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The safety premium driving low rates



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The outlook for historically low interest rates is a top issue for investors. Low rates stem from tepid potential growth (ageing populations, poor productivity) and central bank success in achieving predictable, stable inflation. Yet another critical factor is often overlooked: a structural rise in risk aversion over the past two decades. This risk aversion intensifies the hunger for perceived safety in highly liquid sovereign bonds. Such a safety premium magnifies the drop in interest rates and compresses bond term premia. This is why we see rates across tenors climbing yet settling at levels well below historic averages. Highlights:

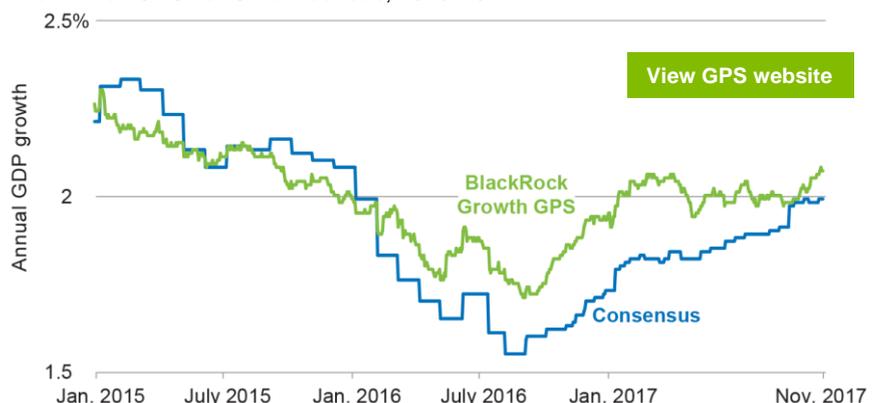
- Interest rates are not determined by potential growth alone. We believe a step-up in risk aversion has led to a structural rise in precautionary savings, further dragging down bond yields across the curve – a trend that won't quickly change.
- Risk aversion also pushes investors towards the relative safety and liquidity of G3 sovereign bonds, squeezing term premia. This might seem inconsistent with record-high equity indices – except that investors are putting an even higher historical premium on core bonds. Quantitative easing (QE) has not been the main driver but makes such assets even more scarce.
- The gravitational centre for interest rates – neutral rates (r^*) – is more global in nature thanks to tighter financial integration, another shift unlikely to change. G7 interest rates are now more influenced by global factors.
- Perceptions matter. Changes in perceived risk can jolt markets out of the current high risk aversion regime and lift rates. Yet we think this is unlikely. Record-high world debt stocks make various economic actors more vulnerable, motivating greater savings as a buffer against future shocks.

Growth GPS: Cruising speed

The [BlackRock Growth GPS](#) suggests that G7 growth is holding at above-trend levels. We believe the solid and stable growth backdrop is positive for risk assets. Better US and German data are helping underpin the broader Growth GPS.

Economic snapshot

BlackRock GPS vs. G7 consensus, 2015-2017



Sources: BlackRock Investment Institute, with data from Bloomberg and Consensus Economics, November 2017. 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.

Risk and low rates

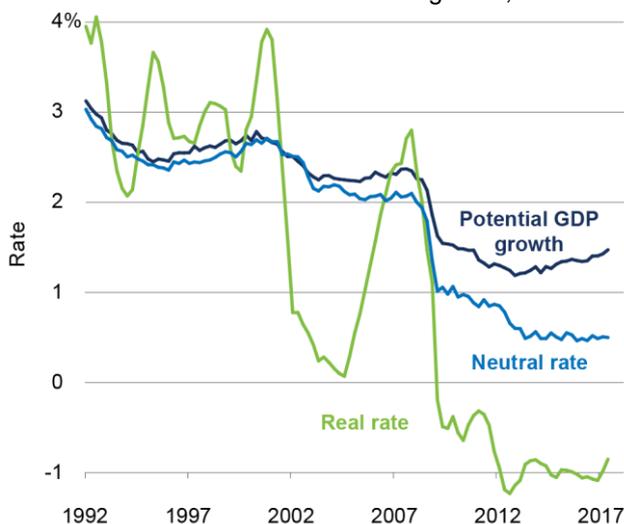
What factors drive interest rates? The neutral rate – which anchors the level of the entire yield curve – is a useful starting point. Textbook economics indicates that r^* is determined not just by potential growth but by perceived risk, too. A persistent rise in risk aversion has raised precautionary savings, suppressing the neutral rate and other rates further out the curve. We believe this has been a critical factor behind the multi-decade drop in global yields, beyond the more familiar decline in potential growth as societies age, productivity softens and central bank inflation targeting keeps price volatility in check.

