

COVID-19 and term premia: a relationship worth watching

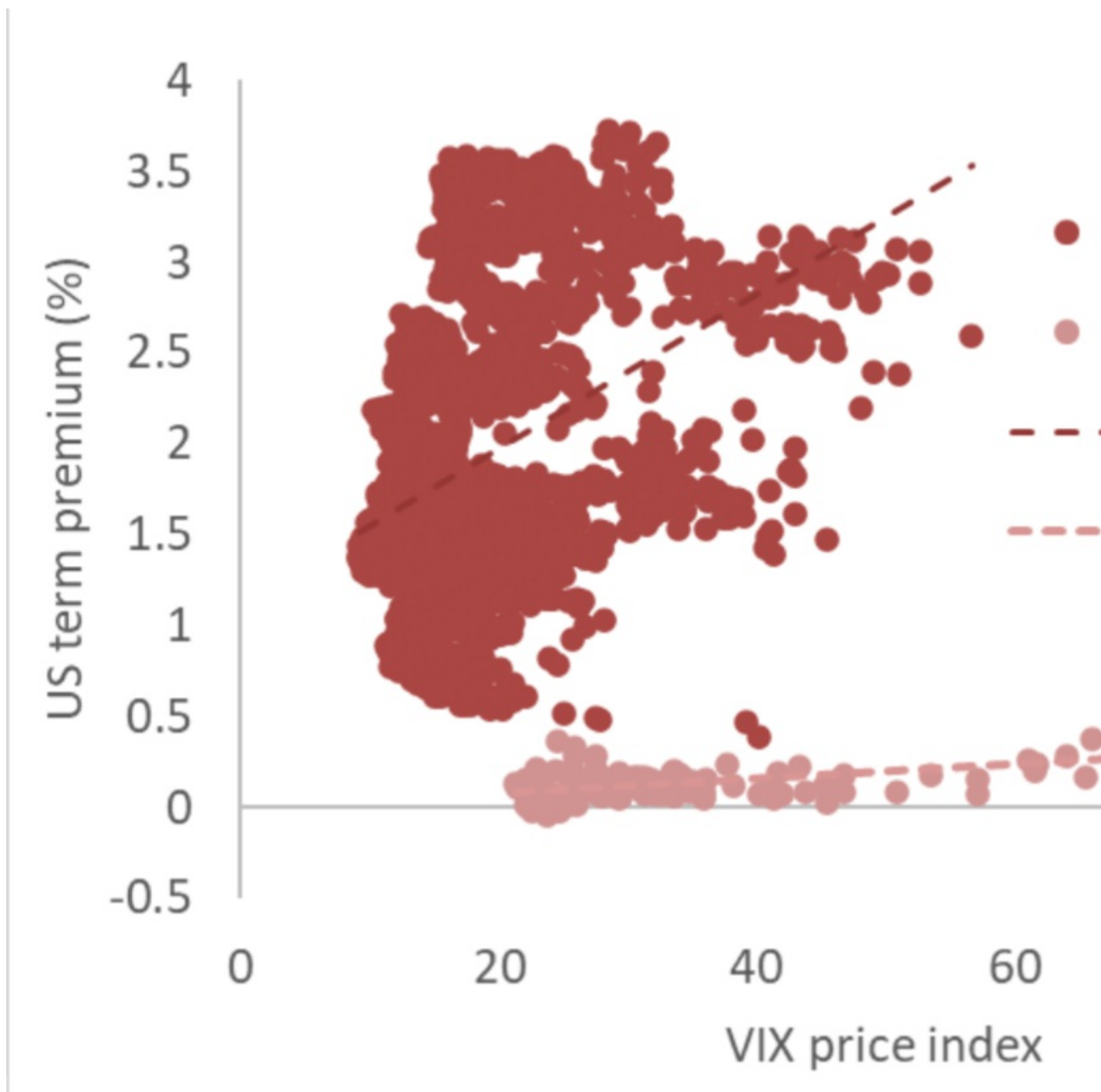
*What has happened to the bond market since the start of the pandemic? Term premia spiked in March but have since recovered to their previous levels. This is the case even though uncertainty remains high. But **Corrado Macchiarelli (NIESR)** says their link with monetary policy is worth watching.*

With monetary policy interest rates as low as they can productively go in developed economies (the 'effective lower bound', or ELB), the conventional view is that countries should deploy fiscal stimulus. Since the start of the pandemic, this fiscal support was accompanied by the continuation of the central banks' asset purchase programmes. This provided [fiscal space](#), allowing governments to support the provision of services and transfers to mitigate the health and welfare impact of the pandemic shock.

