

FEDERAL RESERVE: HOW MUCH IS ENOUGH?

At which level will the Federal Reserve stop hiking the federal funds rate? The question is hugely important for activity and demand in the US economy as well as for financial markets. During his recent press conference, Fed Chair Jerome Powell remained vague about the reaction function of the FOMC but he did mention that they would be looking at real interest rates. This raises the question which inflation measure to use to move from nominal to real rates. A possible solution is to use the term structure of inflation expectations that is calculated by the Federal Reserve Bank of Cleveland. Despite its significant recent increase, the real one-year Treasury yield is still below that reached during previous tightening cycles, with the exception of 2018. Against the background of elevated inflation, it is clear the tightening cycle is not about to end.

At which level will the Federal Reserve stop hiking the federal funds rate? The question is hugely important for activity and demand in the US economy as well as for financial markets. It also matters for the rest of the world, considering the global spillover effects of US monetary policy

During his recent press conference, which came after another 75 basis points rate increase, Fed Chair Jerome Powell remained vague about the reaction function of the FOMC. "We'll take into account the full range of analysis and data that bear on that question guided by our assessment of how much financial conditions have tightened, the effects that that tightening is actually having on the real economy and on inflation, taking into consideration lags..."¹ He also mentioned they would be looking at real rates, all across the yield curve, without specifying how these rates would be calculated.

Using current inflation makes no sense for a multi-year investment. After all, an investor's decision today depends on the expected path of inflation over the maturity of the bond he is considering buying. Comparing the yield of a nominal bond to that of an inflation-protected security of the same maturity suffers from a bias due to the existence of an inflation risk premium. This premium is a compensation for the risk that inflation may be different from what was expected initially.

A possible solution is to use the term structure of inflation expectations that is calculated by the Federal Reserve Bank of Cleveland.² It combines data from three different sources: Blue Chip economic forecasts - a consensus forecast of short-term inflation expectations over the next several quarters-, the inflation forecasts over the next 10 years of the Survey of Professional Forecasters (SPF) and inflation swaps, which cover the entire maturity spectrum.³

1. Source: Federal Reserve, Transcript of Chair Powell's Press Conference, 2 November 2022.

2. See [Inflation Expectations \(clevelandfed.org\)](https://www.clevelandfed.org).

3. *The econometric methodology is explained in Inflation Expectations, Real Rates, and Risk Premia: Evidence from Inflation Swaps*, Federal Reserve Bank of Cleveland working paper 11-07, March 2011. For a general presentation, see Joseph G. Haubrich, A New Approach to Gauging Inflation Expectations, Economic Commentary, Federal Reserve Bank

US: TERM STRUCTURE OF INFLATION EXPECTATIONS

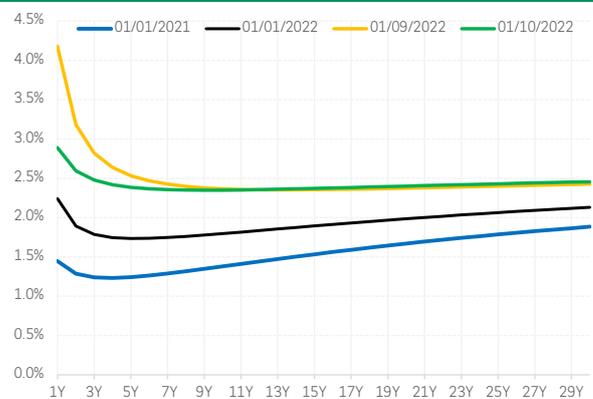


CHART 1

SOURCE: FED CLEVELAND, BNP PARIBAS

Chart 1 shows the evolution of the term structure since the start of 2021. Inflation expectations have increased across the board, but whereas in 2021 there was essentially a parallel upward shift, this year, short-term expectations increased far more than longer-term expectations. Importantly, the policy tightening has already caused a significant decline of short-term expectations after their peak in September. Nevertheless, in a historical perspective, one-year expected inflation is still at the upper end of the range since the early 1990s (*chart 2*). Consequently, despite its significant recent increase, the real one-year Treasury yield is still below that reached during previous tightening cycles, with the exception of 2018 (*chart 3 and table*).

of Cleveland, August 2009.

