Discussion of

Exorbitant Privilege Gained and Lost: Fiscal Implications

by Chen, Jiang, Lustig, van Nieuwerburgh, and Xialoan

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IMF

Fiscal Policy in an Era of High Debt
IMF, April 2023

Debt Sustainability vs Fiscal Capacity

$$D_{t+1} = D_t(1 + r_t) - PB_t$$

IMF's SRDSF

- Divide through by GDP

$$d_{t+1} = d_t \left(\frac{1 + r_t}{1 + g_t} \right) - \frac{pb_t}{1 + g_t}$$

- Sophisticated r_t: maturity, currency, inflation, etc
- Get distributions for $\{r_t, g_t, pb_t, d_t\}$
- Probability of debt-stabilizing primary balance?

This paper

- Iterate forward

$$D_t = \mathbb{E}_t \left[\sum_{j=0}^{\infty} M^{\$}_{t,t+j} \, PB_{t+j} \right]$$

- Distributions, probabilities, risk premia all implicit in NPV with stochastic discount factors
- Find *appropriate* SDFs

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Finding an appropriate stochastic discount factor

$$D_t = \mathbb{E}_t\left[\sum_{j=0}^{\infty} M^{\$}_{t,t+j}(T_{t+j} - G_{t+j})\right] = P^T_t - P^G_t$$

- One PDV of taxes, one PDV of spending $\longrightarrow$ Think of those as asset prices
- Decompose into short risk-free (not special) rate, term premium, risk premium
- Proxy risk premium with risk premium of GDP
- Proxy GDP risk premium through stock market: leverage
- Procedure for steady-state as well as dynamics

US post-WWII: fiscal capacity = 9.4% of GDP

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What belongs in the IGBC?

What does holding the special asset give you apart from a pecuniary return?

- Bonds-in-utility function?
- Regulation?
  - … Banks demand it for compliance reasons
- Institutions?
  - … Can post the asset as collateral
- In equilibrium, supply of special asset related to multiplier (or marginal utility for BIU)
  - … Monopolist understands this: market power (Choi-Kirpalani-Perez '22), no overmining the bubble (Reis '21; Brunnermeier-Merkel-Sannikov '22; Willems-Zettelmeyer '22)

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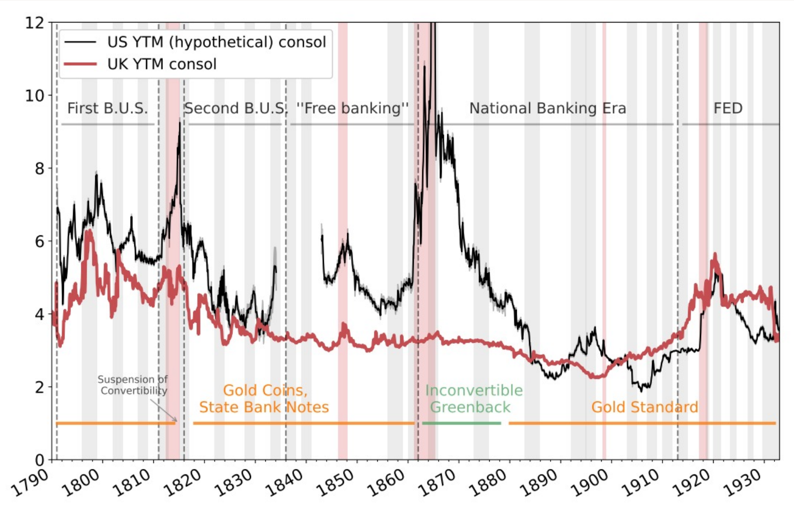
Issuing “the” safe debt requires issuing safe debt

U.S. in the 1800s: the long end

- US consols at 150-200bps over UK consols in 1790-1840 (outside wars)
- US policymakers (esp. Hamilton) assume this reflected default risk



Source: Payne, Szoke, Hall, and Sargent (2022)

How much can US default risk explain?

