

US Rates Strategy

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November 12, 2025

Optimal Treasury maturities

The current mix of coupons and bills is probably close to optimal given the Treasury's goal of minimizing debt service costs and their volatility. But this mix may be less efficient if growth slows or inflation rises. Instead, a more conservative approach might include more 2-7y coupon issuance and fewer bills.

- **The Treasury's choice of maturities seeks to minimize its debt service costs and their volatility.** Its choice must also balance the Treasury's goals of maintaining liquid issues and "regular and predictable" auctions.
- The optimal maturity mix (or efficient frontier) changes with shifts in the economy and term premia. **Its current maturity mix – with heavier bill issuance – is near the efficient frontier between servicing costs and volatility.** Baseline debt servicing costs with this mix average 4.5% of GDP with volatility of about 1% over next 20y.
- **But this mix is less efficient if growth slows or inflation rises.**¹ Increasing bill issuance sharply from current levels only lowers average servicing costs by a couple of tenths at a cost of more volatility.
- **Instead, a more conservative approach might be to shift some issuance from bills to coupons with 2-7y maturities.** Higher term premia since the Treasury's model was last updated suggest issuance should remain shorter.
- **The Treasury could adopt a more dynamic issuance strategy – changing its issuance maturities to reflect shifts in term premia. This might reduce its servicing costs without increasing their volatility.** But such a strategy might conflict with the Treasury's "regular and predictable" goal.

Optimal for current conditions

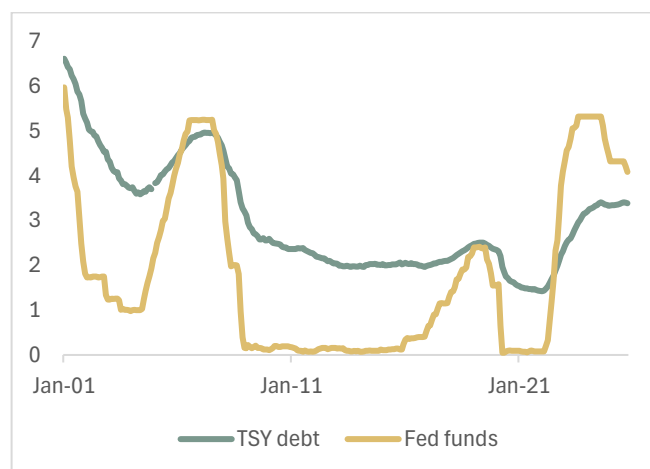
The Treasury's optimal maturity mix must minimize two opposing forces – expected debt service costs and their volatility. At one extreme, the Treasury can concentrate all its issuance in bills to save on debt service costs as term premia typically increase with debt maturity. But this requires rolling over its (growing) outstanding debt more frequently – increasing the sensitivity of its debt service payments to

¹ Specifically, the Treasury might be able to reduce the volatility of its servicing costs without much of an increase in cost.

changes in market interest rates (Figure 1). Alternatively, it can reduce this volatility by issuing only bonds although at a higher overall debt service cost. Graphically, this can be plotted as a curve (or efficient frontier) where, for a given set of maturities, the trade-off between expected debt service costs and their volatility is plotted across different scenarios reflecting changes in growth, inflation and deficits. The simulations are run thousands of times under different scenarios and with random shocks over a 20y forecast horizon.

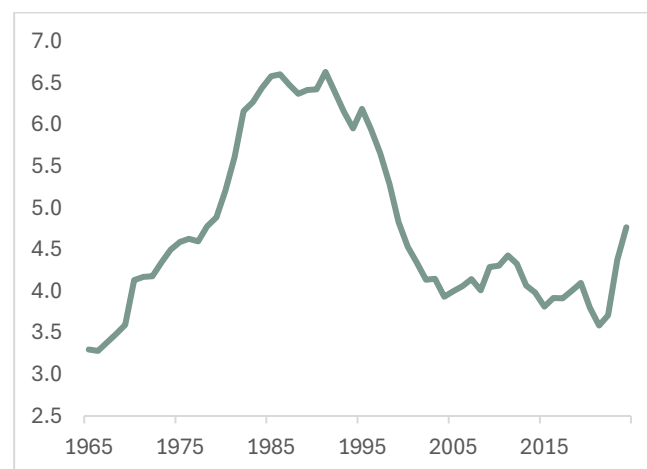
At the November refunding, the Treasury Borrowing Advisory Committee (TBAC) updated its optimal debt issuance model. Since the last update in 2023, the fiscal situation has deteriorated, while trend growth and inflation have improved.² Debt services costs are now higher as the debt-to-GDP ratio has risen from 89% to 94%. But the Treasury has also increased the bill share of its debt from around 16% in 2022 to 22% currently. **Relative to an unchanged, pre-2023 maturity mix, the Treasury reduced its expected debt service costs but (slightly) increased its volatility.** It concluded that the current mix – with heavier bill supply – is near the efficient frontier.³ **But how does the current mix perform under different economic and fiscal scenarios?**