Central bank bond purchase programmes of the type announced before and during COVID-19, such as quantitative easing (QE), have a direct effect on the liquidity of the bond market. Long-term treasury yields can be broken down 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 (the risk premium).

Studying the term premium over the recent pandemic lets us investigate what has driven changes in Treasury yields since COVID-19.

Figure 1: The relationship between the US term premium and the Chicago Board Options Exchange SPX Volatility Index



Since the term premium is not a variable which is observable, it must be estimated. To do so, we use a five-factor, no-arbitrage term structure model (following [Adrian, Crump and Moench \(2013\)](#)). The model uses zero-coupon yield data which are available at a daily frequency.

The term premium which we obtain is typically a [countercyclical](#) variable that rises during recessions and falls during recoveries. Since 2020, however, there is no clear-cut relationship between the increase in term premia and the individual country output losses – particularly in some countries, where a two-digit economic contraction has not been accompanied by a corresponding increase in the term premium.

It is also useful to compare the term premium we obtain with standard measures of uncertainty or volatility (VIX) for the US, for example. The evidence suggests that financial market volatility normally appears to be associated with high levels of term premia, as evidenced by the linear fitted line (2009 – February 2020) in Figure 1. This relationship tends to be [stable over time](#), but this year seems to have shifted with COVID-19. Yet after March 2020, as volatility increased, the corresponding risk premium for the US, as well as for the UK and most European countries, has remained low – suggesting a different regime. Why has that been so?

