Fundamentals:

Beyond Goldilocks

Low energy prices will make inflation too cold for central banks' comfort in 2015. But consumer spending is likely to be red hot.

In this edition of Fundamentals, LGIM economist James Carrick assesses the impact of the sharp fall in energy prices over the past year. While there are drags from energy capex and OPEC imports, the huge scale of the decline in energy prices should boost global growth as central banks keep policy loose to stave off deflation risks.

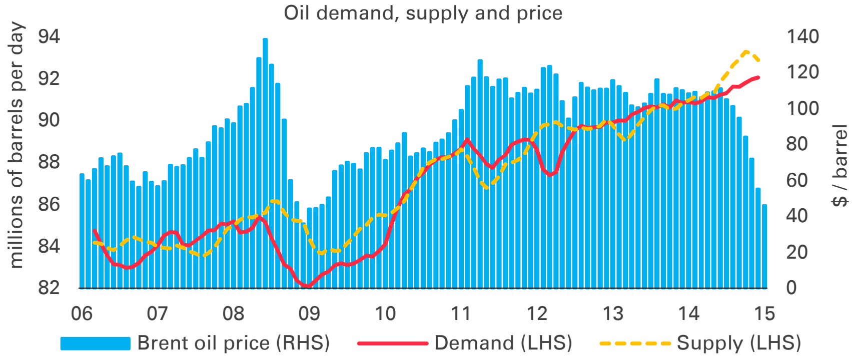
Oil prices have fallen by around $60 since the summer of 2014. If sustained (Brent is $50 per barrel at the time of writing), global cash spending on oil could fall by almost 3% of GDP. This is a shock of similar magnitude to the oil price spike of 1974. History suggests these shocks have significant macro effects because oil consumers tend to react quicker than oil producers to changes in cashflow. Our lead indicator therefore points to a global economic boom. But we acknowledge there are potential losers and will investigate the negative effects from weaker energy investment, strains in OPEC finances, credit conditions and the risk of deflation. The fear of the latter is likely to keep global monetary policy looser for longer, which should further underpin global consumer spending.

IS THE CANARY WELL?

The first question to answer is 'why have oil prices fallen so much'? Some argue they represent the metaphorical canary in the coal mine, keeling over in response to a collapse in global demand. We are unconvinced by this. Monthly data by the US Energy Information Association show global oil demand rising at a steady pace up to December – in contrast to the summer of 2008 before Lehman Brothers

Legal & General INVESTMENT MANAGEMENT

Figure 1. Oil demand has carried on rising in contrast to 2008



Source: US Energy Information Assocation, Macrobond, LGIM estimates

went bankrupt (**figure 1**). Instead, we saw an acceleration of global energy supply over the summer. The most obvious explanation seems to be a price war initiated by the oil producers' cartel – OPEC – to take on new technologies, predominantly US shale. This echoes 1985/86 when prices plunged as OPEC boosted production after years of losing market share. Rather than speculating where oil prices will ultimately settle, this note will discuss the sensitivity of global growth, inflation and monetary policy to a significant decline in oil prices.

ABSOLUTE NOT PERCENTAGE CHANGES

In order to quantify the impact of movements in energy prices on the economy we calculate the 'oil burden': the amount of money the world spends on oil. This is the number of barrels of oil consumed per year, multiplied by the oil price (in current US$) and divided by world GDP (in current US$). We therefore take into account both the energy intensity of the world economy and the relative price of oil. With world GDP estimated at $78trillion in 2014, and oil consumption around 92million barrels per day, a $100 oil price reflects 4.3% of GDP (**figure 2**).

If oil prices were to halve to $50, the world economy would spend 2.15% of GDP less on oil – equivalent to $1.67trillion. But if oil prices were to halve again to $25, the gain would only be another 1.075% of GDP, or $0.84trillion. In other words, it's important to look at the absolute change in oil consumption (in US$ or as a share of GDP) rather than just the 'percentage change in the oil price' to accurately assess its impact. Today's shock is far bigger than the 50% fall in oil prices in 1998 to around $10.

