



UK Economic Outlook

Special features on:

- Consumer spending prospects after Brexit
- Will robots steal our jobs? The potential impact of automation on the UK and other major economies



Visit our blog for periodic updates at:
pwc.blogs.com/economics_in_business

Highlights and key messages for business and public policy

Key projections

	2017	2018
Real GDP growth	1.6%	1.4%
Consumer spending growth	2.0%	1.7%
Inflation (CPI)	2.3%	2.8%

Source: PwC main scenario projections

- UK economic growth held up better than expected in the six months following the Brexit vote, particularly as regards consumer spending. But there have been signs that growth may be beginning to ease in early 2017 as inflation has risen, squeezing household spending power.
- In our main scenario, we project UK growth to slow to around 1.6% in 2017 and 1.4% in 2018 due to slower consumer spending growth and the drag on business investment from ongoing political and economic uncertainty relating to the outcome of the Brexit negotiations. The Budget had little net impact on the growth outlook from a macroeconomic perspective.
- The weaker pound could also boost net exports, however, which should offer some support for overall GDP growth. The recent pick-up in the world economy should also help here.
- Service sector growth will slow but remain positive in 2017-18, but construction may suffer from lower investment levels. Some exporters will benefit from the weaker pound, but businesses serving domestic consumers are likely to see some slowdown in growth.
- The Bank of England will probably keep interest rates on hold in the short term, but the case for a rate rise could build later this year or, more likely, in 2018 if growth and inflation evolve broadly as we project.

Consumer spending growth to moderate, but housing and utilities share of total spending could rise to almost 30% by 2030

- Consumer spending growth is also projected to slow from previous strong rates, dropping to around 2% in 2017 and 1.7% in 2018 in our main scenario. This reflects the impact of a weaker pound in pushing up import prices and squeezing the real spending power of households, as well as expected slower jobs growth.
- There may be some offset to this from higher household borrowing in the short term, but there are limits to how much further this can increase as household spending may already exceed household disposable income this year.
- In the long run, we expect real consumer spending growth to average around 2% per annum, but the composition of this spending will change. The share of spending on housing and utilities could rise to close to 30% by 2030, while that on food, alcohol, tobacco and clothing declines over time.

Up to 30% of UK jobs could potentially be at risk from automation by the early 2030s, but there should be offsetting job gains elsewhere in the economy

- Our analysis suggests that around 30% of UK jobs could potentially be at high risk of automation by the early 2030s, lower than the US (38%) or Germany (35%), but higher than Japan (21%).
- The risks appear highest in sectors such as transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%).
- However, in practice, not all of these jobs may actually be automated for a variety of economic, legal and regulatory reasons. Furthermore new automation technologies will both create some totally new jobs in the digital technology area and, through productivity gains, generate additional wealth and spending that will support additional jobs of existing kinds, primarily in services sectors that are less easy to automate.
- The net long term impact of automation on total UK employment is therefore unclear. Average pre-tax incomes should rise due to the productivity gains, but these benefits may not be evenly spread across income groups.
- There is a strong case for increased investment in lifelong vocational education and training to help people adapt to increased automation. Universal basic income schemes may also be considered, but suffer from potential problems in terms of affordability and adverse effects on work incentives.

1 – Summary

Recent developments

The UK economy held up well in the six months after the EU referendum, particularly as regards consumer spending. Growth was close to trend at 2% in the year to the fourth quarter of 2016.

UK growth continues to be driven by services, with manufacturing and construction seeing more volatile trends through the last year. There have, however, been signs from both retail sales data and business surveys that the resilience of consumer spending and services has started to falter in early 2017.

A key factor behind this recent moderation in retail spending has been an increase the rate of consumer price inflation (CPI) from around zero on average in 2015 to 2.3% in the year to February 2017, as global commodity prices have picked up from lows in early 2016 and the effects of the weak pound after the Brexit vote have fed through supply chains.

