ECONOMIC AND FIXED INCOME OUTLOOK

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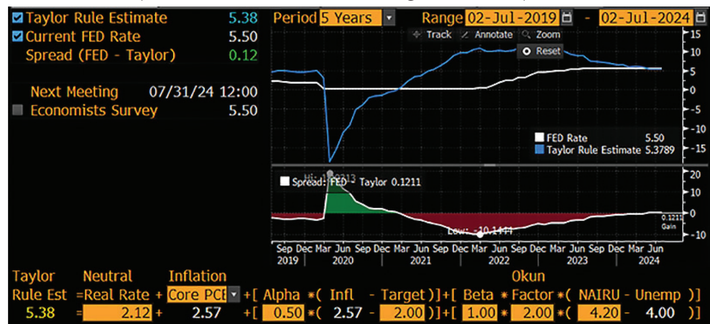
Revisiting the Taylor Rule

What is the Taylor Rule? Stanford economist John Taylor's 1993 paper "Discretion versus policy rules in practice" made an argument that monetary policy "should be guided by policy rules". In it, he describes an equation incorporating recent measures of inflation (he uses the GDP deflator) and real GDP compared to target levels to produce a prescribed short-term interest rate. This equation and subsequent variations are now referred to as Taylor Rules. If inflation or growth were higher than target, the equation would generate a higher prescribed interest rate and vice versa. Taylor observed that his equation's output closely corresponded to actual monetary policy over the past six years. The Federal Reserve Open Market Committee (FOMC) looks at Taylor Rules (but is not in any way bound by them) and many other economic variables in designing and executing monetary policy, primarily through choosing the short-term interest rate level. Of course, some discretion is required as these are simple models that cannot fully capture the economy's complexity and sudden shocks, such as a financial crisis or a pandemic that would result in extreme interest rate and financial market volatility.

What does the Taylor Rule suggest about recent economic performance and interest rates and what does it suggest about the future? We look at a Taylor Rule with a few modifications from Taylor's original equation. First, the inflation measure we use is core PCE inflation, as this is the measure the FOMC targets. Second, instead of using GDP as a measure of economic activity, we use the unemployment rate. The reason, again, is that this is what the FOMC targets. Taylor used 2.0% as a fixed natural real rate of interest somewhat arbitrarily. The Fed currently estimates this rate to be 0.8%. This estimate has been rising recently and was much higher prior to the pandemic. We will use the market rate for five year TIPS of 2.12% - close to Taylor's original 2% estimate and less influenced by the zero interest rate period still in the Fed estimate.

In April 2020, the Taylor Rule-prescribed rate plunged to -18% as the unemployment spiked to +14.8%. However, since the Fed cannot really take interest rates negative, they relied on other



unconventional methods of monetary policy easing, such as quantitative easing and a commitment to keep interest rates low for a long time. As unemployment declined and core PCE rose over the next 24 months, our Taylor Rule estimate climbed, moving above the actual Fed Funds rate in April 2021.

At this point, our Taylor Rule was signaling that monetary policy was too accommodative, meaning faster economic growth and inflation were likely. Nevertheless, and perhaps because the Fed had promised to keep interest rates low for a long time in response to the pandemic, the Fed ignored the Taylor Rule prescription and did not raise rates for another year (in March 2022). As a result, Core PCE inflation was far above their 2.0% target after peaking at 5.57% in February 2022. The Fed was behind the curve, as they say.

At its most bullish in January 2024, Fed Funds futures markets (Bloomberg ticker: US0ANM DEC2024) were pricing in 6.7 rate cuts by December 2024 and the 10-year US Treasury was around 4.0%. However, the Taylor Rule suggested that short-term interest rates were still around 100 basis points too low, signaling growth and inflation could outperform market expectations, and of course, they did. By April 2024, the ten-year yield peaked at 4.70%. We have had zero interest rate cuts year to date and the market now sees just 1.9 cuts by the end of the year.

Today, our Taylor Rule suggests the policy rate is in the right place. Inflation is still a touch high and the unemployment rate is a bit low, but if our Taylor Rule is accurate, we would expect to see both inflation and unemployment to track toward target. As such, one to two interest rate cuts in 2024 looks reasonable. At the 2.0% core PCE target and 4.2% long-run unemployment rate, our Taylor Rule prescribes an interest rate of around 4% (TAYL, outlook matrix).

This appears to be an attractive time to enter fixed income investments. According to our Taylor Rule, short-term interest rates are no longer too low. Inflation has been gradually easing and unemployment is gradually rising. Should that trajectory continue, the Federal Funds rate, today at 5.50%, will eventually migrate downward to the estimated 4.0%. 10-year Treasuries, currently yielding 4.3%, offer modest price appreciation potential as monetary policy eases. In addition, if the Fed keeps rates too high for too long and the economy sharply slows, rate cuts will be even swifter and deeper, driving higher fixed income returns that likely outperform equity portfolios.