DISTILLING THE IMPACT

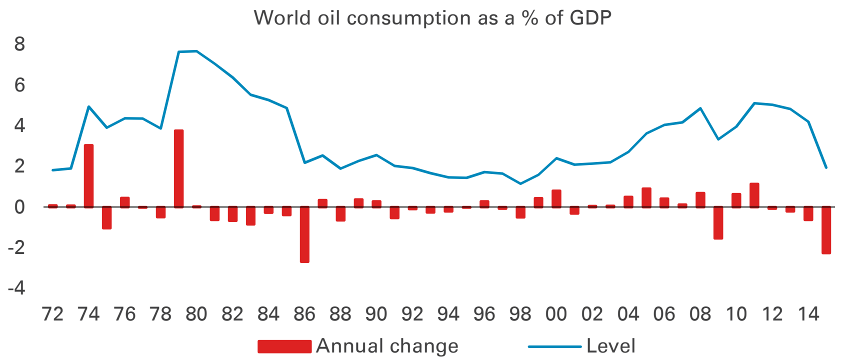
Our global lead indicator suggests a $10 fall in energy prices – after taking into account historical inflation and current energy intensity – boosts real global GDP growth by just over ¼%. This is broadly in line with other macro simulations published by institutions such as the IMF and OECD. Given the oil price has fallen by $60, this would suggest that we can expect an extraordinary boost to growth of over 1.5 percentage points.

Our multivariate model takes into account other variables such as global credit conditions and corporate interest gearing to try and distil the pure impact from oil price changes. Given the current decline in corporate yields and reported easing of advanced economy credit conditions, our lead indicator is the strongest since the late 1980s boom, pointing to 4½% growth (**figure 3**).

PLANES, TRAINS AND AUTOMOBILES

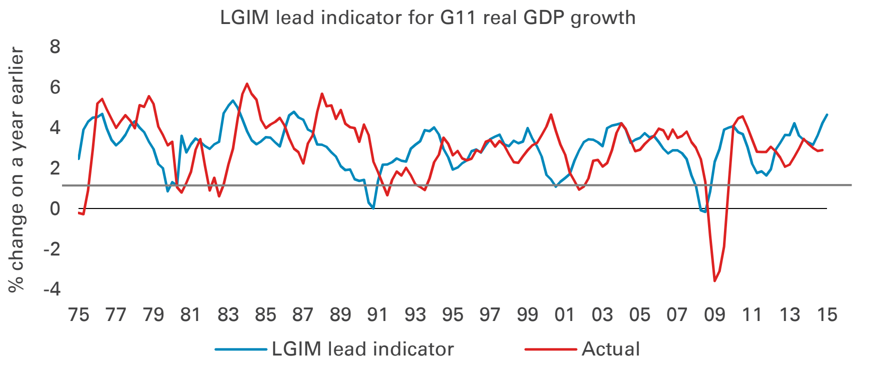
The obvious winners from lower oil prices are global consumers, who will have more change in their pockets after filling up their cars. We estimate the $60 fall in oil prices will directly knock around 1½% off OECD inflation through lower energy prices (**figure 4**). Our models suggest consumers will spend half of this and save the other half. So we should get a boost to real consumer spending of around ¾%. This is equivalent to around 0.4% of world GDP. But the overall effect could be double (0.8%) as a result of multiplier

Figure 2. The decline in oil spending is similar in size to the 1974 oil spike



Source: Reuters Ecowin, LGIM estimates

Figure 3. Lower oil prices have pushed our lead indicator into boom territory



Source: Reuters Ecowin, LGIM estimates

effects. Stronger consumer spending will boost confidence, capacity utilization, employment and investment throughout the economy.

A further boost should come from the broader corporate sector. Consumers (defined as passenger cars and household energy) only account for around 33% of UK oil consumption. The other 67% is used by the corporate sector, of which the majority is commercial road transport (33%), followed by airlines (20%) and industry. So of the huge $1.67trillion reduction in global energy spending highlighted earlier, around £1.1trillion will be enjoyed by the corporate sector. It is unclear how much and how quickly they will react. If they passed the cost savings onto consumers (for example, an airline could cut airfares) then demand for air travel could rise and airlines would need to hire more cabin crew and possibly order more planes. Or consumers could buy duty free with the money saved on the flight.