Simple back-of-the-envelope calculation

- Assume constant probability of default p *iid* each year
- Price of consol with coupon $\kappa = 1/\beta - 1$

$$q^\star = \beta(\kappa + q^\star) \quad \implies \quad q^\star = 1 \qquad \text{(U.K.)}$$

$$q_t = \beta \mathbb{E}_t \left[(1 - d_{t+1})(\kappa + q_{t+1}) \right] = \beta(1-p)\big(\kappa + q_{t+1}\big) \qquad \text{(U.S.)}$$

- Choose β so yield on U.K. consols = 400bps
- Move p and keep track of $\mathbb{P}$ (no default in 1790–1840)

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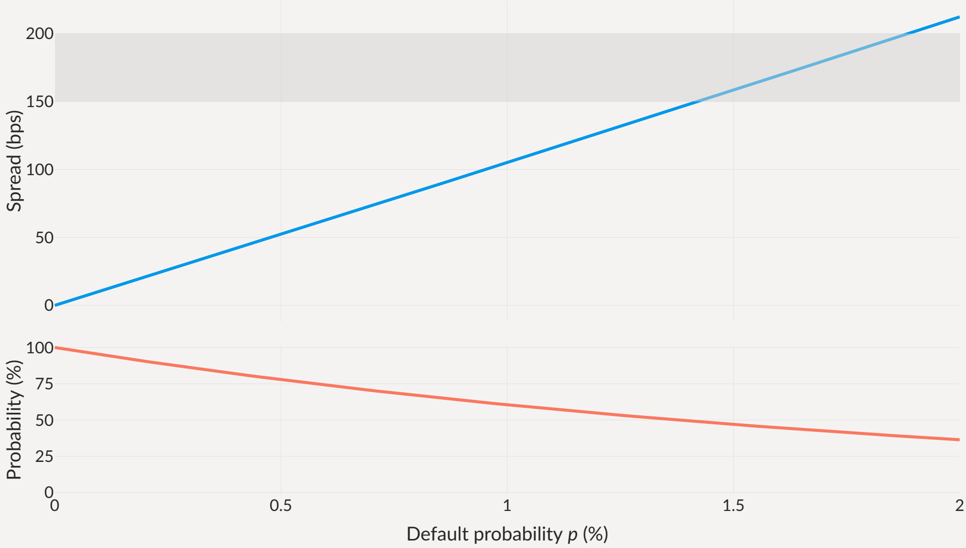
How much can US default risk explain?

With rational-expectations, deep-pocket, risk-neutral lenders: how to discipline p?



How much can US default risk explain? (with robustness)

- Same exercise
- But now lenders mistrust their approximating model and seek robust decision rules
  - … Pouzo and Presno (2016), Roch and Roldán (2023), based on Hansen and Sargent (2001)

$$q_t = \beta \mathbb{E}_t \left[\frac{\exp(-\theta v_{t+1})}{\mathbb{E}_t \left[\exp(-\theta v_{t+1})\right]} (1 - d_{t+1})(\kappa + q_{t+1}) \right]$$

