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## Heating up, slowly



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The robust global economy, led by the US, is approaching full capacity. The expansion's pace of growth is holding above potential thanks to its synchronised nature. US fiscal stimulus should give growth an extra leg up and is one more reason to think inflation has bottomed out. Yet there is another important consideration: The global economy is as integrated as ever. US stimulus can reinforce the rebound in business investment and share the growth boost more broadly via increased imports. Lingering global slack helps moderate the expansion's heating up. Highlights of our expanded *Global macro outlook*:

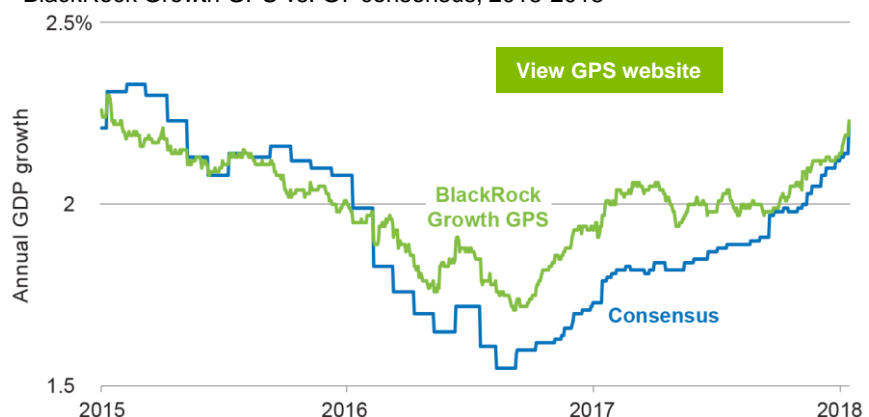
- From a growth perspective, US fiscal stimulus is a sea change after a significantly contractionary policy stance for much of the expansion. We estimate the US cycle can power on for another two to three years – about a year shorter that would have been the case without stimulus.
- Some spare capacity persists, particularly in Europe, and is more global in nature. More US growth spilling abroad could underpin the global expansion, implying less domestic overheating. If overheating pressures are contained, the global expansion could press on for longer, in our view.
- Corporate animal spirits are revving up and leading to greater investment. An investment recovery gives the expansion more breadth and a longer lifespan by lifting potential growth.
- US protectionism could threaten one of the most important foundations to the post-war economic order. We may be witnessing the start of global integration going in reverse.

### Growth GPS: Here comes fiscal stimulus

The [BlackRock Growth GPS](#) suggests that G7 growth is firming at above-trend levels. We see scope for a further GPS acceleration as the effects of US fiscal stimulus become fully incorporated into our gauge. The GPS's big data inputs are likely to capture improving business investment intentions.

### Economic snapshot

BlackRock Growth GPS vs. G7 consensus, 2015-2018



Sources: BlackRock Investment Institute, with data from Bloomberg and Consensus Economics, January 2018. Notes: The GPS in green shows where the 12-month consensus GDP forecast may stand in three months' time for G7 economies. The blue line shows the current 12-month economic consensus forecast as measured by Consensus Economics.

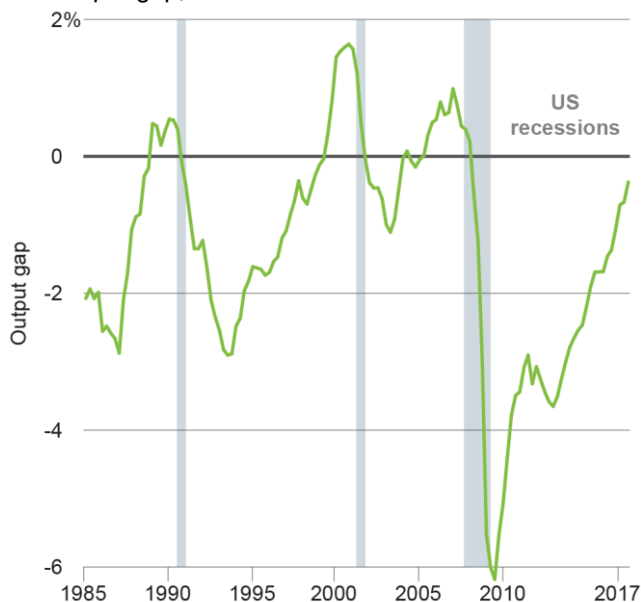
## A unique expansion

The global economy has never been so integrated at this point of an expansion, with world trade making up about 50% of global GDP – much higher than in the last cycle. Global integration is key for assessing where we are in the cycle. For the first time since the 2007-08 crisis, the global economy is close to operating at or above full capacity. Yet that is largely a US story. We see global slack playing a bigger role in this more integrated world. A revival of corporate investment should give the expansion better breadth. Europe is playing a bigger role driving global growth, including on capital spending, but some slack lingers. That should limit the pickup in global inflation. Interest rates should rise in this environment, but substantial precautionary savings and more interconnected financial markets should limit how high core bond yields can go.