If companies don't pass on lower prices, then profit margins will rise. This could boost financial markets through higher dividends, share buybacks or M&A.

SNAKE OIL AND LADDERS

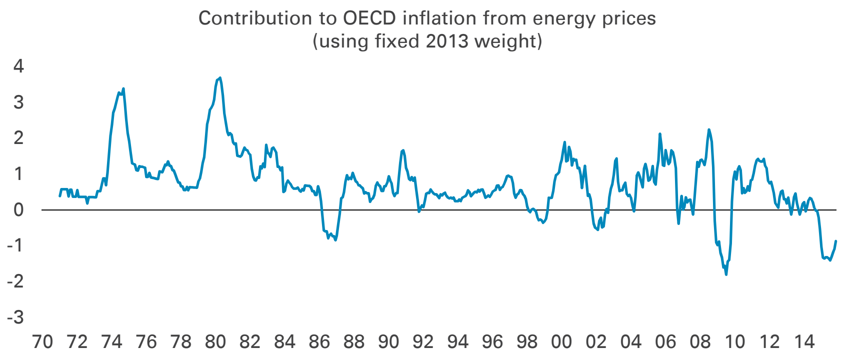
Before getting too carried away about the positive impact of lower energy prices, it's important to recognise there are losers and we need assess their size and who is most exposed. We highlight four main areas: non-OPEC energy production and capex, OPEC imports, credit conditions and deflation.

US shale production has boomed in recent years and oil and gas extraction boosted US GDP growth by ¼% in 2014. It's unclear what will happen to production in the near term. Between 1986 and 1989, non-OPEC energy production merely flattened off, rather than collapsing. But that would still imply a drag on US growth of ¼%. In the UK, oil and gas production has been flat in recent years after being on a secular decline. Given UK production is more cumbersome 'offshore', it should be less responsive to price fluctuations than in the US where rigs have a shorter lifespan. But both countries should suffer from weaker energy capex.

The Scottish government estimated last May (when oil was at $100) that North Sea investment had risen by approximately 0.1% of UK GDP per year between 2010 and 2013 and was set to fall at a similar pace until 2017 – a swing factor of -0.2% (**figure 5**). This fall could accelerate. In the US, we estimate that a 33% decline in energy investment would cause a swing factor of -0.3% to US GDP growth. As with consumer spending, there will be multiplier effects from these investment cuts.

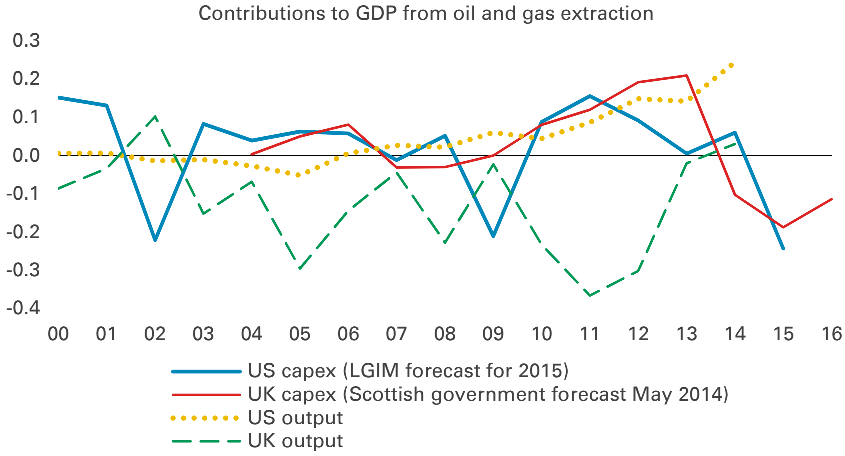
Europe and Japan barely produce any oil, so are spared from the direct impact of these capex cuts. But Europe has larger indirect exposure to OPEC and Russia. Exports to those countries represent 2% of euro area GDP vs 1½% in the UK, 1% in Japan but just ½% in the US. Historically, for every $1 decline in export revenue, OPEC countries cut their imports by 33 cents (**figure 6**). Given that the oil price has more than halved, this suggests exports to OPEC and Russia could decline by up to 0.3% of GDP for the euro area. Timing is the critical factor here. Typically, western consumers

Figure 4. Global inflation is set to fall by 1.5 percentage points in 2015



Source: Macrobond, LGIM estimates

Figure 5. Energy output and capex has boosted US and UK GDP growth



Source: LGIM estimates, Macrobond, Reuters Ecowin

adjust their spending quicker than governments in oil producing regions. Some oil producers, notably Saudi Arabia, have large foreign assets they can draw down on to smooth spending.

