
Is a bond market crisis imminent?

Central banks need careful action and a good dose of luck if they are to avoid financial instability, write Marina Misev and Philip Turner.

Global bond markets were rattled by the message from the March meeting of the Federal Open Market Committee (FOMC): increases in the federal funds rate are coming sooner than had been expected at the December meeting. It is not the first time alarm bells have sounded, but so far fears of a bond market crisis have proved unfounded.¹

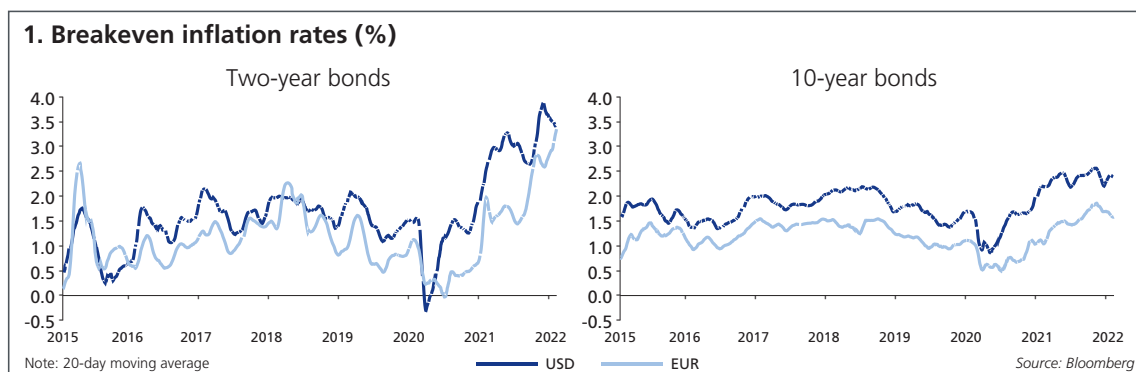
We cannot pretend to know why. The forecasting record of 10-year yields even one year ahead has been poor. So, what do we know?

- An analysis of bond yields suggests that, even though markets expect inflation above 2% over the next two years, both the Fed and the European Central Bank (ECB) enjoy market confidence that inflation over the longer term will return to target;
- Financial stability risks are high because of large interest rate exposures of banks and other financial institutions. Because such exposures will magnify the macroeconomic responses to higher interest rates, central banks can be expected to move cautiously;
- Central banks have balance sheet tools to contain financial disruption and minimise the rise in unemployment;
- More explicit communication by central banks of their expectations of the future interest rates, long as well as short, is needed.

Thus, the answer to the question posed in the title is: “Avoiding a bond market crisis will require careful policies on a number of fronts – and a generous dose of good luck.”

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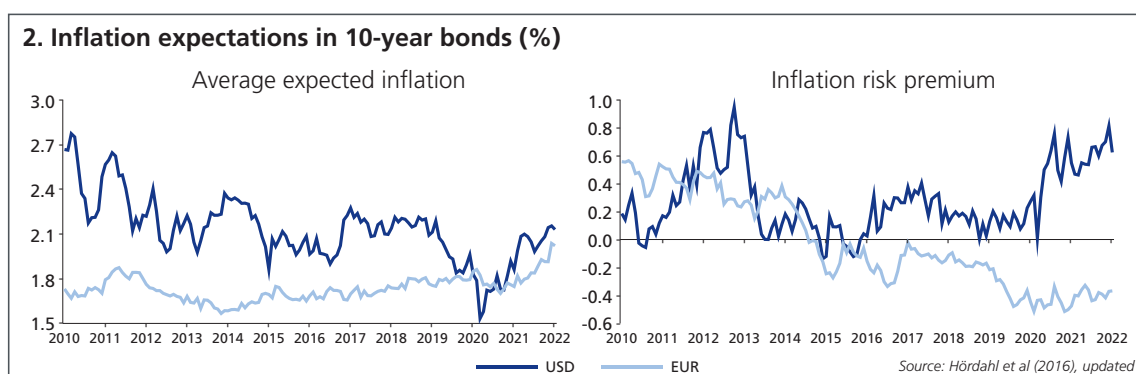
The first step is to calculate the spread between the yields on nominal and inflation-linked bonds – the breakeven inflation rate. This is fundamentally the sum of expected inflation rate and the inflation risk premium.² Breakeven inflation implicit in two-year bonds has risen, and to well above previous peaks (figure 1). In the past decade, breakeven inflation rates in dollar and euro had generally been below 2%.³ Now it's 3.5–4% in the US and 2.5–3% in the euro area.

