Summary Report – July 2018

UK Economic Outlook

Special features on:

- UK housing market outlook
- What will be the net impact of AI and related technologies on jobs in the UK?

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Key projections

	2018	2019
Real GDP growth	1.3%	1.6%
Consumer spending growth	1.1%	1.3%
Inflation (CPI)	2.5%	2.3%
House prices	2.9%	2.8%

Source: PwC main scenario projections

Recent UK developments and prospects

- In our main scenario, we project UK growth to remain modest at around 1.3% in 2018 and 1.6% in 2019. This is due to continued subdued real consumer spending growth and the drag on business investment from ongoing economic and political uncertainty relating to the outcome of the Brexit negotiations.

- The stronger global economy, and the competitive value of the pound, have boosted UK exports and inbound tourism, offering some support for overall UK GDP growth that should continue through 2018. However, the Eurozone economy has slowed recently and any further escalation of international trade tensions could dampen global growth in 2019 and beyond.

- Service sector growth should remain modest but positive in 2018-19, while manufacturing also retains some positive momentum despite a slowdown in early 2018. But the construction sector has fallen back due to the weakness of commercial property investment and this looks set to continue.

- London has grown significantly faster than other UK regions for most of the past three decades, but recently there have been signs from both the labour and housing markets that London's relative performance has been less strong. We therefore expect London to grow at only slightly above the UK average rate in 2018-19.

- In our main scenario, we assume that the Bank of England raises interest rates by 0.25% later this year, although the precise timing of this will be data-dependent and the pace of any subsequent rate increases will remain limited and gradual.

House price growth to remain moderate across UK and negative in London this year

- In our main scenario, we project a further softening of UK house price growth to around 3% in 2018 and we expect this to continue at a similar average rate in the medium term to 2025. This implies that the average UK house price would rise from £221,000 in 2017 to around £285,000 by 2025. Price growth at this pace would mean that the ratio of house prices to earnings would remain broadly stable, but still at high levels by historical standards.

- We expect that most regions will experience moderate house price growth in 2018 broadly similar to the UK average. The exception is London, where we project that average house prices could drop by nearly 2% in 2018 compared to 2017.

AI and related technologies should create as many jobs as they displace

- AI and related technologies such as robotics, drones and driverless vehicles could displace many jobs formerly done by humans, but will also create many additional jobs as productivity and real incomes rise and new and better products are developed.

- We estimate that these countervailing displacement and income effects on employment are likely to broadly balance each other out over the next 20 years in the UK, with the share of existing jobs displaced by AI (c.20%) likely to be approximately equal to the additional jobs that are created.

- Although the overall effect on UK employment is estimated to be broadly neutral in our central projections, there will inevitably be variations by industry sector. The sectors that we estimate will see the largest net increase in jobs due to AI over the next 20 years include health (+22%), professional, scientific and technical services (+16%) and education (+6%). The sectors estimated to see the largest net long-term decrease in jobs due to AI include manufacturing (-25%), transport and storage (-22%) and public administration (-18%).

- We identify a number of policy areas where action could help to maximise the benefits of AI (e.g. boosting research funding, ensuring competition is adequate to ensure productivity gains are passed on to consumers) and/or mitigate the costs (e.g. a national retraining programme for displaced workers).

1 – Summary

Recent developments

The UK economy held up well in the six months after the EU referendum, but growth slowed from early 2017. This slowdown continued into early 2018, although early signs are that GDP growth was somewhat stronger in the second quarter of this year as the weather improved.

Higher inflation has squeezed real household incomes and this has taken the edge off consumer-led growth, together with a slowdown in the housing market. Brexit-related uncertainty has also dampened business investment growth.

On the positive side, UK exports have been boosted by the upturn in global growth over the past two years. The weaker pound, although bad for UK consumers, has been helpful to exporters and inbound tourism. Jobs growth has remained strong, with the employment rate at record levels. Fiscal policy has also been relaxed somewhat since the Brexit vote, particularly as regards public investment.

Future prospects

As shown in Table 1.1, our main scenario is for UK GDP growth to remain moderate at around 1.3% on average in 2018 and 1.6% in 2019. Our views on growth and inflation are broadly similar to the latest consensus and OBR forecasts (see Table 1.1).