But other oil producers, such as Venezuela and Russia, could run into trouble. There is also the risk of defaults on loans to energy companies in the US and UK. While this should be offset by increased profitability of the non-oil sector, a concentrated shock to one sector could hurt banks, triggering a tightening of credit conditions. The running down of savings by oil-producing sovereign wealth funds also implies upward pressure on global bond yields. Both factors could depress global growth.

DEFLATION DANGER

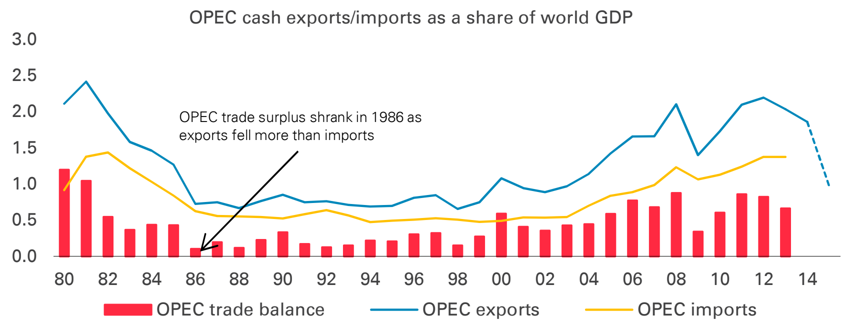
A further danger stems from deflation. A prolonged period of negative headline inflation, alongside low core inflation as firms pass on the $1.1trillion of cost savings, could dampen inflation expectations and therefore wage negotiations as we head into 2016. This could 'lock in' low inflation. Countries with high and rising unemployment (such as Italy and France) are at greater danger from second-round effects than countries with low and falling unemployment – for example, the US, UK and Germany.

Given high debt levels (which require rising profits, wages and tax receipts to pay off) and monetary policy being trapped at the zero bound, policymakers seem keen to act asymmetrically. They will prefer to keep policy too loose for too long than tighten monetary conditions too early. The ECB surprised expectations with a €1trillion bond purchase scheme in January and the Bank of England's hawks have stopped voting for rate increases.

The impact on the Fed is more ambiguous given it has a dual mandate of unemployment and core inflation. The energy sector is not as labour intensive as the consumer services sector, so lower energy prices should accelerate the decline in unemployment. But a pass-through of energy savings by corporates should depress core inflation in the short term, giving the Fed room to remain 'patient'.

Macro models point to a huge boost to global GDP from lower oil prices. While there are offsetting drags from lower energy capex and weaker demand from oil importers, the consumer sector is likely to be red hot as a result of too cold inflation and lower-for-longer interest rates.

Figure 6. OPEC's imports tend to fall less than its exports



Source: Macrobond, LGIM estimates

Market overview:

New measures for a New Year

It's been a busy start to the year. As commodity prices continued to tumble, dragging Europe into a deflationary environment, the European Central Bank (ECB) announced its quantitative easing programme - providing markets with a greater liquidity fix than expected. In Greece, the anti-austerity Syriza party just fell short of gaining an outright majority. Against this backdrop, the euro continued to weaken while the US dollar strengthened against a basket of other currencies. Global equity markets managed to stay in positive territory, with the Greek-related volatility constrained to Greek markets, and developed government bond yields continuing to trade at or around all-time lows.

