July 2014

UK Economic Outlook

UK house prices – bubble or no bubble?

The UK's standing in the world

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Contents

Highlights and key messages for business and public policy

- After a period of generally disappointing growth in 2011 and 2012, the UK economy showed clear signs of recovery during 2013 that have continued in the first half of 2014.
- In our main scenario we expect GDP growth to pick up from 1.7% in 2013 to around 3% in 2014, before easing slightly to 2.6% in 2015 as consumer spending growth moderates as the run down in savings reaches its limits. Risks to growth are now more balanced, with both upside and downside possibilities.
- The services sector will remain the main engine of UK growth for both output and employment, but both manufacturing and construction are also now showing positive growth trends.
- We expect London and the South East to continue to lead the recovery, but all regions should see relatively strong growth in 2014 (see Figure 1.1).
- Consumer price inflation is likely to remain at or just below target in 2014-15. We expect the MPC to keep interest rates on hold in the short term, but then to increase them gradually from late 2014 or early 2015 onwards, perhaps returning to around 4% by 2020. Businesses should start to prepare for this upward trend now.

Key projections

	2014	2015
Real GDP growth	3.0%	2.6%
Inflation (CPI)	1.7%	1.9%

Source: PwC main scenario projections

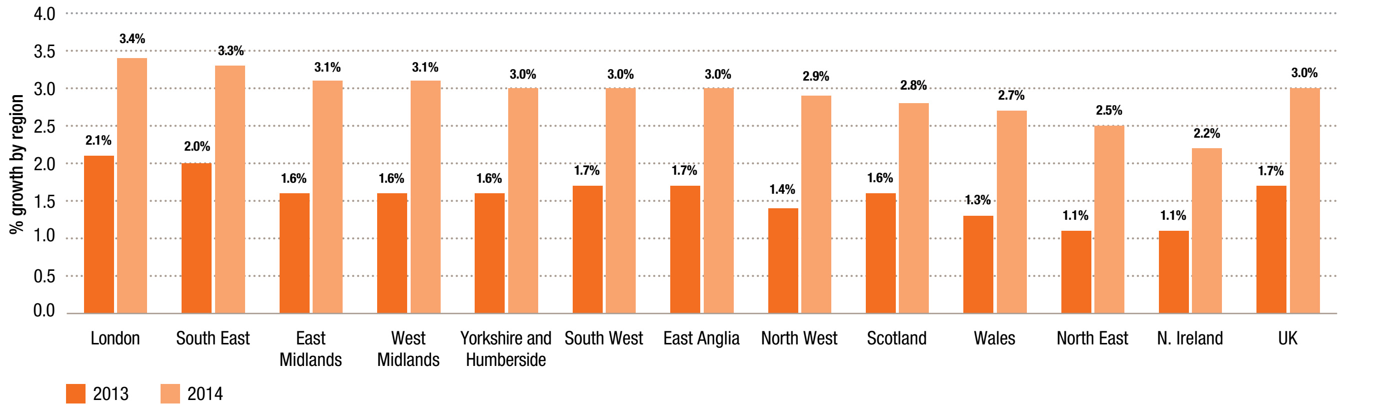
Housing market remains strong for now – but London prices look bubbly

- Our detailed analysis in this report suggests that average UK house prices could rise by around 8% this year, with prices increasing by around 13% in London. However, we expect the pace of growth to moderate over the next two to three years.
- Under our baseline scenario, our analysis suggests that, by the end of 2015, the average property in the UK could be worth around £276,000, up from £242,000 at the end of 2013. By 2020, the average UK house could be worth close to £330,000.
- On balance, we believe that the market is not yet overheating at a national level, although evidence of a bubble in the London market is stronger as borrowers are more stretched on average in the capital.

UK growing strongly recently, but lags behind G7 peers on social indicators

- We project the UK to be the fastest growing of the G7 economies this year, but we also believe that you need to look beyond GDP when assessing national performance and potential. On the broader range of measures covered by our ESCAPE Index, the UK ranks only 5th of the G7 economies in 2013, down from 3rd place in the G7 in 2000 and 2007.
- This reflects both a fall in our relative economic ranking since 2007 and a consistently poor performance compared to our G7 peers on social indicators relating to education and income inequality.
- Against this, the UK scores slightly above the G7 average on environmental sustainability and clearly above the average in terms of political stability, ease of doing business and communications technologies.
- Overall, therefore, our ESCAPE index shows the UK has important strengths to build on but also some serious structural weaknesses to address.

Figure 1.1: PwC main scenario for output growth by region



Source: PwC main scenario estimates and projections

1 – Summary

Recent developments

The UK economy grew by 0.8% in the first quarter of 2014 compared to the previous quarter, and was up by just over 3% on a year earlier. The recovery has now gathered real momentum after a couple of sluggish years in 2011 and 2012.

Growth has been driven primarily by services over the past five years, but the latest data from both business surveys and official sources indicate that manufacturing and construction are also now on an upward trend. This momentum seems to have carried over into the second quarter of the year.

A calmer situation in the Eurozone has supported financial markets since autumn 2012, while the US economy still seems to be on the road to recovery despite some dip in activity in early 2014 due to heavy snowfall. Emerging market performance has been much less strong, however, with Chinese growth slowing (but remaining fast in absolute terms) and more marked downturns in economies such as India, Brazil, South Africa and Turkey. The situation with Russia and Ukraine also remains an important source of geopolitical uncertainty, as does ongoing conflict in the Middle East. A marked increase in global oil prices could have a significant negative impact on UK GDP growth.

UK employment has continued to rise strongly, which has supported consumer spending growth despite persistent subdued rates of real earnings growth. Rising house prices have also supported consumer confidence and spending, but have also raised concerns about over-heating that we discuss further below.

Business investment has also shown signs of recovery since early 2013, although it remains well below pre-crisis levels. Public spending cuts have slowed down over the past year, but will remain a drag on growth for many years to come.

Table 1.1: Summary of UK economic prospects

Indicator (% change on previous year)	OBR forecasts (March 2014)		Independent forecasts (June 2014)		PwC Main scenario (July 2014)	
	2014	2015	2014	2015	2014	2015
GDP	2.7	2.3	3.0	2.5	3.0	2.6
Consumer spending	2.1	1.8	2.5	2.5	2.7	2.5
CPI	1.9	2.0	1.8	2.1	1.7	1.9

Source: Office for Budget Responsibility (March 2014), HM Treasury survey of independent forecasts (average values in June 2014 survey) and PwC main scenario.

The rate of consumer price inflation (CPI) has drifted down over the past year as import price inflation has moderated and is now somewhat below its 2% target rate.

Future prospects

As shown in Table 1.1, our main scenario is for UK GDP growth to average around 3% in 2014 and around 2.6% in 2015. This is similar to the latest consensus forecasts and slightly more optimistic than the OBR was in March, reflecting generally positive UK economic data since then.

Consumer spending growth is projected to follow a broadly similar pattern to GDP, with some moderation over time as the recent fall in the savings ratio bottoms out and spending becomes more reliant on real income growth, which we expect to pick up only very gradually. However, household incomes will be supported by continued employment growth.

Investment growth has picked up recently from a low base according to both latest official estimates and recent business surveys. We expect a further acceleration in investment growth over the remainder of this year and into 2015, helped by a continued recovery in housebuilding activity.

Net exports have been erratic and we do not expect them to lead the recovery in 2014-15, although a gradual upturn in the Eurozone should at least avoid them being a significant drag on overall UK GDP growth. This should be associated with positive growth in manufacturing output in 2014-15 as well as strong growth in services exports.

As always there are many uncertainties inherent in our growth projections, as illustrated by the alternative scenarios in Figure 1.2. Risks are now more balanced than for the last few years because, although there are still considerable downside risks relating to trends in the Eurozone and emerging markets (including Ukraine), there are also upside possibilities if these problems can be avoided and a virtuous circle of rising confidence and spending can be established as in past economic recoveries.

Inflation has fallen below the 2% target since January 2014 for the first time in more than four years, and we expect it to remain at or slightly below target in 2014-15 (see Table 1.1). There could still be upside risks to this inflation outlook in the longer term, however, if stronger global growth pushes commodity prices up again at some point, or if domestic wages start to recover without a corresponding rise in productivity.

We do not expect any immediate rise in official UK interest rates, but a gradual upward trend seems likely to begin during late 2014 or early 2015 and persist through the rest of the decade, perhaps returning official rates to a more normal level of around 4% by 2020.

Higher interest rates will help savers and reduce pension fund deficits, but borrowers (including businesses and the government) might gain from locking in funding now for long term investments such as infrastructure and housing. Households need to bear in mind likely future interest rate rises in any decisions on mortgages or other longer term loans.

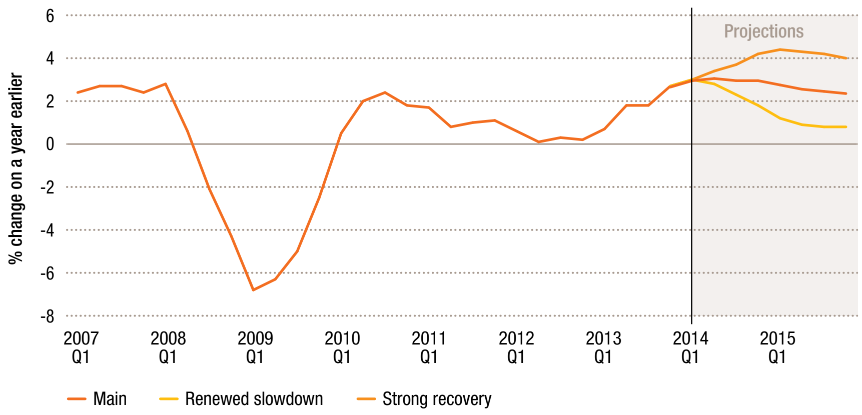
Outlook for house prices

As discussed in detail in Section 3 of this report, the UK housing market has leapt back into life. Prices across all regions are accelerating in stark contrast to the generally weak picture (at least outside London) seen until 12-18 months ago.

We project that average UK house prices could rise by around 8% this year, with prices increasing by around 13% in London. However, we expect the pace of growth to moderate over the next two to three years, with the downside risks being particularly pronounced in the case of London.

Under our baseline scenario, our analysis suggests that, by the end of 2015, the average property in the UK could be worth around £276,000, up from £242,000 at the end of 2013. By 2020, the average UK house could be worth close to £330,000 in cash terms (see Table 1.2).

Figure 1.2: Alternative UK GDP growth scenarios



Source: ONS, PwC scenarios

Table 1.2: UK nominal house price projections with high and low scenarios (£000s)

Year (annual average prices)	Baseline	High	Low
2013 (actual)	242	242	242
2014	262	266	257
2015	276	283	254
2020	328	344	275

Source: ONS for 2013, PwC projections for 2014-20

On balance, we believe that the market is not yet overheating at a national level, although evidence of an emerging bubble is stronger in London as borrowers are more stretched in the capital. However, even at national level, there are important medium-term risks that policymakers need to monitor with care.

Recent recommendations from the Financial Policy Committee (FPC) focused in particular on restricting the proportion of new mortgages at high loan-to-income ratios, which seems sensible. Indeed some leading banks have already taken action to limit their exposures here. Concerns about a possible house price bubble could also be one factor causing interest rates to rise sooner rather than later.

There could also be a case for phasing out the Help to Buy mortgage guarantee scheme before the end of its three year term, although its impact on house prices does not seem to have been significant so far. In the longer term, increased housing supply is the priority to keep prices under control.

Table 1.3: Actual and projected GDP league table in 2013, 2020 and 2030

2013			2020p			2030p		
GDP rank	Country	GDP at MER (2013 US$ bn)	GDP rank	Country	GDP at MER (2013 US$ bn)	GDP rank	Country	GDP at MER (2013 US$ bn)
1	US	17,528	1	US	20,310	1	US	25,585
2	China	10,028	2	China	15,855	2	China	25,009
3	Japan	4,846	3	Japan	5,209	3	India	6,172
4	Germany	3,876	4	Germany	4,205	4	Japan	5,695
5	France	2,886	**5**	**UK**	**3,258**	5	Germany	4,613
6	**UK**	**2,828**	6	France	3,182	**6**	**UK**	**4,027**
7	Brazil	2,216	7	India	3,175	7	Brazil	3,858
8	Italy	2,171	8	Brazil	2,748	8	France	3,846
9	Russia	2,092	9	Russia	2,563	9	Russia	3,659
10	India	1,996	10	Italy	2,323	10	Mexico	2,791

Source: IMF estimates for 2013, PwC baseline projections for 2020 and 2030 at market exchange rates (MERs)

UK growing strongly recently, but lagging behind G7 peers on social indicators

The UK looks set to the fastest growing economy in the G7 this year, but what about its longer term economic standing in the world? Our detailed analysis in Section 4[1] suggests that:

- The UK could remain the sixth largest economy in the world in 2030 when measured by GDP at market exchange rates[2], falling behind India but overtaking France (see Table 1.3).
- The UK has the potential to become the second largest EU economy on this measure, moving ahead of France before 2020, and narrowing the gap with Germany by 2030.

However, it's not all good news. We have also looked beyond GDP at broader measures of performance by using an updated version of our ESCAPE Index[3]. This shows that, in 2013, the UK ranked only 5th of the G7, down from 3rd place in 2000 and 2007. The UK's performance relative to the G7 was:

- Below average in the economic performance and stability category, although this was attributed largely to adverse cyclical variations in the economy since 2007 and is expected to improve gradually now that the UK is recovering relatively fast.
- Significantly below average for the G7 in the social progress and cohesion category, which is driven primarily by relatively high income inequality in the UK and a relatively poor performance on education.
- Significantly better than the G7 average in the political and regulatory institutions and communications technology categories, and slightly better on environmental sustainability.