We see a simple reason why economic slack needs to be measured on a global basis when estimating a cycle's lifespan: The world is more interconnected. Demand is better redistributed around the world due to more deeply intertwined global trade and corporate supply chains. Our estimate of the G3 output gap in the chart below shows ongoing slack. The US expansion is entering its ninth year and is on course to become the longest on record – stirring concern it is nearing a recessionary tipping point. We have argued that the amount of economic slack remaining matters more than time elapsed when judging a cycle's lifespan. Economies can run beyond potential for long stretches before peaking, especially when growth is just above trend. This is one of the the main themes in our [2018 Global Investment Outlook](#). Estimates of slack suggest the US economy is now closing its output gap and edging into the overheating phase. Fiscal stimulus will accelerate that. Yet even then, the cycle's lifespan can last for a few years. Also see our [Cycles in context](#) interactive.

## Lingering slack

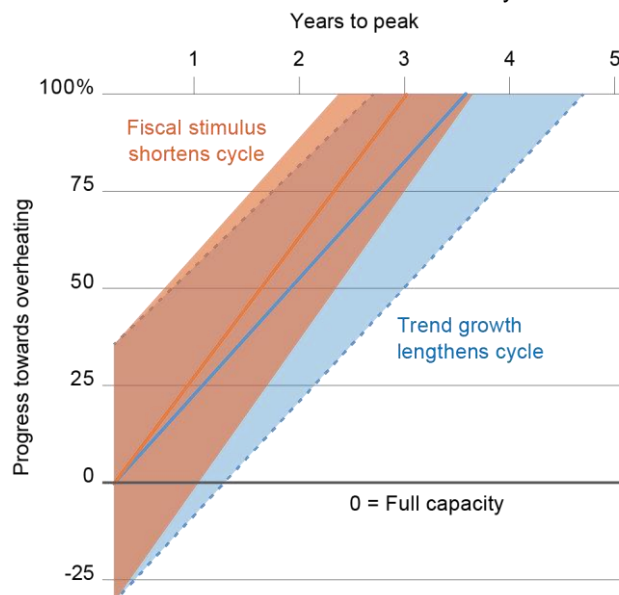
G3 output gap, 1985-2017



Sources: BlackRock Investment Institute, with data from Thomson Reuters, January 2018. Notes: The chart shows our estimate of the G3 output gap, or where output is relative to potential for the US, eurozone and Japan.

## Fiscal fuel for expansion

Estimated US stimulus effect and uncertainty bands



Sources: BlackRock Investment Institute, with data from International Monetary Fund (IMF), Congressional Budget Office (CBO), OECD and Thomson Reuters, January 2018. Notes: The chart shows the likely number of years left in this US economic cycle reaching an overheating point based on two scenarios: 1) our expectation for higher growth versus potential (2.6% actual versus 1.8% potential) over the next two years due to fiscal stimulus with a modest but delayed rise in potential; 2) a no-stimulus scenario where growth remains only slightly above potential in line with post-crisis trends. The bands represent the different outcomes based on averaging four measures of prior cycle peaks since the early 1950s: the IMF's, the OECD's, the CBO's output gap and the CBO's measure of the non-accelerating inflation rate of unemployment gap.

## Shot in the arm

The just-passed US tax cuts plus higher expected federal spending point to growth getting a shot in the arm. This represents a sea change after the contractionary fiscal stance during much of this expansion. We believe the total fiscal package could add 0.8 percentage point to US real GDP in 2018 thanks to the mix of corporate tax cuts, immediate capex expensing and higher federal spending – while also worsening the US debt trajectory. The makeup of this stimulus may lead the US to import more as companies increase investments. This is how stimulus can share the growth beyond US borders. Stronger business investment should boost US potential growth by about 0.2 percentage point – but with a lag to the demand impact.