Table 1.1: Summary of UK economic growth prospects

Indicator (% change on previous year)	OBR forecasts (March 2017)		Independent forecasts (February 2017)		PwC Main scenario (March 2017)	
	2017	2018	2017	2018	2017	2018
GDP	2.0	1.6	1.6	1.4	1.6	1.4
Consumer spending	1.8	0.9	1.7	1.0	2.0	1.7
Inflation (CPI)	2.4	2.3	2.6	2.8	2.3	2.8

Source: Office for Budget Responsibility (March 2017), Consensus Economics survey (average value of new forecasts made in February 2017 survey) and latest PwC main scenario.

Future prospects

As shown in Table 1.1, our main scenario is for UK GDP growth to decline gradually from 1.8% in 2016 to around 1.6% in 2017 and 1.4% in 2018 as the effects of the weaker pound on inflation and continued Brexit-related uncertainty feed through. Our views on growth are similar to the latest consensus forecasts but slightly lower than the new OBR forecasts in the March 2017 Budget (see Table 1.1). However, the broad pattern of gradually slowing growth over the next two years is common to most forecasts at present.

The largest effect of the vote to leave the EU is likely to be on real investment growth, which we now expect to be pushed down to around zero in 2017. This reflects major private sector projects being deferred or even cancelled due to uncertainties surrounding Brexit, although there should be some offset here from increased planned public investment. These uncertainty-related effects should fade eventually, but it will take time before clarity emerges on future UK-EU trading arrangements.

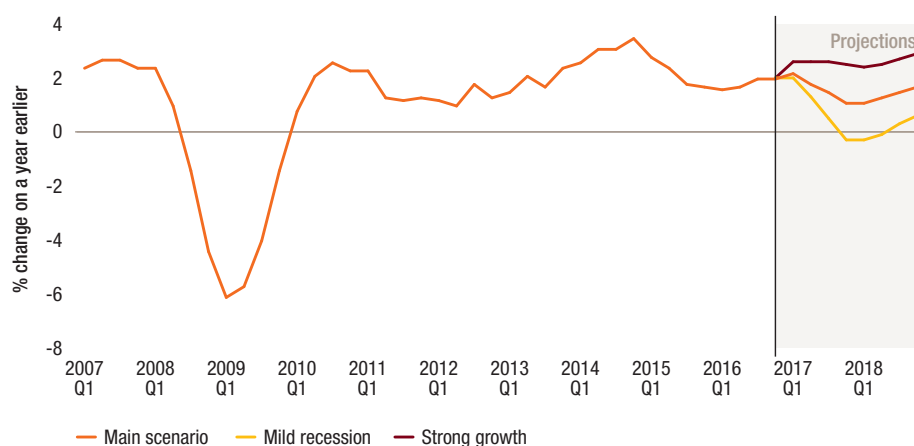
Consumer spending growth is also expected to moderate as inflation bites into real spending power, as we discuss in more detail below, though the weak pound should also have some offsetting benefits for net exports. A relatively strong global economy has also benefited UK exporters during the second half of 2016 and this seems likely to continue at least in the short term.

The Budget involved small net giveaways in 2017/18, notably on social care, but was broadly fiscally neutral in the medium term so its impact on the overall UK growth outlook will be minimal.

There are always uncertainties surrounding our growth projections and these are particularly marked following the vote to leave the EU, as illustrated by the alternative scenarios in Figure 1.1. There are still considerable downside risks relating to international developments (notably the French presidential elections in the short term and a possible US-led rise in global protectionism in the longer term) and the fallout from Brexit, but there are also upside possibilities if these problems can be contained. In our main scenario, we expect the UK to suffer a moderate slowdown not a recession, but businesses need to monitor and make contingency plans for potential downside risks.

Inflation could rebound to around 3% by early 2018 assuming the pound remains relatively weak and there is no repeat of past falls in global energy and food prices. Despite this, we expect monetary policy to remain on hold in the short term. In our main scenario, official interest rates are assumed to remain at current levels throughout 2017, but this will depend on how events develop. By early 2018, the case for a gradual rate rise could grow stronger if UK growth and inflation evolve broadly as projected in our main scenario.