Lower potential growth has contributed to the structural decline in r^* , as the *Roots of low rates* chart below shows. But our r^* estimate, based on a [Fed model](#), has fallen by more than growth since the mid-2000s – especially after the crisis. We believe this wedge reflects the role played by an evolving global risk aversion, initially stoked after the late-1990s Asia crisis and then magnified by the 2007-08 global financial crisis. These severe shocks motivated persistently higher precautionary savings by public and private sectors, dragging down the neutral rate. Our estimates suggest that greater risk aversion and lower potential growth each account equally for the roughly 150 basis point decline in the US r^* since the global crisis.

The [Bank for International Settlements](#) documented the weak empirical relationship between rates and growth earlier this year, following the [Hamilton et al. 2015 paper](#). This is no surprise. Risk perceptions matter to this rates-growth relationship and their role has grown over time. Failing to account for changing risk perceptions would make the empirical link between rates and growth appear murky.

Roots of low rates

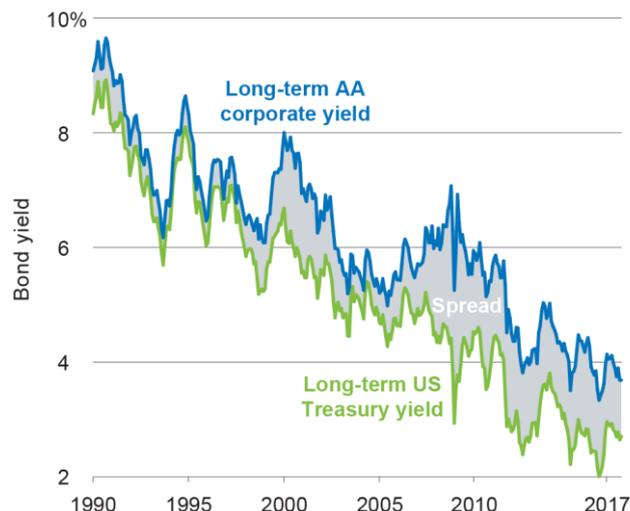
G7 neutral and real rates with trend growth, 1991-2017



Sources: BlackRock Investment Institute, with data from Thomson Reuters, November 2017. Notes: This chart shows G7 GDP-weighted averages of 1) estimates of the real neutral rate for the US, Japan, eurozone, UK and Canada; 2) estimates of the real short-term policy rate for those countries, and; 3) estimates of potential GDP growth rates. The neutral rate and potential growth are estimated using a methodology similar to that in the [2016 paper](#) by Holston, Laubach & Williams.

Seeking safety

US AA corporate and Treasury yields, 1990-2017



Sources: BlackRock Investment Institute, with data from Federal Reserve and Bloomberg, November 2017. Note: This chart shows the spread of long-term AA-rated US corporate bond yields and the average of 20- and 30-year Treasuries.

The safety premium

Risk aversion not only weighs down rates across the curve, it also makes perceived safe assets more alluring and pushes down their yields relative to other assets. We think two factors are important for perceived safety in assets such as G3 sovereign bonds beyond the apparent lack of default risk. First is the sheer size and liquidity of these markets, giving these assets a money-like nature. Second is the negative beta – or inverse relationship – these bonds have historically had with risk assets that makes them a natural hedge. The desire for perceived safety makes sovereign bonds particularly prized, leading to a structural compression in term premia.

