13th Annual JRCPPF Conference

Monetary, Fiscal and macroprudential policies and long-run challenges.

An Unhappy Marriage. Monetary and Fiscal Policy at the start of the XXIst century

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Junior Can't Vote

Government Budgets under pressure.

Secular decline in growth rate and demographic transition

- Governments in advanced economies
  - Have made significant promises to transfer recipients
  - Have shifted the burden to future generations.

  "It is feasible for one generation to shift costs to subsequent ones. That is what national government debts do"....(Sargent (2007), Berkeley commencement address).

- Future generations can't vote today.
- **Price discovery** in Treasury markets:
  - Bond markets enforce government debt valuation equation:

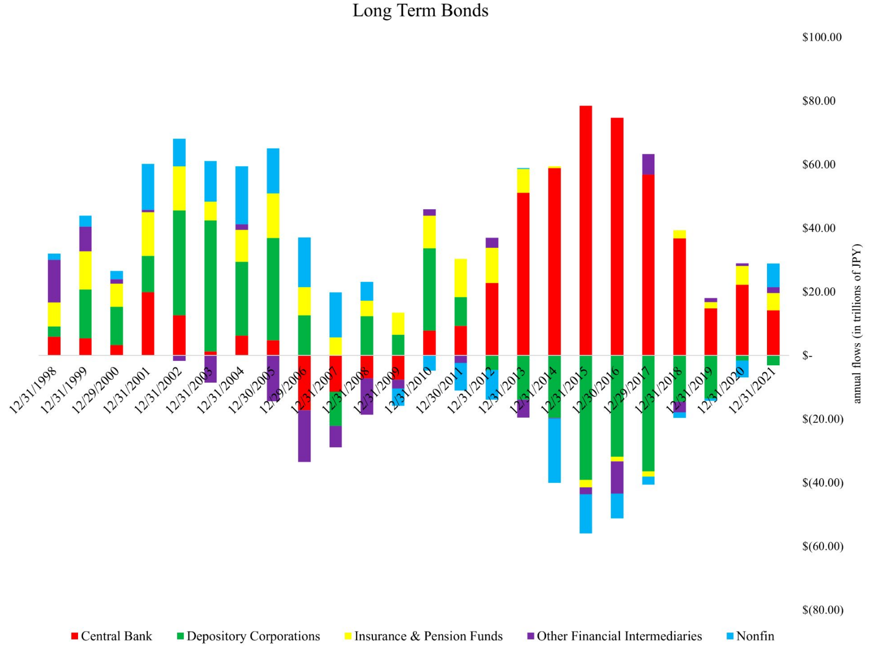
    PDV(Surpluses)=Treasury Valuation.

Low-rate Policies

Low Real Rates

- Long history of U.S. and other governments adopting low-rate policies in wars:
    - U.S: Civil war, WW-I, WW-II. (Financial repression) (recent work by *Payne et al.(2023)*)
- Recently: Central banks and financial regulators have adopted low-rate policies.
    - Bank of Japan led the charge (now Yield Curve Control) (*What about Japan*, *joint with Yili Chien and Hal Cole.*)
    - The ECB and the Fed have followed.
    - U.S: Civil war, WW-I, WW-II, **COVID**. (recent work by *Hall and Sargent (2022, 2023)*)
- **Price Discovery** in Treasury markets impaired

Purchases of JGBs.



New Central Banking Consensus

Around low-rate policies.

March 12, 2020.

"We are not here to close spreads, this is not the function or the mission of the ECB," said Ms Lagarde. "There are other tools for that and other actors to deal with those issues."

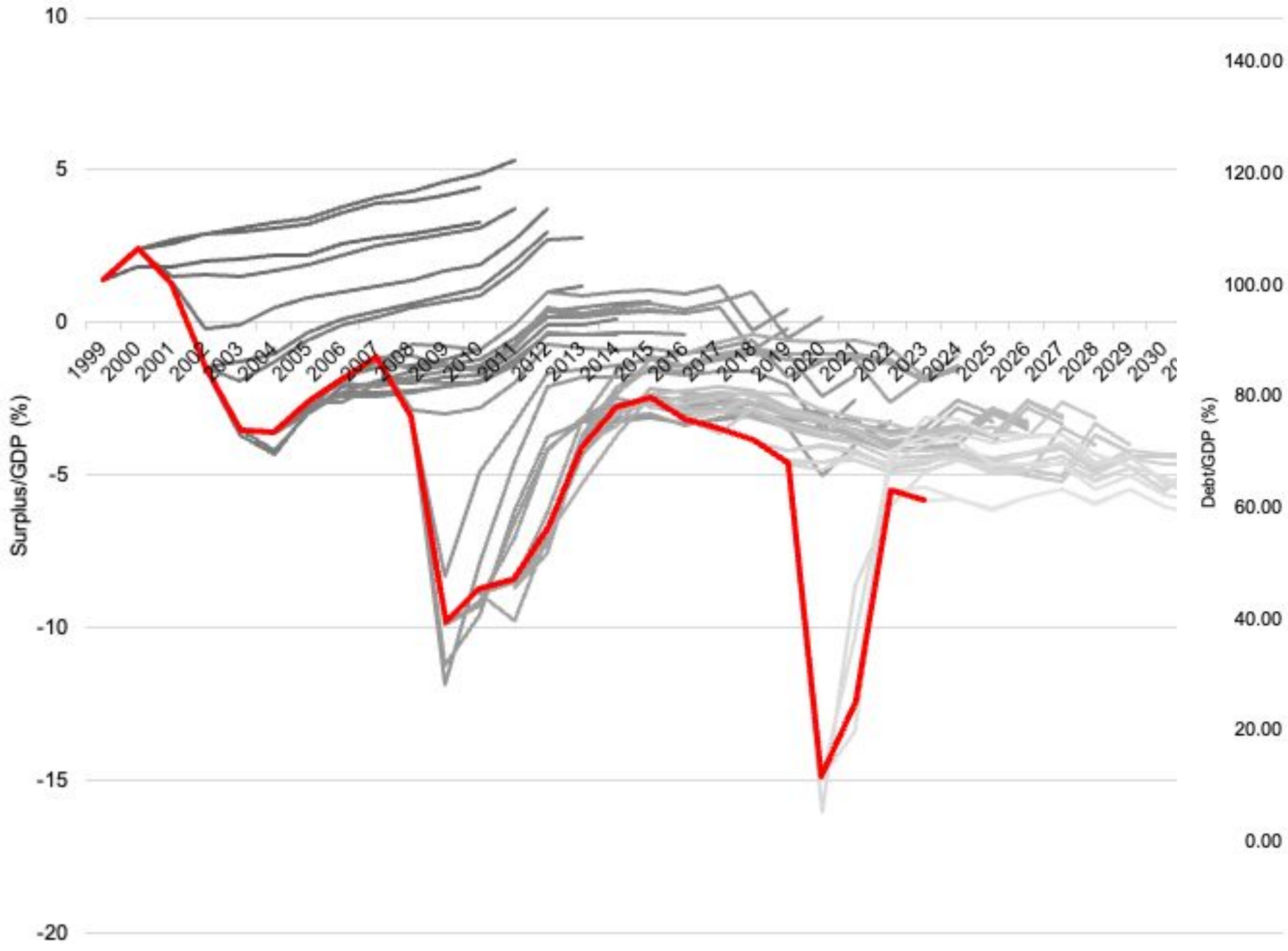
Ms Lagarde's mis-step came on the day she announced the first change in monetary policy since she took over at the ECB in November.