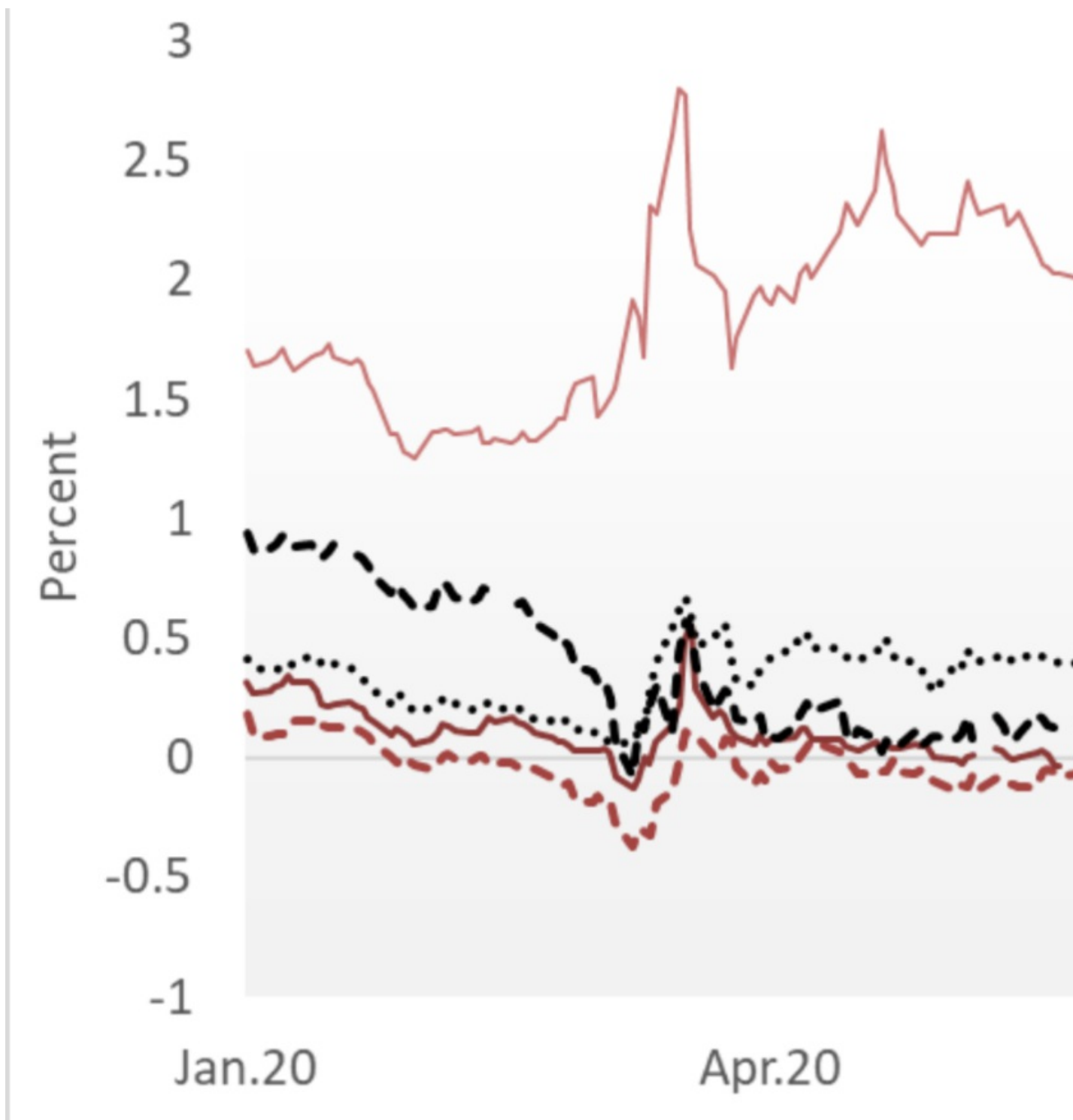


An Open Outcry at the Chicago Board Options Exchange in 2010. Photo: [yuan2003](#) via a [CC BY NC 2.0 licence](#)

Treasury bond yields can change in response to the monetary policy stance, both conventional and unconventional, to the extent that they reflect changes in the expected path of future short-term interest rates or changes in the term premium. Unconventional monetary policy – including asset purchase programs and forward guidance – is particularly instructive here, as it represents the central bank's commitment that policy is going to be lower for longer, but also that the market will not have to absorb large quantities of bonds onto its portfolios.

Ten-year government bond yields have been close to zero because the European Central Bank, the Bank of England and the Federal Reserve have adopted large-scale asset buying programs and committed to keeping near-zero repo rates. This commitment was restarted in March 2020. At the same time, the corresponding term-premia estimates show that the premia in many countries have been compressed and, in some cases, have turned negative.

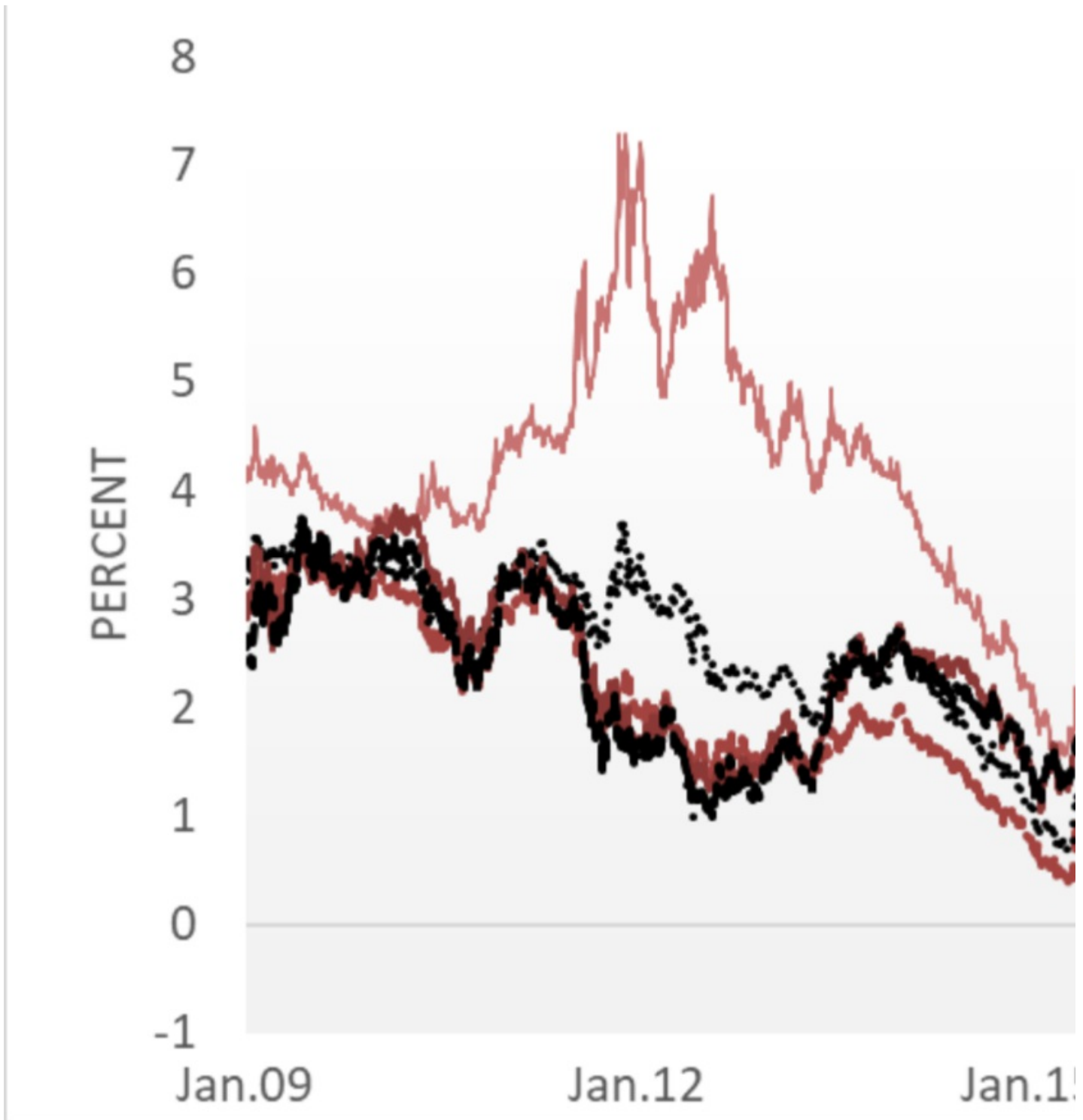
Figure 2: Ten-year Treasury bond risk premium component, Jan-Oct 2020