Despite its significant recent increase, the real one-year Treasury yield is still below that reached during previous tightening cycles. The job of the Federal Reserve is not finished yet.



ONE-YEAR EXPECTED INFLATION AND FEDERAL FUNDS RATE

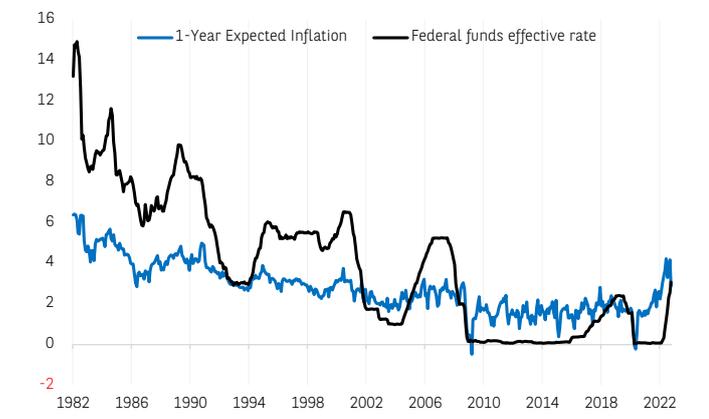


CHART 2 SOURCE: FEDERAL RESERVE BANK OF ST. LOUIS, BNP PARIBAS

REAL ONE-YEAR TREASURY YIELD AND FEDERAL FUNDS RATE

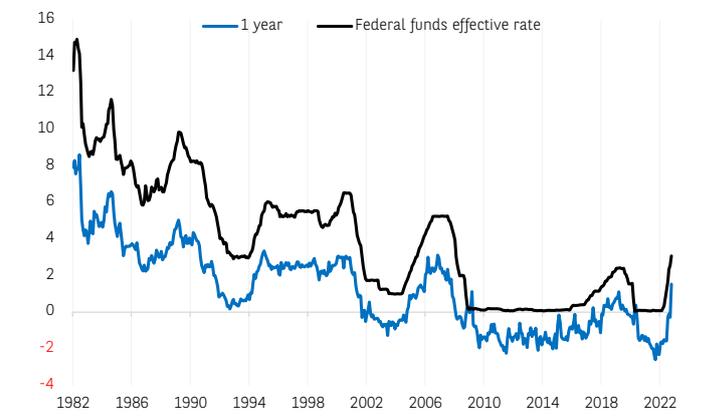


CHART 3 SOURCE: FEDERAL RESERVE BANK OF ST. LOUIS, BNP PARIBAS

With a one-year nominal yield of 4.7% at present, the terminal federal funds rate would need to be higher than current market pricing of about 5.0% to bring the real yield closer to past cyclical highs. Two developments could change this: a rapid decline in inflation expectations -which would raise the real yield- or a more patient approach by the Federal Reserve -which would no longer seek to push real rates higher. For either of these to happen we need good news on inflation or bad news on the economy, in particular the labour market. Both seem not very likely in the near term given the inertia of inflation and the ongoing strong pace of job creations.

William De Vijlder

ONE-YEAR REAL TREASURY YIELD AND PEAK NOMINAL FEDERAL FUNDS RATE (WITH THE EXCEPTION OF THE CURRENT CYCLE)

Current cycle		
Date	1-year real yield	Peak federal funds effective rate
October 2022	1.54	3.08
Previous cycles		
Date	1-year real yield	Peak federal funds effective rate
January 2019	0.78	2.40
July 2007	2.35	5.26
February 2007	2.41	5.26
April 1995	2.80	6.05
July 2000	3.00	6.54
October 1987	3.21	7.29
March 1989	5.04	9.85
August 1984	6.60	11.64
February 1982	8.30	14.78

TABLE 1 SOURCE: FEDERAL RESERVE BANK OF ST LOUIS, BNP PARIBAS