At the same time, financial institutions hold more bonds such as US Treasuries as capital or collateral to comply with post-crisis regulations to fortify the system. QE purchases exacerbated the relative scarcity of Treasuries – but it's still just one factor. The greater appetite for safety can be observed in the yields of highly-rated corporate bonds and US Treasuries. Given the perceived near-zero default risk of both these instruments, the yield spread should reflect liquidity preferences rather than credit risk. The yield spread between AA corporates and Treasuries has widened – especially since the crisis, as the *Seeking safety* chart shows. This spread can proxy the convenience yield for Treasuries, as dubbed in the [2012 paper](#) by Krishnamurthy and Vissing-Jorgensen. The structural increase suggests a more permanent premium paid for that convenience yield and explains up to 100 basis points of the Treasury yield drop since the late 1990s, according to [May 2017 New York Fed](#) estimates.

Of course, perceptions are fickle. Highly-rated tranches of collateralised debt obligations and asset-backed commercial paper were seen as safe in the mid-2000s – until they weren't. Government bonds can lose their safety role and trade like a risk asset, as happened during the eurozone sovereign crisis.

Savings spillovers

Risk aversion in any corner of the world has global consequences. Rainy-day savings in one country can influence the interest rates in others thanks to the free flow of capital across borders. This has made G3 sovereign bond markets more intertwined over time. The *Global more than local* chart below breaks down how much the variation of the r^* can be explained by shocks, either domestic or from other G7 neutral rates. Since the mid 1990s, the changes in foreign r^* have overwhelmed domestic factors, our work shows. This suggests that r^* is globally determined, and our analysis also suggests that term premia are even more a function of international factors.

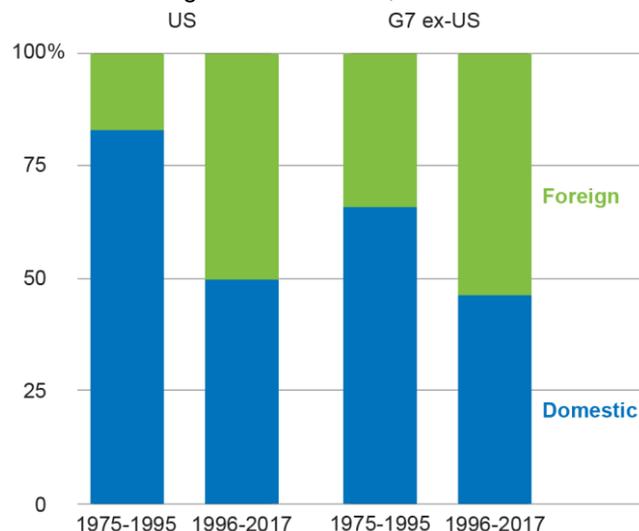
In the early 2000s, a major shift happened at the sovereign level: Asian economies, scarred by the region's 1997-98 crisis of collapsing currency pegs, started building up big piles of foreign reserves to shield themselves against potential capital outflows in the future. China's trade surpluses and household savings added to this surge in savings. Former Fed Chairman Ben Bernanke called this surge in precautionary savings the global savings glut. Since then, savings accumulation shifted from Asia to other regions – notably Germany and the eurozone, partly in response to the sovereign crisis.

Even if one or two contributors to high global savings were to reverse course, this may not have ripple effects on neutral rates if global savings remain high.

Central bank policy, on its own, is not the sole determinant of low rates. Central banks set policy rates, but r^* – a rate consistent with the economy being neither too hot nor too cold over the long run – is out of their control and increasingly determined by global factors. For major central banks, this means the slow path of policy normalisation is not completely of their own choosing.

Global more than local

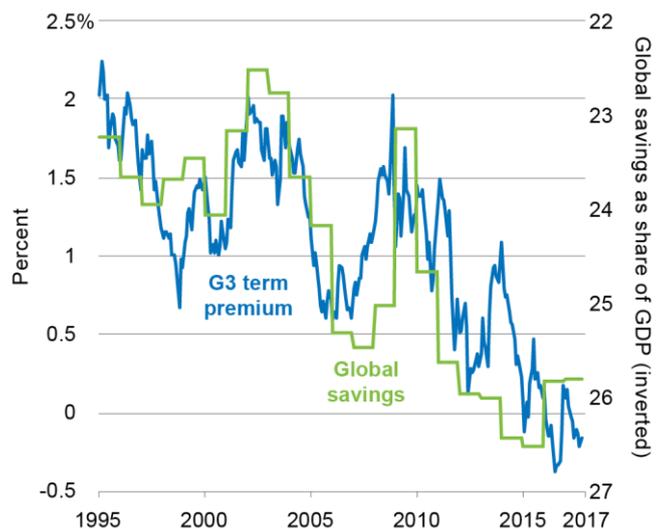
Factors affecting G7 neutral rates, 1975-2017