UK

Unanimous vote from MPC

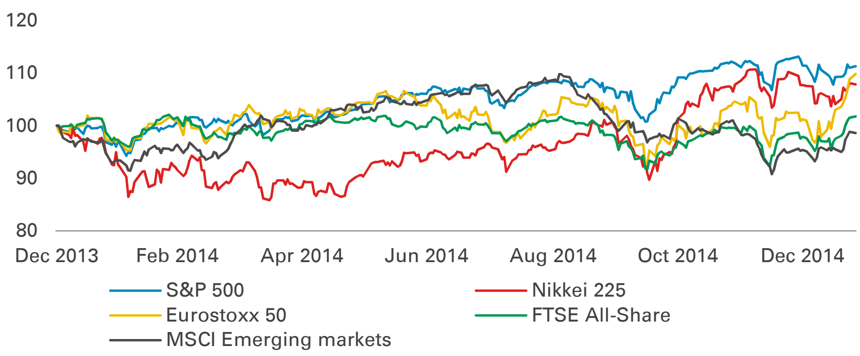
The latest minutes released from the Monetary Policy Committee (MPC) meeting revealed a unanimous decision to keep rates on hold. The committee probably found unity because of the increasing drag on inflation from lower commodity prices. In addition, the committee are acutely aware of the various risks surrounding Europe, the UK's largest trading partner. Indeed, the first interest rate hike is now expected in mid-2016: at one point last year, the first rate hike was expected from the Bank of England in November 2014. UK equities have posted positive returns so far this year, with the more domestically focused smaller and mid cap stocks outperforming.

US

Shale fail

With the market largely preoccupied with the European situation, the US has fallen away from headlines of late, unless it's weather related. However, the latest Michigan consumer sentiment survey came in at the highest level since 2004. Risks remain, evidenced by the marginally weaker US equity markets so far this year. US shale production is only viable when oil prices are higher than current levels. The jury is still out on whether the massive falls in oil prices, and its related detrimental effects on the US energy industry and therefore jobs and investment, can be offset by the boost to consumer spending that the drop in gas prices provides. For now, the US dollar continues to strengthen and demand for treasuries shows no signs of abating.

Figure 1. Global equity markets



Source: Bloomberg L.P. chart shows price index performance in local currency terms

EUROPE

Draghi delivers, and then some

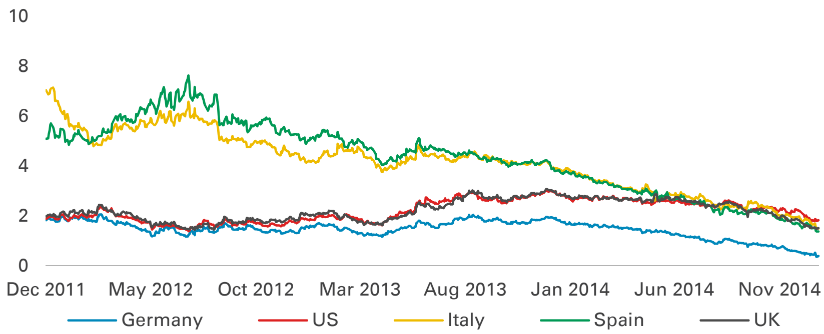
The ECB released the details of its quantitative easing measures, which at €60bn of purchases a month, was above market expectations. Draghi appears to be hoping that buying investment grade sovereign debt will stave off deflation risk, encourage investment in riskier assets and make Europe more competitive on the international export market. Any relief was short-lived, as Greece elected a government based on its anti-austerity measures. It remains to be seen how this political risk plays out. For now, the euro has weakened, bond yields have lowered, especially at the long end, and equity markets have weathered the Greek election results relatively unscathed.

JAPAN

Abe reaffirms his mantra

Prime Minister Abe won the snap election in December, reaffirming the credibility of his inflation-targeting mandate. However, Japan's inflation rate, along with many other developed countries is very low, and Japan recently recorded its 30th consecutive monthly trade deficit, despite the plummeting yen. Indeed, questions have emerged whether the economy remains export-driven. Over 2015 so far, Japanese equities are marginally weaker but Abe does remain committed to achieving 2% inflation.

Figure 2. 10-year government bond yields



Source: Bloomberg L.P.