Overall, therefore, the UK is growing relatively strongly at present and has some important strengths, but it also has some deeper structural weaknesses to address in the longer term, particularly around education and inequality. Maintaining recent relatively strong growth will also require increased productivity, which also requires improved education and skills levels, as well as increased business and infrastructure investment.

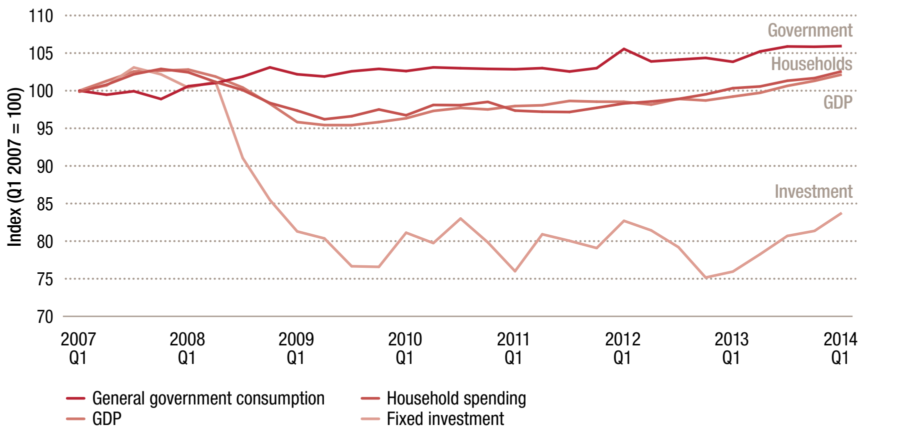
1 We assume that Scotland remains part of the UK in these projections and other analysis in this report, but this should not be taken as implying any judgement on the outcome of the Scottish independence vote.
2 The UK would fall to 9th place if we instead used purchasing power parity (PPP) exchange rates, as discussed in Section 4.
3 The PwC ESCAPE index combines 20 indicators across five dimensions: economic growth and stability, social progress and cohesion, communications technology, political and regulatory institutions, and environmental sustainability. It therefore provides a much more holistic measure of national performance than GDP alone (see Section 4 for more details).

2 – UK Economic prospects

Key points

- The UK recovery remains on track with growth of around 3% in the year to the first quarter of 2014.
- The recovery is being driven primarily by the services sector, but there has also been positive news over the past year from the construction and manufacturing sectors. Business surveys for all three sectors suggest that activity should continue to grow at a healthy pace during the second half of 2014.
- The acceleration in GDP growth has been driven primarily by consumer spending as employment and confidence have risen. Fixed investment has also picked up from a low base over the past year as both business investment and housebuilding have risen.
- We expect the UK economy to grow by around 3% in 2014, building on 1.7% growth in 2013, but growth may then moderate slightly to around 2.6% in 2015.
- We expect all the UK regions to grow at a faster rate in 2014 than in 2013, with London growing fastest (3.4%) and Northern Ireland seeing the slowest growth rate (2.2%).

Figure 2.1: GDP and key components of domestic demand



Source: ONS

- There are still some important downside risks to the UK economic recovery including a slowdown in activity in the Eurozone, unrest in Ukraine and the Middle East, with a potential impact on global energy prices, and potential problems in some major emerging markets. But there are also upside possibilities including stronger than expected business investment and a return to real wage growth pushing up consumer spending faster than projected in our main scenario.
- Inflation is currently below the Bank of England's 2% target and is expected to remain relatively subdued over the next 18 months. We would, however, expect interest rates to start rising gradually from late 2014 or early 2015 to head off longer term inflationary risks, including overheating in the housing market.

Introduction

In this section of the report we describe recent developments in the UK economy and review future prospects.
The discussion covers:

2.1 Recent developments and the present situation

2.2 Economic growth prospects: national, sectoral and regional

2.3 Outlook for inflation

2.4 Monetary and fiscal policy options

2.5 Summary and conclusions

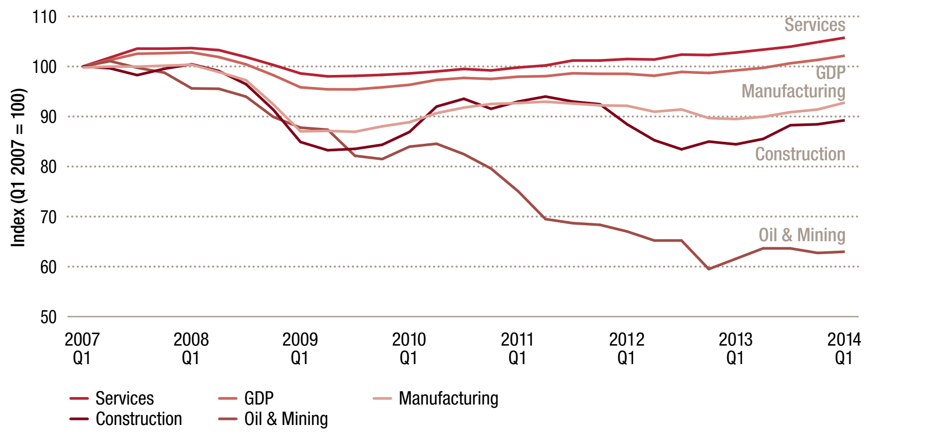
2.1 – Recent developments and the present situation

The UK[1] economy grew by 0.8% in the first quarter of 2014, building on growth of 0.7% in the final quarter of 2013. Growth has now been above trend for four consecutive quarters with total GDP growth of around 3% in the year to Q1 2014. The level of GDP[2] looks set to rise back above its pre-recession peak in Q2 2014 and indeed has already done so for output excluding North Sea oil and gas production.

Recent GDP growth has been driven by consumer spending, which has followed a very similar path to GDP since 2007, as shown by Figure 2.1 Government consumption has also been rising despite the much talked about austerity - it has been above its 2007 Q1 level since the first quarter of 2008. However, the story is different with fixed investment. It fell sharply during the downturn in 2008 and 2009 and did not show a clear recovery in 2010-12. But it has been picking up steadily in recent quarters due in large part to strong business investment and private dwellings investment. As Figure 2.1 shows, however, investment still has a lot of ground to make up before it returns to pre-recession levels.

The services sector continues to be the main driver of UK growth. GDP and services have followed a broadly similar path since 2007, as shown in Figure 2.2. Whereas GDP is only now regaining its previous peak, however, the services sector is comfortably above its pre-recession level and remains on a steady upward trajectory.

Figure 2.2: Sectoral output and GDP trends



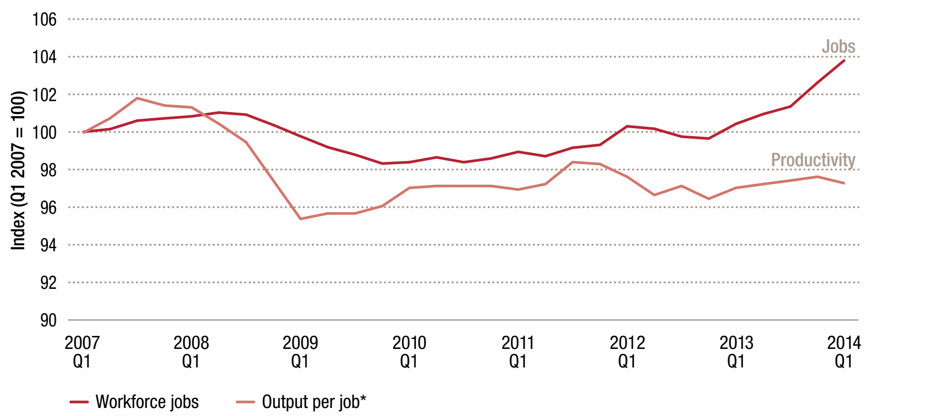
Source: ONS

However, other sectors are also bouncing back well. The manufacturing sector has mounted a steady recovery over the past year. Quarter-on-quarter growth has been more volatile in the construction sector, but has also been on a general upward trend and rose strongly in the first quarter of 2014. The output of the oil and mining sector was very weak prior to 2013, but has shown signs of stabilising since then.

While the UK economy is recovering, this is still characterised by strong jobs growth offset by relatively weak productivity and pay growth.

Figure 2.3 shows that employment has increased well above pre-recession levels, while the unemployment rate in March 2014 was 6.6%, a rate not seen since December 2008. However,

Figure 2.3: Employment is rising strongly but productivity is not following



Source: ONS
Note: *Estimate for 2014 Q1

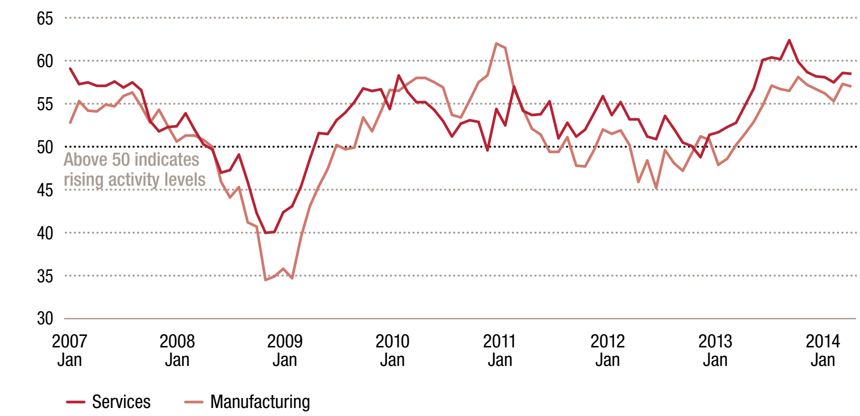
1 Throughout this report, we assume that the status quo continues in terms of Scotland remaining part of the UK. This is purely an assumption and should not be taken as representing any judgement on the outcome of the September 2014 vote on Scottish independence.
2 As discussed in Box 2.1, there will be significant revisions to the level of UK GDP in September 2014, but for this report we use the existing national accounts definitions and data (as published on 27 June 2014).

the latest available data shows that productivity is not on a similar path as it remains well below its pre-recession level. Real earnings have also been falling for some years, although declining price inflation means the squeeze should not be quite as tough for consumers to bear going forward. For the UK recovery to remain sustainable, productivity and pay must rise together so that consumer spending growth can be supported by increased real income, not just lower saving or increased borrowing. If this does not happen, then the recovery could be at risk in the medium term.

Business surveys suggest recovery continued in second quarter

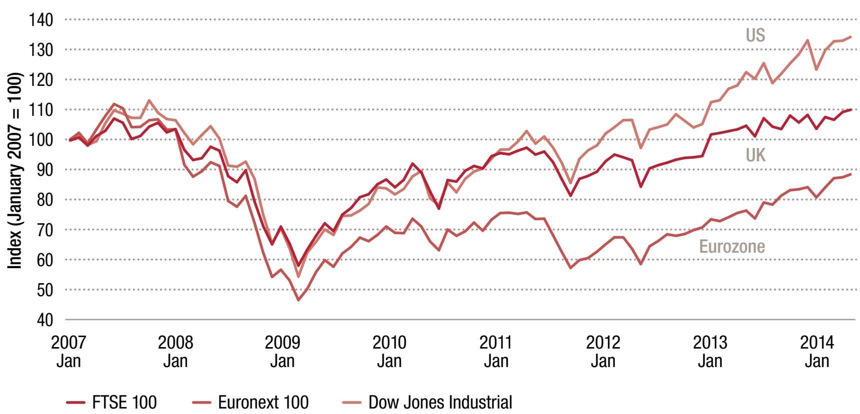
Official GDP data are only available up to Q1 2014, but more recent business surveys suggest that the relatively strong UK recovery continued into the second quarter. The latest Markit/CIPS Purchasing Managers' Indices (PMIs) for services and manufacturing were both significantly above 50 meaning that activity in these sectors is increasing at a relatively strong pace (Figure 2.4), even if not as rapidly as earlier in the year. The construction PMI, which is not shown in the chart, has also been above 50 for a sustained period of time due in particular to stronger housebuilding activity.

Figure 2.4: Purchasing Managers' Indices of business activity



Source: Markit/CIPS

Figure 2.5: Equity market indices



Source: Thomson Reuters Datastream

Rising house prices have also been a support to consumer confidence and spending, although concerns remain about a bubble developing. We discuss this topic in much more detail in Section 3 below, concluding that there is not yet strong evidence of a bubble outside London, although this is clearly an area that the Bank of England will need to watch with care.

Equity market indices have been on a generally upward trend since the end of 2011, although there has been some short term volatility, as shown in Figure 2.5. This chart shows that equity markets in the US and (to a much lesser degree) the UK, have moved back above pre-crisis levels. Eurozone markets remain at lower levels, but have also shown a clear upward trend since autumn 2012.

Box 2.1
Changes to UK National Accounts from September 2014

From September 2014 a number of changes to UK National Accounts will come into effect for the 2014 Blue Book. These changes fall into two categories:

1. ESA 2010 / BPM 6 changes – The European System of Accounts (ESA) 2010 and Balance of Payments Manual (BPM) 6 changes will bring the UK into line with the latest agreed international standards.

