On May 6, 2022, I first published an essay explaining why I focus on long-term real rates to evaluate the overall stance of monetary policy, which includes effects from both the setting of the federal funds rate and changes to the Federal Reserve's balance sheet. Please see that essay for a discussion of why long-term real rates drive economic activity rather than short rates or nominal rates. On June 17, 2022, I then published an update to reflect both increases in inflation and actions by the Federal Open Market Committee (FOMC) to tighten policy in response. This essay is an update to those earlier versions in order to assess where we are in our inflation fight some 15 months later.

In the ensuing time, inflation climbed further but then fell dramatically, in part due to policy tightening by the FOMC. Although annual inflation remains well above our target (Figure 1), there is no question we have made a lot of progress towards our 2 percent goal. And after climbing last year, near-term inflation expectations have returned to levels broadly consistent with their levels before the pandemic (Figure 2). This suggests market participants believe the inflation fight will soon have been won.

1

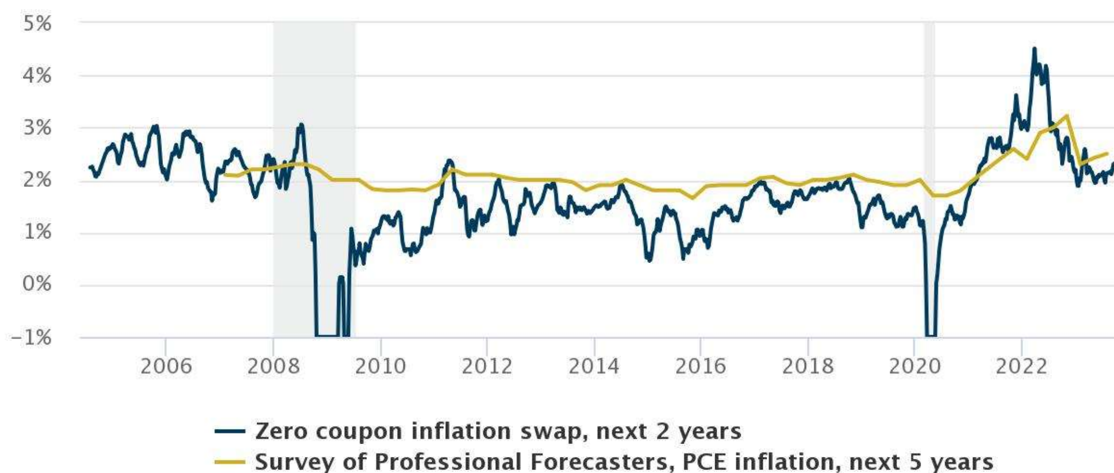
PCE Inflation

12-month percent change

Note: PCE—personal consumption expenditures.
Source: Bureau of Economic Analysis

2

Near-Term Inflation Expectations



Note: Zero coupon swap is a weekly average and is adjusted to PCE basis by subtracting 30 basis poir
Gray bars indicate recessions.
Source: Bloomberg and Federal Reserve Bank of Philadelphia Survey of Professional Forecasters

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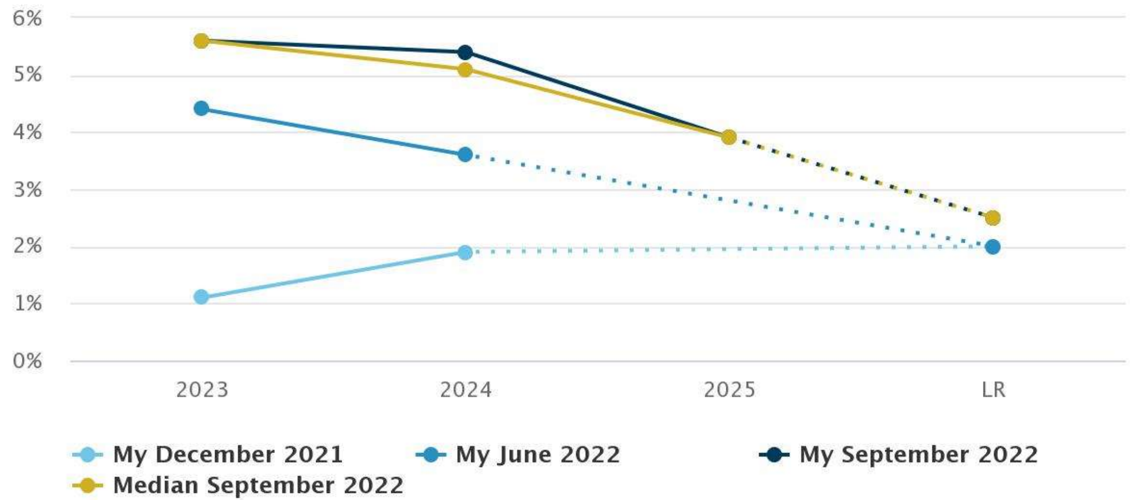

Financial markets have responded to the FOMC's moves, with the 10-year real rate continuing to climb, indicating that the overall stance of monetary policy has likely tightened further (Figure 4). But as I explained in my prior essays, ultimately the overall stance of monetary policy is determined by the position of long real rates relative to the neutral real rate, which is uncertain.

