

In 2022, monetary policy rates were raised from historic lows to combat inflation risks not seen since the 1970s. This has subsequently sparked debate on whether interest rates will return to pre-pandemic levels or remain elevated going forward. Many argue that secular forces entrenched in the global economy, like low potential growth,¹ will drive yields lower, while many others suggest yields could remain higher amidst current economic resilience, the trend toward deglobalization, the transition to clean energy, and increased government debt levels.

Embedded in this debate of higher or lower interest rates is the concept of the *neutral rate of interest*. In this brief update, we first define the neutral interest rate and provide a quick review of its history and some popular models that seek to measure it. We then focus on current estimates, drivers, and the implications for monetary policy, fiscal policy, and institutional portfolios.

Key takeaways

- **Neutral interest rate:** The neutral rate of interest is the rate at which monetary policy neither stimulates nor slows down economic growth when the economy is at full strength.
- **Historical context:** Interest rates were raised from historic lows in 2022 to combat inflation, sparking debate on whether they will return to pre-pandemic levels or remain elevated.
- **Drivers of the neutral rate:** Factors influencing the neutral rate include potential economic growth, demographics, inflation expectations, risk aversion, fiscal policy, and return expectations for risky and safe assets.
- **Potential implications for policy and portfolios:** The neutral rate impacts monetary and fiscal policy decisions and has significant implications for institutional portfolios, particularly in terms of investment strategies and pension plan valuations.

CONTRIBUTORS

RICHARD O'NEILL, CFA, CAIA
ORRAY TAFT, CAIA, FRM
ALISON ADAMS, PHD
CR OLSCHWANG

¹ Source: IMF, World Economic Outlook, "The Natural Rate of Interest: Drivers and Implications for Policy," April 2023. See also M. Obstfeld, "Natural and Natural Real Interest Rates: Past and Future," presented to 24th IMF Research Conference, November 9, 2023.

What is a “neutral” interest rate

The neutral rate of interest is an economic term referring to the rate at which monetary policy neither stimulates nor slows down economic growth when an economy is operating at full strength. It is the interest rate that keeps the economy balanced, with stable inflation and full employment, hence why it is also called the long-run equilibrium interest rate.

Understanding the neutral rate assists central banks in setting the appropriate level of policy rates. Directly, when the actual interest rate is below the neutral rate, the economy tends to grow faster, potentially causing inflation. When the actual interest rate is above the neutral rate, it can slow economic growth and reduce inflation.

Brief history of key research

The neutral rate of interest cannot be directly observed or measured; rather, it can only be estimated.² For practical purposes, it is usually defined as the *neutral short-term interest rate*.³ The most common method of estimating it is through the Laubach-Williams model.⁴ It uses real GDP, inflation, and monetary policy rates to identify trends in economic growth and other factors that affect the neutral rate.⁵ Using this methodology, it appears that the neutral rate in the US has declined considerably over the past 25 years (see Figure 1).

- ² Source: Federal Reserve of Dallas, E. Martinez-Garcia, “Gazing at R-Star: Gauging U.S. Monetary Policy Via the Natural Rate of Interest,” July 03, 2023.
- ³ Source: Federal Reserve, T. Laubach et al, “Measuring the Natural Rate of Interest,” November 2001.
- ⁴ The Laubach-Williams model was created by Thomas Laubach, Board of Governors of the Federal Reserve System, and John C. Williams, Federal Reserve Bank of San Francisco, as a way to estimate the natural rate of interest.
- ⁵ Source: Federal Reserve Bank of New York, “Measuring the Natural Rate of Interest.” See also - Federal Reserve Bank of New York, “Measuring the Natural Rate of Interest.” An adapted form of this model, known as Holston, Laubach, and Williams, has been modified to account for changes following the Covid-19 pandemic. Anecdotal evidence suggests monetary policy officials use a number of estimates and models in their application of monetary policy. See BIS, T.J. Jordan, “The Natural Rate of Interest (r^*) as a Reference Point for Monetary Policy – a Practitioner’s View,” May 30, 2024.

