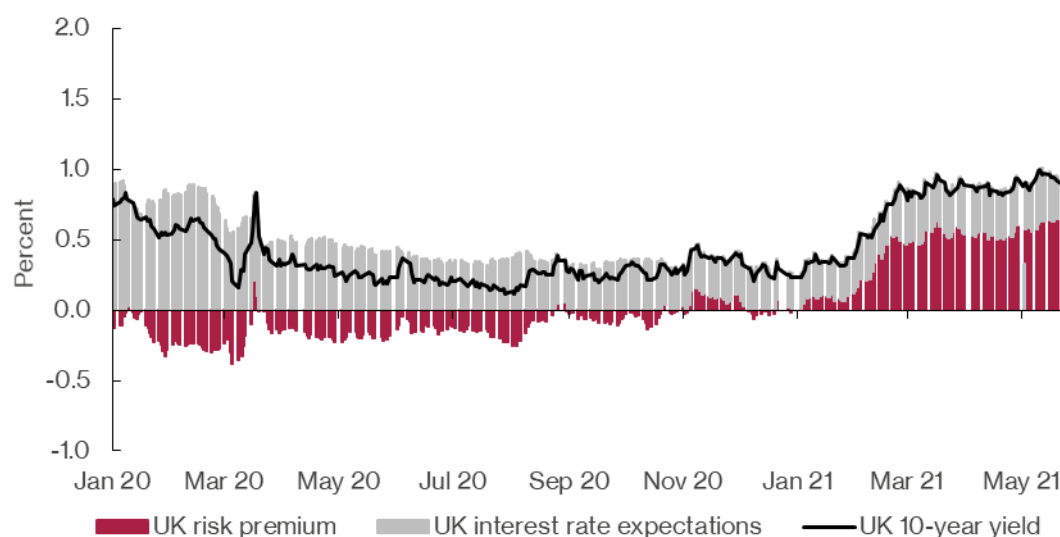


Government Bond Term Premium Tracker

UK treasury yield rise due to an increase in the term premium.

Figure 1 – UK 10-year government bond yield and decomposition (percent)



Source: Authors' calculations based on data by Bank of England

Main points

- Despite continued support from the Bank of England through low interest rates and quantitative easing, the UK 10-year bond yield has risen since last summer. As economic prospects started to improve after the successful vaccine rollout, most of the increase has been observed since January 2021 (Figure 1).
- In recent weeks, this rise occurred as investors started to worry about the prospect of higher inflation and the possibility of monetary policy tightening should the Covid-19 vaccine rollout spark a stronger than expected rebound in economic activity.
- We decompose long-term treasury yields into two components: expectations of the future path of short-term Treasury yields and a term premium. The term (or

risk) premium is the compensation investors require for bearing the risk that short-term Treasury yields will not evolve as expected. This decomposition allows us to track what happens on the long-term segments of the bond market beyond the expected policy rate. By necessity, this is a theoretical construction (see 'Background' section). It is unlike the term spread, which is the difference between two market rates at short and long maturity, respectively.

- The rise in the UK treasury yield since the beginning of the year appears to be associated mainly with an increase in the estimated term premium.
- The term premium which we obtain is a countercyclical variable that rises during recessions and falls during recoveries: this suggests that an increase in real activity as measured by GDP is expected to push the risk premium down. By contrast, inflation is expected to push bond yields up, on account of the inflation risk premia influencing the expectation that short term interest rates will increase in the future (see Breach, D'Amico and Orphanides, 2020).
- The increase in the UK term premium for the 10-year maturity is observed despite the positive rebound in GDP, as illustrated by the National Institute Monthly GDP tracker. While GDP is forecast to grow by 4.7 per cent in the second quarter of 2021 compared with the previous quarter, the risk premium has decreased only slightly from its peak in March 2021. Its increase, from 0.25 per cent at the end of January to 0.6 per cent in May, represents the highest sustained increase since the pandemic started. Interest rate expectations, capturing markets' expectations of rising rates (and future inflation) over the longer horizon have remained broadly stable at 0.35 per cent.
- A significant amount of the movements observed at the longer end of the yield curve also depends on changes in international risk and uncertainty, as well as monetary policy developments abroad. The co-movements in the UK and the US are particularly suggestive of the role of such channels.