2. Non ESA 2010 / BPM 6 changes – Some other methodological changes will be implemented at the same time.

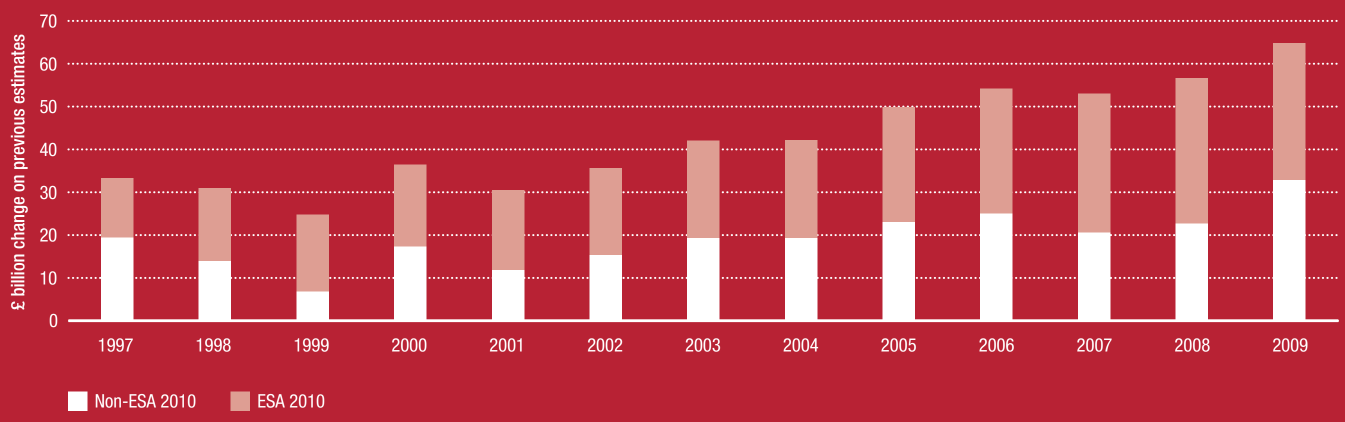
Within the ESA 2010/BPM 6 changes, there are some changes that will have a direct effect on GDP. These include a new treatment for R&D, spending on weapons systems and funded defined benefit pension schemes. However, there will be some other changes that will not affect the level of total GDP, such as the treatment of goods sent abroad for processing and remote gambling. Similar ESA 2010/BPM 6 changes will be applied across the EU.

Within the Non ESA 2010/BPM 6 changes, one of the most talked about and most sizable changes is the inclusion of certain illegal activities (drug dealing and prostitution) in the UK National Accounts for the first time. The ONS have estimated that these activities will add approximately £10 billion to 2009 GDP, although inevitably these are subject to wider margins of error.

The ONS have also estimated the total impact of the methodological changes to UK GDP in current prices from 1997 to 2009 (See Figure 2.1.1 below), although not yet for more recent years or, at the time of writing, in real terms adjusted for inflation.

In 2009, the combined upward revision to GDP at current prices will be in the region of £65 billion, or around 4.6% of GDP. This shows that these changes could have a significant impact on GDP data. However, it is important to note that this is based on nominal GDP and not real GDP which will be of more interest. The impact on average nominal GDP growth over this period is also not that great at only around 0.06% per annum. The impact on growth going forward is also unclear and, in principle, could be in either direction.

Figure 2.1.1: Revisions to nominal GDP at current prices



Source: ONS

2.2 – Economic growth prospects: national, sectoral and regional

We expect the recovery in the UK to continue during the next two years. In our main scenario, we are projecting GDP growth of around 3% in 2014 following on from 1.7% growth in 2013. We then expect growth to slow slightly in 2015 to 2.6% as consumer, investment and government consumption growth all moderate somewhat (see Table 2.1).

We have revised these projections up from our March 2014 UK Economic Outlook, where we projected growth of 2.6% in 2014 and 2.4% in 2015. This is due to the improved economic data coming out of the UK for the first half of 2014, but the broad profile of growth over time remains similar.

Our main scenario projection assumes a faster rise in consumer spending growth in 2014 and 2015 than was seen in 2013. However, consumer spending growth is expected to moderate slightly in 2015 as the driver of consumption moves from a declining savings rate to rising real wages.

We are projecting a strong return to growth for fixed investment as business investment picks up, continuing the trend over the past year. The low base level of fixed investment relative to the other key components of domestic demand (consumer spending and government consumption), which we can see from Figure 2.1 above, makes a strong rise in this element of spending plausible in response to stronger consumer demand and business confidence.

We are not expecting net exports to contribute much to GDP growth in either 2014 or 2015. Relatively sluggish growth in the Eurozone, combined with the uncertainty surrounding events in Ukraine and the Middle East, as well as decelerating growth in some emerging markets, makes a strong pickup in UK exports unlikely. This leads us to believe that domestic demand will remain the main source of UK GDP growth in 2014 and 2015.

Comparing Tables 2.1 and 2.2 shows that our main scenario growth projections are higher than the OBR forecasts in March, reflecting recent stronger data. Our projections are, however, broadly similar to the average of the independent forecasts compiled by the Treasury in June.

Table 2.1: PwC main scenario for UK growth and inflation

(% real annual growth unless stated otherwise)	2013	2014p	2015p
GDP	1.7%	3.0%	2.6%
Consumer spending[3]	2.2%	2.7%	2.5%
Government consumption	0.7%	0.6%	0.5%
Fixed investment	-0.8%	7.8%	5.8%
Domestic demand	1.8%	2.8%	2.6%
Net exports (% of GDP)	0.1%	0.2%	0.0%
CPI inflation (%: annual average)	2.6%	1.7%	1.9%

Source: ONS for 2013, PwC main scenario projections for 2014-15.

Table 2.2: Official and independent forecasts

(% real YoY growth unless stated otherwise)	Latest estimates	OBR forecasts (March 2014)		Average independent forecast (June 2014)	
	2013	2014	2015	2014	2015
GDP	1.7%	2.7%	2.3%	3.0%	2.5%
Manufacturing output	-0.7%	N/A	N/A	3.1%	2.2%
Consumer spending	2.2%	2.1%	1.8%	2.5%	2.5%
Fixed investment	-0.8%	8.6%	8.2%	7.6%	6.9%
Government consumption	0.7%	1.2%	-0.5%	1.0%	0.1%
Domestic demand	1.8%	2.9%	2.2%	2.8%	2.5%
Exports	0.5%	2.6%	4.7%	3.1%	4.5%
Imports	0.2%	3.0%	4.3%	2.5%	4.4%
Current account (£ bn)	-73	-40	-34	-63	-57
Unemployment claimant count (Q4 m)	1.3	1.2	1.1	1.1	1.0

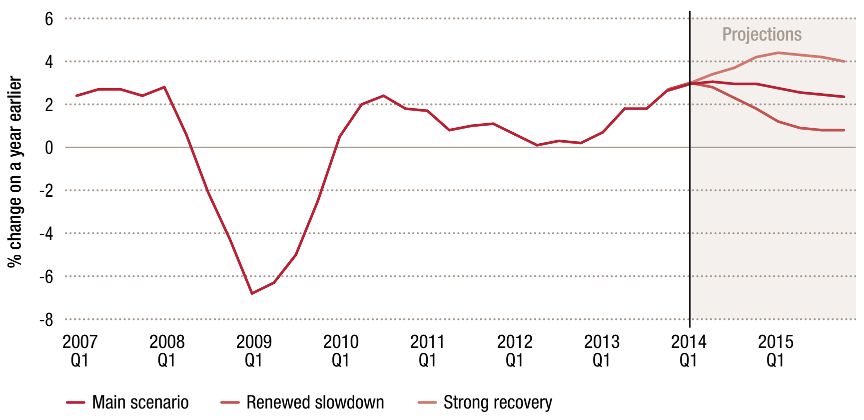
Source: ONS for 2013, OBR Economic and Fiscal Outlook (March 2014), HM Treasury Forecasts for the UK economy: a comparison of independent forecasts (June 2014)

3 We define this as household consumption expenditure not including consumption by not-for-profit institutions serving households.

As with any economic projections, there is considerable uncertainty around our main scenario. Therefore, we have developed two additional scenarios for UK growth as shown in Figure 2.6:

- Our **'strong recovery' scenario** sees UK growth accelerate further to around 4% on average in 2015. This scenario assumes that the Eurozone economy will recover more quickly over the next year than in our main scenario, pushing both consumer and business confidence upwards in the UK. This will feed through to a significant increase in business investment and consumer spending, as well as increased demand for UK exports. This scenario also assumes a stronger growth rate in other economies.
- Our **'renewed slowdown' scenario**, by contrast, sees UK growth falling back over the next two years due to adverse shocks from the Eurozone, problems in some major emerging markets (including Ukraine/Russia), and a fall in the supply of oil (pushing prices up)[4] due to increased political instability in the Middle East. These events would have a direct effect on UK businesses and would lead to a fall in business investment, a halt to rising employment and a slowdown in consumer confidence and spending.

Figure 2.6: Alternative UK GDP growth scenarios



Source: ONS, PwC scenarios

While we do not think that either of these two scenarios are the most likely outcomes, they are certainly possible. Businesses should consider how they would be affected by events like this occurring and stress test their plans accordingly. However, it appears that the upside and downside risks to the UK economy are now quite balanced, possibly even leaning slightly more towards the upside in the short term given the recent positive momentum of the recovery.

Sectoral prospects

Table 2.3 shows actual and projected growth rates for 2013-2015 for five key sectors of the UK economy, as well as a summary of the key issues and trends affecting these sectors.

Regional prospects

All UK regions are now achieving reasonable positive growth but variations remain as shown in Figure 2.7. When compared to our March 2014 UK Economic Outlook, London is still expected to grow the fastest this year (at 3.4% now compared to the 3.1% rate we projected in March) and Northern Ireland is still expected to grow the slowest (at 2.2% compared to our projection of 1.9% in March). However, all regions are expected to show a higher rate of growth in 2014 than they achieved in 2013.

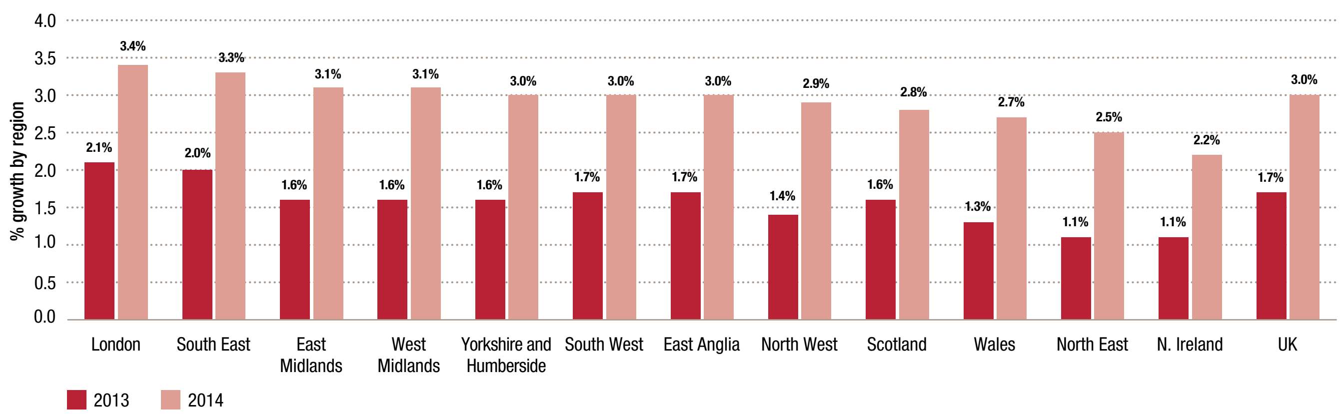
4 An OBR study in 2010 argued that a 20% increase in world oil prices could reduce UK growth by 0.34% in the first year. Similarly, the ready reckoner used by HM Treasury and the Bank of England is that a 10% increase in oil prices reduces UK GDP growth by 0.2% and raises inflation by a similar amount.

Table 2.3: UK sector dashboard

	Growth			
Sector	2013	2014p	2015p	Key issues/trends
Manufacturing	-0.7%	4.1%	3.4%	Manufacturing PMI surveys have shown increasing activity for some time now. Sluggish Eurozone growth and a relatively strong pound may hold back manufacturing exports, but UK domestic demand should remain strong in 2014-15.
Construction	1.6%	4.5%	2.0%	The construction PMI has also been showing increasing activity in the sector. Housebuilding has been one of the main drivers of the growth in the construction sector (estimates of which have been revised up in recent national accounts data).
Distribution, hotels & restaurants	3.5%	4.6%	2.9%	Retail sales have been growing at a strong pace over the past year, supported by strong price competition from internet sales. A gradual return to positive real wage growth should boost the demand for retailers, hotels and restaurants.
Business services and finance	2.2%	3.7%	3.4%	The UK financial sector remains exposed to external shocks and disappointing economic performance in the Eurozone, but business services remain a strong driver of growth.
Government services	0.6%	1.4%	1.2%	Government spending should continue growing over the next two years but at a slower rate after the 2015 election as the new government attempts to balance the books.
Total GDP	**1.7%**	**3.0%**	**2.6%**	

Source: ONS for 2013, PwC for 2014 and 2015 main scenario projections and key issues

Figure 2.7: PwC main scenario for output growth by region



Source: PwC analysis

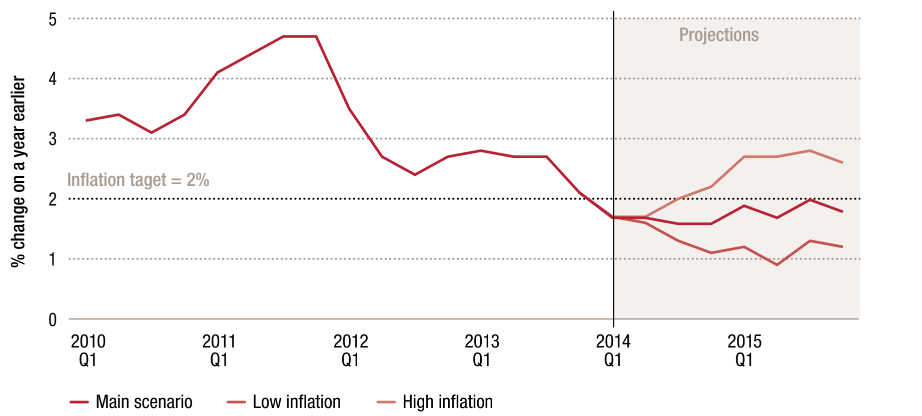
2.3 – Outlook for inflation

In our main scenario, we expect consumer price index (CPI) inflation to average around 1.7% in 2014, down from 2.6% in 2013. In 2015, we are projecting inflation to rise back towards its 2% target rate, averaging around 1.9%.