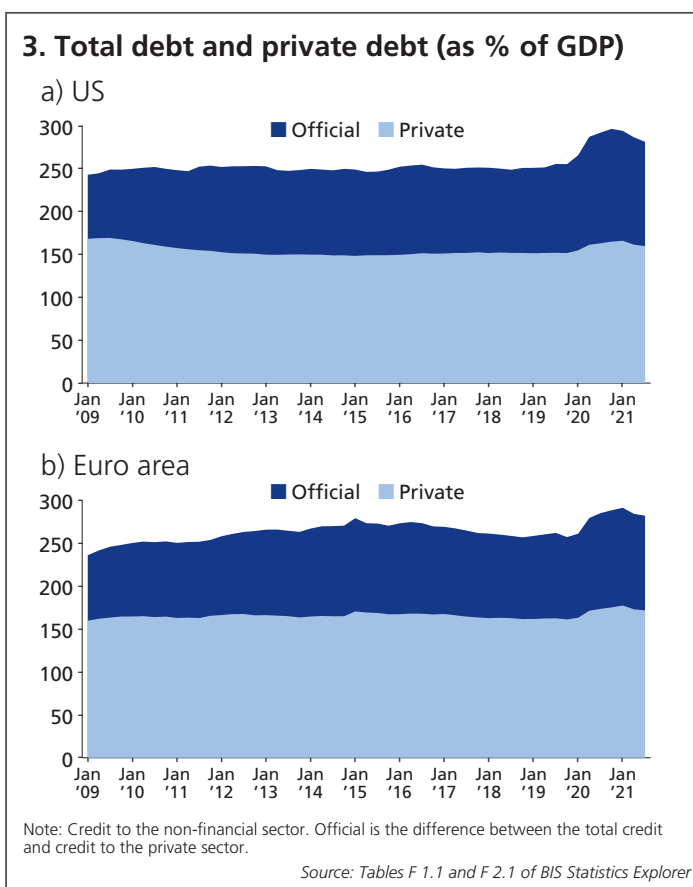
The rise in 10-year breakeven inflation has been much smaller, suggesting that the inflation surge is viewed as fundamentally transitory, even if lasting longer than first thought. Gerlach estimates the dollar breakeven inflation five years forward (that is, from 2027 to 2032) is about 2%.⁴

The second step is to use a macrofinancial model to decompose bond market movements into: expected inflation; the inflation risk premium; the term premium; and expected short-term interest rates. How these elements differ between the dollar and the euro is likely to have implications for global economic developments. Unlike breakeven inflation rates (which can be read directly from market data), these estimates depend on a model.

As of end-2021, the expected inflation rate in 10-year US Treasuries had risen to 2.1% (figure 2). But it had been even higher in previous years. Expected inflation in the euro rose to around 2% for the first time in a decade. The inflation risk premium rose significantly (but not dramatically) in the dollar. More striking is that the inflation risk premium in the euro stayed so low, perhaps still reflecting lingering worries about deflation.

The apparent trend decline in term premia from 2010 reflects many factors. Contrary to assertions about a post-global financial crisis (GFC) debt explosion, total credit to the non-financial sector did not rise as a percentage of GDP during the





decade from 2009 to 2019.⁵ There was some decline in the US and stagnation in the euro area (figure 3). Restrictive fiscal policies over much of this period contributed by reducing the supply of risk-free bonds. Perhaps this is why the long cyclical upswing from 2009 did not increase term premia. The decline in private non-financial debt in the US up to 2015 was much larger than that in the euro area. The sharp Covid-linked rise in debt in 2020 was partly reversed in 2021.

The timing of central bank bond purchases also seems to have been influential. When the Fed led the way, dollar term premia fell below euro term premia. But this was reversed when the ECB sustained a long period of bond purchases (figure 4, left chart).

In any event, dollar and euro term premia in the 10-year benchmark bonds both narrowed when Covid struck. This was partly driven by policy. Central banks increased bond purchases and made clear their determination to drive long-term rates down. But it was also partly

endogenous as real economic prospects deteriorated and financial markets swung into risk-off mode. This balance between policy and endogenous influences is constantly changing, making it harder to ‘read’ bond markets.

In dollar markets, the Covid-induced decline in the term premium had been reversed (but was still slightly negative) by the end of 2021. The Fed’s commitment to scale back asset purchases has doubtless had an impact. So too has the strong rebound in economic activity and the decline in the unemployment rate. The inflation risk premium has risen by 0.2 percentage points and average expected inflation by 0.4 percentage points.⁶

But the term premium in euro-denominated bonds remains substantially negative. This is mainly because the real component of the term premium remains much larger than in dollar markets. This may suggest doubts that growth in the euro area will reduce the unemployment rate enough to lead to a significant rise in interest rates. This may also explain why the inflation risk premium in the euro area did not increase. Nevertheless, average expected inflation did rise by about 0.2 percentage points.