Sources: BlackRock Investment Institute, with data from G7 statistical agencies and central banks, Thomson Reuters, November 2017. Note: This chart shows the variance decomposition of the US and G7 ex-US neutral rate over two time periods. The bars display the proportion of the variance that is attributable to domestic or foreign shocks. This estimate follows the methodology in Holston, Laubach & Williams (2016).

Gauging the glut

G3 term premium, global savings inverted, 1995-2017



Sources: BlackRock Investment Institute, New York Fed and International Monetary Fund, with data from Thomson Reuters, November 2017. Notes: This chart shows our estimate of the G3 term premium on 10-year sovereign yields and gross global savings. The G3 term premium is a GDP-weighted average of the US, German, and Japanese term premium, with each individual country estimated using a term structure model similar to that of the [New York Fed's model](#). Global savings reflect gross savings, or output excluding final consumption relative to overall GDP.

Dark matter is real

Neutral rates and risk aversion are not directly observable and may seem like the economics' equivalent of dark matter. Plenty of uncertainty shrouds these estimates. Yet like dark matter their existence can be detected by their effects on other variables – and their impact is real with concrete implications for the global economy and asset prices.

Risk aversion has clear and significant effects on the macroeconomy. Global savings are elevated and still rising. Gross global savings amount to nearly 26% of the \$75 trillion in GDP (nominal as of 2016) –and that share has steadily climbed since the crisis. See the *Gauging the glut* chart above. That suggests historically high global savings, motivated by risk aversion, represent a structural change. One reason we see this as a structural change? Record-high global debt levels (see page 5 of [Waking up to reflation](#) from January 2017). We see the recognition of balance sheet vulnerabilities pushing governments, companies and households alike to keep savings high as a cushion against future economic tail risks.

The chart also shows the GDP-weighted term premium for G3 economies: The linkages with global savings are surprisingly strong. How this global savings plays out will be a long-running – and much slower moving – story shaping interest rates and term premia. We believe this savings influence will limit how much r^* rises, while safe asset demand should contain any increase in the term premium due to central banks reducing QE bond holdings. Another long-term factor? The sharp drop in inflation volatility. Our work shows that inflation volatility is near its lowest levels in the past 40 years, as highlighted in [Getting to inflation's core](#) from September 2017.

Changing perceptions

Perceptions of risk are at the heart of the framework we have laid out. The change and intensification of these perceptions have been important in the structural decline in interest rates, we believe.

The *Risky business* chart at right illustrates how perceptions change and manifest themselves. The return on capital should track the real short-term rate, and they were much closer together in the past. But since the 1990s, a wedge has opened up and lingered. The stability of the returns on capital is remarkable on its own given the structural slowdown in growth. Importantly, we see the widening wedge between US real rates and capital returns as evidence that risk aversion has undergone a structural uptrend.

Risk aversion prompts investors to demand that companies deliver a higher level of profitability for lending capital. Companies sweat their capital harder to meet return expectations. The risk aversion reflected in that wedge is reinforced by our [risk ratio](#), in our view. The risk ratio shows the value of US risk assets not rising much relative to perceived safe assets as of the second quarter – even with the equities hitting all-time highs. Our conclusion: Investors are not obviously exuberant.