Consumer spending growth is expected to moderate to only around 1% in 2018, but may pick up slightly next year as real wages recover.

The stronger global economy should continue to have some offsetting benefits for net exports this year, although there are downside risks in 2019 and beyond if recent US tariff policy changes were to escalate into a wider international trade war. Brexit-related uncertainty may also continue to hold back business investment in the UK.

Table 1.1: Summary of UK economic growth and inflation prospects

Indicator (% change on previous year)	OBR forecasts (March 2018)		Independent forecasts (June 2018)		PwC Main scenario (July 2018)	
	2018	2019	2018	2019	2018	2019
GDP	1.4	1.5	1.4	1.5	1.3	1.6
Consumer spending	1.0	1.2	1.1	1.3	1.1	1.3
Inflation (CPI)	2.6	2.2	2.5	2.1	2.5	2.2

Source: Office for Budget Responsibility (March 2018), HM Treasury survey if independent forecasters (average value of new forecasts made in June 2018 survey) and latest PwC main scenario.

The slowdown in UK growth should be offset in part by planned increases in public investment and some easing of austerity over the next two years as announced in the November 2017 Budget. Recently announced NHS spending plans could imply some further loosening of fiscal policy in the medium term if this is partly funded by higher borrowing rather than increased taxes. But we will not get details of this until the November 2018 Budget.

There are always uncertainties surrounding our growth projections, as illustrated by the alternative scenarios in Figure 1.1. There are still considerable downside risks relating to possible pitfalls on the road to Brexit and a global trade war, but there are also upside possibilities if these problems can be contained and global growth continues to pick up. In our main scenario, we expect the UK to continue with moderate but steady growth in 2018-19, but businesses need to monitor and make contingency plans for potential alternative scenarios related to Brexit and other factors such as global trade tensions.

Inflation should fall back gradually to around its 2% target rate by the end of 2019, assuming no major shifts in exchange rates or global commodity prices.

Given continued uncertainties around Brexit and the UK economy, we expect the Monetary Policy Committee to remain cautious about the pace of future interest rate rises, but in our main scenario we assume a one quarter point rate rise later this year (either in August or November) and one further increase in 2019.

Housing market trends and prospects

UK house price growth remained relatively resilient in 2017 despite a weakening economic backdrop, but has shown signs of moderating during the first half of 2018, particularly in London.

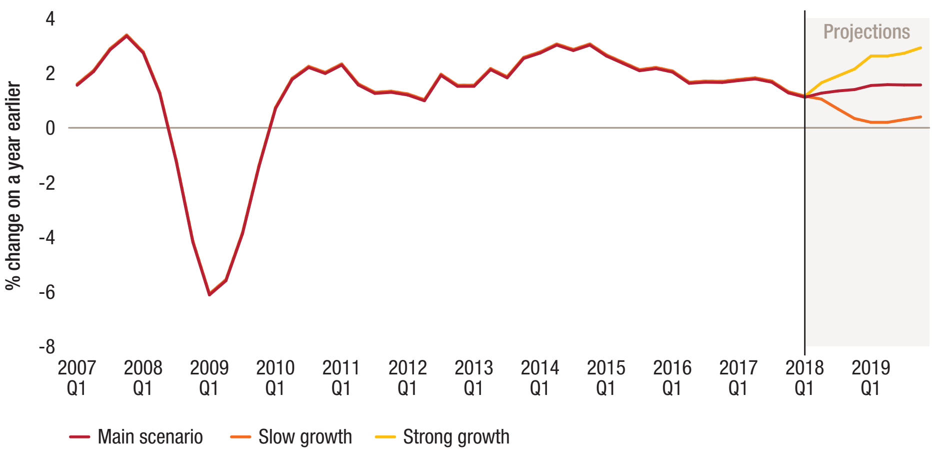
As discussed in detail in Section 3 of this report, we project a further softening of UK house price growth to around 3% in 2018 and we expect this to continue at a similar average rate in the medium term to 2025. This implies that the average UK house price would rise from £221,000 in 2017 to around £285,000 by 2025. Price growth at this pace would mean that the ratio of house prices to earnings would remain broadly stable, but still at high levels by historical standards.