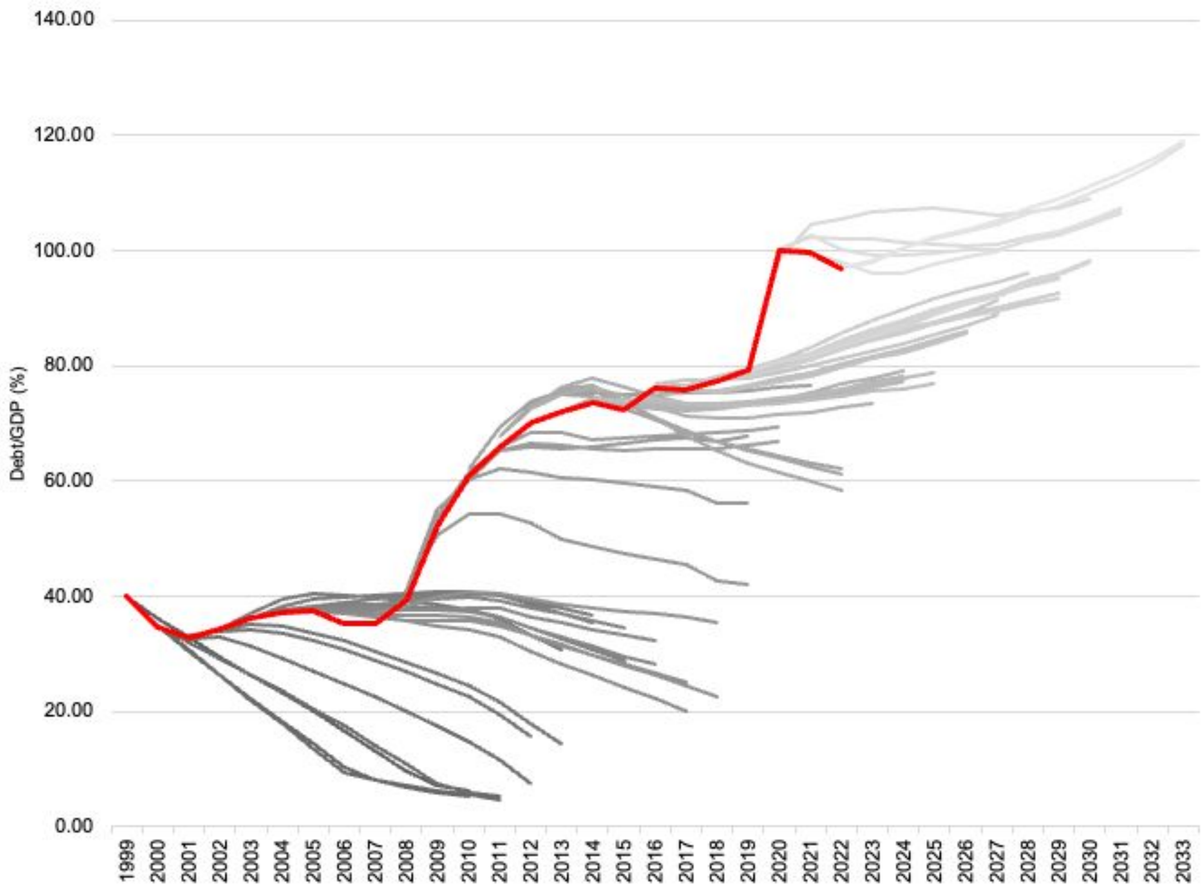
Not a Free Lunch

Low-Rate Policies

- Distort *incentives* of governments.
- Engineer transfers of wealth.
  - *Within generations*: Impose *hidden tax* on younger, poorer and less financially sophisticated households (**duration** shortfall).
  - *Across generations*: Shifting the burden to future generations.
    - Governments (**duration** shortfall)
  - *Across borders*: Shifting the burden to other countries (Eurozone).
- Distort incentives of market participants.
  - Re-engineer the financial system
    - Reaching for yield.