Figure 1.1 – Alternative UK GDP growth scenarios



Sources: ONS, PwC scenarios

Consumer spending prospects after Brexit

Consumer spending has grown by an average of 2.4% per annum faster than inflation over the past four years, driving the overall UK economic recovery both before and after the Brexit vote.

As we discuss in detail in Section 3 of this report, this reflects rising employment levels, continued historically low interest rates, and a declining household savings ratio driven by higher borrowing and a strong housing market.

Looking ahead, we expect real household income growth to slow in 2017-18 as rising inflation squeezes household spending power and employment growth softens. Increased borrowing may help fill the gap, but there are limits to how far this can go on a sustainable basis.

As a result, in our main scenario we expect real consumer spending growth to moderate from around 3% in 2016 to around 2% in 2017 and 1.7% in 2018, although it could then pick up again to around 2% in 2020 and beyond assuming the Brexit negotiations go reasonably smoothly.

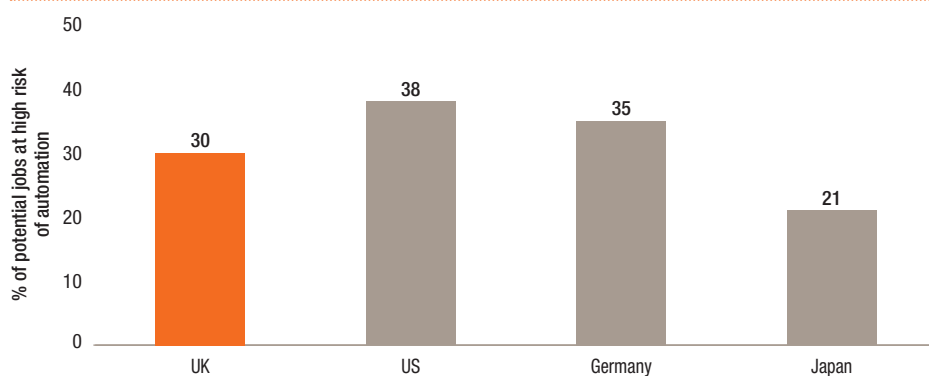
We project households will spend almost 30% of their budget on housing and utilities by 2030, up from around 25% in 2016. Spending on financial services and personal care (including self-funded social care) will also tend to increase relatively rapidly over time, while the share of total spending on food and clothing will tend to decline in the long run (see Figure 1.2).

Figure 1.2 – Historical trends and main scenario projections for household budget shares to 2030

1985 Rank		Spending Share	2016 Rank		Spending Share	2030 Rank		Spending Share
1	Housing & utilities	26.6%	1	Housing & utilities	25.4%	1	Housing & utilities	29.0%
2	Transport	12.6%	2	Transport	13.9%	2	Miscellaneous	15.0%
3	Food	12.2%	3	Miscellaneous	13.3%	3	Transport	12.4%
4	Miscellaneous	9.5%	4	Recreation & Culture	10.1%	4	Recreation & Culture	10.6%
5	Hotels and restaurants	8.8%	5	Hotels and restaurants	9.3%	5	Hotels and restaurants	9.4%
6	Recreation & Culture	7.9%	6	Food	8.2%	6	Food	5.7%
7	Clothing and footwear	6.0%	7	Clothing and footwear	5.8%	7	Furnishing	5.2%
8	Alcohol and tobacco	5.5%	8	Furnishing	4.8%	8	Clothing and footwear	4.3%
9	Furnishing	5.3%	9	Alcohol and tobacco	3.8%	9	Alcohol and tobacco	3.1%
10	Health	3.4%	10	Communication	2.0%	10	Health	1.9%
11	Communication	1.6%	11	Health	1.8%	11	Communication	1.8%
12	Education	0.6%	12	Education	1.6%	12	Education	1.6%

Sources: ONS for historical data, PwC for main scenario projections

Figure 1.3 – Potential jobs at high risk of automation by country



Sources: ONS; PIAAC data; PwC analysis

The impact of Brexit on the consumer will vary by category of spending. Our analysis shows that the food and clothing sectors are most exposed to the fall in the value of sterling since the Brexit vote due to a high reliance on imports. The hotel, restaurant, manufacturing and agricultural sectors are also heavily reliant on EU labour and so could be subject to disruption in the longer term if migration from the EU is significantly reduced after Brexit. Businesses need to prepare for these and other aspects of Brexit and make appropriate contingency plans.