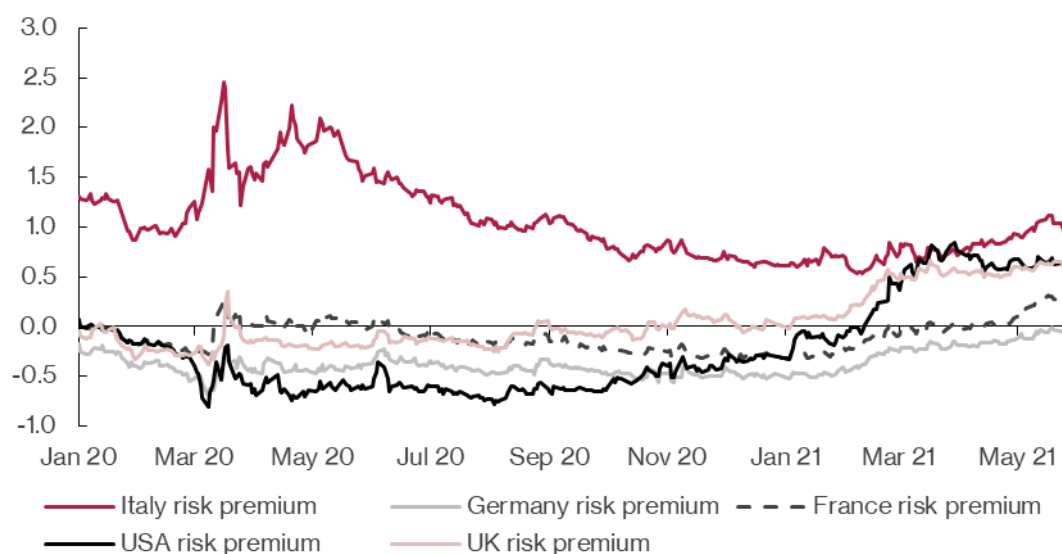
"The recent sell-off in bond markets suggests that a stronger than expected rebound in the global economy and the threat of higher inflation have not been particularly welcome developments for fixed-income investors, particularly as they have increased the likelihood of a monetary policy tightening. This is also a feature from international developments, in particular President Biden's fiscal package in the US. However, there is still a large amount of spare capacity in the economy, which suggests that while there is the potential for a higher risk premium in the UK, a sustained rise in inflation above the central bank's inflation target is not likely for now."

Dr Corrado Macchiarelli
Research Manager for Global Macroeconomics

According to data from the Bank of England, low inflation risk premia were one of the drivers of a low term premium in the UK until last summer, where [inflation rates fell sharply](#) as the result of the pandemic. Since the successful vaccine rollout at the start of the year, the economic outlook has improved. Particularly, for May 2021, the [inflation environment](#) is consistent with the observed risk premium in the UK. With consumer inflation starting to pick-up in April and expected to rise further during the second half of the year, the UK risk premium might continue to move up. The rise in inflation coincided with the recent increase in international oil prices. The relaxation on 17 May of Covid-19 restrictions following the government roadmap might pose some upward risks to our estimates owing to a strong rebound in consumption and investment. However, in our [UK Economic Outlook main-case scenario](#) we do not expect a sustained rise in inflation above the Bank of England's 2 percent inflation target – at least until 2022 – which might limit the scope for a persistent rise in the UK risk premium.

Given global integration of financial markets, a significant amount of the movements observed at the longer end of the yield curve also depends on changes in international risk and uncertainty, as well as monetary policy developments abroad. The co-movements in the UK and the US are particularly suggestive of the role of such channels (Figure 2).