CBO 10-YR Budget Projections



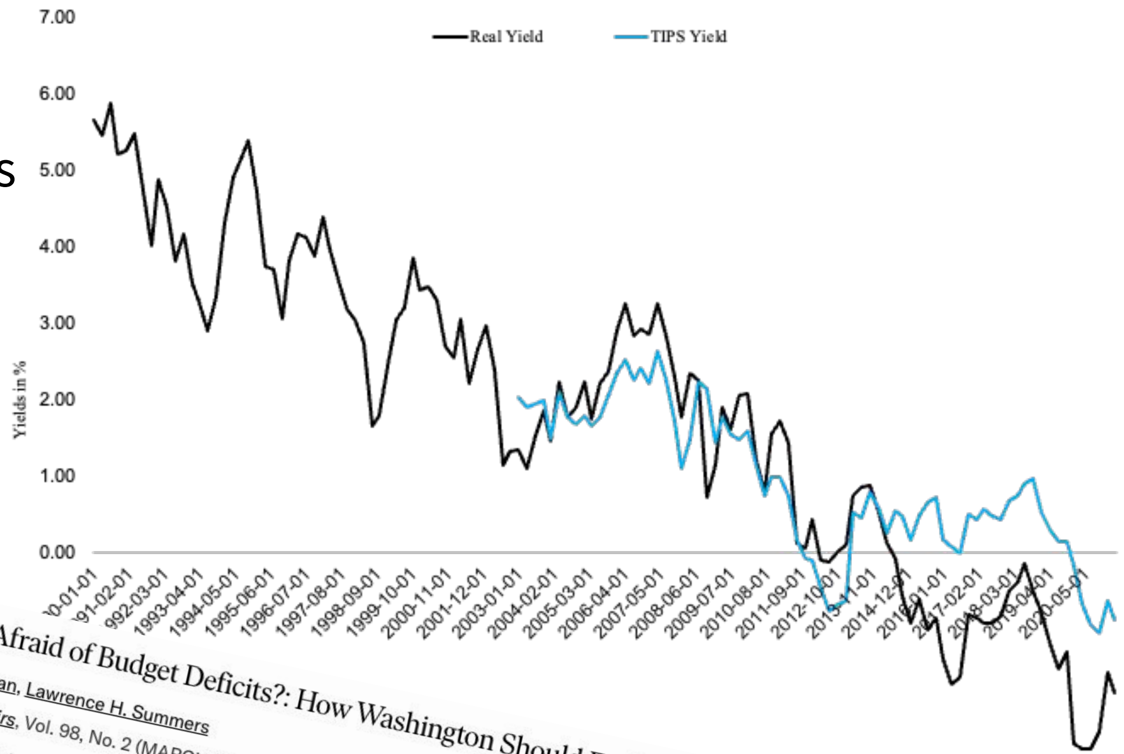


Fiscal Exuberance

Yields continued downwards trend after GFC

- Treasury market was no longer penalizing large deficits
- Fiscal Optimism: *r<g*
  - We can keep rolling over deficits.

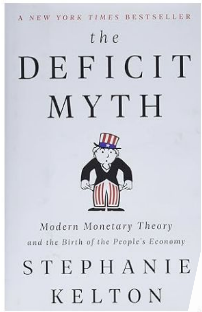
10-YR USTR Real Yields.



OPINION

Learn To Love Trillion-Dollar Deficits

Our country's myth about federal debt, explained.



Who's Afraid of Budget Deficits?: How Washington Should End Its Debt Obsession

Jason Furman, Lawrence H. Summers

Foreign Affairs, Vol. 98, No. 2 (MARCH/APRIL 2019), pp. 82-95 (14 pages)

https://www.jstor.org/stable/26798090

Public Debt and Low Interest Rates

Olivier Blanchard

AMERICAN ECONOMIC REVIEW
VOL. 109, NO. 4, APRIL 2019
(pp. 1197-1229)

"Put bluntly, public debt may have no fiscal cost"

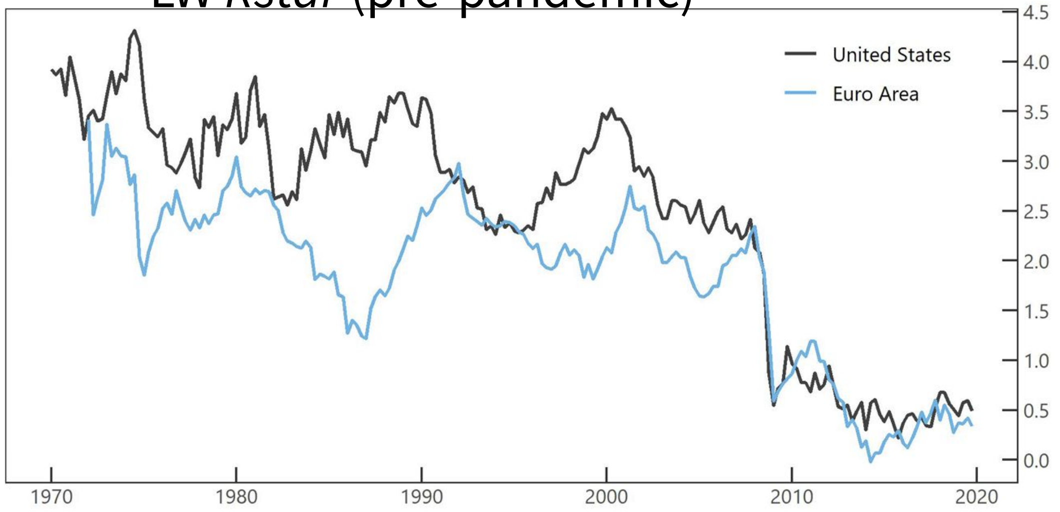
Navigating by the stars

Yields continued downwards trend after GFC

- Fiscal optimism (*r*<*g*) ignores role of Fed in pushing down *r* (models with perfectly elastic demand for USTR)
- Fed deploys measure of equilibrium real rates (***rstar***) that keeps trending down. March 2022.

Variable	Median[1]				Central Tendency[2]						
	2023	2024	2025	Longer run	2023	2024	2025	Longer run	2023	2	
Federal funds rate	5.1	4.3	3.1	2.5	5.1–5.6	3.9–5.1	2.9–3.9	2.4–2.6	4.9–5.9	3.4–5.6	2.4–5.6

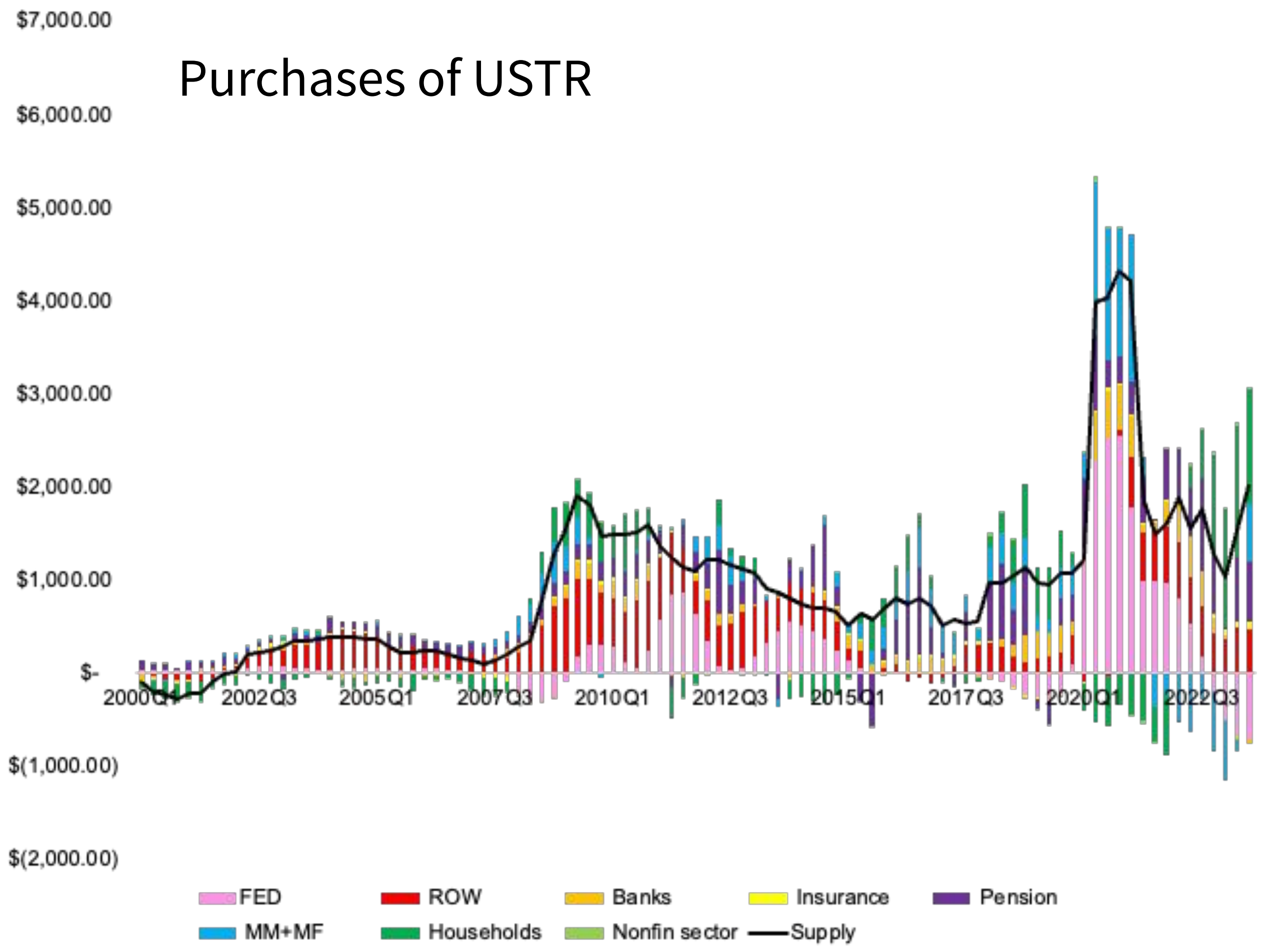
LW *Rstar* (pre-pandemic)