We expect that most regions will experience house price growth in 2018 broadly similar to that of the UK average (see Table 1.2). The exception is London, where we project that average house prices could drop by nearly 2% in 2018 compared to 2017. In the medium term, however, London house price growth should pick up again, and a large affordability gap will remain between the capital and other UK regions as illustrated by the projections for average regional house prices in 2022 in the final column of Table 1.2.

We have also considered the effect of the recent marked trend towards fixed rate mortgages, which in 2017 accounted for 94% of new mortgages compared to only around 50% in 2010. At the same time, only around 28% of UK households now have a mortgage, as opposed to renting or owning their home outright. Combining these two factors, we estimate that only around 11% of all UK households would now be immediately affected if mortgage interest rates rose, compared to around 24% in 2012. This would be a reason for the MPC not to be overly concerned about small rate rises causing significant short-term economic damage.

Past rises in UK house prices have been driven by a number of factors, but one of these has been a lack of new housing supply. To further investigate this we have carried out new analysis at the local authority level across England, which suggests a clear link between a lack of new housing supply, relative to population growth, and local house price growth since 2011. This has been particularly marked in London, where we estimate that around 110,000 more homes would need to have been built between 2011 and 2016 to keep up with population growth.

Figure 1.1 – Alternative UK GDP growth scenarios



Sources: ONS, PwC scenarios

Table 1.2: Projected regional house price growth and house price values (£000's) in our main scenario

	Average house price growth			Average house price values (£'000s in cash terms)	
Region	**2018**	**2019**	**2020-2022 (average)**	**2017**	**2022**
East of England	4.0%	4.5%	3.4%	283	340
East Midlands	4.4%	3.7%	3.4%	180	216
South West	4.3%	3.7%	3.6%	245	295
West Midlands	4.8%	4.3%	3.6%	185	225
South East	2.3%	3.1%	3.3%	318	369
North West	3.2%	2.7%	3.5%	155	182
London	-1.7%	-0.2%	2.6%	480	509
Wales	3.0%	2.1%	3.4%	150	175
Scotland	4.8%	3.4%	3.6%	143	172
Yorkshire & the Humber	3.5%	2.7%	3.4%	155	182
Northern Ireland	3.4%	3.9%	4.0%	128	154
North East	1.2%	0.7%	3.1%	127	141
UK	**2.9%**	**2.8%**	**3.4%**	**221**	**259**

Source: ONS, PwC analysis

Looking ahead, if the government can achieve its target of building 300,000 new homes a year in England by the mid-2020s, then this should exceed the increase in housing demand from projected population growth and therefore start to make up the backlog from past under-supply. But our local analysis suggests that many of these homes need to be built where demand is highest in London and the South East and the East of England to prevent a further worsening of affordability in those regions. Local targets need to be set and met for housebuilding, linked to supporting infrastructure development, as well as national targets.

What will be the net long-term impact of AI and related technologies on UK jobs?

AI and related technologies such as robots, drones and driverless vehicles could displace many jobs formerly done by humans over the coming decades. But, as we discuss in detail in Section 4 of this report, this will also create many additional jobs as productivity and real incomes rise and new and better products are developed.

We estimate that these countervailing displacement and income effects on employment are likely to broadly balance each other out over the next 20 years in the UK, with the share of existing jobs displaced by AI (c.20%) likely to be approximately equal to the additional jobs that are created. However, there will inevitably be 'winners' and 'losers' by industry sector (see Table 1.3).

The sectors that we estimate will see the largest net increase in jobs due to AI and related technologies in the long run include health (+22%), professional, scientific and technical services (+16%) and education (+6%). The sectors estimated to see the largest net long-term decrease in jobs due to AI include manufacturing (-25%), transport and storage (-22%) and public administration (-18%).