ASIA PACIFIC/EMEA

Russia downgraded

The oil price slump and wider commodity price falls have acted as a drag to most exporters, with many emerging market currencies much weaker since the start of 2014. The situation has hit Russia particularly hard where its sovereign credit rating was downgraded to junk for the first time in nearly a decade. The Russian rouble has sold off considerably against the US dollar as the ongoing fighting in eastern Ukraine and international sanctions exacerbate the situation. In China, there is evidence that the property sector is responding positively to easing measures and its healthy labour market is supporting consumer spending, despite the weaker year-on-year industrial profits print in December.

FIXED INCOME

Rates lower again

Government bond yields have moved lower, particularly at the long end of the curve. Lower commodity prices and its drag on inflation expectations have pulled down yields. In the UK, the Bank of England has reaffirmed its awareness that any premature tightening in policy could prove detrimental to the domestic economy and long-end bond yields have moved lower over the month. European yields in particular have moved lower as the ECB announced its QE measures. The lower government bond yields have continued to prop up most corporate bond markets but some parts of the high yield credit market are weaker, notably US energy high yield companies.

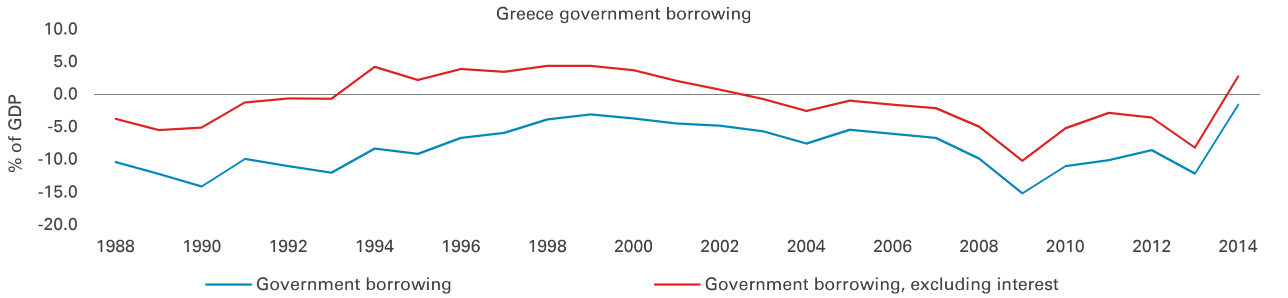
Snapshot:

Greece is the word

Greece has elected a new government with the radical left Syriza party at its helm. It is the first time since the sovereign debt crisis engulfed Europe that an overtly anti-austerity party has been voted into power in the euro area. With other national elections coming up – particularly Portugal and Spain – political risk will be a prominent factor in 2015.

Greece has undergone several years of economic recession and seen swingeing cuts to public spending. As a result, overall government borrowing has fallen from 15% of GDP in 2009, to less than 2% in 2014, and when interest payments are stripped out, Greece is running a surplus of around 2½% of GDP. While the fiscal effort is commendable, the high unemployment rates have taken their toll on the Greek population and a protest vote for a party promising to reduce the debt burden is hardly surprising.

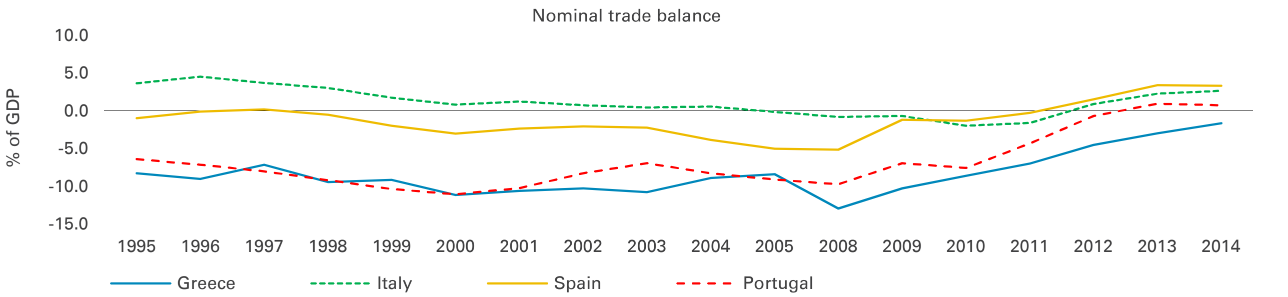
Figure 1. Greek fiscal improvement



Source: European Commission

But for the rest of the EU, such negotiations are highly problematic. Writing off a portion of the debt would be politically unpalatable; it's a tough sell to the electorate to make a loss on the principal of any loan. And concessions to Greece would likely lead to similar demands from other countries that have also worked hard to improve their economic sustainability (figure 2).