(*Laubach and Williams, 2003, 2016*)

- But stars seem to be moving when the Fed changes course.

Why were rates so low?



- **2 Large Inelastic buyers of US Treasurys:**
  - RoW: U.S. Treasury is the *world's safe asset supplier.*
    - Between 2007 and 2022, RoW absorbed \$5.36 trillion (mostly prior, during and after GFC).
  - Federal Reserve: In 4 different rounds of QE, the **Fed** absorbed \$5.15 trillion in issuance.
    - **Fed** 29% of issuance of Notes and Bonds.
  - disconnect between valuation of USTR and *PDV(Surpluses)*

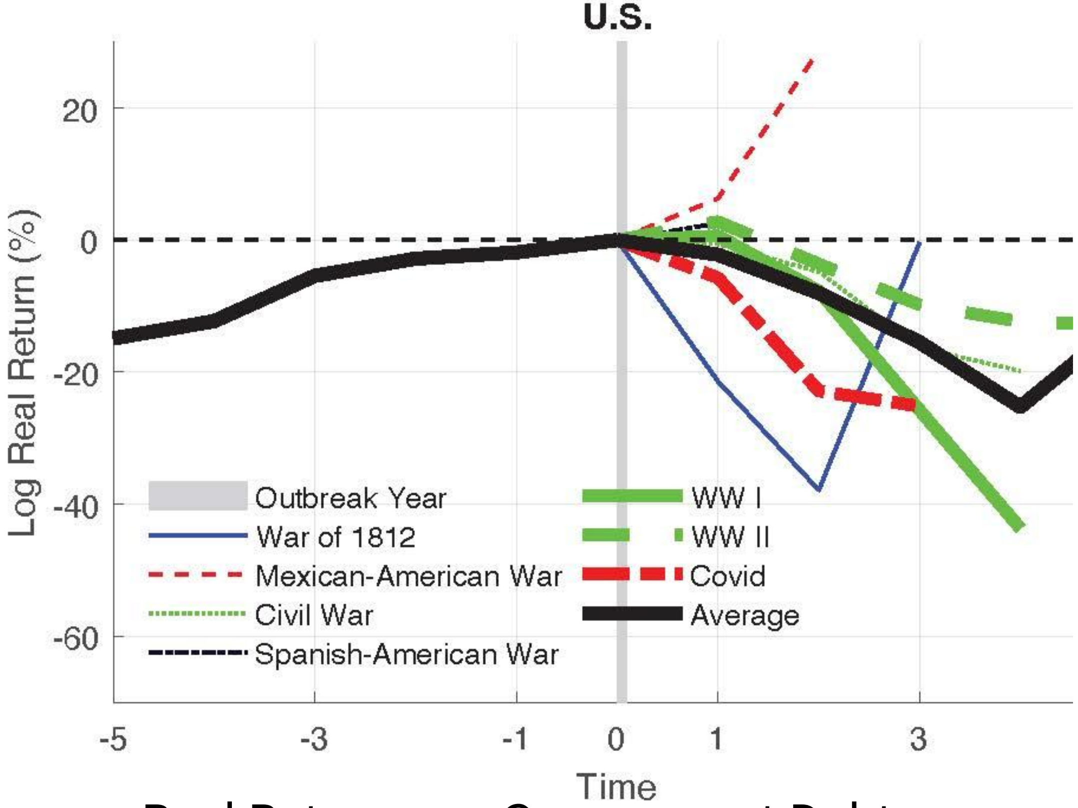
Government debt valuation wedge

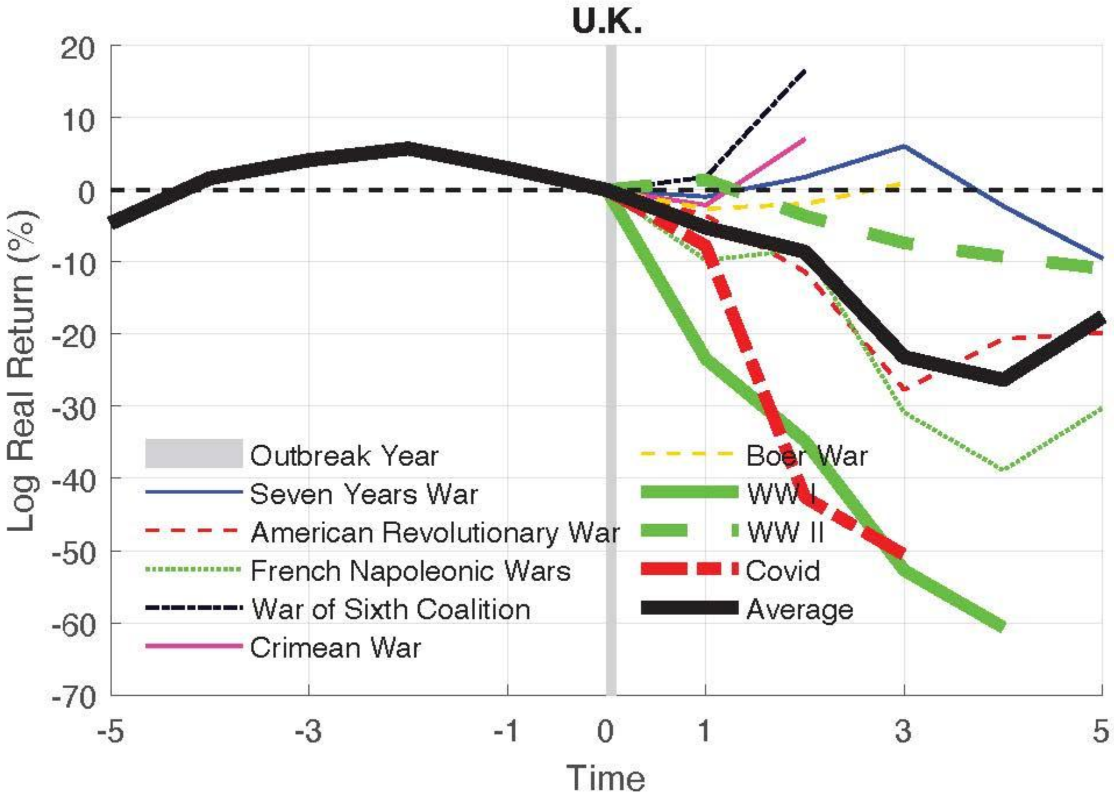
Yields continued downwards trend after GFC