Table 1.3: Estimated job displacement and creation from AI by industry sector (2017-37)

Industry sector	% of existing jobs (in 2017)			Number of jobs (000s)		
	Creation	**Displacement**	**Net effect**	**Creation**	**Displacement**	**Net effect**
Health and social work	34%	-12%	22%	1,481	-526	955
Professional, scientific and technical	33%	-18%	16%	1,025	-541	484
Information and communication	27%	-18%	8%	388	-267	121
Education	12%	-5%	6%	345	-158	187
Accommodation and food services	22%	-16%	6%	518	-371	147
Administrative and support services	23%	-24%	-1%	698	-733	-35
Other sectors	13%	-15%	-2%	466	-533	-67
Wholesale and retail trade	26%	-28%	-3%	1,276	-1,403	-127
Construction	12%	-15%	-3%	279	-355	-75
Financial and insurance activities	18%	-25%	-7%	209	-286	-77
Public administration and defence	4%	-23%	-18%	64	-339	-274
Transportation and storage	17%	-38%	-22%	296	-683	-387
Manufacturing	5%	-30%	-25%	133	-814	-681
Total	**20%**	**-20%**	**0%**	**7,176**	**-7,008**	**169**

Source: PwC analysis

Based on differences in industry structure alone, our projections do not imply large variations by region, though our central estimates imply a small net job gain in London offset by small net losses in the North and Midlands. But other factors could lead to larger regional variations than captured by our analysis.

Although our central estimate is that the net effect of AI on jobs will be broadly neutral, there are many uncertain factors that could tip the balance towards more optimistic or pessimistic scenarios.

We identify some policy areas where action could help to maximise the benefits (e.g. boosting research funding for AI, ensuring competition is adequate to ensure productivity gains are passed on to consumers) and/or mitigate the costs in terms of impacts on jobs (e.g. a national retraining programme for older workers as well as renewed efforts by schools and universities to build STEAM skills).

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 2017 and this is expected to continue, increasing the global weighted average real growth rate to 3.4% in 2018 before easing slightly to 3.2% in 2019 (using GDP at market exchange rates as weights – global GDP using PPP weights might be just under 4% in both years). This growth is expected to be driven by the large emerging economies with continued strong growth of around 7.4% in India and around 6.5% in China this year. The outlook for emerging markets has also brightened as a result of somewhat improved economic conditions in Russia and Brazil, which are now moving gradually out of recession. Indonesia is also expected to continue to grow strongly at over 5% in 2018-19, with the ASEAN economies as a group also generally performing well.

There has been a clear upswing in Eurozone economic activity over the past two years, increasing projected growth to over 2% this year despite some recent slowdown. Relative to the rest of the G7, strong US growth of just under 3% is projected in 2018 as fiscal stimulus strengthens an already recovering economy. But this could be offset by gradual rises in US interest rates to keep inflation there under control, causing some slowing of growth next year. Any further shift towards greater protectionism by the US could also pose significant downside risks to growth in 2019 and beyond both in the US and in the world more generally.

These projections are updated regularly 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 (%)	
	2017 at MERs	2018p	2019p	2018p	2019p
US	24.3%	2.9	2.5	2.5	2.2
China	15.0%	6.5	6.3	2.3	2.4
Japan	6.1%	1.0	0.8	0.5	1.1
UK	3.3%	1.3	1.6	2.5	2.2
France	3.2%	2.2	1.9	1.7	1.5
Germany	4.6%	2.4	2.1	2.1	1.7
Greece	0.3%	2.0	2.1	0.8	1.2
Ireland	0.4%	4.6	3.3	0.9	1.3
Italy	2.4%	1.3	1.1	1.1	1.4
Netherlands	1.0%	2.7	2.3	1.6	1.9
Portugal	0.3%	2.1	1.9	1.1	1.7
Spain	1.6%	2.8	2.4	1.7	1.7
Poland	0.7%	3.9	3.4	1.9	2.5
Russia	1.9%	1.8	1.7	4.0	4.2
Turkey	1.1%	3.2	3.8	8.4	8.1
Australia	1.7%	2.9	3.0	2.2	2.5
India	3.3%	7.4	7.6	4.8	5.0
Indonesia	1.3%	5.2	5.3	3.8	3.9
South Korea	1.9%	2.9	3.0	1.6	1.9
Argentina	0.8%	2.1	3.0	23.5	n/a
Brazil	2.6%	2.5	2.7	3.5	4.0
Canada	2.1%	2.0	1.9	2.4	1.9
Mexico	1.4%	2.1	2.2	4.2	3.9
South Africa	0.4%	1.3	1.5	5.3	5.6
Nigeria	0.5%	2.0	3.4	12.1	10.7
Saudi Arabia	0.9%	1.3	1.9	3.7	3.0
World (PPP)		3.9	3.8	3.1	2.9
World (Market Exchange Rates)	100%	3.4	3.2	2.7	2.5
G7	46.0%	2.3	2.0	2.1	1.9
Eurozone	13.9%	2.3	2.0	1.7	1.6