However, as mentioned above, all economic projections have a degree of uncertainty associated with them and we have therefore developed two alternative scenarios for CPI inflation (see Figure 2.8):

- In our **'high inflation' scenario,** we assume that there will be supply side commodity price shocks, such as rising global energy prices, and stronger than expected demand for goods and services. As a result, our projections rise to an average of 1.9% in 2014 and 2.7% in 2015 in this scenario.
- In our **'low inflation' scenario,** by contrast, we assume less domestic demand growth, a global economic slowdown and consequent falling commodities demand and prices. These assumptions lower our inflation projections to 1.4% in 2014 and 1.2% in 2015.

Figure 2.8: Alternative UK inflation (CPI) scenarios



Source: ONS, PwC scenarios

2.4 – Monetary and fiscal policy options

The Monetary Policy Committee (MPC) maintained the Bank Rate at 0.5% and the Quantitative Easing Asset Purchase Programme at £375bn at their latest meeting.

The central MPC estimate is that spare capacity in the economy stood at approximately 1%-1.5% of GDP in the second quarter of 2014, which would suggest that we are still some way away from the first rate rise. However, the minutes of the June MPC meeting emphasised that there is considerable uncertainty around how much slack is in the economy and that there are a number of opinions on the Committee.

Some MPC members have also expressed concerns related to potential overheating in the housing market, although the majority view seems to be that this is better dealt with by macroprudential measures rather than interest rates rises, as we discuss further in Section 3 below.

Overall, it does seem that the debate is hotting up over when interest rates will start to rise, with Mark Carney suggesting in his Mansion House speech in June that this could be sooner than markets had previously expected (i.e. late 2014 rather than early 2015).

Certainly, with the economy continuing to grow strongly and the uncertainty around how much spare capacity exists in the UK, it is possible that the amount of slack could begin to fall quicker than had previously been expected. If this occurs and inflation begins to pick up, while other factors such as high house prices remain a factor, it is quite possible that the MPC could start to increase the Bank Rate towards the end of this year. Businesses should take this into account in their forward planning, as well as factoring in longer term rises in rates to perhaps around 2.5% by early 2017 and around 4% by 2020. The post-crisis era of exceptionally cheap money will not last forever.

There was no significant change in the government's fiscal stance as a result of the 'swings and roundabouts' Budget in March. In general, we would expect overall fiscal plans to remain largely unchanged in the Autumn Statement as well, but we will revisit this in our next UK Economic Outlook in November.

2.5 – Summary and conclusions

The UK economy has continued to grow at an above trend rate during the first half of 2014 according to both official data for the first quarter and business surveys for subsequent months. Consumer spending and housing investment have been driving this growth, but business investment also started to rise strongly from a low base during the course of 2013 and should continue to do so during 2014 and 2015.

In our main scenario, we project GDP growth of around 3% in 2014, moderating slightly to 2.6% in 2015 but remaining above trend. All UK regions should see stronger growth in 2014 than in 2013, although London will continue to lead the pack.

Inflation is currently below its target rate of 2% and we expect it to remain at or below target over the next 12-18 months. However, we would expect the MPC to head off longer term inflation risks by starting to raise interest rates gradually in late 2014 or early 2015. Businesses should plan accordingly.

There is still a degree of uncertainty associated with UK economic growth. On the downside, the UK economy remains vulnerable to a slowdown in activity in the Eurozone or an escalation of recent unrest in Ukraine and the Middle East (potentially pushing up global energy prices). There are also important risks associated with continued disappointing productivity growth at home and an overheating housing market.

However, the upside possibilities are arguably at least as strong in the short term given the recent forward momentum of the domestic economy. For example, strongly rising business investment could further stimulate growth and a return to more consistently positive real wage growth could make the consumption-driven recovery stronger and more sustainable.

In summary, the UK recovery should remain relatively robust through 2014 and 2015, although its longer term sustainability will depend on avoiding major global shocks and raising growth of productivity and real incomes.

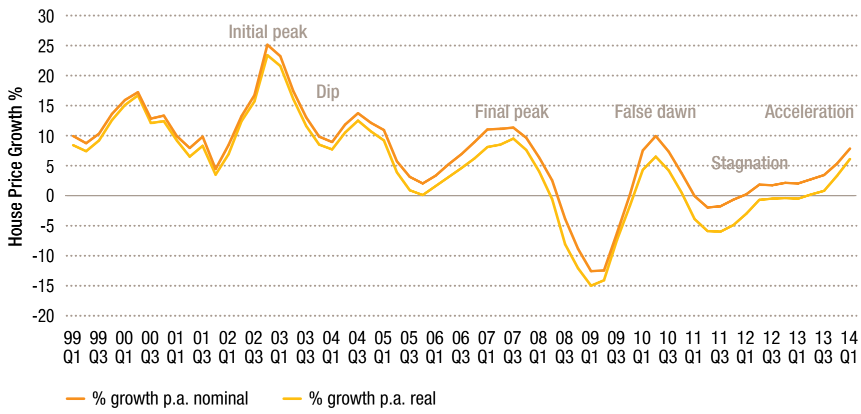
The UK recovery should remain relatively robust through 2014 and 2015, although its longer term sustainability will depend on avoiding major global shocks and raising growth of productivity and real incomes.

3 – UK house prices: bubble or no bubble?

Key points

- The UK housing market has leapt back into life. Prices across all regions are accelerating, a stark contrast to the generally weak price rises experienced 12-18 months ago everywhere outside of London.
- We project that average UK house prices could rise by around 8% this year, with prices increasing by around 13% in London. However, we expect the pace of growth to moderate over the next two to three years.
- Under our baseline scenario, our analysis suggests that, by the end of 2015, the average property in the UK could be worth around £276,000, up from £242,000 at the end of 2013. By 2020, the average UK house could be worth close to £330,000 in cash terms. On balance, we believe that the market is not yet overheating at a national level, although evidence of a bubble in the London market is stronger as borrowers are more stretched on average in the capital.
- Recent recommendations from the Financial Policy Committee (FPC) focused on restricting the proportion of new mortgages at high loan-to-income ratios, which seems sensible. Indeed some major banks have already taken action on this front. Concerns about a possible house price bubble could also be one factor causing interest rates to rise sooner rather than later. In the longer term, however, measures to boost housing supply more directly should be the priority.

Figure 3.1: Average real and nominal annual house price growth in the UK since Q1 1999



Source: ONS (using CPI as a deflator to calculate real house price growth)

Introduction

The housing market has been a hot topic of debate recently, with Mark Carney, the IMF and some government ministers all warning about a possible future bubble, particularly in London. But how concerned should we be about these risks and what can be done to mitigate them?

In this section of the report we address this issue by reviewing recent developments in the UK housing market, presenting our own modelling results for future house price trends and discussing possible policy interventions. The discussion covers:

3.1 Stagnation to acceleration: recent developments in the UK housing market

3.2 House price prospects: UK and regional projections and alternative scenarios

3.3 Blowing bubbles: risks of a housing crunch across the UK

3.4 Cooling off: Possible policy interventions

3.5 Summary and conclusions

Our econometric modelling methodology and results are described further in the technical appendix.

3.1 – Stagnation to acceleration: recent developments in the UK housing market

There has been a transformation in the UK housing market over the past twelve to eighteen months. Following a brief spurt of activity in 2010 the market remained subdued through 2011, 2012 and early 2013. New mortgage lending was flat and year on year price changes were close to zero.

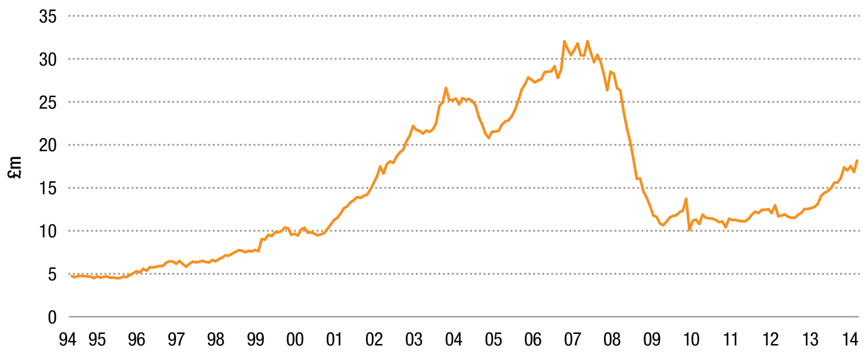
However, as shown in Figure 3.1, we have now moved out of a phase of stagnation into one of acceleration. Average UK house prices in both real terms (adjusting for inflation) and nominal (cash) terms are on a strongly rising trend.

The average UK house price was around 10% higher in April 2014 than in the same month the year before, according to the ONS measure of house prices. Other indices have also shown strong increases over the past year, although precise numbers vary. We have primarily focused in this article on the ONS measure as the most timely official statistic on house prices, but our views on future trends would not be affected materially by looking at other indices.

This house price growth has been supported by a revival in gross mortgage lending since early 2013, as shown in Figure 3.2. This was supported during 2013 by the Funding for Lending scheme, although this has now been refocused on lending to small- and medium-sized businesses, and Help to Buy.

Throughout much of 2013 higher capital repayments on existing mortgage debt had led to contractions in net borrowing. But a more recent upturn in the flow of new mortgage credit has also led to the overall stock of mortgages growing since late 2013, according to statistics from the British Bankers Association.

Figure 3.2: Gross mortgage lending

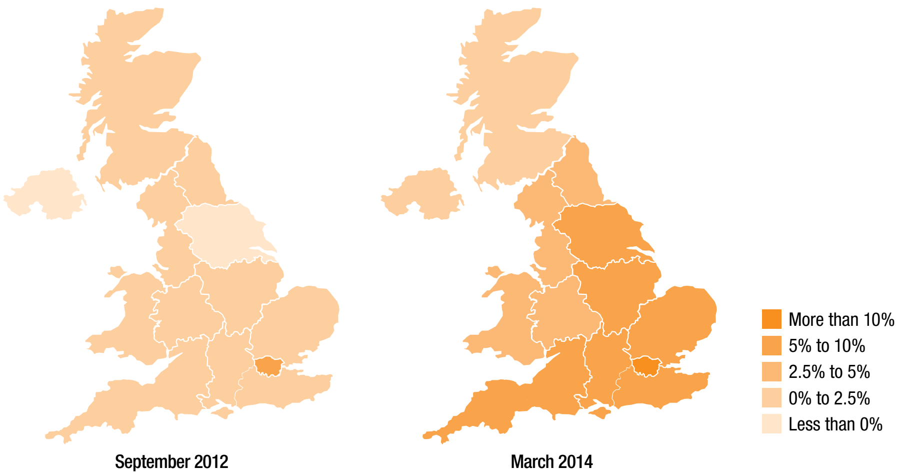


Source: Council of Mortgage Lenders

Despite continued strong house price growth over the past year, there have recently been some signs that the market could be starting to level off. New Financial Conduct Authority (FCA) requirements on lenders to conduct more rigorous affordability checks on mortgage applicants came into effect in April 2014, which may have been one cause for the dip in mortgage approvals in April compared to March. But it is too early to judge whether this is a genuine cooling of the market or just a temporary blip. More fundamentally, lower housing market activity may also not prevent further rises in house prices while supply shortages remain.

Overall, it is clear that there has been resurgence in UK housing market activity and prices over the past year, but how evenly is this spread? We investigate regional trends below.

Figure 3.3: Year on year growth in house prices by region – September 2012 compared to March 2014



Source: ONS

The regional perspective

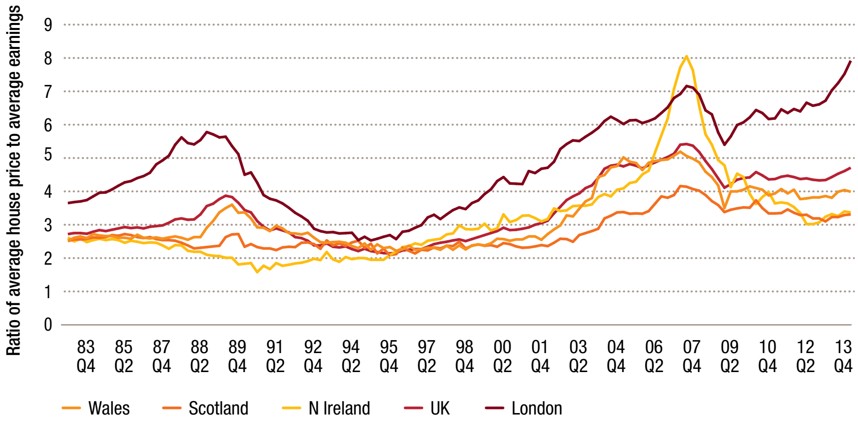
House prices were broadly flat in most regions except London until early 2013. In contrast, house prices have now been growing across all regions during the past year. This is captured in Figure 3.3, which shows a 'heat map' of house price growth regionally, comparing figures for the year to September 2012 with those for the year to March 2014.

In September 2012 most of our UK heat map was made up of pale shades, indicating that growth was under 2.5%, except for London. When we fast forward to March 2014, the map has many more darker shades, indicating house price growth of 5% of higher. Even in Northern Ireland, where prices had been falling very steeply in 2012, there has been an upward trend by March 2014. London now has house price inflation well above 10%, with the recovery rippling out to adjacent regions over the past 18 months.

