A 'RARE VIEW' THAT PINPOINTS THE NEUTRAL RATE BEFORE A HIKING CYCLE BEGINS



Innovative Goals-Based Investment Management.



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by

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EXECUTIVE SUMMARY

We present our proprietary framework to pinpoint the neutral rate. Also, we discuss the portfolio construction implications before an interest rate hiking cycle begins and after it is underway.

BACKGROUND

The "neutral" setting of monetary policy is the level of the Federal funds rate (FFR) that would neither stimulate nor restrain the economy in the long run. Investors refer to this as the "neutral rate." Knut Wicksell formulated the concept of the neutral rate of interest for the economy over 100 years ago. However, economists only included the notion of "neutrality" to the central bank's decision-making process in the early 2000s. Two Fed Board staffers, Tom Laubach and John Williams, published research that included a model for estimating the equilibrium real rate of interest (aka "r*").

The core tenet of the Laubach-Williams (LW) model was that the economy's potential, or trend growth rate could vary significantly over time, in turn pushing r* up or down.

While the neutral rate could be below or above equilibrium, it is most associated with monetary tightening from a market perspective. That is, the Fed typically keeps raising rates until the economy has already slowed down. Metaphorically, it is like "backing up" an 18-wheeler truck into a tight parking spot. The monetary playbook dictates that the Fed keeps "backing up" interest rates until it hits something. Only then would the Fed know that it had reached (and surpassed) "neutral." An excellent example of this metaphor was the most recent monetary tightening cycle, precisely the 2018 period. Before the cycle started, the LW model estimated the neutral rate at 0.4%. With inflation above 2%, this implied the neutral rate of Fed funds would be above 2.4%. That estimate missed the mark by a wide margin.

In retrospect, the market determined the Fed reached the neutral rate of 1.75% in the summer. However, it hiked interest three more times by 0.25% to 2.50% by the end of the year. This 0.75% overshoot of "neutrality" led to a series of popup thunderstorms and rolling bear markets across asset classes. Over the next month, the Fed was forced to recant.

While a model might tell you where to park the 18-wheeler, it became evident the Fed was operating in total darkness. They had nothing to measure the distance they "backed up" and were oblivious to the objects they bumped into that were also moving.

WHERE WE ARE TODAY

The US Treasury market is pricing an aggressive interest rate hiking cycle in 2022. The first interest rate hike is expected at the March FOMC meeting.

As a result, the market narrative is quickly shifting away from the timing of the first interest rate hike to the

endpoint of the cycle. Said differently, investors are already trying to identify the "neutral rate" well before the first hike.

Below, we provide our guide to pinpoint the neutral rate. We first introduced this proprietary framework and these important observations in 2015 before the last hiking cycle.

ONE INSTRUMENT ABOVE ALL OTHERS

Historically, the yield at which the 5-year US Treasury has settled the week of the first interest rate hike in a tightening cycle is the "neutral rate" for that cycle.

That level currently stands at 1.87%, the yield as of March 9, 2022.

Note: The 5-year yield may be different at the first interest rate hike date, which is expected at the March 16, 2022, FOMC meeting.

Over the last 40 years, including every monetary policy tightening cycle, the one instrument with a flawless track record of predicting where the US Treasury yield curve inverts and causes a recession is the 5-year US Treasury yield.

While this may sound too simple to be true, the accuracy is 100%. The below table provides this historical precedent.

Market Implied Neutral Rate Through Spot 5-Year US Treasury Yield

Date of 1st Hike	5-Year Treasury Yield	Date of Meeting When Fed Funds Rate > Neutral Rate	Fed Funds Rate Above Neutral	Peak FF Rate for Cycle	Date of Peak Fed Funds Rate for Cycle	Curve Inversion?
15-Aug-83	11.55%	18-Aug-84	11.75%	11.75%	18-Aug-84	Yes
15-May-87	8.50%	7-Dec-88	8.75%	9.75%	8-Feb-89	Yes
4-Feb-94	5.30%	15-Nov-94	5.50%	6.00%	1-Feb-95	Yes
30-Jun-99	5.90%	21-Mar-00	6%	6.50%	16-May-00	Yes
30-Jun-04	3.93%	1-Nov-05	4.00%	5.25%	29-Jun-06	Yes
30-Dec-15	1.68%	15-Jun-18	2.00%	2.50%	18-Dec-18	Yes

Source: Rareview Capital LLC, NY Fed, Bloomberg

Therefore, if history is a guide, once the Fed funds rate passes the level where it settles the week of the first interest rate hike, the Fed will no longer be "easy" on an absolute basis but will have become "too tight."