- Treasury market is no longer penalizing large deficits.
  - Hard to get *PDV(Surpluses)* anywhere close to valuation of USTR.
  - US Treasury valuations do not respond to fiscal fundamentals.
    - *The Dogs that didn't bark (2020)*
  - Treasurys seem overpriced (footprint of low-rate policies).
    - *U.S. Government Debt Valuation Puzzle (2019); Measuring U.S. Fiscal Capacity Using Discounted Cash Flow Analysis (2023)*.*
    - *Feed in CBO Projections and compute PDV(Surpluses)*
- Limits to Arbitrage: Bond trader don't trade against the Fed (in Japan, they call this the "widowmaker trade").

**joint work with Zhenyang Jiang, Stijn Van Nieuwerburgh and Mindy Xioalan.*

Wars and COVID

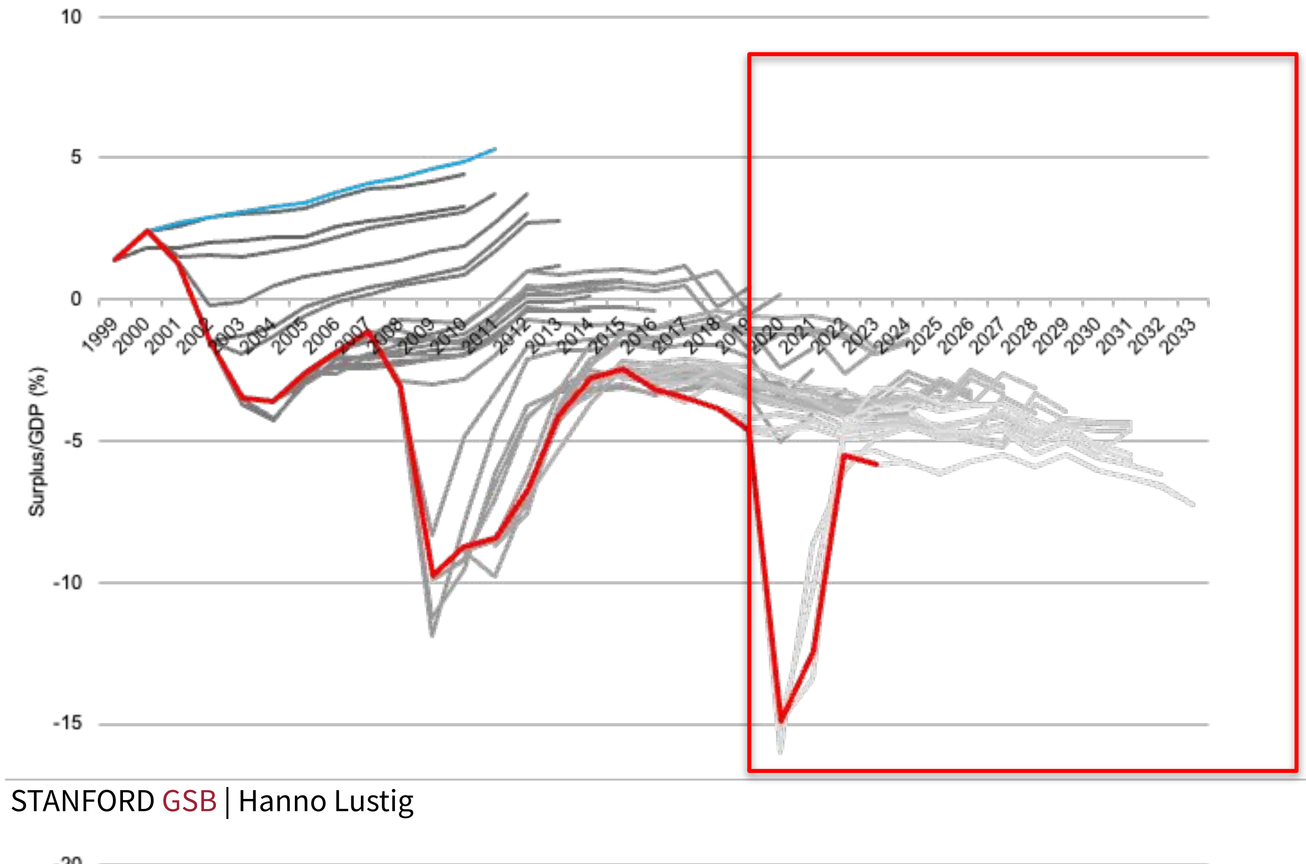




Real Returns on Government Debt

Mini-Case Study: COVID-19

COVID-19, March 2020.