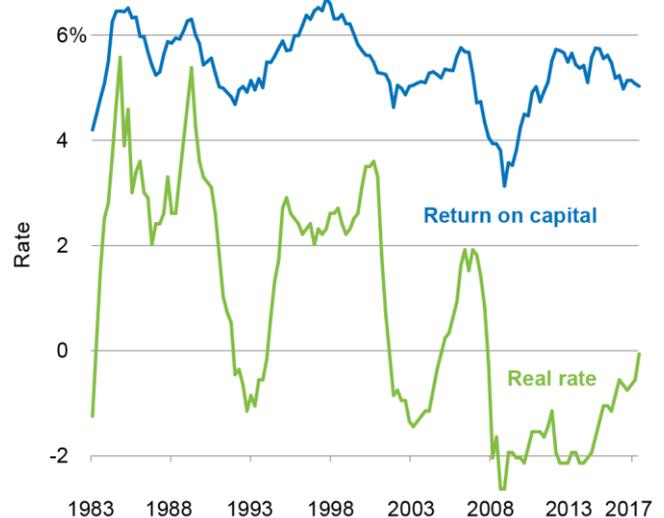
The March 2017 paper [Rents, Technical Change and Risk Premia](#) by Caballero, Farhi & Gourinchas agrees with our thinking and points to two other reasons: 1) reduced competition means companies are more monopolistic and able to extract winner-take-all returns for a given investment, and; 2) technological disruption is lowering the cost of capital investment and causing bigger returns for every unit of investment, shrinking the labour share of income.

Of course these trends can persist – until they don't. Perceptions can shift quickly and become self-fulfilling. This was highlighted by Bank of England MPC member Gertjan Vlieghe in a [September speech](#) that argued that the economy can transition from a regime of risk aversion to one of risk appetite. The scars of past crises may fade and animal spirits, long subdued during the big [household deleveraging](#) in the post-crisis recovery, could kick in. The risk to our view is a sudden revival of risk-taking that unleashes the precautionary savings stored in perceived safe-haven assets. That could cause a shift to higher neutral rates and higher long-term yields. Would this be bad for risk assets? Not necessarily. Such a regime shift would likely be accompanied by investors reducing their compensation for taking risk. We would see the return on capital in the chart above come down. Equity prices would not necessarily fall and could even rise.

Yet we believe the potential for a significant shift to happen – moving to a broader risk-taking environment and away from a risk-averse one – is limited. Record-high global debt levels increase potential vulnerabilities, reinforcing the desire for precautionary savings. Another factor compounding the precautionary savings motive: Households in ageing populations fear current savings are insufficient to meet fast-approaching retirement needs.

Risky business

US capital returns and real rates, 1983-2017



Sources: BlackRock Investment Institute, with data from US Bureau of Economic Analysis, Federal Reserve and Haver Analytics, November 2017. Notes: This chart shows measures of the US real interest rate and the real return on capital. The real interest rate is measured as the three-month Treasury bill rate minus the three-year average CPI. The return on capital measures capital income as a fraction of the capital stock following the methodology in a [2011 paper](#) by Gomme, Ravikumar & Rupert.

Adding it all up

We find risk aversion has increased over the past two decades. This has prompted a precautionary savings build-up that explains why real rates and term premia are so low. This means that yields along the core bond curves can remain low for years – with major implications for asset valuations. We see softer potential growth as persistent, keeping intact 75 basis points of the overall drop in US r^* since the crisis. Some of the risk aversion effect is likely to linger. In our view, it's easy to see about 100 basis points of this r^* drop sticking. This view is consistent with our US yield outlook in our Capital Market Assumptions.

The interplay between interest rates and the equity risk premium (ERP) – the excess return investors demand to hold equities relative to bonds – is nuanced. All things equal, lower rates suggest compensation for risk is high and support higher equity valuations. And if economic volatility – and hence the perceived riskiness of the economy – remains subdued, it may warrant even lower compensation for risk. If low rates are being driven by lower growth and/or greater risk aversion, a higher ERP would be justified. Overall, we see the ERP across major economies at or only slightly below long-term levels, with a modest drag to equity valuations in the medium term.

Our bottom line: Perceptions of risk matter in assessing the outlook for interest rates beyond the well-understood relationship with potential growth. Persistent risk aversion not only suppresses rates across the yield curve but raises the premium on assets seen as the most safe and liquid. We see core bond yields rising further from all-time lows touched last year but settling at long-run levels well below pre-crisis averages. This also suggests flatter core yield curves relative to history. More broadly, our view on rates helps underpin our positive view on risk assets.

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