This divergence of London from the rest of the UK is also captured by house price to earnings ratios as shown in Figure 3.4. London reached a ratio of 8.0 during the first quarter of 2014, its highest ever value since the series began in 1983. Price to earnings ratios are lowest outside of England: Northern Ireland and Scotland both have ratios of under 3.5, although in the case of Northern Ireland this is the result of a dramatic collapse following the pre-2008 boom[1], while the ratio has been much more stable in Scotland.

We now investigate possible future paths for house prices at the UK and regional level.

Figure 3.4: House price to earnings ratio by region



Source: Nationwide

Table 3.1: UK nominal house price projections with high and low scenarios (% change pa)

Year	Baseline	High	Low
2014	8.0%	9.9%	5.9%
2015	5.5%	6.4%	-1.0%
2016 - 2020 Average	3.5%	4.0%	1.6%

Source: PwC projections for 2014-20

Table 3.2: UK nominal house price projections with high and low scenarios (£000s)

Year (annual average prices)	Baseline	High	Low
2013 (actual)	242	242	242
2014	262	266	257
2015	276	283	254
2020	328	344	275

Source: ONS for 2013, PwC projections for 2014-20

1 The Northern Ireland boom echoed that in the Republic of Ireland, and to some degree it was a spill-over from that credit.

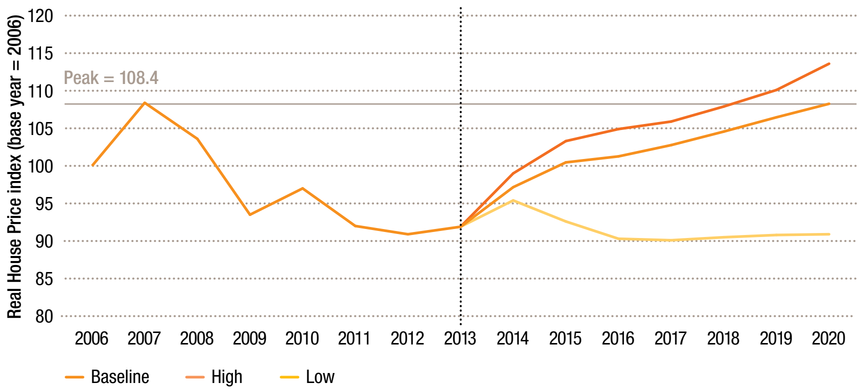
3.2 – House price prospects: UK and regional projections

We have updated our UK house price model, which was first published in 2006 and been regularly reviewed since then. Our model uses annual earnings, housing supply, credit conditions in the market and mortgage interest rates as explanatory variables for house price trends since 1975. Further details are provided in the technical appendix at the end of this article.

We assume in our baseline scenario that average real earnings growth will pick up gradually from current low levels to just under 2% per annum by the end of the decade. We also assume that credit conditions improve over the next two years, before stabilising at close to their long-run trend level, while interest rates rise from early 2015 onwards[2]. Lastly, we include a modest upward trend in the growth of the underlying housing stock from 2013 levels, but with growth remaining under 1% per year.

Under these 'baseline' scenario assumptions, and using the model as described above, house prices are projected to increase by around 8% on average in nominal terms this year as compared to 2013. Annual house price inflation is then expected to slow to around 5.5% in 2015 and an average rate of around 3.5% per annum between 2016 and 2020 (see Table 3.1). This would represent a relatively soft landing for the housing market. Under this scenario, our analysis suggests that, by the end of 2015, the average property in the UK could be worth around £276,000, up from £242,000 at the end of 2013. By 2020, the average UK house could be worth close to £330,000 in cash terms (see Table 3.2).

Figure 3.5: UK real house prices relative to previous peak in alternative scenarios



Source: ONS, PwC projections (using CPI as deflator to calculate real house price trends)

As projecting house prices always involves significant uncertainties, we also consider alternative high and low scenarios for house prices, as shown in Tables 3.1 and 3.2.

The high scenario reflects a more buoyant macroeconomic environment. It assumes a stronger recovery in credit conditions, which is accompanied by a somewhat faster increase in interest rates. Employment and earnings assumptions are also more optimistic, with real earnings growth rising to over 2% in the medium term. Housing stock growth in this scenario is also faster than the long-run trend rate.

The low scenario reflects a more challenging macroeconomic environment. It assumes that the recovery weakens significantly, with the economy returning to conditions akin to those seen in 2011 and 2012. It is characterised by falling real earnings growth and tight credit conditions as there is more risk aversion from banks, although mortgage rates do stay lower for longer in this case.

Under our baseline scenario, real house prices (adjusted for CPI inflation) would return in 2020 to around the levels experienced at their previous peak in 2007, as shown in Figure 3.5. Under our high scenario, real house prices would exceed their previous peak by 2018, but our low scenario would see a renewed real house price decline, leaving real house prices more than 15% below their pre-crisis peak in 2020. This illustrates our assessment that, at present, risks to house prices are skewed to the downside in the medium term.

2 Specifically we assume mortgage rates rise by around 250 basis points by 2020, which might correspond to a rise of Bank of England base rates to around 4% together with some compression of spreads.

Regional projections

Table 3.3 shows our projections for 2014, 2015 and 2016-2020 average house price growth across all UK regions. The projections relate to the baseline scenario set out above, but it should be borne in mind that uncertainties are even greater at the regional than the national level.

The double digit growth expected in London this year is the most eye-catching statistic in the table, but we expect this boom to run out of steam over the next few years. The lowest projected growth rates are in Scotland and Northern Ireland in the short term.

In the medium term (2016-2020) we expect London house price growth to be slower than the UK average and also slower than earnings growth, leading to a reduction in the very high price to earnings ratios seen in Table 3.4 from 2015 onwards. In this baseline scenario we are still assuming that foreign interest and confidence in the London property market remains reasonably strong, without which there could be a sharper correction in London house prices over the period.

In Northern Ireland, by contrast, medium-term house price growth is projected to exceed the UK average as the region recovers from the very steep price falls of recent years.

Table 3.3: Regional nominal house price projections in baseline scenario (% change pa)

Region	2014	2015	2016-2020 average
Wales	7.4%	5.7%	4.0%
Scotland	4.6%	4.5%	2.8%
Northern Ireland	4.7%	6.1%	4.4%
North East	5.5%	5.9%	4.1%
North West	7.0%	5.9%	4.1%
Yorks & Humber	7.1%	5.7%	3.9%
East Midlands	7.9%	6.2%	4.4%
West Midlands	8.0%	6.0%	4.2%
East	8.2%	5.6%	3.9%
South East	8.7%	5.5%	3.8%
South West	8.2%	6.0%	4.2%
London	13.3%	4.4%	2.7%
UK	**8.0%**	**5.5%**	**3.5%**

Source: PwC baseline projections for 2014-20

Table 3.4: Regional nominal house price projections in baseline scenario (£000s)

Region	2013 (actual)	2014	2015	2020
England	252	273	288	341
Wales	162	174	184	221
Scotland	181	190	198	225
Northern Ireland	130	136	144	177
North East	146	154	163	197
North West	163	174	184	223
Yorks & Humber	166	177	188	225
East Midlands	173	187	198	243
West Midlands	184	199	210	256
East	255	276	292	349
South East	300	326	344	409
South West	229	248	263	319
London	424	480	501	565
UK	**242**	**262**	**276**	**328**

Source: ONS for 2013, PwC baseline projections for 2014-20

3.3 – Blowing bubbles: risks of an overheating UK housing market

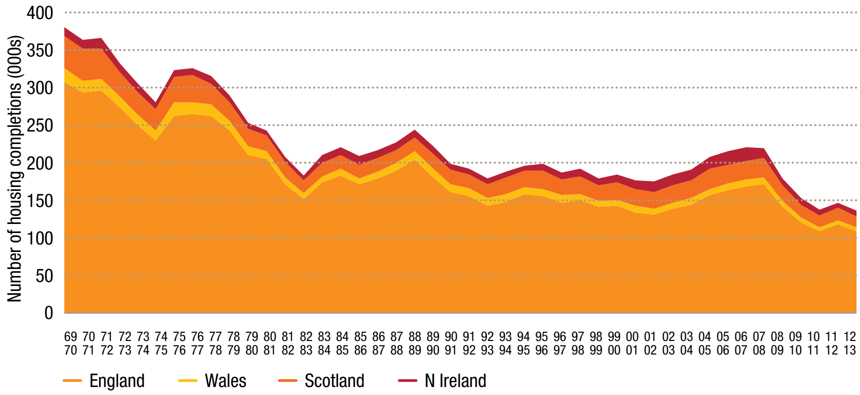
How big a risk is the kind of renewed house price correction seen in our downside scenario? Is there a bubble waiting to burst? In this sub-section we review the evidence on this highly topical issue. On balance we conclude that across the whole of the UK talk of a bubble is premature. However, London, where valuations are significantly higher relative to earnings, offers stronger evidence of an emerging house price bubble.

As shown in Figure 3.6, the number of housing completions across the UK has been on a downward trajectory since the late 1960s. The ever decreasing rate of housing completions has caused a shortage of housing, which has been particularly acute in the South East of the UK. This has been, and remains, one of the key drivers of rising house prices. As housing supply cannot adjust quickly to the signal of higher prices, this has been one of the perennial features of the UK housing market in recent decades.

Furthermore, cash purchases from foreign buyers have been a strong source of demand for UK housing, most notably in London. In 2013, the FT reported that their study, with Savills and Hometrack, had found that the share of homes being purchased entirely with cash had risen to more than a third. There is some evidence to suggest that this is driven by hedging behaviour[3] linked to London property being seen as a relatively safe haven at a time of instability in other markets, although there could also be a more speculative element to some investment in the London market. These two factors combined, chronic under-supply and foreign demand (primarily in London) will act as a support for house prices so long as they persist.

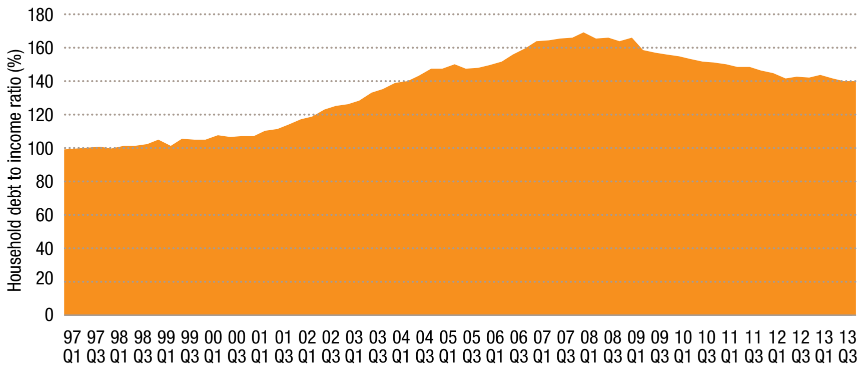
Particularly on the supply side, this is unlikely to change anytime soon. The Chancellor's recent announcement of measures to limit planning restrictions was welcome, but it remains to be seen how effective this will be in practice.

Figure 3.6: UK housing completions



Source: DCLG

Figure 3.7: Household debt to income ratio



Source: ONS

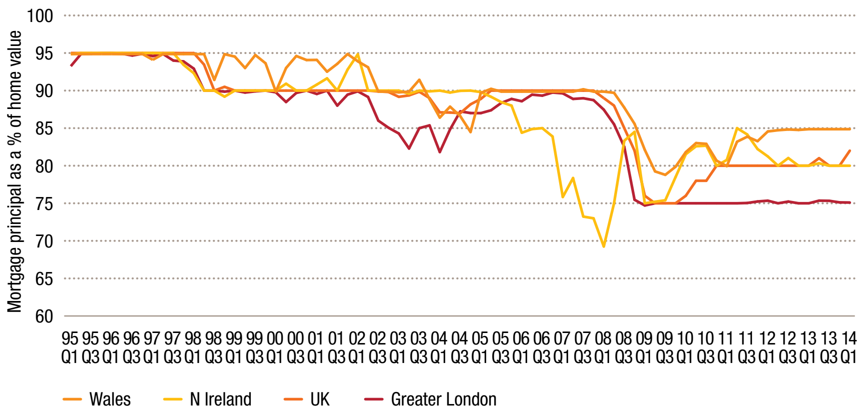
3 Badarinza and Ramadorai (2013), 'Home away from home? Safe haven effects and London house price'.

A dive into debt

Thus far, bank losses from UK residential mortgages have been limited; part of this is due to very accommodative monetary policy over the period. As the base rate rises, interest costs will go up, squeezing households with low margins of safety on their mortgage borrowing. While households have paid down some debt since 2008 (see Figure 3.7), household debt to income ratios are still at relatively elevated levels of around 140%. This is similar to where they were in around 2004 and well above levels in the 1990s.

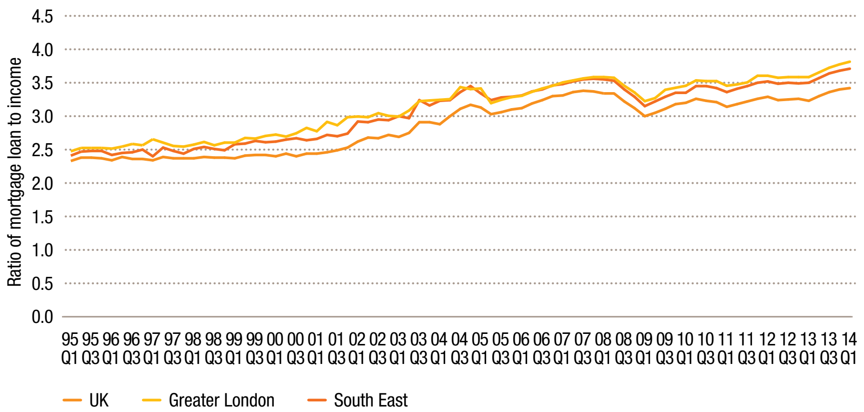
Focusing on new lending, and the margins of safety of recently originated loans, while the advances on mortgages are currently around 80% loan to value for first time buyers in the UK, the advances in London are lower at 75% (see Figure 3.8). These levels are lower than historical norms, reflecting post-crisis credit constraints. Loan-to-income (LTI) ratios present a different picture though, rising to record levels recently not just in London and the South East but also on a UK average basis. This suggests that much recent lending may have relatively thin margins of safety, with households having a low tolerance to future interest rate rises. As price to earnings ratios in areas such as London are now at record or near record levels (see figure 3.9), it will be difficult for new buyers to purchase unless they are prepared to be highly geared. The Government's Help to Buy scheme was aimed to address this issue, but also has drawbacks as discussed in Box 3.1.