Will robots really steal our jobs?

Our detailed analysis in Section 4 of this report suggests that around 30% of UK jobs could potentially be at high risk of automation by the early 2030s, lower than the proportion in the US or Germany, but higher than in Japan (see Figure 1.3).

We estimate that the risks could be highest in sectors such as transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%).

For individual workers, the key differentiation factor is education (including vocational training). For those with just GCSE-level education or lower, the estimated potential risk of automation is as high as 46% in the UK, but this falls to only around 12% for those with undergraduate degrees or higher.

However, in practice, not all of these jobs may actually be automated for a variety of economic, legal and regulatory reasons. Furthermore new automation technologies in areas like AI and robotics will both create some totally new jobs in the digital technology area and, through productivity gains, generate additional wealth and spending that will support additional jobs of existing kinds, primarily in services sectors that are less easy to automate.

The net impact of automation on total employment is therefore unclear. Average pre-tax incomes should rise due to the productivity gains, but these benefits may not be evenly spread across income groups.

There is a strong case for increased investment in vocational education and training to help people of all ages to adapt to the challenge of automation. Given the pace of change, retraining and career shifts may need to become more frequent during what are likely to be longer average working lives. Universal basic income schemes may also be considered, but suffer from potential problems in terms of affordability and adverse effects on work incentives.

Appendix A

Outlook for the global economy

Table A.1 presents our latest main scenario projections for a selection of economies across the world.

World economic growth strengthened through 2016 and this is expected to continue, increasing the global weighted average real growth rate to 2.9% in 2017 and 3% in 2018 (using GDP at market exchange rates as weights). This growth is expected to be driven by the large emerging economies with continued strong growth of around 7-8% in India and around 6-6.5% in China projected for 2017 and 2018. The outlook for emerging markets has also improved as a result of improving economic conditions in Russia and Brazil, which are now moving out of recession.

Steady but moderate growth of around 1.6% is projected for the Eurozone in 2017-18 although this is subject to potential political volatility due to upcoming elections in France and Germany. Relative to the rest of the G7, quite strong growth is projected for the US economy in 2017-18 as fiscal stimulus strengthens an already recovering economy. But this could be offset by further gradual rises in US interest rates to keep inflation under control.

These projections are updated monthly in our Global Economy Watch publication, which can be found at www.pwc.com/gew

Table A.1: Global economic growth and inflation prospects

	Share of world GDP	Real GDP growth (%)		Inflation (%)	
	2016 at MERs	2017	2018	2017	2018
US	24.5%	2.2	2.4	2.3	2.5
China	15.2%	6.5	6.1	1.8	2.5
Japan	5.6%	0.5	0.7	1.3	1.5
UK	3.9%	1.6	1.4	2.3	2.8
France	3.3%	1.4	1.6	1.2	1.1
Germany	4.6%	1.6	1.5	1.8	1.9
Greece	0.3%	1.6	2.0	0.5	0.7
Ireland	0.4%	3.2	3.0	0.8	1.3
Italy	2.5%	1.0	1.1	1.1	0.8
Netherlands	1.0%	1.6	1.8	1.5	1.1
Portugal	0.3%	1.1	1.2	1.0	1.0
Spain	1.6%	2.3	1.9	1.3	1.1
Poland	0.6%	3.4	3.2	1.2	1.7
Russia	1.8%	1.0	1.1	5.6	4.8
Turkey	1.0%	2.9	3.2	8.1	8.4
Australia	1.7%	2.7	2.9	2.5	2.4
India	2.8%	7.3	7.7	5.0	5.3
Indonesia	1.2%	5.1	5.5	4.5	4.4
South Korea	1.9%	2.6	2.8	1.6	2.8
Argentina	0.9%	1.9	2.4	25	n/a
Brazil	2.4%	0.4	1.5	5.0	4.5
Canada	2.1%	1.9	2.1	1.9	2.0
Mexico	1.6%	1.8	2.1	3.4	3.0
South Africa	0.4%	1.0	1.7	6.0	5.7
Nigeria	0.7%	0.9	2.4	14.2	12.0
Saudi Arabia	0.9%	1.2	2.0	3.2	3.0
World (PPP)		3.4	3.5	3.1	3.0
World (Market Exchange Rates)	100%	2.9	3.0	2.7	2.6
Eurozone	15.8%	1.6	1.6	1.3	1.3