Optimism following the \$1.9 trillion US stimulus has pushed up the US 10-year government yield. US 10-year bond rates increased by 80 bps from start of the year to March 19th. Rates have since fallen, by 15bps since the peak in March to 5th May, and have remained broadly stable through May. This pattern could be seen as both the result of raised expectations for faster economic growth and inflation, and Treasury bonds sell-offs, signalling that investors are pricing in a rate hike as early as the second half of 2022. The rise in US long-term yields has spilled over to emerging markets as global investors shifted their portfolio away from riskier emerging market local currency bonds, implying tightening in emerging markets financial conditions. Our latest [Global Economic Outlook](#) contains a detailed discussion of the effects of the US fiscal stimulus on developed and emerging economies.

Figure 2 – 10-year term premium estimates across countries (percentage points)

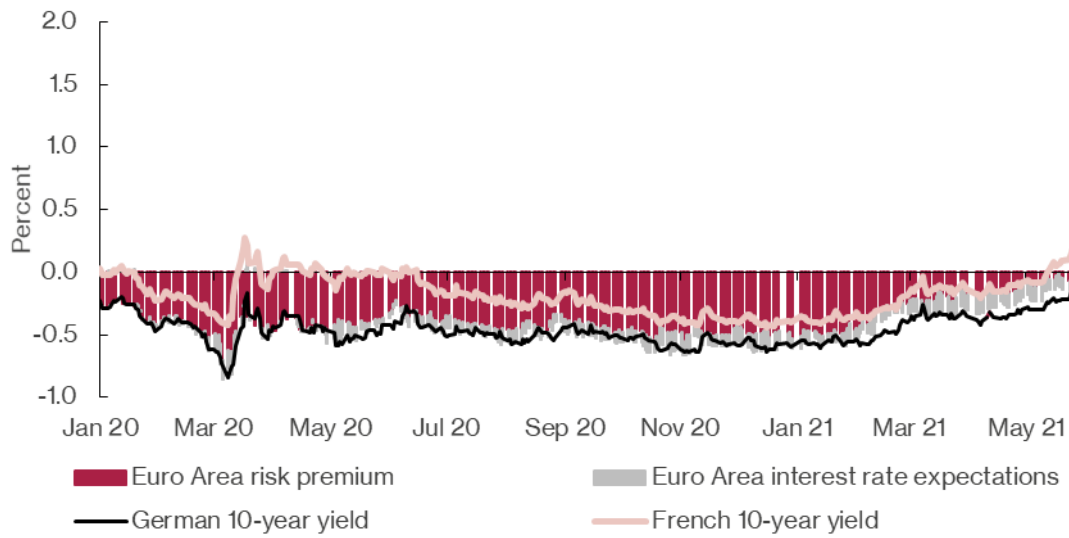
Source: Authors' calculations based on data by Bank of England

Looking at international movements in risk premia for countries such as Germany, Italy and France, suggests that risk premia have increased in European countries as well, but not quite as much as in the UK. For the euro area, the average bond interest rate has remained negative, with a number of euro area bonds (Austria, Germany, Ireland, and to a lesser extent, France, Finland and Belgium) trading, or having been traded, with mostly negative yields up until recently. This effectively means investors are paying – rather than earning an interest – to buy these government bonds.

Long-run expectation of euro area interest rate remain negative (Figure 3) owing to both the negative ECB policy rate since 2014 and the model employed for generating future expected short-term rates based on average short-rate predictions. Our approach makes no assumptions on the structural macro-financial relations in the economy (see, e.g., [Hördahl, Tristani and Vestin, 2006](#)), thus not imposing any long-run equilibrium conditions for either employment or inflation.

