

Revisiting R^{\wedge} : How does the fiscal deficit affect the neutral Fed Funds rate?



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IN A NUTSHELL

- What interest rate will bring fiscal discipline to Washington? Consider R^{\wedge} vs. R^*
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What interest rate will bring fiscal discipline to Washington? Consider R^{\wedge} vs. R^*

R^* is an estimate of the neutral overnight real interest rate. The interest rate at which monetary policy is neither tight nor loose with normal unemployment and inflation at target. In concept, this neutral interest rate balances consumption with production to achieve price stability. It should promote stable unit labor costs, such that wage growth is fueled by the productivity growth rate of labor plus only target inflation. This neutral interest rate should also promote an adequate savings rate that supports the investment spending required to align the capital related means of production with consumption. The adequate savings rate will vary across economies and time given varying capital intensity and efficiency or investment spending return. Uncertainty in capital efficiency and labor productivity causes policy setters to mostly focus on inflation and unemployment, usually per policy mandate, to justify deviations from neutral interest rates. Inflation above target calls for real interest rates set above neutral, whereas high unemployment and low capacity utilization, known as output gaps or slack, calls for interest rates below neutral.

What overnight real interest rate promotes adequate savings and also prevents excessive government borrowing from hindering balanced near and longer-term supply and demand? Fiscal risk or largesse is what differs R^{\wedge} from R^* in concept. In observation, 2-year Treasury yields exceeded inflation plus estimates of R^* per empirical models back to 1960 (models based on inflation, unemployment, growth) when US fiscal deficits were high outside of recessions and interest expense on US debt was high relative to gross domestic product (GDP). In this note we point out that high mid cycle deficits affect market demanded 2-year real yields and thus the appropriate neutral policy rate per fiscal conditions. Incorporating deficits and interest expense burdens better explains observed 2-year real yields and likely improves R^* estimates.

As we wrote here in October 2023, we think deficits affect both Treasury bond yields, or term premiums, as well as shorter term interest rates. We called the interaction between an uncertain R^* and 10-year Treasury yield outlook when both are attempting to find a new normal range amidst structurally changed inflation risks with consideration of rising fiscal risks R^{\wedge} . " R^{\wedge} " being a term borrowed from statistics denoting an estimate with error from unexplained residuals. Factoring in the fiscal burden in an empirical model of normal or neutral overnight real rates as proxied by observed 2-year real Treasury yields since 1960 reduces error and residuals from that of other R^* estimate models that do not factor such. This is conceptually sound as high deficits should affect short and long-term real rates when the government is crowding out the private sector. High deficits also raise long-term inflation risk and term premiums because burdensome debt or additional debt taken on in an emergency might need to be monetized. Also, high government borrowing and spending can weigh on productivity and growth by channeling decisions and resources away from the private sector. Thus, the deficit can affect real

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rates when the government is crowding out the private sector and it can also raise longer-term inflation risks. There is a rational give and take at work between short and long-term yields and the U.S. Federal Reserve (Fed) considers longer-term observed yields when setting appropriate policy overnight interest rates.

R^* : R^* estimated by 2-year real yields vs. CPI & US deficit, 1960-2005

$$R^* = (0.47 * \text{Core CPI y/y @ 2.8\% in May}) + (0.33 * \text{deficit \% GDP @ 6.9\%}) - 0.4\% = 3.2\%$$

We examined 2-year Treasury yields less economist consensus long-term inflation estimates (to proxy normal/neutral overnight real interest rates) to consumer price index (CPI) and US fiscal deficits from 1960-2005. We found that Core CPI year-over-year (y/y) was the dominant cause of deviation in real 2-year yields outside of recessions and before the financial crisis. However, adding the deficit as a secondary variable in a multi-factor regression improved explanation. According to the model, 2-year real yields should be 3.25% or 5.25% nominally as compared to 3.75% now. The models suggests that for every 1% point (pt) Core CPI is above target that 2-year real yields should be 0.5% point above norm and that every 1% point the deficit is over 2% that 2-year real yields should be at least 0.1% point above norm. Yet, the average 2-year real yield from 1960-2005 was 2.5%, whereas it was -1% from 2007-2020. If we assume that the normal 2-year real yield is about 1.5% now when inflation and deficit are neutral factors, then the appropriate overnight real rate for today's inflation and deficit should be about 2.25%. This suggests that current Fed Funds rate at 4.25-4.5% or 2.25-2.5% real is neutral.

Powell soon to be lame duck? But only one Fed Chair at a time, until May Day

There is no reason for the Fed to cut near-term or signal rate cuts soon to come in this author's view. Inflation remains above target with tariffs and other acceleration risks, now including a slipping dollar. The Fed should focus on keeping the confidence of long-term bond investors by not cutting until both the risks of inflation and the high deficit subside. Assuming Trump is committed to at least 10% tariffs in aggregate and the One Big Beautiful Bill Act (OBBA) passes with current key aspects intact, we think these two risks will remain elevated probably for the rest of Powell's term as chair ending May 2026. The risk of secularly higher Treasury bond yields remains high. The carry trade for banks doesn't work if deposits flee to real or non-dollar assets on inflation fears.

Glossary

Capacity utilization refers to the share of an economy's productive capacity that is in use.

Carry Trade is a strategy in which an investor sells a certain currency with a relatively low interest rate and then buys another, higher-yielding currency.

The **consumer price index (CPI)** measures the price inflation as a percentage, year over year, of a basket of products and services that is based on the typical consumption of a private household.

The **financial crisis** refers to the period of market turmoil that started in 2007 and worsened sharply in 2008 with the collapse of Lehman Brothers.

Fiscal policy describes government spending policies that influence macroeconomic conditions. Through fiscal policy, the government attempts to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

Monetary policy focuses on controlling the supply of money with the ulterior motive of price stability, reducing unemployment, boosting growth, etc. (depending on the central bank's mandate).

Productivity measures how much economic output is produced for a given level of inputs (such as capital and labor).

R* is an estimate of the neutral overnight real interest rate. The interest rate at which monetary policy is neither tight nor loose with normal unemployment and inflation at target. In concept, this neutral interest rate balances consumption with production to achieve price stability.

R^ or "R hat" is a term borrowed from statistics denoting an estimate with error from unexplained residuals.

The real interest rate is the nominal interest rate adjusted for inflation as measured by the GDP deflator.

A **recession** is, technically, when an economy contracts for two successive quarters but is often used in a looser way to indicate declining output.

A **regression** is the statistical procedure to identify the co-movement between different variables.

The **residual** value is the estimated value of a fixed asset at the end of its lease or at the end of its useful life.

A **tariff** is a tax imposed by one country on the goods and services imported from another country.

The U.S. Federal Reserve, often referred to as "the Fed," is the central bank of the United States.

U.S. **Treasury yield** is the annual return investors can expect from holding a U.S. government security with a given maturity.

Unit labor costs (ULC) measure the average cost of labor per unit of output.

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