# What Is R-Star and Why Does It Matter?

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#### **Definition and Parameters**

R-star (R\*) is the real or inflation-adjusted equilibrium rate of interest that, in theory, aligns supply and demand in the economy such that growth is neither accelerating or decelerating.

R\* has become a focal point of monetary policymaking but unfortunately is not directly observable. This makes it difficult for the Fed to precisely calibrate policy.

Three factors account for R\*'s long-run decline. In order of importance, they are slowing productivity, aging demographics and rising debt levels.

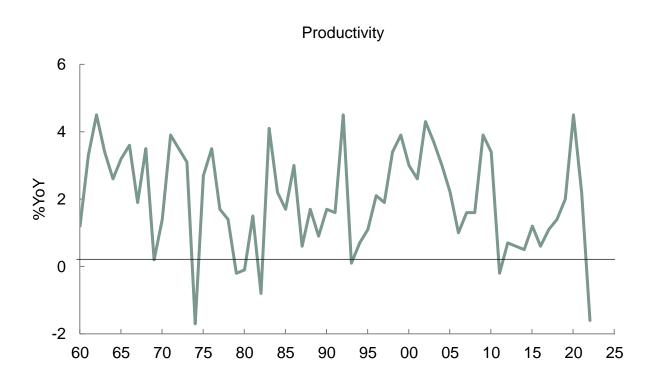
Each of these factors has deteriorated over the past several years ostensibly further lowering R\*.

But surprisingly, the New York Fed recently revised its estimate of R\* upward.



# **Plunging Output Per Hour**

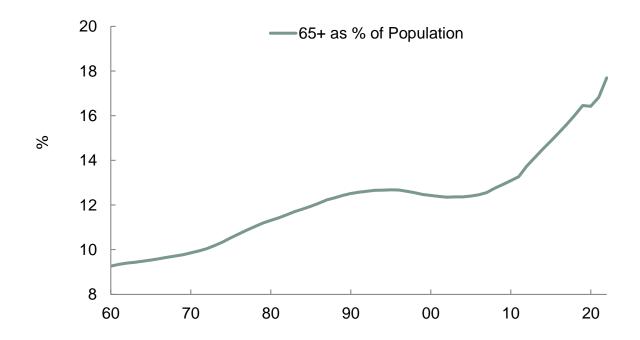
Productivity growth collapsed last year, declining -1.7%. This was the weakest performance since 1975, and there is no evidence thus far in 2023 of meaningful improvement. Weakening productivity implies lower demand for capital and hence a lower equilibrium rate of interest.





# **Worsening Demographics**

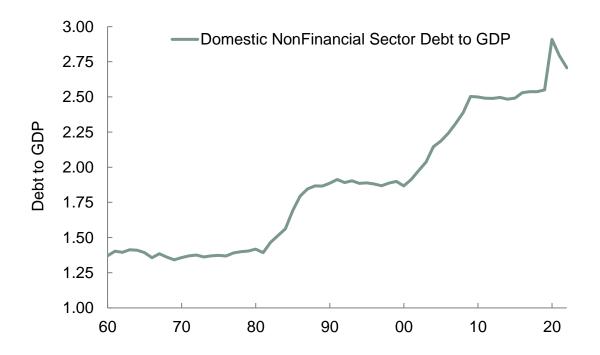
The United States continues to age at a fast pace as the share of the population over 65 is at a record high and rising. As people retire, they spend less and save more. This both lowers the demand for capital and increases the supply of capital, which together push down the equilibrium rate of interest.





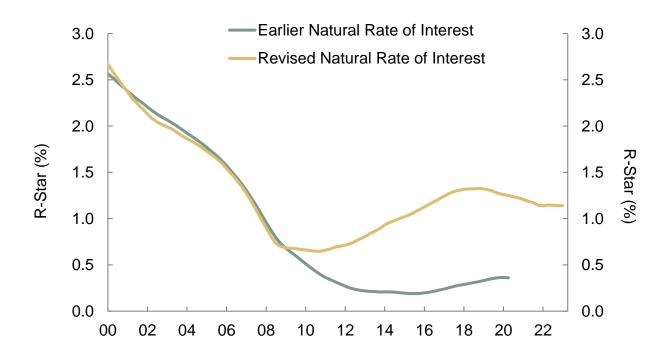
# **Deteriorating Debt Dynamics**

Nonfinancial debt relative to nominal GDP is down from its pandemic peak but is up sharply over the past decade. Moreover, Congressional Budget Office projections show further deterioration in the government's long-term finances. Hence, interest rates may need to stay depressed to keep government borrowing costs down. This, too, supports a lower R-Star.



# A Surprising Upward Revision to R\*

In May 2023, the NY Fed updated its estimates of R\* after having not published them for three years. The latest figures show that the predicted equilibrium rate is significantly higher than what economists had thought. R\* is currently though to be around 125 basis points (bps) compared to earlier estimates of just 35 bps. This partly explains why the Fed has been so aggressive in tightening policy. Time will tell if this was the prudent approach.





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