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A Goldilocks Theory of Fiscal Deficits

Based on BFI Working 2022-22, "A Goldilocks Theory of Fiscal Deficits," by Atif R. Mian, Princeton University; Ludwig Straub, Harvard University; Amir Sufi, Chicago Booth.

KEY TAKEAWAYS

- ✓ Normally, accrued deficits mean higher interest rates as the Treasury issues more bonds to finance its debt.
- ✓ The current period, though, has been dubbed a "free lunch" because interest rates are consistently low and below the growth rate of the economy, meaning spending need not be offset by decreased spending or higher taxes in the future.
- ✓ This research shows that these conditions persist only if spending remains below a certain threshold; otherwise, interest rates will rise and negate the free lunch.
- ✓ Under a zero lower bound (ZLB) regime where aggregate demand is slack, governments have even more leeway to increase spending.

Interest rates among advanced economies have fallen precipitously in recent years, following a decades-long trend, and fueling fears of secular, or long-term, stagnation. What that means is the interest rate that balances desired saving and investment and, thus, leads to full employment and stable inflation, has not only approached zero but in theory could be negative, especially if not for generous government social programs. Likewise, fiscal deficits have grown.

Normally, when governments accrue deficits and increase their debt, the result is higher interest rates because the Treasury must issue more bonds, which reduces their price and raises the interest rate.

However, these are not normal times. The current phenomenon—interest rates that are consistently low and below the growth rate of the economy—has been dubbed a "free lunch" in which governments can continue to spend freely (issue debt) without having to lower future expenditures or raise taxes.

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How can this be? Every Econ 101 student is told that there is no such thing as a free lunch, that someone must pay the bill. In "A Goldilocks Theory of Fiscal Deficits," the authors address this free lunch puzzle by introducing a new factor to the interest rate and growth equation. While it is true that a free lunch is possible when nominal rates remain below nominal growth, the authors describe how persistent spending in a low interest rate environment will—if the spending is too high—increase debt relative to GDP at a rate that will negate the free lunch. Interest rates will rise, in this scenario, and the lunch tab will be paid.

Further, it is possible to devise a methodology to set parameters on deficit spending that allows governments to maintain a free lunch. This insight has important implications for policymakers, including those currently making spending decisions in a zero lower bound (ZLB) environment, and who wish to remain in a Goldilocks zone.

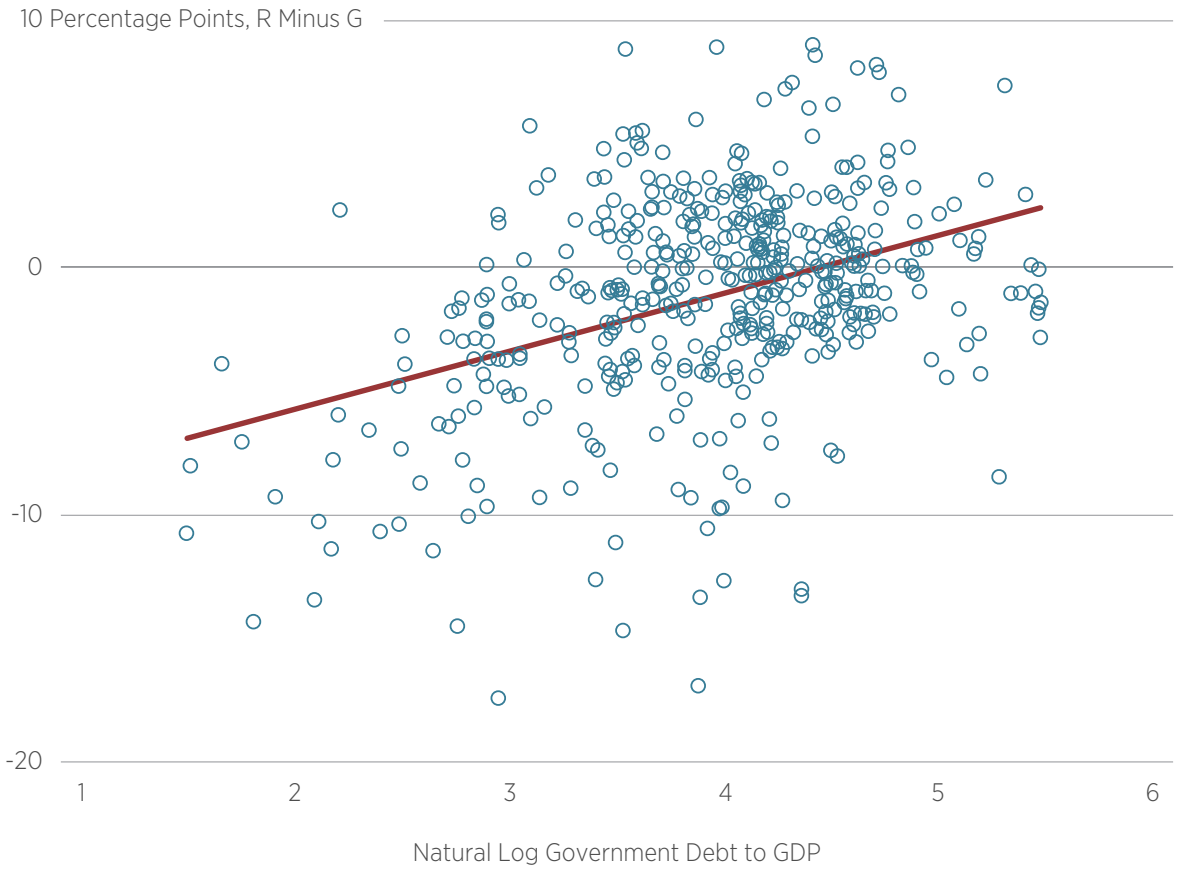
R < G = Hey kids, free lunch, order what you like.