The chart above shows how fiscal stimulus could affect how much time it takes to reach the US expansion's end based on where the output gap was at past cycle endpoints. The orange line and band show our base case that fiscal stimulus has likely shortened the cycle, mainly by pulling forward demand. The blue line and band show how the cycle might have played out if GDP growth had kept running at a slightly above-trend pace similar to that during most of the expansion. The bands represent the uncertainty across the range of official slack measures. We estimate the cycle can power on for another two to three years – about a year shorter that would have been the case without stimulus. The bottom line: The expansion can push on – and cycles can still run beyond this point if overheating pressures are contained.

## Better breadth

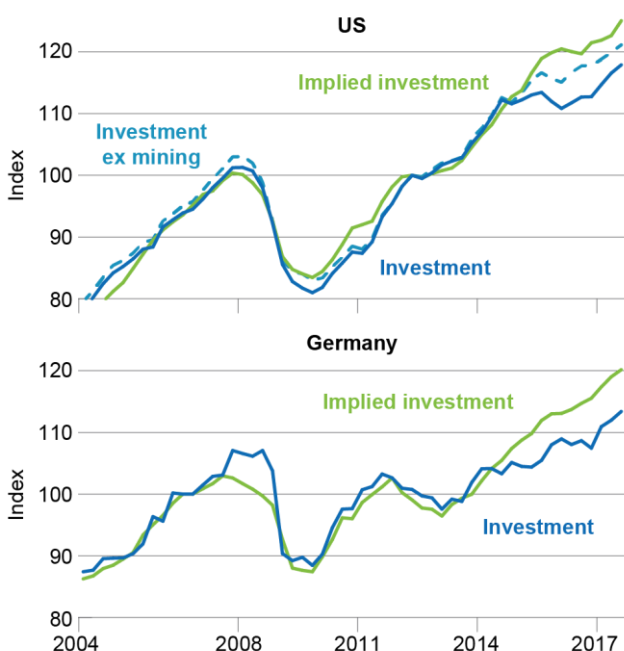
Stronger corporate investment, a long-missing ingredient in this expansion, is already underway. This should give the expansion better breadth and take some of the burden off household spending. That is now playing out across developed market (DM) economies.

The chart below shows the level of non-residential investment that would be implied by GDP trends in the US and Germany. We find that an investment shortfall remains in both countries. In the eurozone, the psychological scars of the double-dip recession put a chill on making commitments to new projects. Then the 2014-15 plunge in oil and commodity prices dealt a sharp blow. US investment is still seeing a shortfall even when excluding the mining sector that accounts for energy-related investment. We find that the level of investment is about 5%-10% below what would be implied by GDP trends. This is starting to close. Animal spirits are slowly revving up. Across the G3, factory orders and shipments are seeing some of their heftiest gains since the commodity shock.

The US fiscal revamp gives companies more reason to up their investment, whether in new computers and robots or research and development. The plan features broad corporate tax cuts and allowances for companies to immediately expense capital spending. This may only intensify the incentive to invest more rather than use funds for share buybacks. As we have highlighted, stronger investment can lift potential growth, making it a more durable growth engine.

## Capex comeback

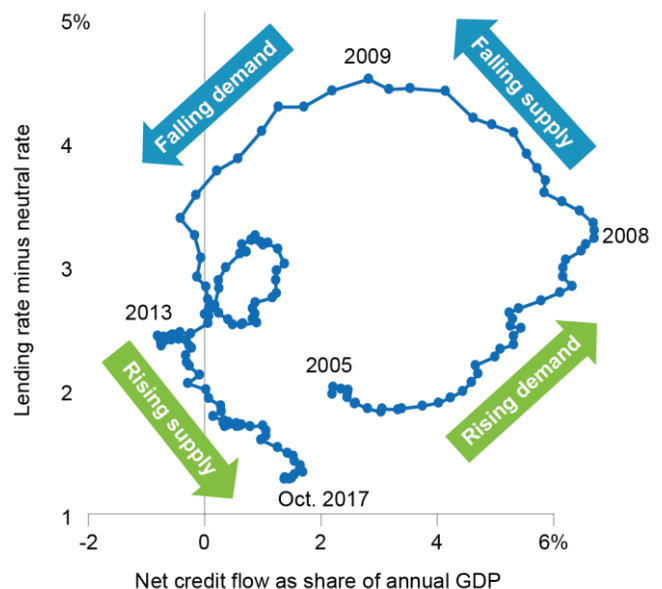
US and German investment trends, 2004-2017



Sources: BlackRock Investment Institute, with data from US Bureau of Economic Analysis and Eurostat, January 2018. Notes: These charts show the actual level of real non-residential investment in the US and Germany and estimates of where the level of investment should be based on its historical relationship with expected long-run GDP growth. We use an accelerator model to derive the level of implied investment and also factor in measures of market and economic uncertainty. The data are rebased to 100 in 2007.