The evolution of term premia has been of particular interest during the pandemic. Figure 2 looks at the level of the term premia over the period January to March 2020. The modelled term premia rose sharply in most countries at the onset of the crisis in March, but recovered afterwards. Italy recorded the highest increases in March (2.8%) whereas Germany recorded the lowest peak (0.1%) followed by the US and the UK (0.5%). Even though uncertainty remained high, term premia compression was observed after the peak in March.

These dynamics can be ascribed to expansionary monetary policies like QE. [Evidence for the UK](#) suggests, for instance, that much of the persistent compression in term premia was because bond market participants correctly inferred that the central bank would pursue an accommodating monetary policy that would keep longer term yields low. Given financial markets' integration, many of the movements observed at the longer end of the yield curve also depend on changes in international risk and uncertainty, as well as monetary policy developments abroad and interest rate [spillovers](#). The [co-movements](#) in the UK, US and German term premia since 2009 are particularly suggestive of the role of such channels (Figure 3).

Figure 3: Ten-year Treasury bond risk premium component, 2009-20



With current inflation rates low, episodes where policy rates are constrained by their ELB are likely to become more frequent and prolonged (so much so that some countries are now at risk of [losing the anchor](#) of inflation expectations). Policy rates at the effective bound – be it zero or less – requires the continuation of unconventional monetary policies, but those have been shown to have [“diminishing returns”](#).

This means that the likelihood of nominal interest rates hitting the zero lower bound has increased compared to the period before the Great Financial Crisis. The observed slack in the economy, together with uncertainty about the shape and length of the recovery, means that monetary policy will have to stay looser for longer. The change in US monetary policy in August supports this view, yet there is a lot of uncertainty on whether the current policy mix will be able to [generate inflation](#) over the medium run.

A world of persistently low interest rates and productivity may be more likely to generate a leveraged ‘reach for yield’, by which speculative asset-price cycles have become detached from fundamentals. In fact, while the real return on indexed sovereign debt has been shown to trend mostly [downwards](#) since 1985, returns on equities have remained consistently flat since the late 1990s, in line with an increasing preference for safe assets. This was also the case after the March 2020 shock, where [greater expected income gains](#), compared to government bonds, have swiftly driven stock prices back to their pre-COVID-19 levels – particularly in some sectors.

So looking at the data since COVID-19, there is no evidence that term premia have recorded sustained increases following an upsurge in volatility and uncertainty after the 2020 shock. While our term premium measure is estimated and is naturally subject to some uncertainty, our conclusions are consistent with both short-term and long-term factors. Not only have bond yields been on a long-term declining path, but shifts in safe assets and bond scarcity as the result of central banks’ purchases have played a role, particularly in countries where bond demand increased as the result of “flight to safety”. The risk premia observed since March 2020 are not comparable what was observed at the height of the Global Financial Crisis: since then, asset purchase programmes such as QE have been quantified to compress 10-year sovereign term premia. Recent evidence also suggests that long-term borrowing costs are likely to fall further in developed economies due to the increase in (precautionary) savings and lower investment demand because of COVID-19.

Expectations about changes in monetary policy and the composition and riskiness of the central banks’ balance sheets will influence term premia in the future. So the link between Treasury term premia and monetary policy is something to watch out for, particularly as the boundary between non-conventional monetary policy and deficit-financed government support might change in the future.

This post represents the views of the author and not those of the COVID-19 blog, nor LSE. The entry is based on a Box originally written for the [National Institute Economic Review](#).