The Inflationary Impact of Higher Interest Rates

The persistence of inflation despite the dramatic increase in the federal funds rate has led some observers to question whether higher interest rates are actually adding to the problem. Before digging into the argument, we make a couple of observations. First, the core PCE measure of inflation rose sharply beginning in roughly 2Q21 and remained at its highest levels through 2022. The year-over-year measure peaked in February 2022 at 5.57%. Throughout 2023 inflation declined. Today year-over-year core PCE is 2.57%. The Fed began its rate hiking cycle in March 2022 and finished in July 2023. The impact of changes in interest rates is widely believed to affect the macro economy with long and variable lags. Interest rate hikes in 2022 leading to disinflation about a year later is wholly consistent with the traditional understanding that higher interest rates can fight inflation. Second, the reasons behind the surge in inflation (primarily pandemic related labor supply and supply chain shocks and the war in Ukraine) were largely not interest rate sensitive. The Fed uses higher interest rates to dampen consumer and business demand. The tool has minimal impact on short-run supply. Furthermore, there are numerous reasons why the economy today may be less interest rate sensitive than in the past. First, in the immediate aftermath of the pandemic the Fed cut rates to zero and flooded the market with liquidity through quantitative easing. Consumers and businesses

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refinanced mortgages and other forms of debt at low fixed rates for long terms. Over time, as debt is refinanced at higher rates, demand will be pressured. Fiscal deficit spending exploded and remains high, supporting demand. Numerous structural trends including deglobalization, the green energy transition, increased defense spending because of increasing geopolitical conflict and an AI investment boom all support demand without much influence from interest rates. Higher interest rates primarily reduce aggregate demand by making credit more expensive and less attractive. The Federal Reserve's measure of total consumer credit outstanding (CCOSTOT Index) slowed from a rate of +8.7% growth in 2021, to +7.6% in 2022, to +2.6% in 2023, and to +0.6% year-to-date through April 2024. Traditionally understood interest rate sensitive sectors of the economy such as homebuilding, commercial real estate, vehicle sales and manufacturing are all muted compared to the years just prior to the pandemic.

Higher interest rates can be simulative in specific areas, but the impact is dominated by the restrictive macro impact on credit and demand. One way this could occur is through higher interest payments received on cash balances. In the current cycle, higher interest rates on debts have more than offset this effect.

Investment-Grade Corporate Bond Second Quarter Performance and Outlook

U.S. investment grade corporate bonds traded roughly sideways during the second quarter. Per the Bloomberg U.S. Credit Index, investment grade corporate credit widened by 3 bps versus comparable U.S. Treasury yields in the second quarter. The Bloomberg U.S. Credit Index measures the investment grade U.S. dollar denominated, fixed-rate, taxable corporate and government-related bond markets. There are no positions in the portfolios with any credit or sustainability concerns through the market cycle.

Corporate securities remain top performers halfway through 2024. Strong technical factors are still in the driver's seat as demand for investment grade credit remains overwhelming and supply is easing off the earlier record pace. In our view, the core driver for this demand is simply attractive yields and so it is unlikely to subside even as spreads move to levels that are near all-time tights. As always, we believe credit selection will be paramount, as the focus will shift toward fundamentals and the ability of corporates to navigate any macro uncertainty with U.S. economic growth risks tilted to the downside.

High Yield Bond Sector Second Quarter Performance and Outlook

High yield fixed income bonds returned 1.35% in the second quarter and were once again the best performing domestic fixed income asset class. There was a flight to quality during the quarter with double-B rated credits performing the best with a 1.57% total return, followed by single-B returning 1.29% and triple-C returning 0.55%. High yield spreads started the quarter at 315 bps and ended at 317 bps, as the market grappled with the prospect of a slowing economy versus the likelihood of a Fed pivot later this year. We anticipate continuing to take some spread risk off the table and moving up in quality as valuations are near post-crisis tights and are not currently compensating investors for a potentially bumpy economic landing. We believe defaults will remain around their long-run averages through 2024 before ticking up slightly in 2025. The long-term average high yield bond default rate (since 2017) is now at 2.1%. High yield bond data is representative of the U.S. High Yield Corporate Bond Index that is designed to track the performance of U.S. dollar-denominated high-yield corporate bonds issued by companies whose country of risk use official G-10 currencies, excluding those countries that are members of the United Nations Eastern European Group (EEG).

Monetary Policy: We believe current Fed policy is restrictive with a Fed Funds rate of 5.25-5.50% (exceeding the neutral rate) after completing eleven quarter-point increases since March 16th of 2022. The most recent Fed meeting on June 12th, 2024 had no surprises, as members were steadfast in their comments that they remain data dependent and need to see continued proof that inflation is trending toward their target. As we enter election season, and barring a significant weakening of economic data, we believe the Fed will avoid cutting until after the election to maintain political neutrality (despite their public denial of such considerations). As such, we now anticipate the first 25 bps rate cut will likely occur in December and that the Fed Funds rate will end the year in the 5.00-5.25% range with more cuts on the docket going into 2025.

Interest Rates: It is our view that as a result of one 25 basis point Fed rate cut at the tail end of 2024, the front end of the yield curve will decline resulting in a modest flattening of the curve. We maintain a bias for interest rates across the curve to drift lower from current levels before year end, but we now forecast the 10-year Treasury yield to end the year between 4.00%-4.25% as a result of one fewer rate cut than previously expected

Conclusion: We believe fixed income remains an attractive asset class and investors have opportunities for increased income and yields by extending duration at this time. These unique economic times require a steady hand and a consistent, thoughtful approach to investing. While never losing sight of the global and domestic economic environment, we believe our long only, research driven style of investing has historically delivered excellent results over the years with less volatility than our peers. We have been consistent in our investment philosophy, process and management style.

If you have any questions on strategy, performance or business development, please do not hesitate to contact us.

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* **Past performance is not a guarantee of future results.** 6767178.1