Source: PwC main scenario for 2017 and 2018; IMF for GDP shares in 2016 at market exchange rates (MERs).

Appendix B

UK economic trends: 1979 – 2016

Annual averages	GDP growth	Household expenditure growth	Manufacturing output growth*	Inflation (CPI**)	3 month interest rate (% annual average)	Current account balance (% of GDP)	PSNB*** (% of GDP)
1979	3.7	4.8			13.7	-0.6	4.3
1980	-2.0	0.1			16.6	0.5	3.9
1981	-0.8	0.3			13.9	1.5	3.1
1982	2.0	1.2			12.2	0.6	2.3
1983	4.2	4.4			10.1	0.2	3.0
1984	2.3	2.5			10.0	-0.5	3.3
1985	4.2	5.1			12.2	-0.3	2.6
1986	3.2	6.1			10.9	-1	2.0
1987	5.4	5.1			9.7	-1.6	1.3
1988	5.8	7.4			10.4	-3.6	-0.6
1989	2.6	3.9		5.2	13.9	-4.1	-0.6
1990	0.7	1.0		7.0	14.8	-3.1	0.6
1991	-1.1	-0.6		7.5	11.5	-1.3	2.6
1992	0.4	0.9		4.3	9.6	-1.5	5.6
1993	2.5	2.8		2.5	5.9	-1.3	6.8
1994	3.9	3.2		2.0	5.5	-0.5	5.8
1995	2.5	2.1		2.6	6.7	-0.7	4.7
1996	2.5	3.9		2.5	6.0	-0.6	3.3
1997	3.1	4.5		1.8	6.8	-0.2	1.6
1998	3.2	3.9	0.4	1.6	7.3	-0.4	-0.1
1999	3.3	4.9	0.6	1.3	5.4	-2.4	-1.1
2000	3.7	4.9	2.2	0.8	6.1	-2.1	-1.8
2001	2.7	3.5	-1.5	1.2	5.0	-1.9	-0.6
2002	2.4	3.7	-2.2	1.3	4.0	-2	1.6
2003	3.5	3.8	-0.6	1.4	3.7	-1.7	2.6
2004	2.5	3.3	1.8	1.3	4.6	-1.8	2.7
2005	3.0	3.0	0.0	2.1	4.7	-1.2	2.9
2006	2.5	1.8	2.2	2.3	4.8	-2.2	2.6
2007	2.6	3.0	0.6	2.3	6.0	-2.4	2.4
2008	-0.6	-0.8	-2.8	3.6	5.5	-3.5	5.2
2009	-4.3	-3.5	-9.4	2.2	1.2	-3	10.1
2010	1.9	0.7	4.6	3.3	0.7	-2.7	9.1
2011	1.5	-0.7	2.2	4.5	0.9	-1.8	7.1
2012	1.3	1.9	-1.5	2.8	0.8	-3.7	7.7
2013	1.9	1.6	-1.0	2.6	0.5	-4.4	5.9
2014	3.1	2.1	2.9	1.5	0.5	-4.7	5.6
2015	2.2	2.5	-0.2	0.0	0.6	-4.3	4.2
2016	1.8	3.1	0.7	0.7	0.5	-4.9	3.0
Average over economic cycles****							
1979 - 1989	2.8	3.7			12.2	-0.8	2.2
1989 - 2000	2.3	3.0		3.3	8.3	-1.5	2.3
2000 - 2014	1.8	1.9	-0.2	2.2	3.3	-2.6	4.2

