more persistent than amongst advanced economies.

The UK would be hit relatively hard by such a scenario. Falling equity prices would weigh on wealth, while business and consumer sentiment would also be adversely affected. Alongside this, a slowdown in world trade would weigh on export growth. The importance of the financial sector to the UK also makes it vulnerable under such a

Figure 2.21. GDP forecasts for alternative scenarios for the UK economy



Source: Oxford Economics.

scenario. GDP growth would be 2.1% this year, slowing to just 1.6% in 2017. With the Bank of England keeping interest rates at 0.5% for longer, and energy prices falling further, growth bottoms out in the first half of 2017 and subsequently recovers, with the economy enjoying above-average growth rates over the latter part of the forecast horizon. We would attach a probability of around 10% to this downside scenario.

Figure 2.21 shows GDP forecasts for the UK economy, based upon these alternative scenarios.

2.6 Conclusion

2015 appears to have been an underwhelming year for the UK economy, with the latest out-turn for GDP growth of just 2.2% disappointing in the context of the scale of the support offered by very low inflation. However, it should be noted that early estimates of GDP growth have been subject to sizeable revisions of late, mostly upward in nature, so we would not be surprised to see the out-turn upgraded over time.

We think that there is currently a significant amount of spare capacity in the economy, with the output gap estimated to have been around 2¾% of potential output at the end of 2015. Our forecast shows potential output growth averaging 2.1% a year over the period from 2016 to 2020, underpinned by further strong growth in the labour supply and robust levels of business investment. This will provide the conditions for firm growth over the medium term, with GDP growth expected to average 2.3% a year from 2016 to 2020, as well as low inflation. Faster growth rates would be possible, were it not for the significant headwinds coming from fiscal consolidation.

The risks around our forecast are heavily skewed to the downside. Domestically, the upcoming referendum on the UK's membership of the EU provides the most immediate source of uncertainty. A vote to leave the EU would generate significant uncertainty while exit negotiations were ongoing, with the outlook thereafter dependent upon what kind of trade deal the government is able to agree. Future developments around household balance sheets and the potential for productivity to recover are also key sources of uncertainty. Externally, there are several sources of downside risk. In our view, the most damaging to the UK outlook would be the Fed increasing interest rates at a pace consistent with its 'Dot Plot', an outcome that could provoke a severe reaction in financial markets and cause global growth to weaken. However, a further supply-driven fall in the oil price is also a plausible alternative, a scenario that would be particularly beneficial to the UK given its status as a net oil importer and its strong trading links to other oil-importing advanced economies.