## Hunger to borrow

Eurozone lending rates and credit flows, 2005-2017



Sources: BlackRock Investment Institute, with data from European Central Bank and Thomson Reuters, January 2018. Notes: The chart shows the credit flow – loans and net bond issuance – to non-financial corporates as a share of GDP relative to the average new lending rate (adjusting for our estimates of neutral rates). This helps show whether relative credit supply or demand is driving credit trends. A drift up and right in the chart suggests rising demand is the main factor.

## Lending and spending

The strength of Europe's rebound in 2017 was one of the year's biggest macro surprises, with GDP growth reaching a robust 3% annual rate. Growth expectations were revised up repeatedly, while some sentiment measures soared to record highs as investors started to embrace the more upbeat growth outlook.

Can this be sustained? We believe so. The chart above shows the flow of credit – both loans and bonds – to non-financial companies as a share of GDP relative to the new rate on that credit. The arrows show how this relationship unfolds across cycles. During the global financial crisis, banks and investors cut the supply of credit as deteriorating asset quality prompted widespread deleveraging. Apart from a brief blip in 2011, the sovereign debt crisis then hurt credit demand, reflecting the limp economy.

Since 2013, that picture has changed. The European Central Bank's (ECB) many stimulus operations to recharge the economy and lending – from long-term refinancing operations to asset purchases and negative rates – started to bear fruit. The supply of credit improved at ever-lower borrowing rates. Yet demand remains relatively tepid, especially relative to prior reflationary periods such as in 2005-2008. That makes this eurozone recovery an unusual one: Credit has played a much smaller role than it has in the past. Persistently tepid demand for credit has blunted the ECB's efforts to revive growth and eliminate slack. We see this as an important reason why the ECB will need to keep supporting the economy through its loose policy stance. A further rebound in borrowing and lending can buttress the eurozone expansion – and give it more room to run.

## Europe: An unsung hero

We expect DM growth to keep serving as the main global engine. Within DM, Europe is an unsung hero in the global economy's recent performance.

We have broken global growth down into regional drivers, based on composite PMIs, to get a better handle on which region is doing the cyclical heavy lifting at any given moment. See the chart below. Each region reflects activity levels relative to its trend – in other words, which are ahead of the pack and which are lagging in their cyclical performance.

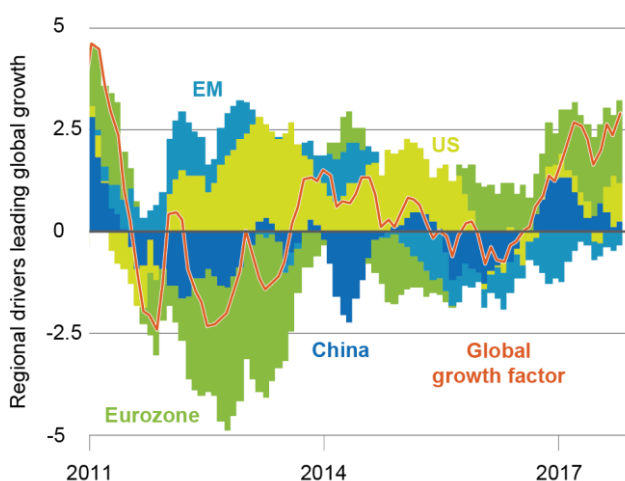
The US propped up global growth between 2012 and 2015 and provided something of a cushion against negative shocks, whether the eurozone in 2012-2015 or China in 2014-2015. Yet by 2017, all regions were contributing, reflecting the synchronised nature of the expansion at this point. Europe stands out more, with the negative impulse from emerging markets (EM) excluding China fading away.

Over the past two years Europe has proved the only constant source of growth support. We expect Europe to be another solid contributor in 2018, with bigger investment to help solidify the pace of growth. The US will also likely outperform thanks to fiscal stimulus. That should give a lift to EM excluding China. We see China's economy cooling a tad due to its deleveraging efforts. But a mild slowing from high levels should not have major repercussions for the broad EM expansion, we believe.