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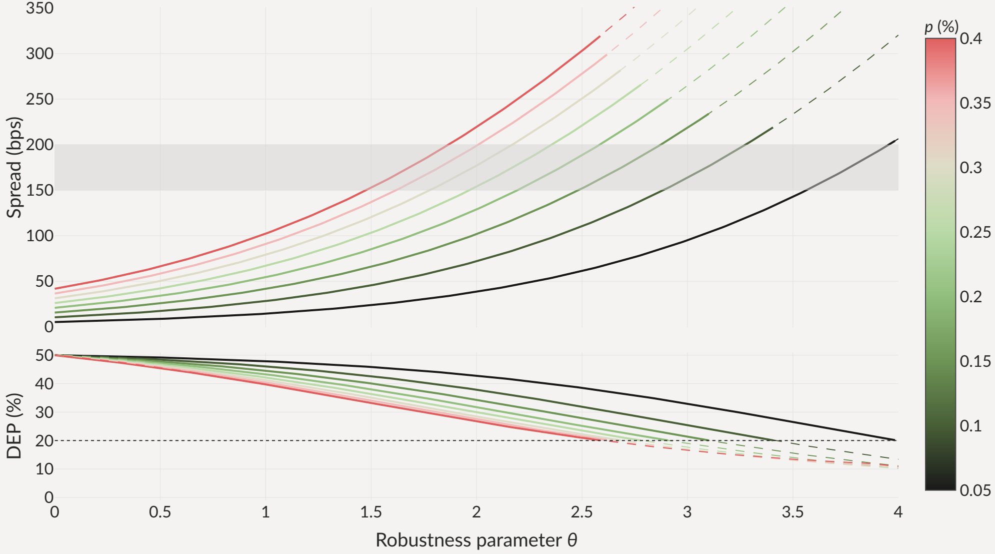
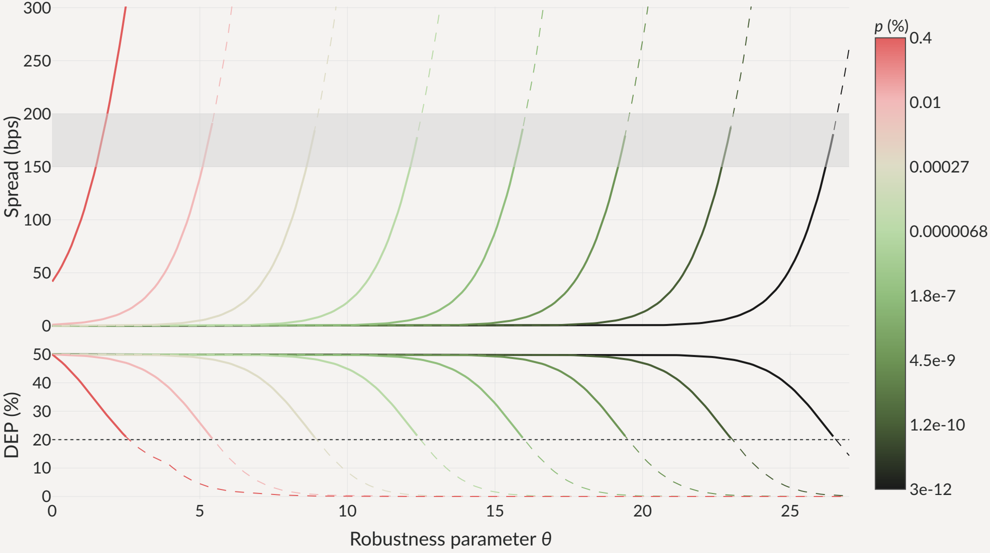
How much can US default risk explain? (with robustness)

With robustness, varying the actual default probability p, staying above 20% DEP



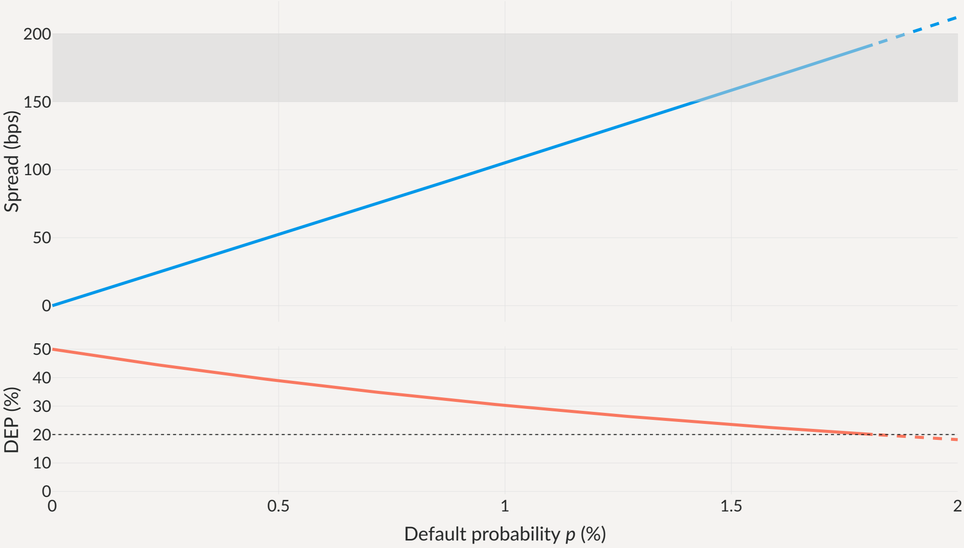
How much can US default risk explain? (with robustness and extreme p)

Can make $p \to 0$, increase robustness, and generate spreads with acceptable DEPs



How much can US default risk explain? (with rational expectations and DEPs)

Rational expectations + DEP against $p_0 \sim 0$: cut the robustness middleman



Concluding remarks

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- Test of FTPL/MMT?