Figure 1: Marketable debt rate and fed funds (%)



Source: US Treasury, SMBC Nikko

Figure 2: Public debt interest cost (% GDP)



Source: BEA, SMBC Nikko

Macro and fiscal scenarios

The simulation results *generally* suggest the current mix remains near the efficient frontier for most of the scenarios examined. TBAC compared three macro scenarios against their baseline. The scenarios were good, bad, and no growth. **Under the baseline growth and inflation assumptions, the current mix of coupons and bills yields an average debt service cost over the forecast horizon of 4.5% (of GDP) with volatility of 1%.** This is close to the current level (Figure 2). In the good growth scenario, the economy's potential growth rate is boosted (from 2.5%) by gains in productivity to 3.5%. The economy's faster speed limit allows it to "grow out" of its outstanding debt faster without generating

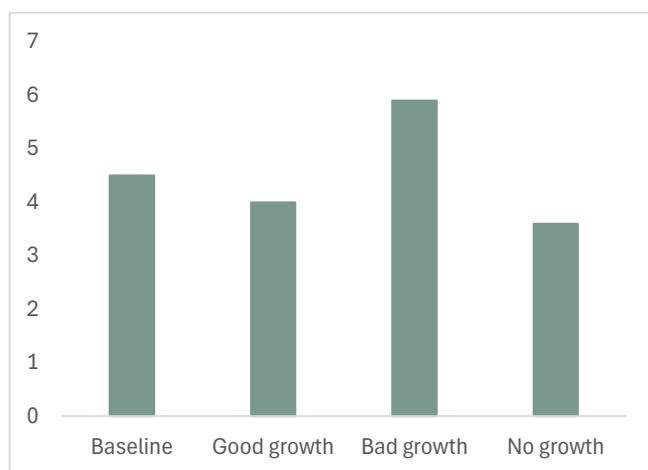
² Trend growth has risen to 2.5% from 2.2% in 2023 while inflation has slowed from 4.7% to 2.6%. See, TBAC Charge, November 2025 Quarterly Refunding presentation, p. 5.

³ See, TBAC Charge, November 2025 Quarterly Refunding presentation, November 5, 2025.

inflation. By contrast, in the bad growth scenario, potential growth holds at 2.5% but inflation accelerates to 3% (from 2% in the baseline) and the Fed responds by keeping interest rates elevated. The no growth scenario – or “secular stagnation” - assumes growth *and* inflation are low and the Treasury’s primary deficit (the deficit excluding debt service costs) averages 4% over the next 10y before converging to 1% at the end of the 20y forecast horizon. The primary deficit assumptions over the next 10y are 3% in the baseline and bad growth scenarios but 2% in the good growth one.

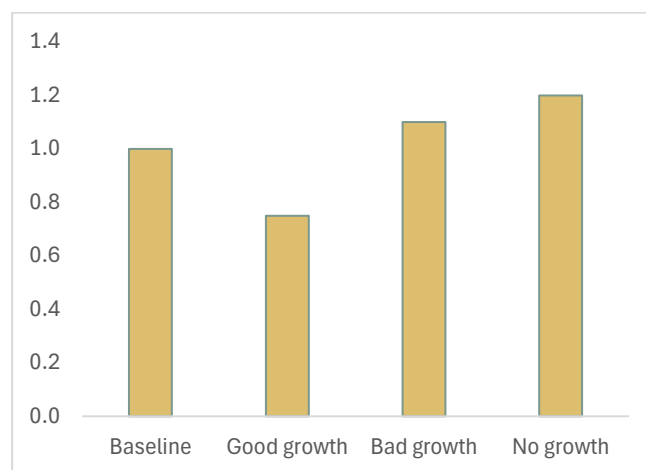
In Figures 3 and 4, we plot what the average debt service and volatility ratios would look like assuming no change in the mix of maturities. The no growth scenario yields the lowest average debt service costs because the growth in outstanding debt is offset by a low fed funds rate. **The current issuance mix, however, would produce a higher average cost volatility than either the good growth or baseline scenarios.** Debt service costs – and their volatility – are higher in the bad growth scenario as the Fed is forced to keep interest rates high and more of the Treasury’s debt is rolling over at these higher rates.

