Discussion of "Did the U.S. Really Grow Out of Its World War II Debt?"

by Julien Acalin and Laurence Ball

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Introduction

- **Q.** What accounts for the evolution of the US public Debt/GDP ratio after WWII?
- **This paper:** compares two paths:
  - Actual Debt/GDP, which declines from 106% to 23% over 1946 to 1974.
  - Counterfactual Debt/GDP without budget surpluses, surprise inflation, or interest rate distortions, which declines from 106% to only 73% over 1946 to 1974.
    ... interpreted as the debt/GDP reduction through output growth.
- **Authors' conclusion:** *"only a small amount of debt reduction has been achieved through growth rates that exceed undistorted interest rates"*
- My comments will focus on:
  - The calculation of the "undistorted" interest rate.
  - Richer counterfactual analysis

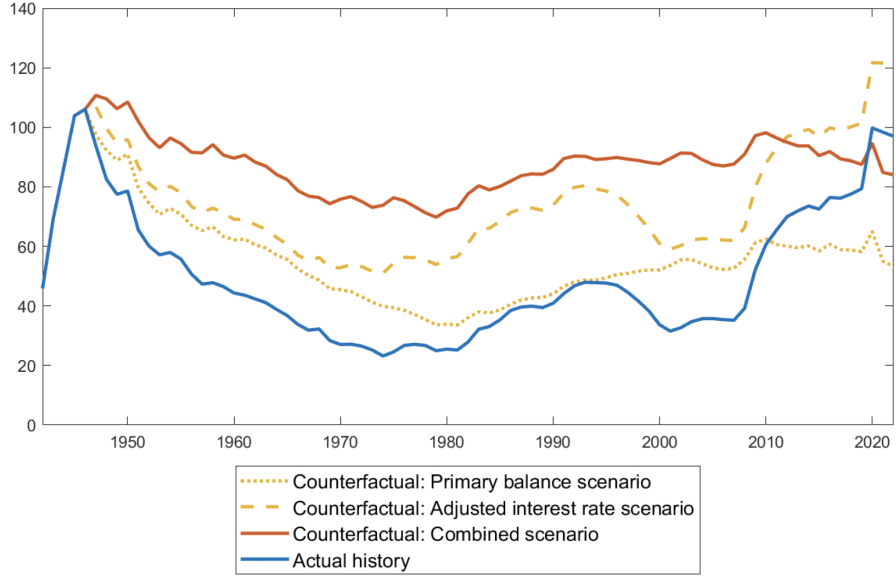
This Paper's Counterfactual Path of Debt/GDP

- Authors start with the actual level of Debt at the end of fiscal year 1946.
- Construct a **counterfactual path of Debt** using by:
  - Setting the primary surplus to zero.
  - Setting the interest rate on government debt to the "undistorted" rate
  - ... where undistorted interest rate $\hat{i}_t^\tau$ at time t on a bond issued at time τ is given by:

$$\begin{aligned}
\tau \leq 1942: &\quad \hat{i}_t^\tau = i_t^\tau, && \textit{where } i_t^\tau \textit{ is the actual interest rate.} \\
\tau \in [1943, 1951]: &\quad \hat{i}_t^\tau = \bar{r}_{52-61}^\tau + \pi_t, && \textit{where } \bar{r}_{52-61}^\tau \textit{ is average real rate over 1952-61.} \\
\tau \geq 1952: &\quad \hat{i}_t^\tau = i_t^\tau + \pi_t - \mathbb{E}_\tau[\pi_\tau], && \textit{where } \pi_t - \mathbb{E}_\tau[\pi_\tau] \textit{ is unexpected inflation}
\end{aligned}$$

  - Appendix A.5. considers a variation where the 2009-15 QE distortion is also removed.
  - So, counterfactual debt $\hat{D}$ follows: $\hat{D}_t = (1 + \hat{i}_t)\hat{D}_t$, where $\hat{i}_t = \sum_{\tau=t-M}^{t-1} \left(\frac{D_{t-1}^\tau}{D_{t-1}}\right) \hat{i}_t^\tau$
- Calculate **counterfactual path of Debt/GDP** by dividing $\hat{D}_t$ by actual GDP.