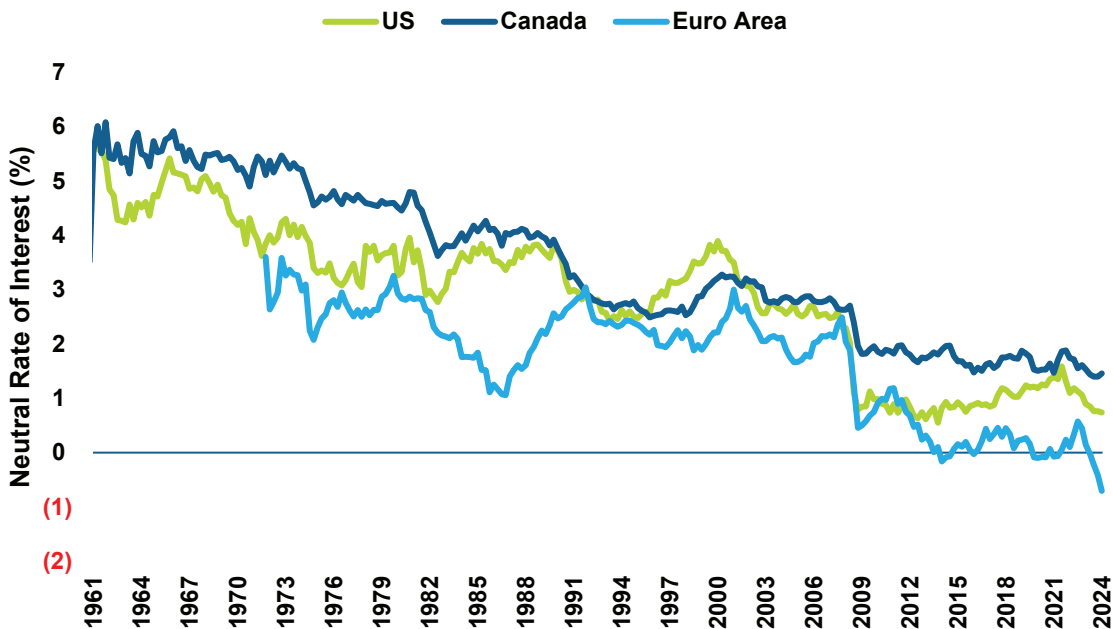


FIGURE 1
Estimate of the US Neutral Rate of Interest

Source: Federal Reserve Bank of New York, “Measuring the Natural Rate of Interest.” Data is for the period from January 1961 through June 2024.

What are the drivers?

Over the past four decades, interest rates in most advanced economies have been declining, which some market participants have attributed to a repricing of the neutral rate of interest.⁶

⁶ Federal Reserve Bank of San Francisco: “Estimating the Neutral Interest Rates”, International Monetary Fund: “The Neutral Rate of Interest – Estimates, Drivers, and Challenges”, Bank of England: “The Neutral Rate of Interest: What Can We Learn from the Data?”, European Central Bank: “The Natural Rate of Interest and Its Implications for Monetary Policy”, Bank for International Settlements: “The Decline in the Neutral Rate of Interest”

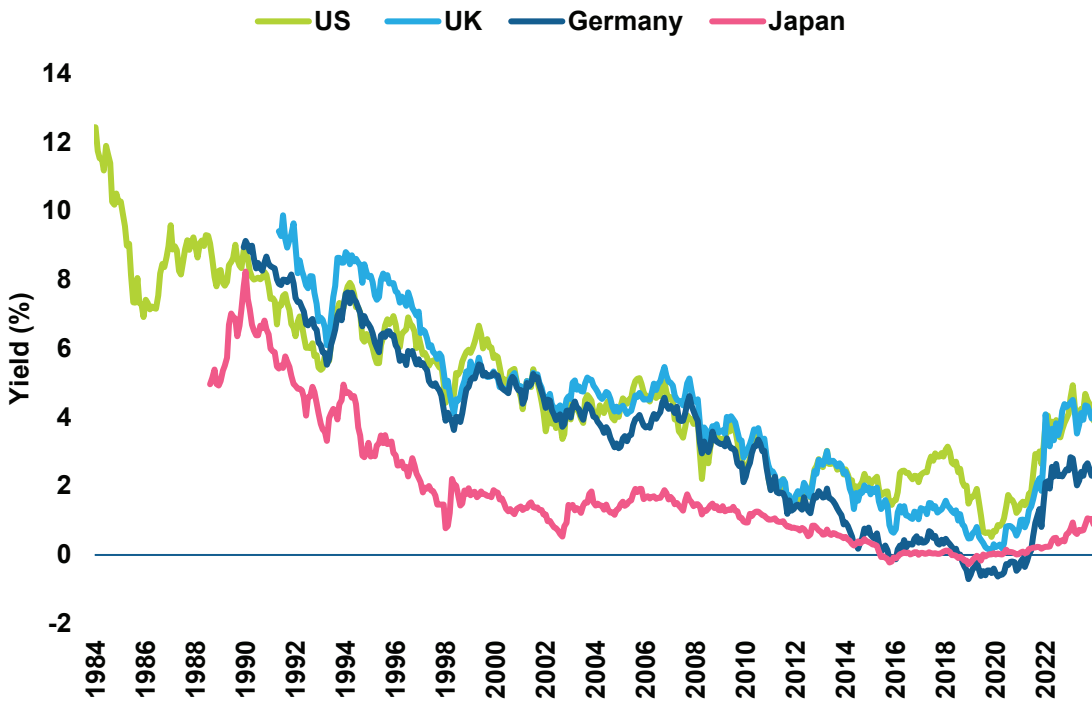


FIGURE 2
Sovereign Debt Yields for Major Economies

Source: Bloomberg. Data is for the period September 1984 through August 2024, where available.