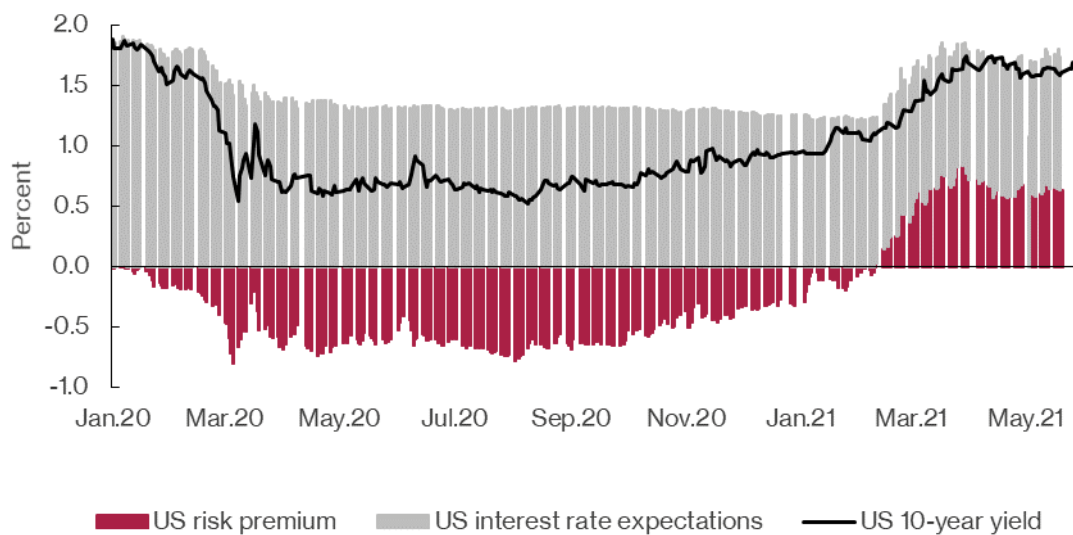
Some structural long-term drivers of the “lower for longer” interest rate scenario still apply (see also [Macchiarelli, 2020](#); [Fell, Peltonen and Portes, 2021](#)). Box B in our latest [UK Economic Outlook](#) includes a discussion of the effects of interest rate rises on UK government debt (see also [Turner, 2021](#)).

Figure 3 – Euro Area 10-year government bond and decomposition (percent)



Source: Authors’ calculations based on data by Datastream

Figure 4 – US 10-year government bond and decomposition (percent)



Source: Authors’ calculations based on data by FRED database at the Federal Reserve Bank of St. Louis

Background

The model we employ enables the decomposition of long-term treasury yields into two components: expectations of the future path of short-term Treasury yields and a term premium. These are, respectively, the average current and expected future short-term interest rates, and the compensation investors require for bearing the risk that short-term Treasury yields will not evolve as expected.

National Institute Term Premium Tracker aims to provide quarterly updates of the Treasury term premia estimates for the UK, the US and some selected European countries based on current daily zero-coupon bond yields data. The Treasury term premia estimates at the 10-year maturity and the expected average short-term rates for the same maturity are based on data from August 7th, 1997 to May 31st, 2021, which weights equally the so-called zero lower bound (ZLB) period – with the Bank of England’s short-term nominal interest rate at or near zero – and the period pre-ZLB. The analysis is based on a five-factor, no-arbitrage term structure model, described in detail in the references below. The estimates we obtain for the US are consistent with those produced by the Federal Reserve Bank of New York.

Data

Daily nominal bond yields for the UK are obtained from the Bank of England <https://www.bankofengland.co.uk/statistics/yield-curves>

Benchmark bond redemption yields for European countries and the US are obtained from Datastream. Nominal bond yields for the US are obtained from FRED-Federal Reserve Bank of St. Louis Database <https://fred.stlouisfed.org/series/DGS10>

References

Macchiarelli Corrado (2020), Government bond term premia during the pandemic, *National Institute Economic Review*, No. 254, November

Tobias Adrian, Richard Crump, Benjamin Mills, and Emanuel Moench (2014), Treasury Term Premia: 1961-Present, *Liberty Street Economics*, May 12.

Tobias Adrian, Richard K. Crump, and Emanuel Moench (2013), Pricing the Term Structure with Linear Regressions, *Journal of Financial Economics* 110, no. 1 October: 110-38.

Notes for editors

For further information and to arrange interviews please contact the NIESR Press Office: press@niesr.ac.uk or Luca Pieri on l.pieri@niesr.ac.uk / 07930 544 631

National Institute of Economic and Social Research

2 Dean Trench Street
Smith Square
London, SW1P 3HE
United Kingdom

Switchboard Telephone Number: 020 7222 7665

Website: <http://www.niesr.ac.uk>