The chart also shows that this expansion has not been all about China and commodities. China is certainly important due to its size. But our work suggests China alone hasn't been a dominant driver of cyclical ups and downs, especially this latest upswing.

## Europe in the driver's seat

Regional drivers of global growth, 2011-2017



Sources: BlackRock Investment Institute, with data from Markit and Thomson Reuters, January 2018. Notes: This chart shows a global growth factor relative to its trend. The growth factor is calculated as the first principal component of 18 large economy composite PMIs. The regional contributions to this global factor are broken down relative to their trends using a vector autoregression model. The global growth factor is a stylized reflection of the regional components' net trend.

## Global growth channels

Impact of hypothetical 1% growth rise over two years



Source: BlackRock Investment Institute, January 2018. Notes: This chart gives estimates of the influence of a sudden growth boost in one economic region on others, in this case DMs, China and EM excluding China split into commodity and non-commodity producers. The numbers represent the cumulative percentage-point impact on growth over the subsequent two years of a hypothetical 1% growth rise in the originating region. For example, a 1% DM growth rise would have resulted in a 1.1% gain in non-commodity EM. The estimates are derived from BlackRock analysis modelling growth in DM, China and EM ex China using data over the past decade. Growth in one region is assumed to be a function of its own historic growth along with that in the other regions. The results are similar to those found in studies such as the IMF's November 2016 [Spillover Notes](#).

## Positive spillovers

We have built on our work gauging growth spillover effects to see how a positive growth shock propagates around the world. Previously we showed how a 1% shock in DM has a positive impact on EM, as much via China as directly, during periods of deflation. See [China's role in global growth](#) of February 2017. This time we break up EM excluding China into commodity and non-commodity producers. The chart shows the growth impact over two years from a 1 percentage point shock in the originating region.

Unsurprisingly, DM growth has historically affected EM non-commodity economies more than commodity ones. China influences the commodity producers more.

This suggests the growth spillovers to the EM world from last year's growth pickup in DM and China will likely run on in 2018. The IMF's upward revisions to DM and China in 2017 imply that EM ex China growth would be about 0.6 percentage point higher this year than would have otherwise been the case. This should help offset the direct impact of any mild slowing in China.

Corporate investment is a key channel for these spillovers – and as discussed we expect a further capex upswing thanks to Europe's recovery and US fiscal stimulus. This should make the growth spurt from investment, global trade and EM production more self-reinforcing. We also find that stronger DM capital spending tends to lead a pickup in world trade activity by about one to two quarters. We estimate that any 1% increase in DM investment lifts EM exports by about 0.5 percentage point. This is another key reason why we have confidence in the expansion's durability at this stage.

## Fickle expectations

Inflation pressures, too, are a story of deeper global interconnections. Lingering global spare capacity limits such pressures through the expectations channel. Inflation has bottomed out in G3 countries but remains well below 2% targets in the eurozone and Japan. The chart below shows the [BlackRock Inflation GPS](#) for each G3 country.

Why is inflation so limited this far into the cycle?

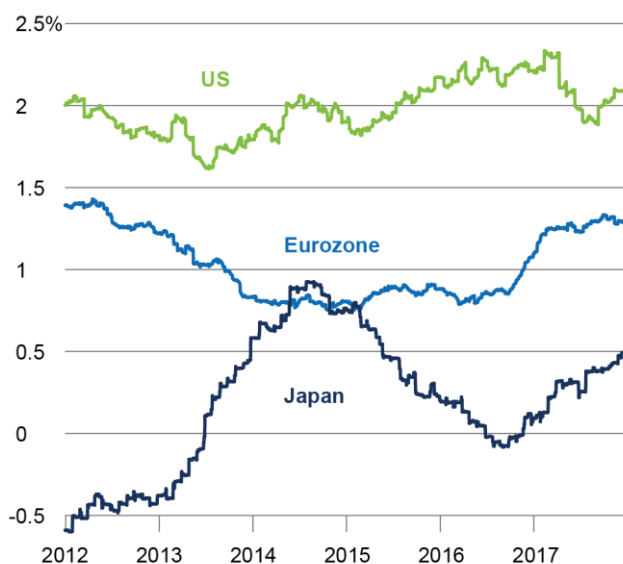
Expectations play a key, if fickle, role. We believe the Phillips curve – the link between slack and inflation – remains in force once expectations are accounted for. Our work shows that subdued inflation expectations are the prime factor behind sluggish US core inflation, masking the reduced drag from slack. See [Getting to inflation's core](#) of September 2017 for details. In the eurozone and Japan, slack and expectations both play a role. Yet expectations can change quickly. The rebound in commodity prices can stoke inflation expectations. Our view on the US inflation comeback is not fully reflected in the market narrative, potentially sparking an expectations shift that reinforces the inflationary dynamic.