Debt/GDP Paths - Counterfactual Scenarios



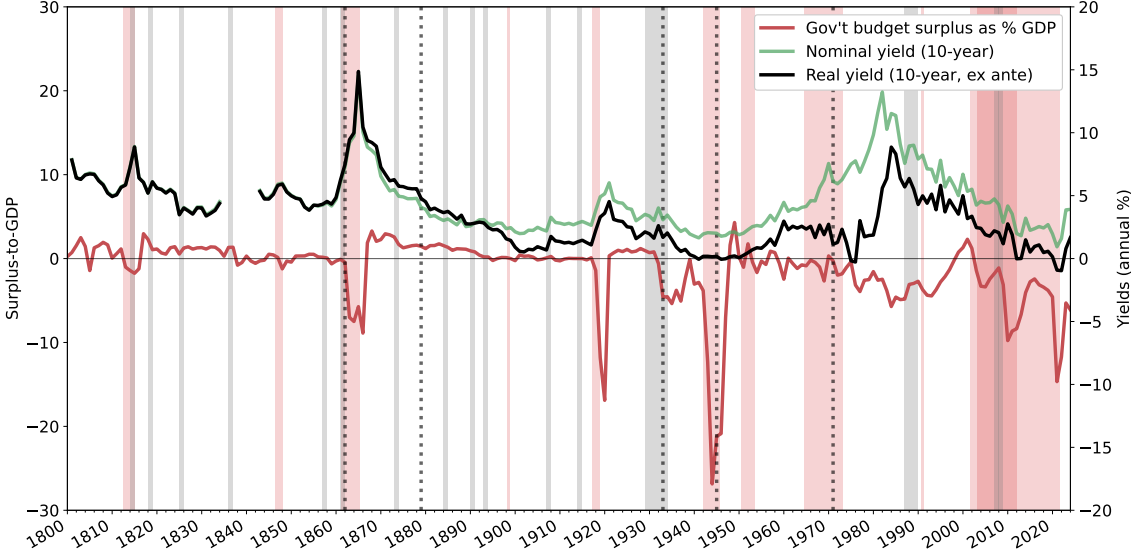
Comment 1: What is the True "Undistorted" Interest Rate?

- Very sympathetic to story that government borrowing costs are distorted by policy.
  (Shaw (1973) McKinnon (1973), Reinhart-Sbrancia (15), Payne-Szoke (24), Lehner-Payne-Szoke (24))
  ...But the authors' undistorted interest rate calculation is not fully convincing.

- **A**. 1952-61 treasury yields are weak proxy for 1943-51 unrestricted yields.
  - Robustness exercise in Appendix A.5. argues choice of proxy period has limited impact
  - Although Table A.3. suggests results are generally sensitive to choice of interest rate.
  - Issue is that 1943-51 is a period with a radically different surplus processes

- **B**. Interesting to see the calculations with the all treasury yield distortions removed.

Comment 1A: Real Yields and Surplus, Payne-Szoke (24)



Comment 1A: Sensitivity Analysis

Table A.3 Robustness Check - Alternative Assumptions About Undistorted Real Interest Rates Under the Peg

		Debt/GDP (%)								
Year	Actual	Combined Counterfactual								
		Baseline	Robustness							
			1952-1980	1952-2022	1960s	1970s	(-2%)	(-1%)	(+1%)	(+2%)
1974	23.2	73.9	76.9	76.0	79.3	77.4	61.6	67.5	80.9	88.5
2022	97.0	84.2	87.1	86.3	89.6	87.6	71.9	77.8	91.1	98.7

Note. This table examines the implications of assuming higher or lower levels of undistorted real interest rates on securities issued during the peg period. Specifically, we measure undistorted rates with the average values of ex-ante real rates during different historical periods (1952-1980, 1952-2022, 1960s, and 1970s). We also add or subtract 1% or 2% to the entire term structure of undistorted rates in our baseline case, which is based on ex-ante real rates for 1952-1961. For each of these adjustments, the table shows the levels of debt/GDP in 1974 and 2022 in the combined counterfactual.