Figure 3: Average debt service costs (% GDP)



Source: US Treasury TBAC, November 2025, SMBC Nikko

Figure 4: Average volatility (% GDP)



Source: US Treasury TBAC, November 2025, SMBC Nikko

In all the macroeconomic scenarios, the primary deficit is assumed to trend to 0% by year 15 after year 10 where it stays through the remainder of the 20y simulation. If, instead, the primary deficit converges to 2% at year 15, the Treasury’s debt service costs would increase by 0.9% relative to the baseline scenario. And, assuming no change in maturities, the volatility of these costs would increase by 0.25%.

More bills?

TBAC also ran these scenarios assuming the Treasury shifts more of its issuance into the bill sector. In this path, coupon issuance grows in line with GDP and the balance of the deficit is financed through bill issuance. This pushes the bill/debt share toward 50% at the end of the 20y horizon – well above the Treasury’s long run average of 23%. **As expected, increased reliance on bill financing raises the volatility of the Treasury’s debt servicing costs.** The effect is more pronounced for those scenarios where deficits are larger as the rising share of outstanding debt is being rolled over at a higher frequency and is, thus, more sensitive to changes in Fed policy. **Interestingly, across all the macro scenarios,**

increasing the bill share this sharply only lowers overall debt service costs by a small amount – 0.1 or 0.2%.

These results suggest the Treasury might only eke out a small amount of debt service savings by increasing bill issuance significantly above its long-term average. **However, this may understate the amount of potential savings as term premia have increased in the last two years.** Since January 2022, 10y term premia have increased by 120bp and are 90bp above their 10y average. All things equal, further increases in premia could make it more expensive to issue longer term debt while increasing the savings from heavier bill issuance. TBAC compared average debt service costs over the forecast horizon assuming different levels of term premia. A 50bp increase in the 10y term premium would increase the average servicing cost by 0.6% of GDP over the period. By contrast, if premia fell by 25bp, the same maturity mix would lower the average servicing cost by about 0.3%.

About right?

These simulations suggest that the Treasury’s current maturity mix is about right for more economic and fiscal scenarios. But there are some limitations to the analysis.

First, the simulations assume the maturity mix is fixed over the 20y forecast horizon. However, the Treasury may adjust its maturity mix in response to changes in demand. And it is possible that over time, the Treasury’s risk tolerance shifts so that it may tolerate higher servicing costs for a lower level of volatility for a given mix of maturities. TBAC examined a dynamic issuance scenario in which the Treasury gradually adjusts its issuance maturities in response to changes in term premia. It assumed that term premia were mean-reverting over the long horizon of the forecasts. The results suggest that it *may* be able to lower its debt servicing costs without much increase in their volatility by incrementally changing its maturity mix in response to changes in term premia. That said, any dynamic approach would have to be carefully communicated to the market and any adjustments would need to be “gradual and predictable”.

Second, the simulations assume the market’s demand elasticity at different maturities is the same. As a result, it is just as costly to shift issuance from bills to short-maturity coupons as it is to increase term issuance by cutting the sale of 2-7y coupons. In practice, the Treasury may not have that flexibility and investors with preferred habitats may be reluctant to shift their portfolio maturities.

Finally, the TBAC’s simulations did not consider the effect of changes in either the Fed’s portfolio reinvestments or its secondary market purchases in QE (QT). As we wrote recently, the Fed is likely to sharply increase its bill holdings near-term.⁴ Longer-term we expect the Fed’s secondary market purchases will be market neutral – that is, matched to the relative coupon share of outstanding debt. And while the simulations included different economic shocks for the Fed to react to, they did not include episodes of QE (or QT). These can also influence term premia and make it more expensive to issue longer maturity debt. Similarly, the Treasury’s liquidity buybacks were not factored into the simulations.

⁴ See After QT: The Case for Bills, October 27, 2025.

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