As an equilibrium concept, the neutral rate reflects long-term structural changes in the economy. For instance, the Laubach-Williams model suggests that the neutral rate is influenced by deviations from potential output and can vary over time. When the economy is operating above its potential (i.e., what is known as a positive output gap), the neutral rate tends to be higher, whereas it is lower when the economy is operating below potential (i.e., a negative output gap).⁷ This relationship aligns with trend growth, as depicted in Figure 3.⁸

⁷ The output gap is the difference between an economy's actual output and its potential output, which is the maximum amount of goods and services that can be produced when the economy is operating at full capacity.

⁸ Trend growth is the long-term average rate of growth that an economy can sustain without generating inflation. It reflects the economy's potential output. The output gap helps to identify where the economy stands relative to its trend growth.

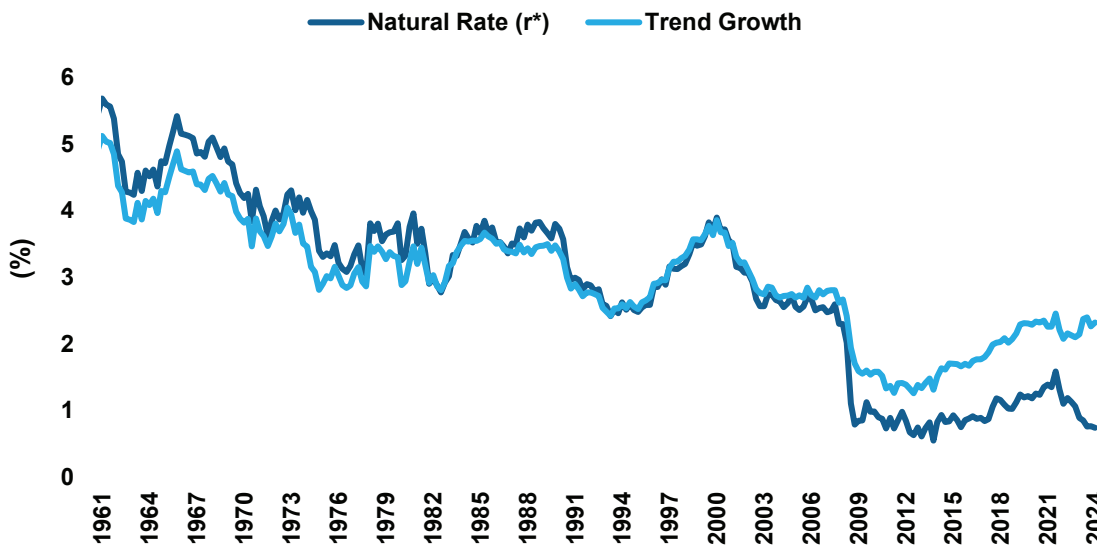


FIGURE 3
Neutral Rate and Trend Growth Rate for the US

Source: the Federal Reserve Bank of New York. Data is for the period January 1961 through June 2024.

A related approach to assessing the neutral rate focuses more directly on the balance between savings and investment. Specifically, the neutral rate is the real interest rate where the supply of savings matches the demand for investment. When real interest rates fall below the neutral rate, borrowing costs are reduced, encouraging more investment but discouraging savings. Conversely, interest rates above the neutral rate boost savings but can reduce investment due to higher financing costs, potentially slowing economic growth as investment projects are delayed or scaled back.

Key (but not complete or conclusive) economic factors that research suggests defines this relationship (between savings and investment) can be broadly defined as follows:

- **Potential economic growth:** higher potential growth can lead to higher investment demand, which increases the neutral rate.
- **Demographics:** changes in the population growth and age distribution can impact the balance between savings and investment. For an aging population, it is assumed that savings would increase and thereby increase the supply of loanable funds and thus put downward pressure on the neutral rate.
- **Inflation expectations:** at lower levels of inflation, savers require a lower level of interest rates to maintain the purchasing power of their assets.
- **Risk aversion:** higher risk aversion can increase savings and decrease investment, which should lower the neutral rate.
- **Fiscal policy:** government spending can influence the balance between demand and supply of funds, and thus influence the neutral rate. More government spending on projects that increase productive capacity should increase the neutral rate.
- **Return expectations for risky and safe assets:** differences between the expected returns on risky and safe assets can impact the neutral rate. If risky assets are expected to perform well due to increased economic activity and inflation pressures, the neutral rate could rise. If returns on safe assets are expected to be low due to softer inflation and more accommodative monetary policy, the neutral rate could be lower.