Beyond expectations, the lack of wage pressure across the G3 speaks to an expansion where the overheating phase can unfold over an extended stretch. Other forces include technology (cheaper products) and globalisation (cheaper labour), although they are playing a smaller deflationary role than in recent years. China is less of a drag on global inflation, if only exporting less deflation.

We see scope for the Fed to lift rates four times this year rather than the three it has signalled – still a gradual pace. The ECB and Bank of Japan will be accommodative for a while, even if markets may overreact to technical tweaks that don't change the policy stance.

## Not overheating yet

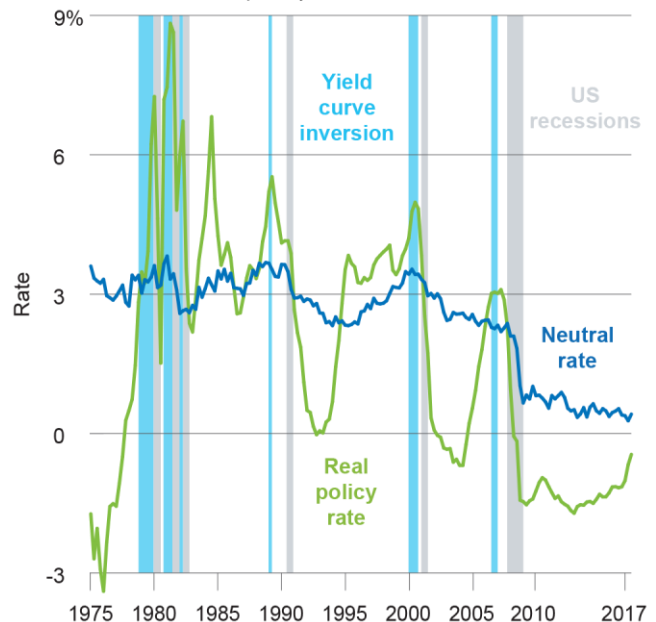
BlackRock Inflation GPS for G3, 2012-2017



Sources: BlackRock Investment Institute, with data from US Bureau of Labor Statistics, Eurostat, Japan's Ministry of Internal Affairs and Communications and Thomson Reuters, January 2018. Notes: This chart shows the BlackRock Inflation GPS, which is based on core inflation excluding food and energy prices. The Inflation GPS shows where core inflation may stand in six months' time.

## Cautious policy shift

US neutral and real policy rates, 1975-2017



Sources: BlackRock Investment Institute, with data from Thomson Reuters, January 2018. Notes: This chart shows the US real neutral rate ( $r^*$ ) and the real short-term policy rate. The neutral rate is estimated using a methodology similar to that in the [2016 paper](#) by Holston, Laubach & Williams. The shaded areas highlight US recessions and when the US Treasury yield curve inverted, either by the two-year or three-month yield being above the 10-year yield.

## Low rates here to stay

Global integration has another effect, namely linking together global interest rates. We find greater financial integration and a substantial build-up of global precautionary savings have pushed down neutral rates – the gravitational centre for interest rates. Based on IMF projections as of October 2017, global savings will total about \$22 trillion this year, up about \$2 trillion since last year. See [The safety premium driving low rates](#) of November 2017. This is important context for thinking about central banks shrinking balance sheets. We expect long-term rates to remain historically low but to rise modestly from current levels due to inflation gaining traction, gradual central bank normalisation – on both rates and balance sheets – and the sizable US fiscal injection. This comes as EM central banks also pivot towards tighter policy.

The chart above shows US real neutral rates and real policy rates. The Fed's cautious policy shift has meant it would take five more rate increases just to get policy rates back to neutral levels. Monetary conditions remain easy. Unless we see tight policy, a flat or inverted yield curve may not tell us much about recession risks. We have not seen the yield curve invert and a recession strike without policy rates being well above neutral rates.

**Risks:** Deeper economic and financial integration is at the core of this expansion's story, helping bolster its durability. But rising US protectionism puts this at risk. A US trade war with China or a unilateral pull-out from the North American Free Trade Agreement could shake the foundation of the post-war economic order and send global integration into reverse.

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