Figure 3.8: Loan to value for first-time buyers



Source: Council of mortgage lenders

Figure 3.9: Loan to income ratios for first-time buyers



Source: Council of mortgage lenders

Box 3.1
Help to Buy mortgage guarantee scheme

Launched in October 2013, the Help to Buy mortgage guarantee scheme offers lenders the option to purchase a guarantee on mortgage loans where the borrower has a deposit of between 5% to 20%. The scheme compensates participating lenders for a portion of net losses suffered in the event of repossession. The guarantee applied down to 80% of the purchase value of the guaranteed property, covering 95% of these net losses.*

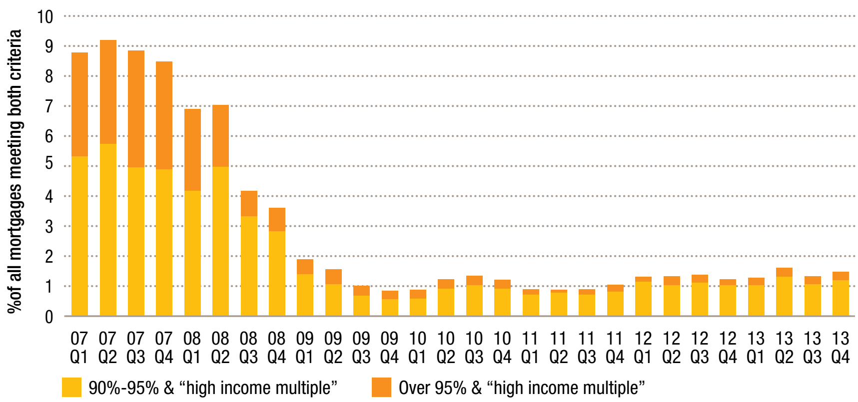
During the first six months of the scheme, only £1,084m of mortgage loans were covered by the scheme. This amounts to just over 1% of total gross advances during the period. A large amount of this lending was for properties of under £125,000 in value (45%), and just 5% was for properties in London.

In summary, Help to Buy is likely to have made only a minor difference to house price trends in the UK to date. However, since it was designed to stimulate a housing recovery that now seems to have been well underway already, the scheme may well be phased out before its planned three year term comes to an end.

*HM Treasury (2014), 'Help to Buy mortgage guarantee scheme: Quarterly Statistics'

Concerns around the sustainability of mortgage debt do not necessarily have to focus only on new lending. Both LTV and LTI ratios were high before 2008, as shown in Figure 3.10. Lending that met both of these categories will have low margins of safety, and were taken out at a time where there was a belief that prices would keep rising robustly. Following the financial crisis in 2008, extremely accommodative monetary policy may have kept such borrowing from default. Since then there has been a period where borrowers have had an opportunity to pay down the principal value of their debt, but many could still be vulnerable to future mortgage rate rises. On the other hand, Figure 3.10 does suggest that most new lending over the past five years has had relatively high margins of safety.

Figure 3.10: Proportion of mortgage lending at high loan to value and high income multiple



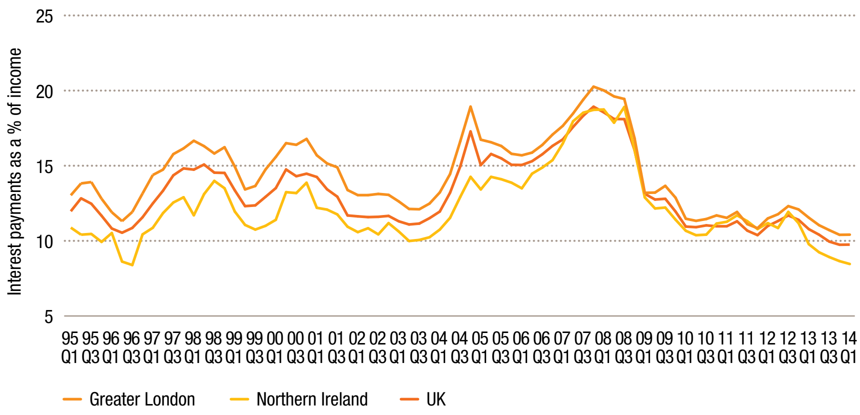
Source: Council of Mortgage Lenders

Note: High income multiple classified as 3.5 times income or more for a single income mortgage, and 2.75 times income or more for joint income.

Figure 3.11 below shows that the interest rate burden on households has fallen significantly since the crisis. In 2008, when interest payments as a proportion of income were close to 20% across most regions, average mortgage rates were approximately 7%. However, the data shown in Figure 3.11 are average figures and may vary significantly according to particular household circumstances. Therefore, simply looking at average affordability ratios does not give a good guide to likely vulnerability to future interest rate rises.

To get a better idea of the risks that interest rate rises could pose, we have looked at a 2013 survey conducted by the Bank of England[5] that specifically addressed the topic of rising interest rates. This report highlighted the fact that the extent to which higher interest rates are problematic depends on how much incomes increase before rates go up. The authors developed stylised scenarios that attempt to quantify the impact of given rate rises on mortgage repayments as a proportion of income. In one scenario, monthly repayments were assumed to increase in line with a 2.5 percentage point rise in effective mortgage rates, while incomes remain as reported at the time of the survey[6].

Figure 3.11: Interest payments as a % of income, by region



Source: Council of mortgage lenders

In this scenario, estimated average mortgage repayment gearing increases from 21% to 28%, and the proportion of vulnerable mortgagors with gearing over 35% would increase from around 8% to 16%. However, given the assumed earnings freeze, and full pass through of interest rate rises, we consider this to be an upper bound estimate for the risks posed by future rate rises.

In conclusion, the impact of rate rises may not be that large in aggregate, but will not be evenly spread. In those regions where loan-to-income ratios are highest, borrowers will on average have lower margins of safety. Therefore, risks of the underlying debt behind housing demand proving to be unsustainable is likely to be greater in these regions, such as London, than elsewhere.

3.4 – Cooling off: Possible policy interventions

Our analysis above suggests that the risks of serious future problems in the housing market should not be exaggerated, at least outside London. Nonetheless, the combination of accelerating house prices and mortgage credit, particularly in the South East and London, has caught the attention of policymakers at the Bank of England (as well as government ministers and commentators such as the IMF). There are two channels that intervention in the market by the Bank could take:

- The Monetary Policy Committee (MPC) could raise interest rates to try and cool the market.
- The Financial Policy Committee (FPC), a relatively new body at the Bank of England, could adjust capital requirements or other 'macro-prudential' levers relating to housing market lending.

5 Bank of England (2013). 'The financial position of British households: evidence from the 2013 NMG Consulting survey'
6 The scenarios assume full pass-through of rate rises.

Box 3.2
The Financial Policy Committee (FPC) and its recent recommendations

The primary responsibility of the FPC is 'protecting and enhancing the resilience of the UK financial system'*. However, this resilience cannot be achieved at any cost. The FPC's actions must not have 'a significant adverse effect on the capacity of the financial sector to contribute to the growth of the UK economy in the medium or long term'.

In order to achieve this goal, the FPC originally had two main powers:

1. The power to make recommendations, in particular to the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).
2. The power to direct regulators to adjust specific macroprudential tools. The most relevant of which for the housing market at present relate to loan-to-income ratios and stress tests.

Following the Chancellor's Mansion House Speech on 12 June, the Bank of England is being given extended powers to directly limit loan-to-income and loan-to-value ratios on mortgages. Although this will take some time to enact in legislation, the FPC has already made a recommendation (on 26 June) that no more than 15% of new mortgages should be at loan-to-income ratios greater than 4.5, which will be enacted by the FCA and the PRA. This constraint will not bite immediately, since currently such high LTI loans only account for around 10% of new mortgages, but will act as a limiting factor against a significant future rise in lending at high LTIs, which could be a source of financial instability in the longer term.

The FPC also recommended a somewhat tougher interest rate stress test when assessing mortgage affordability, based on assuming a 3% point rise in Bank Rate at some point over the first five years of the loan. This is slightly higher than current industry norms of using 2.5-3% point stress tests, so it is not it will probably not have a large impact but does provide an additional prudential safeguard.

*Bank of England, Financial Stability Report (June 2014)

Gradual interest rate rises are likely to begin in either late 2014 or early 2015, as discussed in Section 2 above. But this would be due to general macroeconomic considerations relating to shrinking spare capacity in the economy and consequent medium-term concerns about inflation picking up again, rather than being specifically targeted at the housing market (although this is clearly one important factor feeding into this wider picture).

It is the latter area that we focus on in this section. Box 3.2 sets out some more details on the FPC and below we consider further the options open to them.

To support its judgements, the FPC monitors a range of information on the economy. In particular, they routinely review a set of core indicators, three of which are related to the housing market:

1. Real estate valuations - residential and commercial property prices.
2. Real estate lending terms – such as loan-to-value or loan-to-income ratios.
3. Spreads on new UK lending – both on residential mortgages and commercial real estate.

The FPC also considers a range of other indicators that track developments in the property market. In their recent Financial Stability Report, this covered areas such as foreign inflows into UK commercial property and mortgage lending. But we focus our attention here on the second core indicator type, which we already discussed earlier in some detail.

Figure 3.9 above shows that there has been a clear upward trend in loan-to-income ratios since 1995. While there was a slight fall in the ratios across the UK, London and the South East in 2008-9, the ratios have now risen back above their 2007 peaks. In Greater London, where LTI ratios are highest, they reached 3.83 on average in the first quarter of 2014. By contrast, loan-to-value ratios fell sharply after the crisis and, despite having rising again somewhat recently as the market has recovered, do not appear to be at worrying levels (at least on average).

Overall, therefore, the evidence of stability problems in the housing market is mixed. This suggests that the FPC should continue to monitor the situation carefully but should not overreact, bearing in mind the limited recent experience with macroprudential tools and their mixed historical record in earlier periods like the 1970s and early 1980s. The relatively modest measures announced on 26 June 2014 seem sensible in this context, particularly in their focus on limiting high LTI ratios and highlighting the importance of interest rate stress tests (see Box 3.2).

It is worth noting here that some major banks have already been making changes in these areas. On 20 May 2014, Lloyds Banking Group announced that, on loans worth more than £500,000, they would limit mortgage lending to four times income. On 3 June, RBS followed suit with a similar policy. As noted in Box 3.2, the industry norm for interest rate stress tests also already seems to be broadly similar to what the FPC is recommending.

3.5 – Summary and conclusions

The UK housing market has leapt back into life. Prices across all regions are accelerating in stark contrast to the generally weak picture (at least outside London) seen until 12-18 months ago.

We project that average UK house prices could rise by around 8% this year, with prices increasing by around 13% in London. However, we expect the pace of growth to moderate over the next two to three years, with the downside risks being particularly pronounced in the case of London.

Under our baseline scenario, our analysis suggests that, by the end of 2015, the average property in the UK could be worth around £276,000, up from £242,000 at the end of 2013. By 2020, the average UK house could be worth close to £330,000.

On balance, we believe that the market is not yet overheating at a national level, although evidence of an emerging bubble is stronger in London as borrowers are more stretched in the capital. However, even at a national level, there are important medium-term risks that policymakers need to monitor with care.

Recent recommendations from the Financial Policy Committee (FPC) focused on restricting the proportion of new mortgages at high loan-to-income ratios, which seems sensible. Indeed some leading banks have already taken action to limit their exposures here. Concerns about a possible house price bubble could also be one factor causing interest rates to rise sooner rather than later. There is also a case for phasing out the Help to Buy mortgage guarantee scheme before the end of its three year term, although its impact on house prices does not seem to be significant so far.

In the longer term, however, increased housing supply is the priority. The Chancellor has recently announced new policies here to reduce planning restrictions, but there are also other blockages to be addressed, including skills shortages in the construction industry. It will be therefore be a slow process to produce a significant boost to housebuilding in the UK.

The housing market is not overheating at national level, but evidence of a bubble is stronger in London.

Technical appendix

Details of house price modelling methodology and results

Our analysis predominantly focuses on the ONS house price indices. We focus on the ONS data as they cover a larger sample size than the Nationwide and Halifax statistics, which are based only on their own mortgage approvals. The ONS data is also more timely than that published by the Land Registry, and is better adjusted for changes in the mix of houses sold over time (although doing this is not easy, so no index is perfect).

The PwC house price model consists of two parts: a long run equilibrium equation and a short run error correction model that indicates how house prices adjust back towards this equilibrium level over time.

In the long run equilibrium equation, real house prices are driven by three key variables: real annual earnings, the ratio of the housing stock to the population ('supply') and a variable which reflects general credit conditions. Monetary values are deflated to real terms using the consumer price index (CPI).

In the short run, changes in real house prices are driven by: deviations from the long run equilibrium; changes in real annual earnings; changes in the credit conditions variable; and the previous period's mortgage interest rate (cost of borrowing). The coefficients for these model variables and other summary statistics for both models are shown in the tables above.