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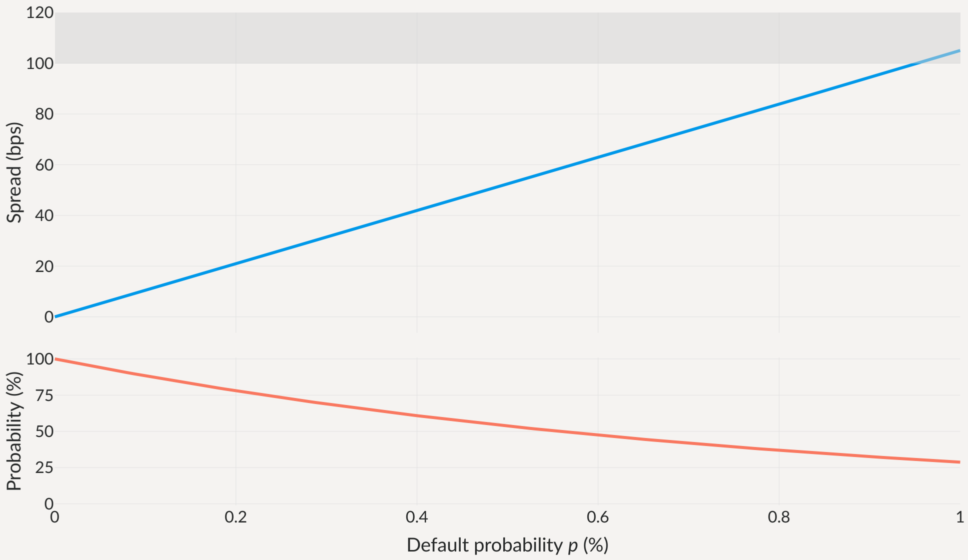
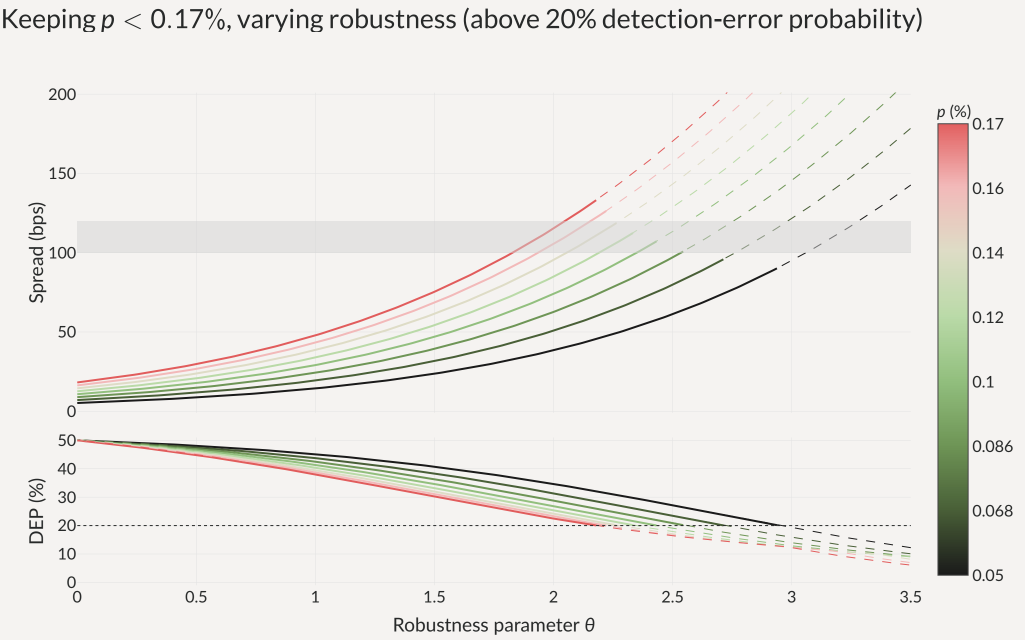
Interbellum period, Rational Expectations

For 1790–1914, targetting average spread of 110bps



Interbellum period, Robustness



Interbellum period, Rational Expectations with DEPs

For 1790–1914, varying p to stay above 20% DEP against $p_0 \sim 0$