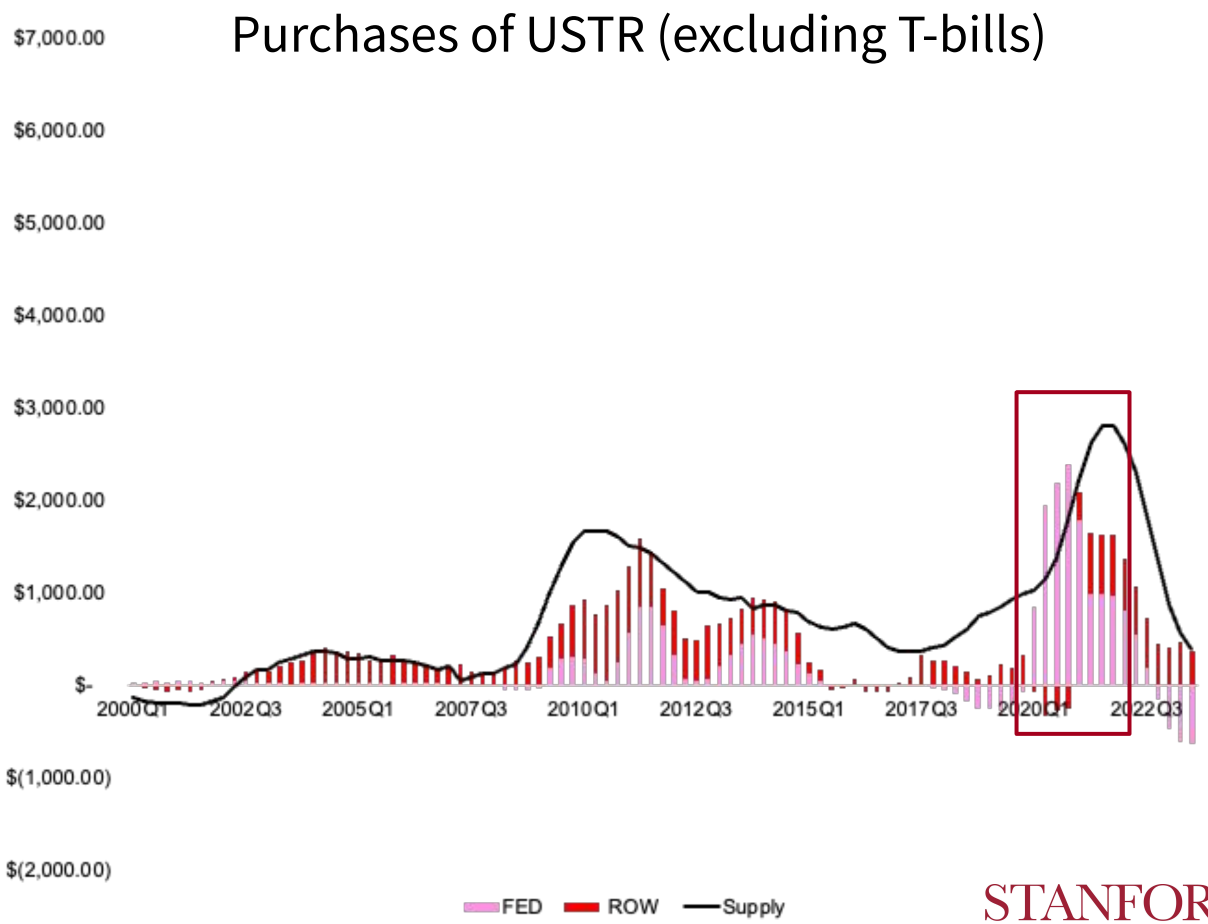


- 10 YR Treasury Yield ⬆️ by 70 bps between March 9 and March 19.
  - Largest post-war fiscal shock in the U.S.
  - Treasury yields have to increase to mark the valuation of all Treasurys to market.
  - Treasury Market hits ⏯️ on Mark-to-Market
    - Valuation of USTR has to backed by PDV(Surpluses)

Fed Intervention.

"Markets aren't functioning."

- On March 15, 2020, Fed announced purchases to support *"smooth functioning of Treasury markets"*
    - At least $500 billion in Treasurys
    - $200 billion in MBS.
- On March 23, 2020, Fed announced purchases were open-ended:
    - Using Fed balance sheet to warehouse USTR.
- Fed hits ⏸️ on Mark-to-Market
    - Excluding T-bills, the Fed had absorbed 99% of Bond and Note issuance.
- Suspension of SLR (excluding USTR)

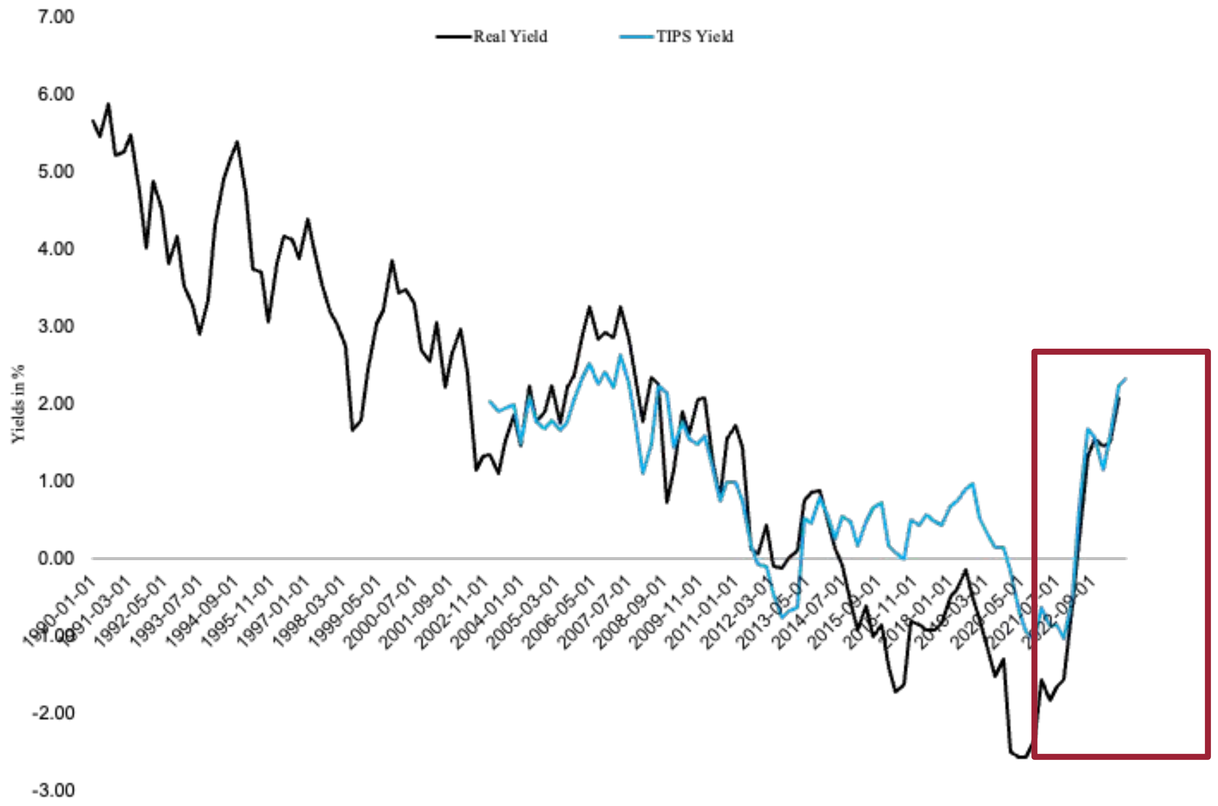


Fed stops intervening

Markets are functioning.