* After the revisions to the national accounts data, pre-1998 data is not currently available ** Pre-1997 data estimated *** Public Sector Net Borrowing (calendar years excluding public sector banks)

**** Peak-to-peak for GDP relative to trend

Sources: ONS, Bank of England

Contacts and services

Economics

Our macroeconomics team produce the UK Economic Outlook three times a year.

The present report was written by John Hawksworth, Barret Kupelian, Richard Berriman and Duncan Mckellar.

For more information about the technical content of this report please contact:

John Hawksworth

john.c.hawksworth@pwc.com
or 020 7213 1650

In addition, we provide a range of macroeconomic consulting services for clients, including:

- Revenue forecasting
- Stress testing
- Economic impact analysis (including Brexit)

For enquiries concerning these services, please contact

Jonathan Gillham on 07714 567 297 or **Richard Snook** on 020 7212 1195.

Our UK economics team is part of Strategy& PwC's strategy consulting practice. Strategy& is a global team of practical strategists committed to helping you seize essential advantage.

Our economics practice offers a wide range of services, covering competition and regulation issues, litigation support, bids and business cases, public policy and project appraisals, financial economics, the economics of sustainability and macroeconomics.

For more information about these services please visit our website (www.pwc.co.uk/economics) or contact the relevant person from the list to the right.

Competition Economics	Tim Ogier	+44 (0)20 7804 5207
	Daniel Hanson	+44 (0)20 7804 5774
	Luisa Affuso	+44 (0)20 7212 1832
Economic Regulation	David Armstrong	+44 (0)28 9041 5716
	Dan Burke	+44 (0)20 7212 6494
	Alastair Macpherson	+44 (0)20 7213 4463
	Stuart Cook	+44 (0)20 7804 7167
Economic Appraisal	Nick Forrest	+44 (0)20 7804 5695
	Jonathan Gillham	+44 (0)7714 567 297
	Andrew Sentance	+44 (0)20 7213 2068
Total impact measurement and management	Mark Ambler	+44 (0)20 7213 1591
Health industries	Kalee Talvite-Brown	+44 (0)20 7213 4372
	Dan Burke	+44 (0)20 7212 6494
	Andy Statham	+44 (0)20 7213 1486
Education and skills	Michael Kane	+44 (0)28 9041 5303
	Peter Norriss	+44 (0)7525 298 726
	Sean Hughes	+44 (0)20 7212 4194
International development	David Armstrong	+44 (0)28 9041 5716
	Sheetal Vyas	+44 (0)7730 146 352
	Zlatina Loudjeva	+44 (0)20 7213 4815
Financial services	Nick Forrest	+44 (0)20 7804 5695
Telecommunications	Alastair Macpherson	+44 (0)20 7213 4463
Media and entertainment	David Lancefield	+44 (0)20 7213 2263
Water	Richard Laikin	+44 (0)20 7212 1204
Power and utilities	Stuart Cook	+44 (0)20 7804 7167
Transport	Daniel Hanson	+44 (0)20 7804 5774

To receive future editions by e-mail please sign up on our website
www.pwc.co.uk/economy or e-mail genevieve.lopes@pwc.com

www.pwc.co.uk/economics

At PwC, our purpose is to build trust in society and solve important problems. PwC is a network of firms in 157 countries with more than 223,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com/UK.

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PricewaterhouseCoopers LLP, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

© 2017 PricewaterhouseCoopers LLP. All rights reserved. In this document, "PwC" refers to the UK member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.

The Design Group 31597 (03/17)