Source: PwC main scenario for 2018 and 2019; IMF for GDP shares in 2017 at market exchange rates (MERs).

Appendix B
UK economic trends: 1979 – 2017

Annual averages	GDP growth	Household expenditure	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	4.2
1980	-2.0	0.1			16.6	0.5	3.9
1981	-0.8	0.3			13.9	1.5	3.0
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	2.5
1986	3.1	6.0			10.9	-1.0	2.0
1987	5.3	5.0			9.7	-1.6	1.3
1988	5.8	7.3			10.4	-3.5	-0.6
1989	2.6	3.8		5.2	13.9	-4.1	-0.6
1990	0.7	1.0		7.0	14.8	-3.1	0.6
1991	-1.1	-0.5	-4.9	7.5	11.5	-1.3	2.6
1992	0.4	0.9	-0.1	4.3	9.6	-1.5	5.6
1993	2.5	2.9	1.4	2.5	5.9	-1.3	6.7
1994	3.9	3.2	4.7	2.0	5.5	-0.5	5.8
1995	2.5	2.0	1.5	2.6	6.7	-0.7	4.6
1996	2.5	3.8	0.8	2.5	6.0	-0.6	3.3
1997	4.3	4.4	1.7	1.8	6.8	0.0	1.9
1998	3.3	4.0	0.4	1.6	7.3	-0.5	0.3
1999	3.2	4.8	0.5	1.3	5.4	-2.5	-0.7
2000	3.5	4.7	2.2	0.8	6.1	-2.4	-1.5
2001	2.8	3.6	-1.5	1.2	5.0	-2.2	-0.2
2002	2.5	3.8	-2.1	1.3	4.0	-2.3	2.0
2003	3.3	3.6	-0.5	1.4	3.7	-1.9	3.4
2004	2.3	3.1	1.8	1.3	4.6	-2.3	3.3
2005	3.1	3.1	0.0	2.1	4.7	-2.0	3.2
2006	2.5	1.8	2.1	2.3	4.8	-3	2.8
2007	2.5	2.6	0.6	2.3	6.0	-3.6	2.6
2008	-0.3	-0.6	-2.8	3.6	5.5	-4.2	5.4
2009	-4.2	-3.2	-9.4	2.2	1.2	-3.6	10.1
2010	1.7	0.8	4.6	3.3	0.7	-3.4	9.0
2011	1.6	-0.9	2.2	4.5	0.9	-2.0	7.1
2012	1.4	1.7	-1.4	2.8	0.8	-3.8	7.6
2013	2.0	2.0	-1.0	2.6	0.5	-5.1	5.6
2014	2.9	2.1	2.9	1.5	0.5	-4.9	5.3
2015	2.3	2.7	0.0	0.0	0.6	-4.9	4.1
2016	1.8	3.2	0.4	0.7	0.5	-5.2	2.9
2017	1.7	1.9	2.5	2.7	0.3	-3.9	1.8
Average over economic cycles****							
1979 - 1989	2.8	3.7			12.2	-0.8	2.2
1989 - 2000	2.4	2.9		3.3	8.3	-1.5	2.4
2000 - 2014	1.9	1.9	-0.2	2.2	3.3	-3.1	4.4

* Pre-1991 figures for manufacturing output growth are not currently available on a consistent basis ** Pre-1997 data estimate
*** Public Sector Net Borrowing (calendar years excluding public sector banks) **** Peak-to-peak for GDP relative to trend
Sources: ONS, Bank of England

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