R < G – ϕ = Let's order from the value menu.

If you had asked economists 20 years ago whether debt-to-GDP ratios like those experienced by advanced economies today were sustainable, they would have replied: Of course not. However, there is a simple equation that describes why those predictions would have been wrong: When the nominal interest rate (R) is less than the nominal growth rate of the economy (G), governments can continue to spend without worrying about reducing future expenditures or raising taxes.

Researchers have noted this phenomenon in recent years, as the authors describe, but one of the contributions of this work is to put parameters

Figure 1 · As Debt-to-GDP Rises, So Does R Minus G



Notes: This Figure shows the relationship between the R minus G (the nominal interest rate on government debt minus the nominal growth rate) for G7 countries (Canada, France, Germany, Italy, Japan, UK, and the US) from 1950 to 2019. The dots reflect the raw data, and the red line is the fitted regression line, which reveals that as government debt to GDP rises, so does R minus G.

> If you had asked economists 20 years ago whether debt-to-GDP ratios like those experienced by advanced economies today were sustainable, they would have replied: Of course not. However, those predictions would have been wrong.

around how much governments can spend and still attain their free lunch. That is, the insight here is not only that those deficits have a ceiling, but that governments can put a number on it and set parameters around fiscal spending to avoid future cuts in spending or higher taxes.

Before describing the authors' new equation, it is useful to briefly describe what makes government debt unique relative to other debt. How can governments get away with endless borrowing when, for example, you cannot do the same with your household debt or corporations are likewise restricted in their borrowing capacity? Essentially, government debt is unique because it provides a form of insurance: Households and corporations choose to hold a certain amount of debt and financial intermediaries are even required by regulators to hold a certain amount of government debt. If private investors are convinced that they can trust a government's debt, for example, even in the throes of a deep recession, then that debt serves as a form of insurance. Private debt does not serve this function.

However, this trust is not limitless. As noted above, one of the authors' key contributions is to devise a methodology that quantifies the implicit insurance of government debt. They do this by adding a factor to the "R < G = a free lunch" equation that accounts for how much a government can spend before investors lose faith in the debt, and they label this factor with the Greek letter phi, or ϕ, to construct a new equation: R < G - ϕ = a free lunch.

In practice, this means that while governments can continue to spend freely if nominal R is less than nominal G, they must do so within parameters that keep accumulated debt below a certain level relative to GDP. In the case of the United States in 2019, for example, the authors find that the government could sustain a maximum permanent primary deficit of just over 2% of GDP at a stable debt-to-GDP ratio of 110%. Indeed, US government spending fell just under that mark.

This equation is complicated, though, in an era when interest rates are so consistently low that they hover at zero, or the zero lower bound (ZLB). A key characteristic of these economies is that aggregate demand is inordinately low and, in effect, holding down growth. This work's second contribution shows that, under such a scenario, greater deficits may reduce rather than increase debt. This occurs because greater deficits raise aggregate demand and inflation, which translates into higher nominal growth rates. These higher growth rates then push debt down as it increases the speed at which debt is "inflated away." Recall R < G and imagine that these increased deficits raise G and, thus, ensure that R remains below G. This indirect effect through the nominal growth rate can be sufficiently strong to overwhelm the direct effect of greater deficits on debt. The free lunch continues.

The authors also apply their framework to analyze the role of inequality and tax progressivity (nearly 70 percent of US government debt is by US households in the top 10 percent of the US wealth distribution), to find that increased inequality, modeled as a greater share of income earned by savers, increases the availability of free lunch policies outside the ZLB. This points to a potential conflict between the goal of reducing inequality (e.g., via progressive taxation) on the one hand, and funding large deficits on the other. At the ZLB, inequality reduces fiscal space as it reduces aggregate demand and nominal growth rates.

Conclusion

Bottom line: Contrary to intuition, there is a free lunch when it comes to government spending, given certain parameters. This work shows that the textbook view that raising deficits must, at some point, be reduced below their original level (through reduced spending and/or higher taxes), does not hold in all cases. Debt may not explode to unsustainable levels if $R < G - \phi$, that is, if the increase in deficits is modest. Further, debt (or accumulated deficits) may not even rise at all if the economy is at the ZLB and the nominal growth rate is sufficiently responsive to increased deficits.

The authors stress that these insights apply to a long run "steady state" economy; that is, not necessarily to times when an economy is experiencing a negative shock like the COVID pandemic. That said, their methodology is applicable to other research efforts that could yield useful insight into short-run effects of fiscal crises, even as applied to non-steady-state economies. At some point, though, the effects of COVID will mostly pass and the economy will enter a new steady state phase wherein policymakers will again confront the possibility of free lunch deficit spending—to a point.

CLOSING TAKEAWAY

Under such a zero lower bound (ZLB) scenario, greater deficits may reduce rather than increase debt because greater deficits raise aggregate demand and inflation, which translates into higher nominal growth rates.

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