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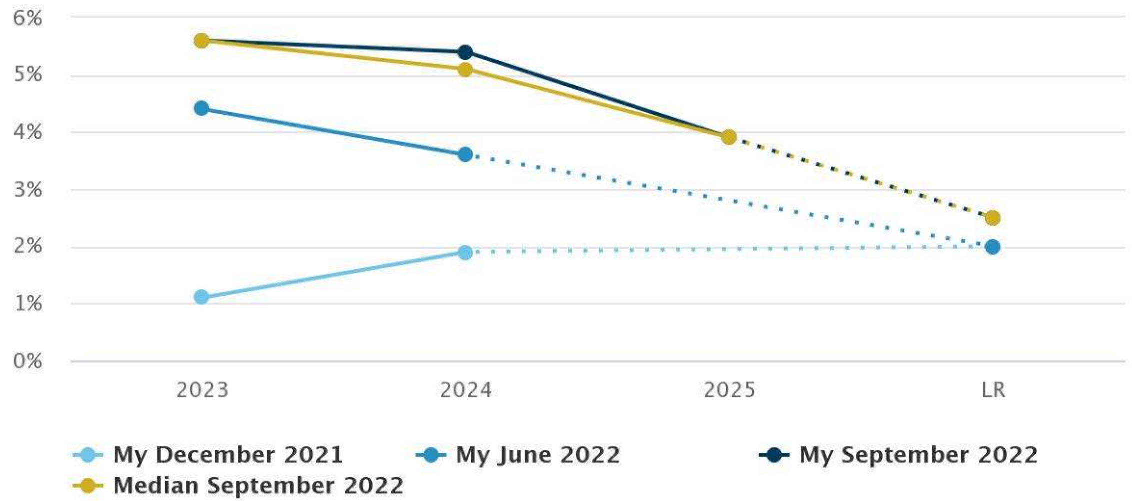

Note: SEP—Summary of Economic Projections.
Source: Federal Reserve Board of Governors

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4

10-Year TIPS Yield

Note: Treasury Inflation-Protected Securities (TIPS) are Treasury bonds that are indexed to inflation a
thus have real yields. Gray bar indicates recession.
Source: Federal Reserve Board of Governors

In the previous essays, I noted that prior to the pandemic the 10-year real yield was about zero, which I estimate was roughly a neutral policy stance at that time. In response to the pandemic, the FOMC acted aggressively to support the economy by driving the federal funds rate to the effective lower bound and massively expanding our balance sheet. Those combined effects drove the 10-year real yield to roughly -1 percent. Since we first tightened policy over 18 months ago, 10-year real yields have fully retraced their pandemic decline and are now approximately 2 percent. So, we are in a contractionary stance relative to pre-pandemic levels. Is that high enough?

Unfortunately, I know of no theoretical framework that can tell us how much we will need to tighten long real rates to get inflation back to target in a reasonable time frame.

As a point of comparison, in the June 2022 essay, I noted that Minneapolis Fed staff's best estimate is that when the FOMC raised the policy rate by 300 basis points in the 1994 tightening cycle, it translated into an increase of about 200 basis points in the 10-year real rate (Figure 5). Coincidentally, the resulting level of the 10-year real rate was also estimated to be about 200 basis points above the then-neutral 10-year real rate. So in that tightening cycle, policymakers drove the 10-year real rate about 200 basis points above neutral to bring inflation back down.

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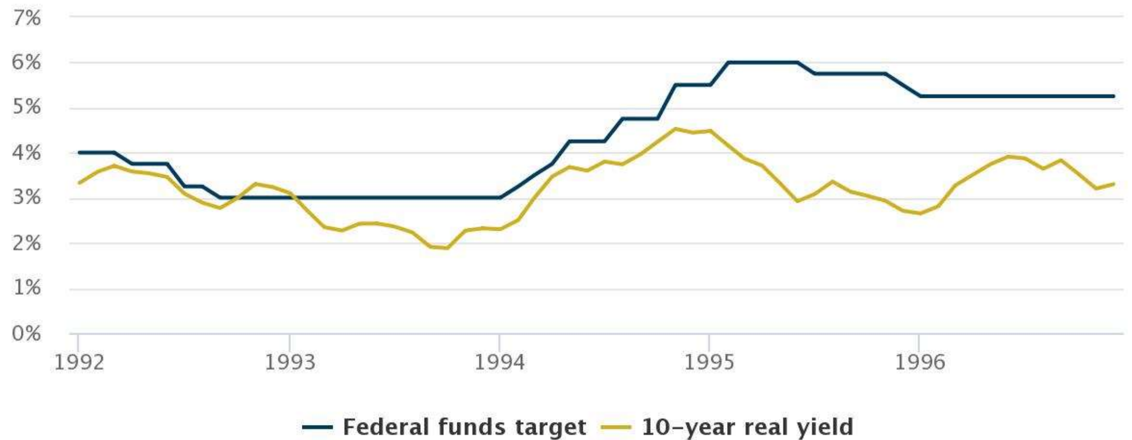