The average expected short-term interest rate in dollars rose by 0.6 percentage points during 2021 and early 2022, reaching 2.6% by January, slightly above the median projection of FOMC members for the fed funds rate for the longer term (Figure 4, right chart). But the average short rate in euros rose much less – to just below 2%.

Developments in bond yields as monetary policy normalises will be crucial for financial stability given the large and opaque interest rate exposures in the financial system. Ensuring the recent spurt in inflation does not become permanent is one thing but, as Sheila Bair, head of the Federal Deposit Insurance Corporation during the global financial crisis recently noted, “the Fed has an even greater challenge maintaining financial stability as it raises interest rates”.⁷

Rate correction and financial stability

The failure to regulate interest rate risk exposures effectively has been a major policy mistake. Basel III and other regulatory reforms after the global financial crisis curbed credit risk exposures but acquiesced to increased interest rate risk exposures from holding government bonds. Both governments and central banks found it convenient that banks and other regulated financial institutions bought more long-term government bonds. The repeated inability of the Basel Committee on Banking Supervision to reach agreement on a capital charge for interest rate risk in the banking book is but one element of a general regulatory failure.⁸

As Hinge has noted,⁹ another instance is the failure to regulate effectively the activities of non-bank financial institutions. The big expansion in the dollar bond debts of non-US companies since the GFC has increased the global financial risks from a rise in benchmark dollar interest rates.

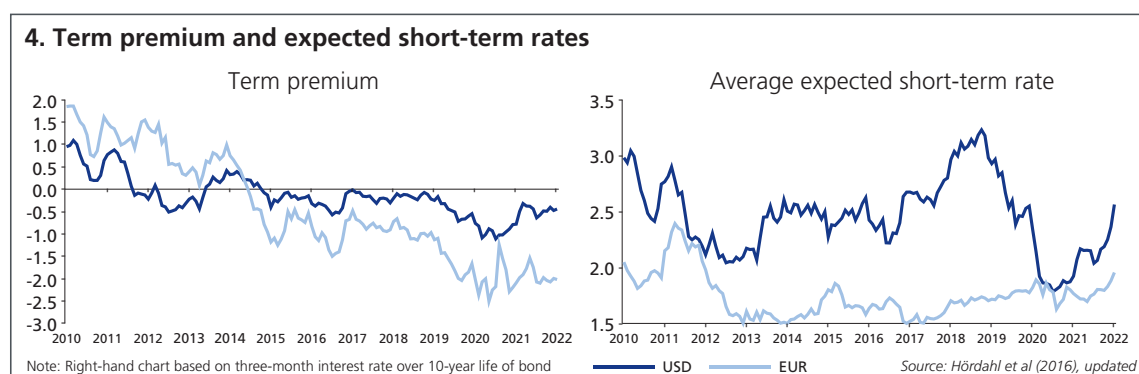
Larger interest rate exposures in financial intermediaries are likely to magnify the macroeconomic effects of interest rate increases. Central banks know this but are unable to quantify such effects with precision. Hence they are likely to feel their way a little in the dark, and raise rates cautiously.

Covid-19 and the associated supply interruptions have created a lot of noise around underlying economic prospects. More recently, central banks have faced an immediate dilemma from the combination of the squeeze on real disposable income due to the large terms of trade loss for energy-importing countries (so real interest rates should fall) and increased inflation (so interest rates should rise).

Monetary policy dilemmas

The war in Ukraine and the scale of sanctions imposed on Russia makes forecasting bond markets even harder. Since the invasion there have been days when the US bond market became more volatile, with yields falling sharply but then rebounding.

Central banks have to decide how quickly to raise the policy rate. For some critics, they have delayed too long, compromising their credibility. They certainly underestimated the scale and persistence of the global inflation shock. Yet the market data cited in this article reveal no such loss of credibility in their longer-term inflation performance.





This is perhaps because of the long history of very low inflation and excessive unemployment. As Gagnon and Sarsenbayev argue,¹⁰ central banks may have inadvertently set monetary policy too tight on average over the past 25 years because they had overestimated the natural rate of unemployment (U^*) and not taken sufficient account of a flattening Phillips curve. As the head of the Bank for International Settlements recently warned, however, wages may begin to react more strongly to rising prices, worsening the growth/inflation trade-off.¹¹

Another choice faced by central banks is the balance to be struck between raising overnight rates and selling bonds. And should they concentrate their sales on short-dated bonds to avoid pushing long-term yields too high? As they aim to downsize their balance sheets, however, central banks should stand ready to tackle unexpected and potentially disruptive interest rate mispricing right along the risk-free yield curve.

Communicating interest rate expectations Do central banks communicate well their interest rate expectations? The answer is “perhaps not”. The obsession of so much commentary in the financial press with questions such as “will the Fed move the funds rate by 25 or 50 basis points next time?” endures.