- QT starts in March 2022.
- Fed stops warehousing USTR.
  - Fed hits ⏯️ on Mark-to-Market in March 2022 by announcing 🛑 of large-scale asset purchases
- Real 10-year yields ⬆️ by more than 300 bps.

10-YR USTR Real Yields.



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An unhappy marriage of monetary and fiscal policy

Things Central Bankers will Say

- Treasury markets are illiquid (FED).
  - Primary dealers running out of balance sheet capacity.
- Sovereign Debt Markets are Segmented (ECB).
- Transmission of Monetary Policy is Impaired (Fed+ECB).
- Firesales in Gilt Markets (BoE) .

What Central Bankers really Mean.

- The US Treasury needs low rates to fund its deficits.
- The periphery (e.g. Italy) in the Eurozone needs low rates to avoid default.
- We want to bail out UK pension funds.

Low-Rate Policies Benefit Current Generations

Government Duration Mismatch

Losers

- **Future Young** face a tax bill.
  - Cheap Debt allows governments to borrow more.
  - Shift burden to future young.

*What about Japan * joint with Yili Chien and Hal Cole.*

Winners.

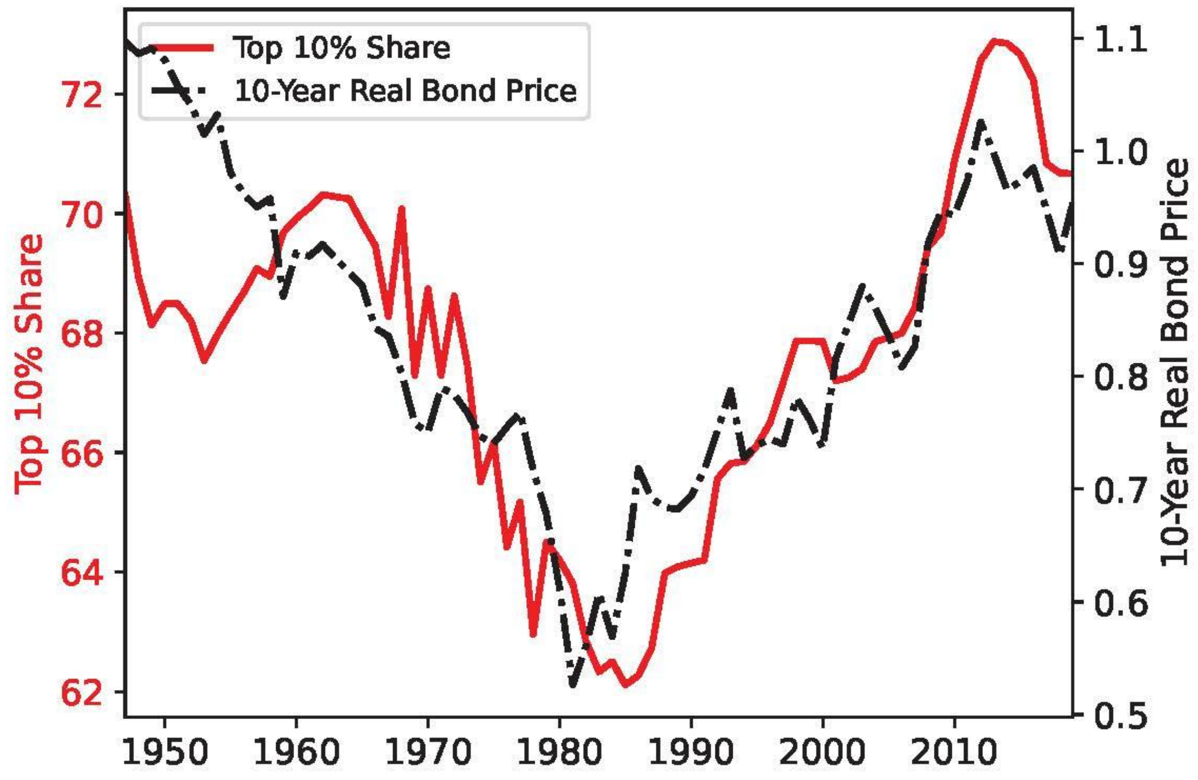
- **Governments** gets extra fiscal space
  - Surpluses have **high duration** (far in the future), but government debt does not (especially after QE and consolidation)
    - *duration mismatch*: lower rate create extra fiscal capacity (higher *G* or lower *T*)

  Duration(D)<Duration(T-G)

- **Current Old** get government transfers.
  - Social security payments
  - Other transfers.

Wealth Inequality

Lower Rates increase Wealth Inequality for Current Generation



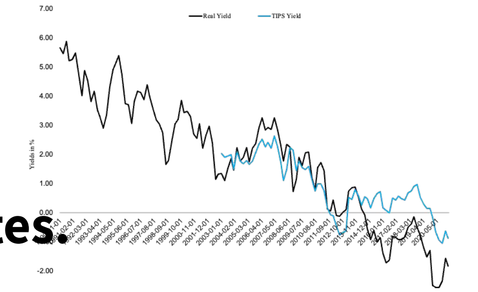
- Between 1980 and 2020, real rates ⬇️ by 350 basis points.
  - Discount rates for long-lived assets ⬇️.
  - Asset valuations ⬆️ more for assets with longer duration.
  - Long-lived assets (with high duration) mostly held in top percentiles of wealth distribution.
  - Wealth inequality ⬆️.

*Financial and Total Wealth Inequality with Declining Interest Rates (2020)**

**joint with Greenwald, Leombroni and Van Nieuwerburgh*

Low-Rate Policies Redistribute

Household Duration Mismatch



Losers from lower real rates

- **Currently Young,** Poor, Least Financially Sophisticated
  - Young need to save for retirement at low-rates
  - Poor and least sophisticated save in deposits
    - Don't participate in asset markets (no stocks, no bonds)
      - Not enough **duration** in their portfolio

        Duration(portfolio)<Duration(C-Y)
  - Young need to buy house

    *Financial and Total Wealth Inequality with Declining Interest Rates (2020)**

Winners from lower real rates.

- **Old,** Rich, More Financially Sophisticated
  - Old don't need to save for retirement
  - Rich and more financially sophisticated (and asset managers who earn fees on AUM)
    - Do participate in asset markets (stocks and bonds)
      - Too much **duration** in their portfolio
        Duration(portfolio)>Duration(C-Y)
  - Old typically own a house.