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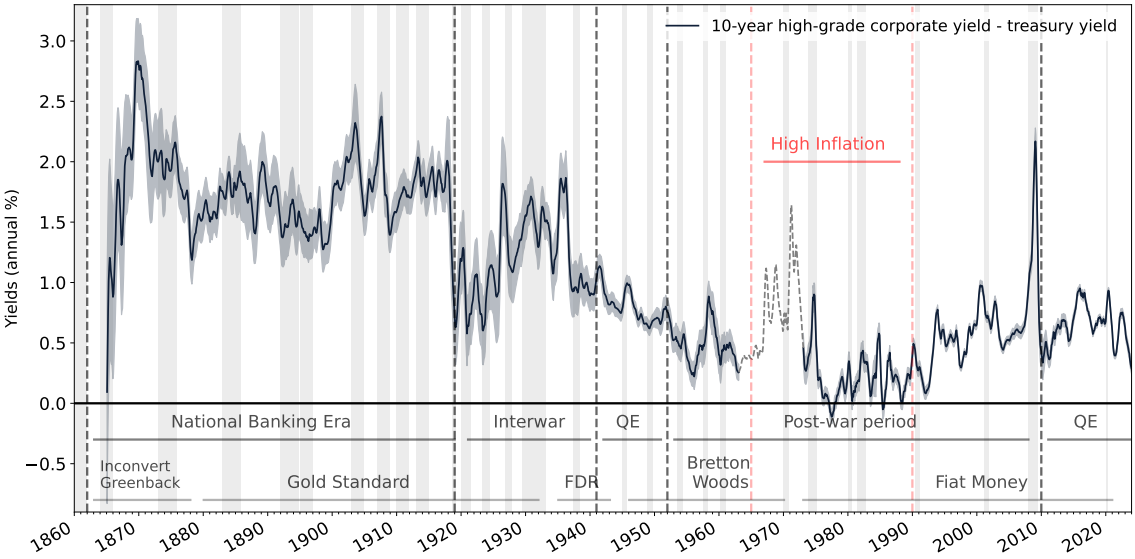
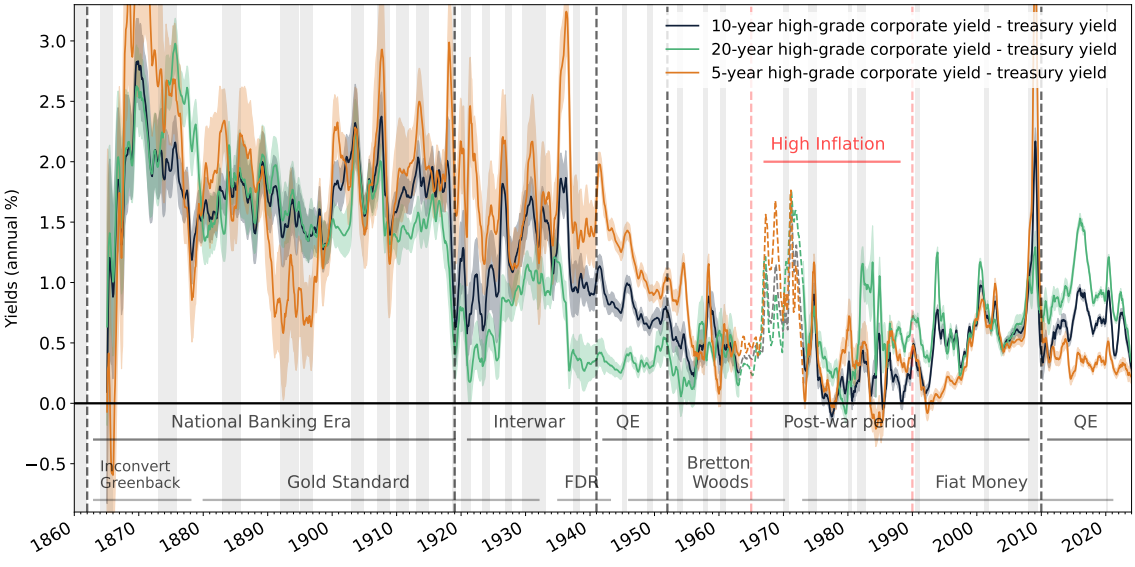
$$\underbrace{i_t}_{\substack{\text{Treasury}\\ \text{yield}}} = \underbrace{\hat{i}_t}_{\substack{\text{Private sector}\\ \text{yield}}} - \underbrace{\chi_t}_{\substack{\text{"Convenience"}\\ \text{yield}}} \quad \Rightarrow \quad \hat{i}_t = i_t + \chi_t$$

  - To me, the paper seems like a lower bound on the influence of distorted interest rates.
  - I would be interested to see the upper bound with the convenience yield revoved.
  - That is, the counterfactual where the government faced the private sector yield curve.

Comment 1B: Convenience Spread (10-Year), Payne-Szoke (24)



Comment 1B: Convenience Spread Term Structure, Payne-Szoke (24)



Comment 2: Is a Richer Counterfactual Exercise Necessary?

- I appreciate the desire to construct a model-lite historical decomposition.
- However, the authors are tracing out a macroeconomic counterfactual where surplus and outstanding debt follow an alternative path.
- These changes would have general equilibrium effects on:
  - The undistorted interest rate (e.g. through crowding out in credit market),
  - GDP (e.g. from stimulus impact of deficits), and
  - Inflation.
- All of which are currently hold constant in the current counterfactual analysis.
- Perhaps a structural model would be helpful for the counterfactual.

Conclusion

- Interesting paper.
- I am sympathetic to the story the paper is telling.
- Although, I think the counterfactual would benefit from more structure.

Thank you

Inflation, Payne-Szoke (24)