Figure 2. Nominal trade balance as % of GDP



Source: OECD

How the Greek government negotiates in the coming weeks will be closely watched by the anti-austerity parties that are gaining ground in polls in other countries.

With much at stake for the EU as well as Greece – where the vast majority of citizens want to remain in the euro area – a compromise is the most likely outcome. But now that Greece, and others, are closer to being self-sufficient, threats to leave the euro are more credible. The ECB's bond purchases limit the risks of contagion to the rest of the euro area. So the debate to stay in the euro or not is likely to intensify on both sides.

UK forecast:
Lower for longer

UK economy	Price inflation (CPI)		GDP (growth)		10-year gilt yields		Base rates		$/£		£/€	
Market participants' forecasts	2015 %	2016 %	2015 %	2016 %	2015 %	2016* %	2015 %	2016* %	2015	2016*	2015	2016*
High	2.00	2.40	3.20	3.00	3.45	3.90	1.50	1.50	1.64	1.66	0.82	0.82
Low	0.10	0.90	2.20	1.70	2.00	1.80	0.50	0.75	1.38	1.31	0.67	0.66
Median	1.00	1.85	2.60	2.40	2.52	2.75	0.75	1.00	1.50	1.52	0.75	0.74
Last month median	1.50	1.90	2.60	2.30	2.75	2.85	1.25	1.25	1.58	1.55	0.75	0.75
Legal & General Investment Management	**0.00**	**1.50**	**2.75**	**2.75**	**2.79**	**3.39****	**0.50**	**1.00**	**n/a**	**n/a**	**n/a**	**n/a**

Source: Bloomberg L.P. and LGIM estimates
***Forecasts are for end of Q2 2016**
****Forecast for end of 2016**

What a difference a new year can make. At the tail end of last year there was a clear consensus that the Bank of England (BoE) would increase rates in 2015. That consensus now points to summer 2016. When we want to look at why everyone expects a later start to rate hikes, we obviously look first to the BoE. Sure enough the Monetary Policy Committee (MPC) voted 9-0 to leave rates unchanged in January, after several months where the split had been 7-2.

Growth is one area that can prompt a shift in view – if it is likely to have an effect on inflation. Growth for the final quarter was a bit softer than expected, but as a whole, 2014 still produced the highest UK annual growth since 2007. Wage growth is picking up too. It's still not overly impressive, but the trend is positive and expected to remain so through 2015.

This combination would often be consistent with growing pressure for a rate hike. Why is this pressure easing? Inflation is the key here. The huge fall in oil prices seen in the second half of 2014 has pushed headline inflation lower and reduced consumer expectations about future inflation, which could spillover into weaker wage growth. As we have seen recently with the ECB, central banks watch inflation expectations almost as closely as current inflation. With interest rates at (or near) zero, there is limited scope to act if inflation looks like it will remain persistently below target. As we've said before, this means that the MPC almost has no choice but to act asymmetrically – waiting until there are clear signs that the economy is at or near capacity and that inflation is about to rise. Ultimately, this course of action probably means that the Bank will have to raise rates a little faster and a little higher than would be the case if it started to hike earlier. But the risk of raising rates too soon and entrenching very low inflation will probably be enough to prompt a cautious approach.

In the short term, this means that we expect the UK base rate to remain lower for longer. And without any rate hike to slow the economy, plus a good global environment, we think that UK GDP growth will be better than expected. The medium-term view may be uncertain, but we believe that this will mean a very positive short-term environment for the UK domestic economy.

The forecasts above are taken from Bloomberg L.P. and represent the views of between 20–40 different market participants (depending on the economic variable). The 'high' and 'low' figures shown above represent the highest/lowest single forecast from the sample. The median number takes the middle estimate from the entire sample.

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