What is the current estimate for the US?

Estimates of the neutral rate vary depending on the methods used by different researchers and institutions, including private economists, the Federal Reserve, the IMF, and the BIS.⁹

The Federal Reserve, which has been refining its analyses for years, provides current estimates ranging from 0.5% to 2.5%.¹⁰ The Federal Reserve's "Summary of Economic Projections" offers a proxy for the nominal neutral rate, which was 2.95% at the time of publishing.¹¹ Additionally, the Laubach-Williams model noted above suggests a real rate of approximately 0.7%.¹²

⁹ Source: See Laubach and Williams (2003), Clark and Kozicki (2005), Justiniano and Primiceri (2010), Barsky et al. (2014), Kiley (2015), and Hamilton et al. (2015) for various methods and further discussion.

¹⁰ Source: These estimates, and the underlying supporting analysis, are provided by a number of regional reserve banks including the Federal Reserve Banks of New York, Chicago, San Francisco, Boston, and Cleveland.

¹¹ Source: Federal Reserve, "Summary of Economic Projections", published September 2024.

¹² As of September 2024.

What are the implications if the neutral rate differs from estimates?

If the estimate of the neutral rate is higher than the true neutral rate, policy officials could inadvertently implement a policy that is more restrictive than intended. This would potentially slow the economy and increase deflationary risks, as well as more adversely impact labor markets. The opposite would hold for underestimating the neutral rate, in that inflation risks could rise and labor markets could overheat.

Recently, however, the focus has been on whether the neutral rate has increased in the post-pandemic economic environment, and if interest rates may be higher going forward as a result. Revisiting some of the factors discussed above, we identify where developments could be consistent with this possibility.

- **Economic growth:** Higher productivity growth, for example as a result of AI, would lead to higher potential growth, which could elevate the global economy and raise the neutral interest rate.
- **Demographic shifts:** While an aging population is generally assumed to put downward pressure on the neutral rate, longer life expectancies might necessitate higher retirement savings, potentially countering this force.
- **Higher inflation expectations:** Higher levels of deficit spending by the federal government combined with a tolerance for a higher inflation target by the Federal Reserve could lead to increased long-term inflation expectations and a demand for higher interest rates by savers to compensate for this.
- **Monetary policy:** Monetary policy affects the neutral rate by altering economic conditions, inflation expectations, and financial stability through adjustments to policy rates and guidance. A central bank's policy stance influences the equilibrium interest rate that balances growth and inflation.

How can the level of interest rates impact institutional portfolios?

Given where short-term policy rates currently¹³ are and the recent estimates for the neutral rate, it is likely that rates will move considerably lower from here. This statement probably strikes most Fed observers as rather obvious. What is less clear is how much lower rates will go, and over what time frame the decline will occur.

The bigger question for institutional investors is what impact this decline in the neutral rate will have on interest rates for the broader bond market. A low interest rate environment implies lower yields and hence lower returns on fixed income investments, which are a significant part of many institutional portfolios. In the past, periods of low rates pushed many investors into higher risk assets to meet their return objectives. By contrast, if interest rates remain elevated for a longer time, fixed income investments could remain a more attractive option for many investors.

¹³ Source: Federal Reserve Board, as of September 19, 2024 short term policy rates are at 4.75% to 5.0%.

The level of interest rates poses an additional issue for a particular type of investor – pension plans. The discount rate used to calculate the present value of future pension liabilities is typically influenced by prevailing interest rates, and if interest rates are low, the discount rate used to value pension liabilities will be lower. This results in higher present values for future liabilities, potentially increasing the reported deficit or funding gap.

Summary

Central banks raised monetary policy rates from historic lows to tackle inflation, prompting debate on whether real interest rates will revert to pre-pandemic levels or stay elevated. Central to this discussion is the concept of the “neutral rate of interest,” which is the rate at which monetary policy neither stimulates nor slows down economic growth.

The drivers influencing the neutral rate include potential economic growth, demographics, inflation expectations, risk aversion, fiscal policy, and return expectations for risky and safe assets. Some of these factors, such as low potential growth, may push rates back to pre-pandemic levels, while other factors such as the current economic resilience and higher inflation expectations might lead to a higher level for interest rates.

The neutral rate is an important concept to understand for investors who watch the Fed for indications about future monetary policy. Whatever level the new neutral rates settles at, it will have implications for investors.

Appendix sources

[Determinants of the real interest rate \(europa.eu\)](#)

[September 18, 2024 Summary of Economic Projections](#)

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