**joint with Greenwald, Leombroni and Van Nieuwerburgh*
See also Fagereng, Gomez , Moll et al (2022)

Low-rate policies Re-engineering Financial System

Pension Funds reach for yield

Defined benefit PFs invest in risky assets

- Natural holders of long-dated USTR but they don't buy USTR.
- Invest in risky assets (and prefer private assets because the risks are hidden)--> rise of private equity.
- Increases the risk of future shortfalls.
- Shifts the *burden to future taxpayers.*

Banks reach for yield

Banks invest in long-dated USTR.

- Not natural holders of long-dated USTR but they do buy long-dated USTR (zero risk weights)
- Taking on interest rate risk, borrowing from depositors at low-rates (taxpayer-funded deposit insurance)
- Shifts the *burden to future taxpayers*
    - SVB Bailout March 2023

Conclusion

Low-Rate Policies

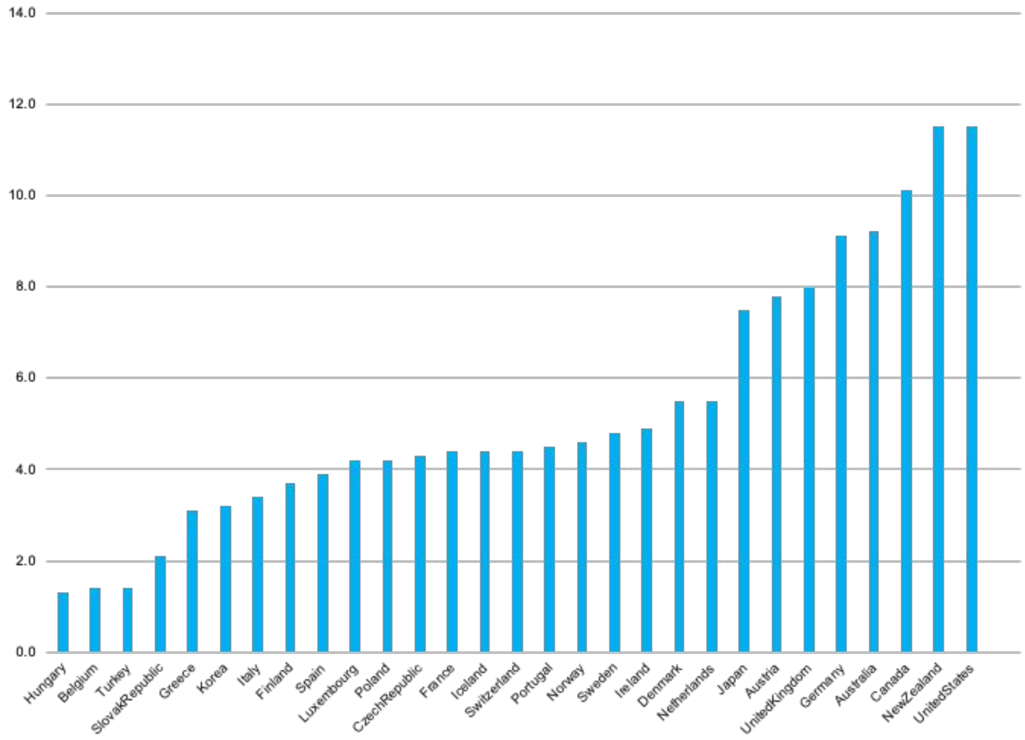
- Long history of governments resorting to low-rate policies.
- Low-rate policies may have the following effects:
  - Help governments shift burden to **future generations.**
    - Extra fiscal capacity: Government debt has short duration.
  - Have heterogeneous effects on the wealth and welfare of **current generations.**
    - Extra spending power for the rich/old**: Household Portfolio duration** is concentrated
  - Distort incentives of agents (including the government and market participants)
  - Re-engineer financial system.
- Need more work on the effects of low-rate policies.
- Need debate on whether low-rate policies are desirable.

Mini-Case Study: COVID-19

COVID-19, March 2020.

1. $2 trillion *CARES act* on March 25, 2020.
    a. $480 billion income support.
    b. $274 billion on stimulus checks.
    c. $440 billion Paycheck Protection.
2. $900 billion *Response & Relief Plan* on Dec 2020.
3. $2 trillion *American Rescue Plan* in March 2021.

Between March and July of 2020, US outspent (11.5% of GDP) France, Italy or Spain by factor of 3.



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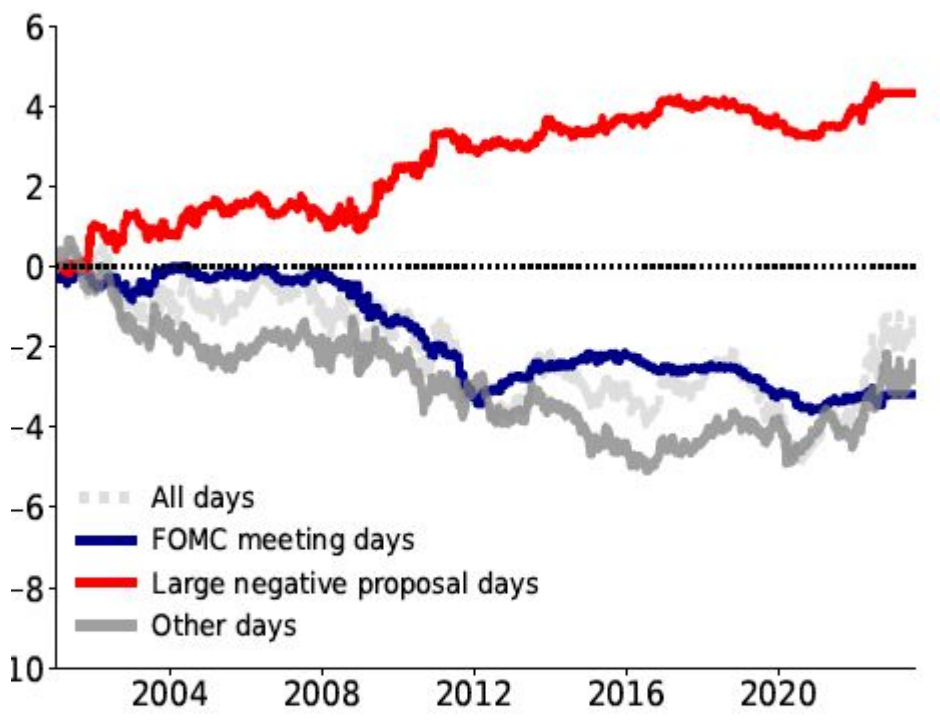
Fed Leaning Against the Fiscal Winds



- Change in 10-year yields in short windows
  - Around CBO cost releases for new bills.
    - Bad fiscal news ⬆️ 10-year yields by 400 bps.
  - Around FOMC meetings.
    - FOMC ⬇️ long yields by 350 bps.

*Can Treasury Markets Add and Subtract? **

**joint work with Roberto Gomez Cram Howard Kung*