Note: 10-year real yield is the 10-year Treasury yield less 10-year expected CPI inflation from the Su
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Source: Federal Reserve Board of Governors and Federal Reserve Bank of Philadelphia Survey of Professional Forecasters, staff calculations

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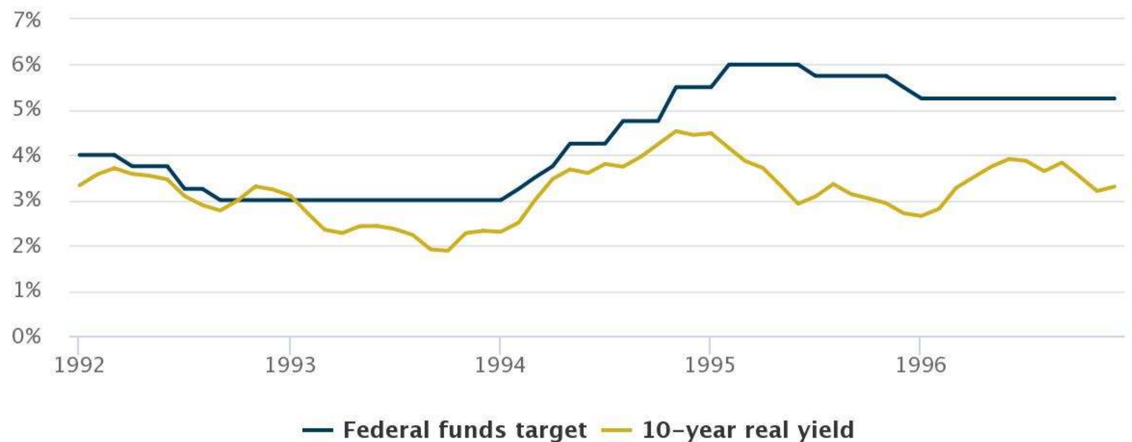
5

1994 Tightening Episode



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How does that compare with our current tightening cycle? If my estimate of neutral being zero before the pandemic still holds (and this is uncertain), then we have accomplished similar tightening to what was achieved in the 1994 tightening cycle. However, as I stated earlier, the underlying inflationary dynamics are quite different today than in 1994, so simply repeating the 1994 tightening might not be enough and the neutral rate may well have moved up relative to before the pandemic.

Given these developments, what is my current outlook?

I see us facing two primary scenarios going forward:

Soft landing: After potentially one more 25-basis-point federal funds rate increase later this year, the FOMC holds policy at this level long enough to bring inflation back to target in a reasonable period of time. Substantial progress has already been made in reducing inflation while a healthy labor market has been maintained. In this scenario, the policy tightening we would soon achieve would prove enough to finish the job. Given the resilient economic activity we have observed, this looks increasingly like the proverbial soft landing that we are hoping to achieve. Because of the actual progress we have made against inflation and the actual labor market performance, today I put a 60 percent probability on this outcome.

High-pressure equilibrium: Underlying inflation proves more entrenched than expected, and the policy path described in the first scenario softly lands the economy to something like 3 percent inflation rather than our 2 percent goal. In an essay in March 2022, I observed that robust consumer spending appeared to be funded by current income rather than the spending down of pandemic savings, suggesting that the economy might have entered a high-pressure equilibrium that was inconsistent with our 2 percent target. In such an equilibrium, households feel more confident about their economic futures and spend more than prior to the pandemic, keeping consumer demand strong and the economic flywheel spinning.

In this scenario, the FOMC would then have to raise rates further, potentially going significantly higher to push inflation back down to our target. The case supporting this scenario is that most of the disinflationary gains we have observed to date have been due to supply-side factors, such as workers reentering the labor force and supply chains resolving, rather than monetary policy restraining demand. Indeed, consumer spending and economic activity both continue to exceed our expectations. In addition, the sectors of the economy that are typically most sensitive to interest rates, housing and automobiles, have proven surprisingly resilient and, by some measures, have bottomed and are now showing signs of beginning to recover. These dynamics raise the question, How tight is policy right now? If policy were truly tight, would we observe such robust activity?

Services inflation has also been quite sticky and remains elevated relative to pre-pandemic levels. Once supply factors have fully recovered, is policy tight enough to complete the job of bringing services inflation back to target? It might not be, in which case we would have to push the federal funds rate higher, potentially meaningfully higher. Today I put a 40 percent probability on this scenario.
I would have more confidence in the soft landing scenario if I were more certain that policy is truly tight relative to neutral today. The good news is that we don't need to make this determination right now. We can observe the actual progress in bringing inflation down over the next several months to determine which scenario is the dominant one.

Of course, policymakers must always consider the risk that new shocks could hit the economy. Some of those shocks potentially could include a government shutdown, escalation of the war in Ukraine, extended domestic auto sector disruption, and spillovers from the slowing Chinese economy. The FOMC remains absolutely committed to achieving our dual mandate goals, and I am confident we will do what we need to do to achieve them.

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