The Fed’s practice of releasing the interest rate projections of FOMC members over the subsequent couple of years and the longer run (the famous ‘dot plots’) is a big step forward. It tells the world about the committee’s *current* expectations of the likely pace of future increases in the funds rate. The change in the dot plots between the December 2021 and March 2022 meetings caught the attention of markets: their estimates for 2022 and 2023 were sharply higher. But their longer-run estimate was unchanged. Other central banks should follow this practice.

The Fed and other central banks should continue to use their balance sheet as needed and not limit policy to changes in the overnight interest rate. The lesson of almost 15 years of quantitative easing policies is that central bank bond purchases or sales exert an influence on longer-term rates independently of the policy rate.¹² That is what the big changes in term premia over the past decade – starting in dollar markets and then in euro markets when the ECB belatedly adopted such policies – reveal. Especially welcome is the recent statement by president Christine Lagarde that the ECB (as it adopts a programme to reduce bond purchases over time) stands ready to use “new instruments” if monetary policy transmission is endangered.

The key role of balance sheet policy is precisely why guidance about the central bank’s likely reaction function to bond market shocks is keenly sought. Those who run banks and other financial intermediaries know the dangers they face come as much from an unexpected steepening in the yield curve as from well-announced increases in the policy rate.

To provide such guidance, monetary policy committees should release dot

plots for their members' expectations not only of the policy rate but also of the two-year and the 10-year yields at least one year ahead. The variance of these plots is also informative when expectations become more unsettled, and can help in the design of stress tests. In this way central banks can help banks and others prepare for the interest rate adjustment which is coming, and so mitigate the financial stability risks.

Revealing the current expectations of members of monetary policy committees for longer-term interest rates will lead to a more controversial question. In what circumstances should the central bank target interest rates further out the yield curve? And if so, at what maturity?

Central banks have on occasion wanted to communicate that they are entering a period of gradual policy rate increases. In what circumstances would a target (or narrow range) for the two-year yield be an effective mechanism? There is, of course, nothing magic about the choice of such a maturity. But by convention interest rates up to two years have often been seen as the domain of central banks, while the yield on longer-dated paper determines the cost of government finance. In addition, the purchase of two-year paper by banks funded by very short-term deposits has traditionally been seen as a “safe” degree of interest rate risk.

In a very uncertain interest rate environment, with risks for financial stability as important as the macroeconomic dangers, central banks should consider these questions carefully.¹³ □

Notes

1. We are indebted for the help and suggestions of Peter Hördahl, who developed the macrofinancial model used here to analyse bond market developments.
2. There can also be a differential liquidity risk premium in inflation-linked paper which narrows when the markets for such paper become more liquid, often exactly when investors are more worried about inflation.
3. Euro area yields are proxied by the government bonds of France, mainly because of its deep and continuous market for inflation-linked debt.
4. Gerlach, S, ‘What inflation rates do breakeven rates price in?’ in *EFG In Focus: Macro comment*, February 2022.
5. Note this measure excludes debt of the financial sector. Leverage has increased in a number of non-bank financial sectors (eg, private equity firms). The regulation of non-bank financial institutions remains inadequate (Hinge (2021)).
6. These estimates and those for the euro are based on a comparison of estimates for 2021 Q4 with 2020 Q2.
7. “Regulators must rein in Wall Street risks as rates rise”, *Financial Times*, February 4, 2022.
8. Ramaswamy, S, and P Turner (2018): “A dangerous unknown: interest rate risk in the financial system”, *Central Banking journal*, vol XXVII, no 3, pages 45–51.
9. Hinge, D, ‘Fixing market-based finance: duct tape or deep reform’ in *Central Banking journal*, vol XXXII, no 1, 2021.
10. Gagnon, JE, and M Sarsenbayev, *25 years of excess unemployment in advanced economies: lessons for monetary policy*, Petersen Institute of International Economics, Policy Brief 2022.
11. Carstens, A, ‘Carstens: world may be on “cusp of a new inflationary era”’, *Central Banking*, April 5, 2022.
12. There is nothing new in this. Keynes explained why in his *Treatise on Money*, and pointed out in the 1930s that HM Treasury forward guidance that Bank rate would remain low for years would not be enough to reduce the long-term rate as far as was needed. *The Radcliffe Report* in the late 1950s echoed the need for monetary policy to focus also on the long-term rate, but this time to make sure that decisions to raise the bank rate affect the whole yield curve. HM Treasury rejected this because it did not want the central bank selling government bonds to increase yields.
13. See: Hördahl, P, Sobrun, J, and P Turner, *Low long-term interest rates as a global phenomenon*, BIS Working Paper no 574, August 2016.