Long run model (Cointegrating equation)		
R-squared = 0.92		
Dependent variable: Real house prices	**No. of observations=39**	
	Coefficient	t-statistics
Real earnings	17.8	8.83
Supply	-1377.4	-3.70
Credit	10660.4	1.34
Constant	297599.1	2.62

Short run model		
R-squared = 0.65		
Dependent variable: Change in real house prices	**No. of observations=38**	
	Coefficient	t-statistics
L. co-integrating equation residual	-0.12	-1.84
D.Credit	18764.3	4.34
D.Real earnings	7.0	3.51
L.Mortgage rate	-555.0	-2.22
Constant	6522.5	2.56

Note: 'D' refers to the first difference of a variable (i.e. change on previous year). 'L' refers to the lagged value of a variable in the previous year. A t-statistic above around 2 in absolute terms shows the explanatory variable is statistically significant at the 5% level. Mortgage interest rate defined in nominal terms as this fitted the data better than a real interest rate.

The parameters of the model were estimated using the standard ordinary least squares (OLS) econometric technique based on annual data from 1975-2013. In the process, we investigated the possibility of using variables in nominal rather than real terms as well as different variables (including lags and differences where appropriate) such as unemployment, the share of the population aged between 25 and 44, the exchange rate, and government bond yields, but these were not found to be significant at the 5% level.

4 – The UK's standing in the world

Key points

- By 2030, the UK is projected to remain the sixth largest economy in the world (at market exchange rates), falling behind India but moving ahead of France.
- On a regional scale, we expect the UK to become the second largest EU economy before 2020, as it overtakes France, and to narrow the gap with Germany by 2030.
- Our updated ESCAPE Index for 2013 shows that the UK ranks fifth in the G7 in 2013, down from 3rd in 2000 and 2007. This reflects the relatively deep recession suffered by the UK in 2008-9 and, prior to 2013, its relatively slow recovery.
- The UK's key strengths relative to other G7 countries are in the political institutions and communications technology fields.
- In contrast, the UK consistently underperforms in the social progress and cohesion category. Improvement in this area requires longer term structural weaknesses in education and income inequality to be addressed.

Introduction

As discussed in Section 2, the UK economy is on track to exceed its pre-recession peak (in real terms) in the second quarter of this year. This is a key milestone for the recovery, but what about the wider standing of the UK in the global economy? From a business perspective this is important when deciding where to locate key commercial activities (e.g. when moving production or sales activities to a new country or region). For policymakers a more holistic analysis of a country's standing in the world could be useful as a starting point in identifying its progress over time and relative to other nations, and in assessing areas where there is room for improvement.

The discussion in this article addresses these issues as follows:

4.1 Presents some global GDP league tables and assesses the standing of the UK relative to the G7 and E7 both now and prospectively in 2030;

4.2 Uses the PwC ESCAPE Index[1] to identify the broader strengths and weaknesses of the UK compared to the rest of the G7; and

4.3 Summarises the key messages coming out of the analysis and concludes.

Table 4.1: GDP league table, 2013

	2013	
MER rank	**Country**	**GDP at MER (2013 US$ bn)**
1	US	17,528
2	China	10,028
3	Japan	4,846
4	Germany	3,876
5	France	2,886
6	**UK**	**2,828**
7	Brazil	2,216
8	Italy	2,171
9	Russia	2,092
10	India	1,996
11	Canada	1,769
12	Mexico	1,288
13	Indonesia	859
14	Turkey	767

Source: IMF estimates

1 We first published this index in February using data up to 2012 and have now updated this to 2013 where new data are now available. As described further below, the index looks at performance across 20 different economic and non-economic indicators.

Table 4.2: Actual and projected GDP league table in 2013, 2020 and 2030

2013			2020p			2030p		
MER rank	Country	GDP at MER (2013 US$ bn)	MER rank	Country	Projected GDP at MER (2013 US$ bn)	MER rank	Country	Projected GDP at MER (2013 US$ bn)
1	US	17,528	1	US	20,310	1	US	25,585
2	China	10,028	2	China	15,855	2	China	25,009
3	Japan	4,846	3	Japan	5,209	3	India	6,172
4	Germany	3,876	4	Germany	4,205	4	Japan	5,695
5	France	2,886	**5**	**UK**	**3,258**	5	Germany	4,613
6	**UK**	**2,828**	6	France	3,182	**6**	**UK**	**4,027**
7	Brazil	2,216	7	India	3,175	7	Brazil	3,858
8	Italy	2,171	8	Brazil	2,748	8	France	3,846
9	Russia	2,092	9	Russia	2,563	9	Russia	3,659
10	India	1,996	10	Italy	2,323	10	Mexico	2,791
11	Canada	1,769	11	Canada	2,015	11	Italy	2,715
12	Mexico	1,288	12	Mexico	1,711	12	Canada	2,399
13	Indonesia	859	13	Indonesia	1,264	13	Indonesia	2,074
14	Turkey	767	14	Turkey	1,057	14	Turkey	1,694

Source: IMF estimates for 2013, PwC projections for 2020 and 2030

4.1 – How does the UK fare in the global economic league?

Where does the UK rank currently in the global economic league?

The most commonly used measure of economic size is Gross Domestic Product (GDP), which is the total value of the goods and services produced in an economy. The IMF's World Economic Outlook database contains standardised information on GDP[2] levels by country and we can use this to derive the league table shown in Table 4.1, which lists latest estimates of GDP levels for the G7 and E7 countries at market exchange rates (MERs)[3] in 2013.

The most important points to note are that:

- In 2013, the UK was the sixth largest economy in the world and its economy was significantly bigger than those of Brazil, Russia and India based on GDP at market exchange rates.
- On a regional basis, the UK remained the third largest European economy behind Germany and, by a very narrow margin, France.

Will the UK still be an important global economic player in 2030?

Our analysis above shows that, in terms of size, the UK remains a significant member of the global economic 'A-list'.

But as emerging market economies might be expected to grow faster in the long term, how long will the UK retain that status?

To address this question, we extend the above analysis by projecting GDP levels for the G7 and E7 to 2030. To do this we combine short- and medium-term projections from our latest *Global Economy Watch* report with long-term projections of potential GDP for the period beyond 2020 from our last *World in 2050* report[4]. The results presented in Table 4.2 are expressed at constant 2013 US dollars and allow for projected variations in real exchange rates according to our model[5].

2 Throughout the analysis in this section, we have assumed that Scotland remains part of the UK and have not taken into account the impact of the forthcoming ESA 2010 changes on estimated GDP. Both of these factors would have a material impact on the level of UK GDP although the move to ESA 2010 would also affect other large economies (see Box 2.1 in previous section for more details of expected UK GDP revisions).
3 Note that an alternative way to measure economic size is by calculating GDP in Purchasing Power Parity (PPP) terms. This measure takes into account the differences in prices between economies. We have carried out this analysis in a subsequent section of the article.
4 Please see our report *World in 2050: The BRICs and beyond: prospects and challenges and opportunities* which you can find at: http://www.pwc.com/en_GX/gx/world-2050/assets/pwc-world-in-2050-report-january-2013.pdf
5 Specifically, they allow for emerging market exchange rates to converge gradually with PPP levels in the very long run at a rate dependent on relative productivity growth. This reflects past empirical relationships, although the exact path of real exchange rates remains highly uncertain in practice.

We can see from this table that:

- By 2020, the UK overtakes France to become the 5th largest economy[6] but later drops back into 6th, due to being overtaken by India before 2030.
- The UK is projected to gain ground against its major Western European rivals. Not only do we expect it to overtake France within the next few years, but we also expect it to narrow the gap with Germany. Our analysis suggests that by 2030 the UK could be only around 12% smaller than Germany compared to around 30% smaller in 2013. This primarily reflects relatively strong UK population growth compared to Germany, however, rather than faster productivity growth.
- On average during the period to 2030, the UK is expected to be the second fastest growing G7 economy. In absolute terms, we expect the UK to generate additional real output by 2030 roughly equivalent to the current size of the Mexican economy.
- By 2030 a clear 'Club of Two' develops with the US and China close together at the top of the global economic order, accounting for the majority of combined E7 and G7 output (54% in 2030 compared to around 50% now). China would almost certainly overtake the US soon after 2030 on this basis (or possibly shortly before that date depending on how exchange rates evolve).

Overall, our analysis suggests the UK is expected to retain its current A-list status in the world economy at least up to 2030, despite more rapid growth in the E7. On a regional scale, the UK is expected to overtake France and become the second largest EU economy by 2020.

Table 4.3: GDP and GDP per capita in 2011 at PPP rates

2011			2011		
GDP rank	Country	GDP at PPP (2011 US$ bn)	GDP per capita rank vs G7/E7	Country	GDP per capita at PPP (2011 US$ bn)
1	US	15,539	1	US	49,782
2	China	13,496	2	Canada	41,069
3	India	5,758	3	Germany	40,990
4	Japan	4,380	4	France	36,391
5	Germany	3,352	**5**	**UK**	**35,091**
6	Russia	3,217	6	Japan	34,262
7	Brazil	2,816	7	Italy	33,870
8	France	2,369	8	Russia	22,502
9	**UK**	**2,201**	9	Turkey	17,781
10	Indonesia	2,058	10	Mexico	16,377
11	Italy	2,057	11	Brazil	14,639
12	Mexico	1,895	12	China	10,057
13	Canada	1,416	13	Indonesia	8,539
14	Turkey	1,315	14	India	4,735

Source: World Bank, 2011 ICP

Measuring UK economic size in PPP terms

Our analysis above assesses economic size using market exchange rates. This is arguably the most relevant measure from a business perspective as most commercial transactions across borders take place at market-determined exchange rates.

An alternative way to measure economic activity is in purchasing power parity (PPP) terms. GDP at PPPs is a better indicator of average living standards or volumes of economic output because it corrects for price differences between countries at different levels of economic development. In general, price levels are significantly lower in emerging economies such as China and India, so PPPs are well above current MERs for most emerging economies[7]. Looking at GDP at PPPs therefore significantly narrows the income gap with the advanced economies compared to using GDP at MERs.

In Table 4.3 we show GDP and GDP per capita in PPP terms for the G7 and E7 economies using the latest available data from the World Bank's latest International Price Comparison (ICP) project, which is for 2011.

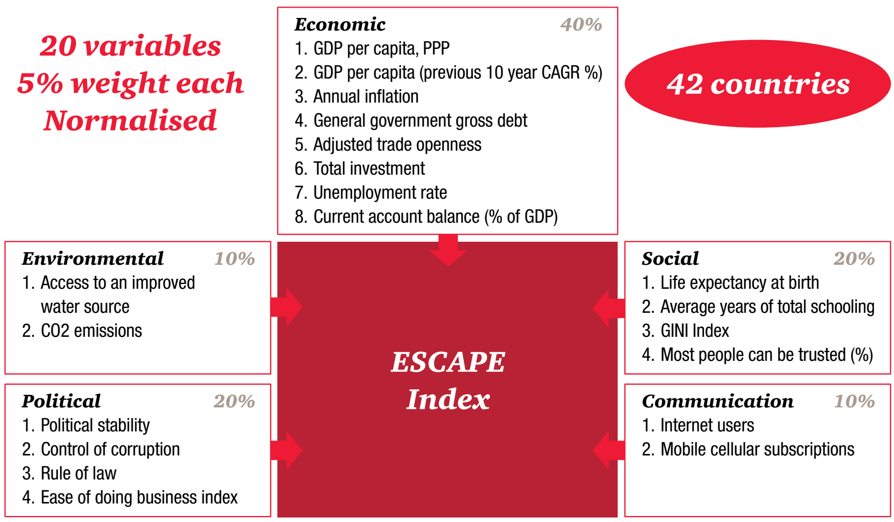
6 This mirrors the projection in a recent blog post by Andrew Sentance, our senior economic adviser: http://pwc.blogs.com/economics_in_business/2014/04/uk-set-to-recover-5th-place-in-global-economic-league.html
7 There are exceptions, such as Brazil in recent years, where emerging market exchange rates have been pushed up close to PPP levels, but generally a significant difference exists.

We can see from Table 4.3 that:

- Using the PPP measure of GDP, China was not far behind the US in 2011 and might overtake it as early as 2014 or 2015. This occurs much earlier than when using MERs, as in Table 4.2 above, since PPPs correct for the much lower average price level in China than in the US to give an indication of the relative volumes of goods and services produced, rather than their current market value.
- On a PPP basis, the UK falls down to ninth place in the global economic league table. Even on this measure, the UK remains the third largest European economy and is only marginally smaller than France (and might overtake it soon).
- Generally speaking, E7 GDP levels are higher at PPPs when compared to Table 4.2. However, they do trail significantly behind the G7 in terms of levels of GDP per capita at PPPs. The UK has only the fifth highest average income level of the G7 on this measure, but is well ahead of any of the E7.

This analysis makes it clear why businesses should not abandon their home markets in countries like the UK because, even though their economic size will be smaller in future compared to some of the E7, the G7 economies will still maintain much higher levels of income per capita. These mature, high-income markets will remain attractive given their affluent consumer base and (in general) lower risks and greater ease of doing business.

Figure 4.1: Composition of the PwC ESCAPE Index



Source: PwC ESCAPE Index

4.2 – Beyond GDP: UK performance on the PwC ESCAPE Index

GDP is a useful indicator to assess economic size and growth over time. However, it has some limitations as it does not directly capture the non-economic aspects of an economy like the quality of its institutions, the ease of doing business, and measures of environmental sustainability and social cohesion. We have therefore used our ESCAPE Index to better understand the UK's standing in the world on a broader set of indicators.

What is the ESCAPE Index?