While we place a high degree of importance on this framework, we appreciate that others may require additional background information on the relevance of the 5-year US Treasury.

Simplistically, the 5-year US Treasury yield encapsulates various bond market inputs, including the projections for

nominal growth and the expectations for future Fed policy. Put another way, the 5-year point in the yield curve represents the collective wisdom of the bond market.

YIELD CURVE INVERSION THIS CYCLE

The signaling power of a yield curve inversion should not be underestimated. Historically, it validates where the neutral rate is for that cycle.

Often, when the US Treasury curve has inverted, the Fed has continued to raise interest rates and overshoot the neutral

rate, leading to impairment of the financial system and the economy by extension. This is what professional investors refer to when they use the phrase "policy mistake."

When the Fed began the last tightening cycle in December 2015, the 5-year US Treasury yield was 1.68%. By June 2018, 30 months later, when the Fed had raised interest rates to 1.75% from 0.25%, yield curve inversions emerged in parts of the Treasury and derivatives markets. The Fed overshot the neutral rate for that cycle when it raised rates another 0.75% to 2.50%.

Applying this precedent to the current 5-year US Treasury yield of 1.87% suggests that if the Fed raises interest rates by 0.25% more than six times from where it is today, it will invert the Treasury yield curve. If true, the yield curve will invert in early 2023.

In the past 30 years, the major G-10 central banks that have conducted an interest rate hiking cycle have had to cut them on average 6-9 months after the last hike. The current cycle is expected to play out aggressively through the first quarter of 2023, and the Fed can likely overshoot deeper into 2023 in more forms than one. That would mean the first interest rate cut will be in 2024, approximately the date currently discounted in the US Treasury market.

PORTFOLIO CONSTRUCTIONS IMPLICATIONS

One of the critical misperceptions in investing is that when the Fed embarks on an interest rate hiking cycle, it is a negative for a portfolio of US Treasury investments. It is the opposite.

Most of the interest rate hike expectations for the tightening cycle are priced in when the first interest rate hike materializes.

For example, in the six months leading up to the first interest rate hike of a cycle, the average excess return for the 10-year US Treasury note is -4.4%, ranking it amongst some of the worst 6-month total return periods in the past 40 years.

Therefore, the odds of losses for holding a long US Treasury position over a longer time horizon is low. For example, during the last tightening cycle, if you had bought the 5-year or 10-year US Treasury the week the Fed raised interest rates for the first time in December 2015 (or the second time in December 2016), **you would have NEVER had a negative total return on your investment.** Also, you would have had <u>excess</u> total returns for nearly the entire cycle – meaning that yields did not rise over the presumed neutral rate for multiple years.

Hiking Cycle Begins	1-Yr Total Return	Excess Return?	2-Yr Total Return	Excess Return?
1983	9.12%	No	31.25%	Yes
1987	8.18%	Yes	17.50%	Yes
1994	-3.69%	No	13.91%	Yes
1999	4.31%	No	17.31%	Yes
2004	9.73%	Yes	5.80%	No
2015	1.66%	No	4.17%	Yes

Net Total Return of 10-Year US Treasury After First Interest Rate Hike

Source: Rareview Capital LLC, Bloomberg

Knowing the neutral rate before the cycle may lead to several different profitable investment strategies from an investment standpoint.

Firstly, because we know that most of the interest rate hike expectations are factored in by the time the Fed raises short-term interest rates the first time, we can adjust positioning for that in advance.

Secondly, as shown above, after the first interest rate hike, one of the historically higher risk-adjusted returns across all assets over the next 12 to 24 months was to buy an intermediate or longer-dated Treasury as the Fed removed inflation risk from the market. In 1994, the -3.69% 1-year total return, while negative, marked the high yield for the entire cycle. In 2004, the +5.8% 2-year total return was the high yield of the cycle even though it was a positive total return. The critical point to recognize is that over a 2-year period, there was a positive excess return, meaning yields fell relative to the forward rate. Also, the total return was positive most of the time over the first year.

Overall, this may appear counterintuitive because of the Fed's goal of raising interest rates, but the evidence again speaks for itself over the past 40 years.



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