The ESCAPE Index[8] provides a holistic measure of a country's performance across five key dimensions relevant to future progress as shown in Figure 4.1. It combines 20 individual variables in the following areas:

- **E**conomic performance and stability;
- **S**ocial progress and cohesion;
- **C**ommunications technology;
- **P**olitical, legal and regulatory institutions; and
- **E**nvironmental sustainability.

The economics component of the Index has a 40% weight, while the others have a 60% weight in total.

8 For further details of the PwC ESCAPE Index please see: http://www.pwc.co.uk/economic-services/issues/escape-index-mapping-how-markets-emerge.jhtml

Where does the UK rank?

For the purpose of this article we have updated the economic variables in the ESCAPE index using newly available data for 2013. We have also updated other variables for which we could find more up-to-date data (e.g. CO_2 emissions). Note that in Table 4.4 we have only presented the results for the G7 economies as these are the most natural peer group against which to benchmark the UK (the overall index contains 42 countries, but covering all of these here would distract from the key conclusions relating to the UK).

Based on this analysis we can see that the UK:

- Ranked third out of the G7 economies for the years before the financial crisis, but had slipped back into fifth position by 2013;
- Remained above France and Italy for the entire period, but did not manage to overtake Germany, which has been at the top of the G7 league table on our index since 2000; and
- Managed to outperform the US and Japan in the years prior to the financial crisis, but lagged behind in the latest set of results for 2013.

Table 4.5 provides further details of the UK's relative strength and weaknesses by ranking the UK against the rest of the G7 in 2013 for the five key categories that make up the ESCAPE Index.

Table 4.4: PwC ESCAPE Index league table (restricted to G7 economies)

Rank	2000	2007	2013
1	Germany	Germany	Germany
2	Canada	Canada	Canada
3	UK	UK	Japan
4	US	US	US
5	Japan	Japan	UK
6	France	France	France
7	Italy	Italy	Italy

Source: PwC analysis using ESCAPE Index

Table 4.5: G7 league table using 2013 data from PwC's ESCAPE Index

Rank	Economic	Social	Communications	Political	Environmental	Overall
1	Germany	Canada	UK	Canada	France	Germany
2	Canada	Germany	Germany	Germany	Italy	Canada
3	US	Japan	Italy	US	UK	Japan
4	Japan	US	Japan	UK	Germany	US
5	France	France	France	Japan	Japan	UK
6	UK	Italy	US	France	Canada	France
7	Italy	UK	Canada	Italy	US	Italy

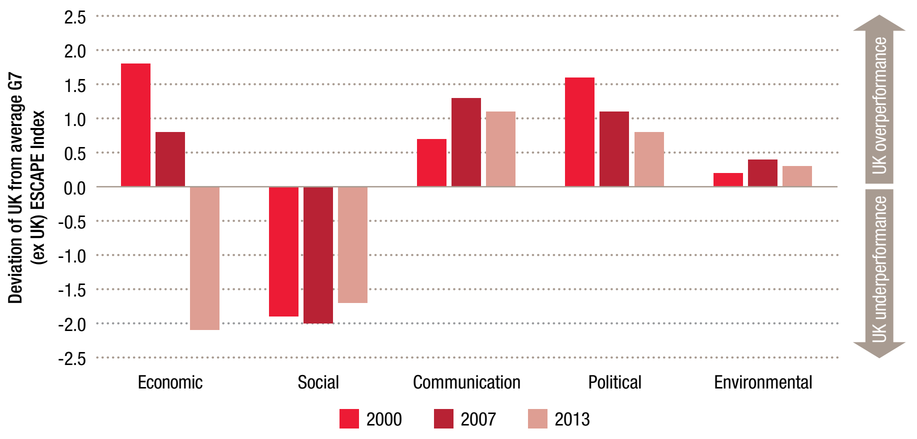
Source: PwC analysis using ESCAPE Index

Table 4.5 shows that the UK's performance is mixed across the five categories. In particular:

- UK economic performance is the second worst amongst the G7 after Italy. This is not surprising as the momentum of UK growth only picked up speed in 2013, which is not enough to make up for the relatively deep recession that the UK suffered in 2008-9 and its slow recovery in 2011-12.
- Italy's weak performance is consistent with the fact that its economy has virtually not grown (on average in real terms) since 2000.
- The UK ranks at the top of the communications technology category. This reflects relatively high take-up of broadband and mobile phones in this country. This might partly be explained by the fact that the UK is one of the smaller G7 countries in terms of land area, which makes it somewhat easier and cheaper to build a high quality tele-communication network. It also reflects a relatively liberal and competitive telecommunications policy regime in the UK (notably relative to the US).

- The UK's worst performance is in the social cohesion category, where it comes last in the G7 rankings. One important factor that explains this is the average numbers of years spent in schooling by the general population (9.4 years in the UK compared with 10.9 in advanced economies on average). This could, however, partly be skewed by the fact that undergraduate university courses in the UK are shorter compared to most other advanced economies. However, there are also other elements within this category in which the UK does not perform particularly well e.g. income inequality, which is higher in the UK than in other G7 countries except the US.
- The UK ranks reasonably well in the political institutions category, placing ahead of Japan, France and Italy. However, this could be affected in the short term by uncertainty over the two upcoming referenda on Scottish independence and the possible 'in-out' vote on the European Union.
- Finally, the UK's environmental performance is somewhat better than that of most of the G7 and especially the US, which is bottom of the pack in this regard, notably on CO_2 emissions.

Figure 4.2: UK performance on elements of the PwC ESCAPE Index relative to the average for the rest of the G7



Source: PwC analysis using ESCAPE Index

The above analysis provides a snapshot of the UK's relative strengths and weaknesses in relation to the rest of the G7. In Figure 4.2 we look at trends since 2000, which is the first year for which we have calculated the ESCAPE Index.

We can see from this chart that:

- UK economic performance has been gradually declining when compared against other G7 economies, particularly since 2007. As discussed above, this is expected given that the UK suffered disproportionately more from the financial crisis. However, going forward, we expect the UK to improve its relative performance in this category as its growth in 2014 is projected to be the fastest in the G7 (see Appendix A).
- The biggest inherent weakness of the UK remains in the social category where there has not been much improvement since 2000. This requires longer term structural weaknesses in relation to education and income inequality to be addressed.
- The communications technology and political categories are areas where the UK does consistently well over time compared to the other G7 countries. The UK is also slightly above the G7 average on environmental measures, although there is clearly room for further improvement here.

4.3 – Summary and conclusions

Ever since the Industrial Revolution, the UK has been an important player in the world economy (even if no longer the dominant player since the US took over that role in the early 20th century). One of the megatrends we expect[9] to be significant in coming decades is the gradual shift of economic power from the West to the East. However, despite this trend, our analysis shows that the UK is expected to remain a sizeable and important member of the world economic elite at least up to 2030.

Specifically, in our baseline scenario we project that:

- The UK could remain the sixth largest economy in the world in 2030 when measured by GDP at market exchange rates, falling behind India but overtaking France.
- The UK has the potential to become the second largest EU economy on this measure, moving ahead of France before 2020, and narrowing the gap with Germany by 2030.

However, it's not all good news. We have also looked beyond GDP at broader measures of performance by using an updated version of our ESCAPE Index. This shows that, in 2013, the UK ranked only 5th of the G7, down from 3rd place in 2000 and 2007. The UK's performance relative to the G7 was:

- Below average in the economic performance and stability category, although this was attributed largely to adverse cyclical variations in the economy since 2007 and is expected to improve gradually now that the UK is recovering relatively fast.
- Significantly below average for the G7 in the social progress and cohesion category, which has been driven by relatively high income inequality and less time on average spent by the population in education.
- Significantly better than the G7 average in the political institutions and communications technology categories, and slightly better on environmental sustainability.

Overall, therefore, the UK is growing relatively strongly at present and has some important strengths, but it also has some deeper structural weaknesses to address in the longer term, particularly around education and inequality. Maintaining recent relative strong growth will also require increased productivity, which also requires improved education and skills levels, as well as increased business and infrastructure investment.

The UK is growing relatively strongly at present and has some important strengths, but it also has some deeper structural weaknesses to address in the longer term.

9 See our megatrends website for more details: http://www.pwc.co.uk/issues/megatrends/index.jhtml

Appendix A
Outlook for the global economy

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

We expect the Eurozone and the US economy to grow in 2014, with even faster growth projected for both in 2015 as the economic recovery in advanced economies continues. Emerging economies will continue to make a significant contribution to global growth, but there are potential downside risks in some of these countries.

These projections (including those for the UK) are updated monthly in our Global Economy Watch publication, which can be found at www.pwc.com/gew

Table A.1: Global economic prospects

	Share of World GDP	Real GDP growth (%)		Inflation (%)	
	2012 at MERs	2014p	2015p	2014p	2015p
United States	22.5%	2.3	3.0	1.8	2.2
China	11.4%	7.4	7.3	2.5	2.6
Japan	8.3%	1.5	1.5	2.1	2.1
UK	3.4%	3.0	2.6	1.7	1.9
France	3.6%	0.9	1.1	1.1	1.2
Germany	4.7%	2.0	1.9	1.2	1.4
Greece	0.3%	0.3	2.1	-0.4	0.1
Ireland	0.3%	1.7	2.5	0.2	1.2
Italy	2.8%	0.1	0.9	0.7	1.0
Netherlands	1.1%	0.2	1.5	0.8	1.2
Portugal	0.3%	0.1	1.4	0.5	1.1
Spain	1.8%	0.9	1.3	0.3	0.8
Poland	0.7%	2.7	3.2	0.6	2.2
Russia	2.8%	0.5	1.5	6.7	5.8
Turkey	1.1%	2.4	3.8	8.0	6.7
Australia	2.1%	2.6	2.2	2.8	2.6
India	2.6%	5.3	6.6	5.6	6.1
Indonesia	1.2%	5.4	5.8	6.2	5.3
South Korea	1.6%	3.5	3.7	2.3	3.0
Argentina	0.7%	0.7	1.8	11.9	13.3
Brazil	3.1%	1.8	2.5	6.6	5.7
Canada	2.5%	2.2	2.5	1.7	1.8
Mexico	1.6%	2.6	3.7	3.9	3.7
South Africa	0.5%	1.8	2.5	6.1	5.5
Saudi Arabia	1.0%	4.1	4.3	3.1	3.5
World (PPP)		3.3	3.7		
World (market rates)	100%	2.8	3.2	5.2	5.6
Eurozone	16.9%	1.0	1.4	0.9	1.2

Source: PwC main scenario for 2014 and 2015; IMF for GDP shares in 2012 at market exchange rates (MERs).

Appendix B
UK economic trends: 1979 – 2013

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	2.8	5.0	-0.2		13.7	-0.5	4.7
1980	-2.0	0.1	-8.6		16.6	0.8	4.3
1981	-1.3	0.0	-6.1		13.9	1.9	3.4
1982	2.2	1.2	-0.1		12.2	0.8	2.6
1983	3.8	4.6	2.1		10.1	0.4	3.4
1984	2.9	2.8	3.7		10.0	-0.4	3.7
1985	3.9	4.3	2.9		12.2	-0.2	2.8
1986	4.3	7.1	1.4		10.9	-0.9	2.2
1987	5.2	6.2	4.8		9.7	-1.6	1.5
1988	5.6	8.4	7.3		10.4	-3.9	-0.8
1989	2.6	3.9	4.0	5.2	13.9	-4.6	-0.8
1990	1.8	2.4	-0.1	7.0	14.8	-3.5	0.7
1991	-1.3	-2.2	-4.9	7.5	11.5	-1.4	3.0
1992	1.3	1.6	-0.1	4.3	9.6	-1.7	6.4
1993	3.5	4.1	1.4	2.5	5.9	-1.4	7.7
1994	5.0	3.4	4.9	2.0	5.5	-0.5	6.5
1995	3.5	2.1	1.5	2.6	6.7	-0.7	5.2
1996	3.5	5.0	1.2	2.5	6.0	-0.6	3.7
1997	4.4	4.9	1.9	1.8	6.8	-0.1	1.9
1998	3.6	4.1	0.6	1.6	7.3	-0.4	0.0
1999	2.9	5.2	0.5	1.3	5.4	-2.7	-1.2
2000	4.4	5.5	2.2	0.8	6.1	-2.9	-1.7
2001	2.2	3.8	-1.7	1.2	5.0	-2.3	-0.6
2002	2.3	4.0	-2.4	1.3	4.0	-2.1	2.0
2003	3.9	3.8	-0.5	1.4	3.7	-1.7	3.2
2004	3.2	3.2	1.9	1.3	4.6	-2.0	3.2
2005	3.2	2.9	-0.2	2.1	4.7	-1.8	3.4
2006	2.8	1.8	1.8	2.3	4.8	-2.8	2.5
2007	3.4	2.8	0.8	2.3	6.0	-2.2	2.6
2008	-0.8	-0.9	-2.7	3.6	5.5	-0.9	4.8
2009	-5.2	-3.6	-10.2	2.2	1.2	-1.4	11.0
2010	1.7	1.0	4.2	3.3	0.7	-2.7	9.9
2011	1.1	-0.5	1.8	4.5	0.9	-1.5	7.7
2012	0.3	1.5	-1.7	2.8	0.8	-3.8	7.8
2013	1.7	2.2	-0.7	2.6	0.5	-4.5	6.8
Average over economic cycles***							
1979 - 1989	2.7	4.0	1.0	7.9	12.2	-0.7	2.5
1989 - 2000	2.9	3.3	1.1	3.3	8.3	-1.7	2.6
2000 - 2007	3.2	3.5	0.2	1.6	4.8	-2.2	1.8

* Pre-1997 data estimated ** Public Sector Net Borrowing (calendar years excluding special factors) *** Peak-to-peak for GDP relative to trend
Source: ONS, Bank of England

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