LABOR MARKETS IN *TRANSITION:*

Demographics, Productivity and Macroeconomic Policy

JACKSON HOLE ECONOMIC POLICY SYMPOSIUM

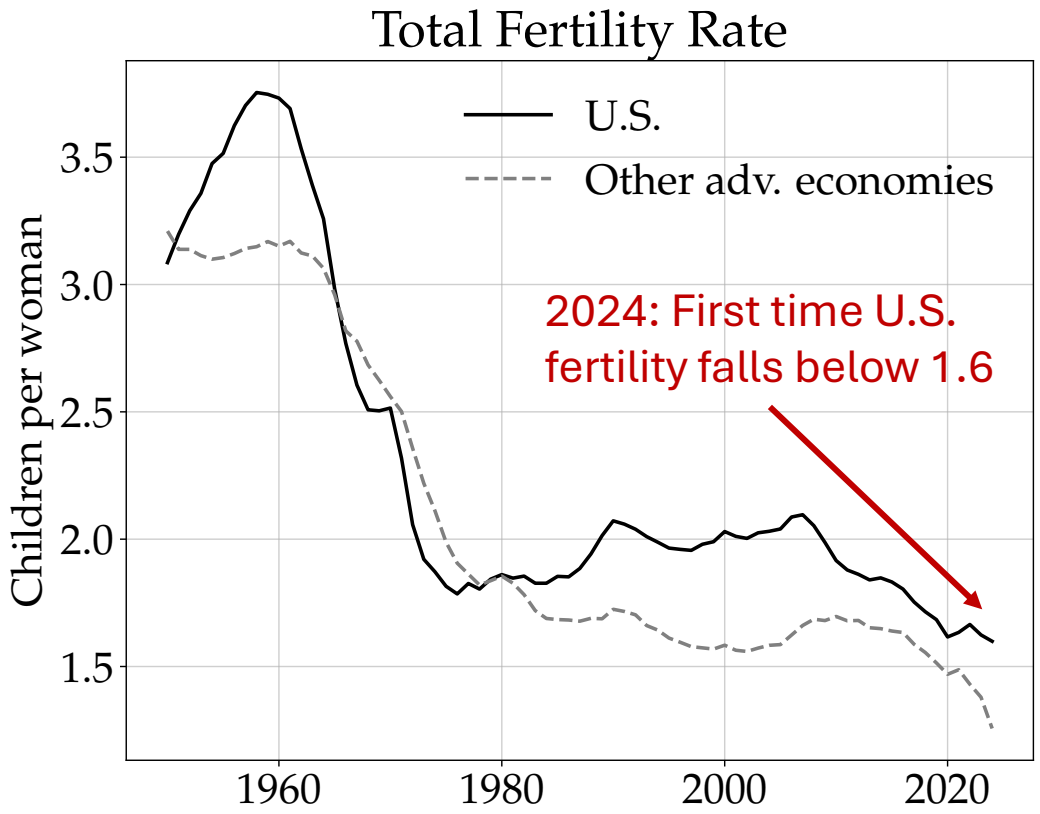
FEDERAL RESERVE BANK OF KANSAS CITY

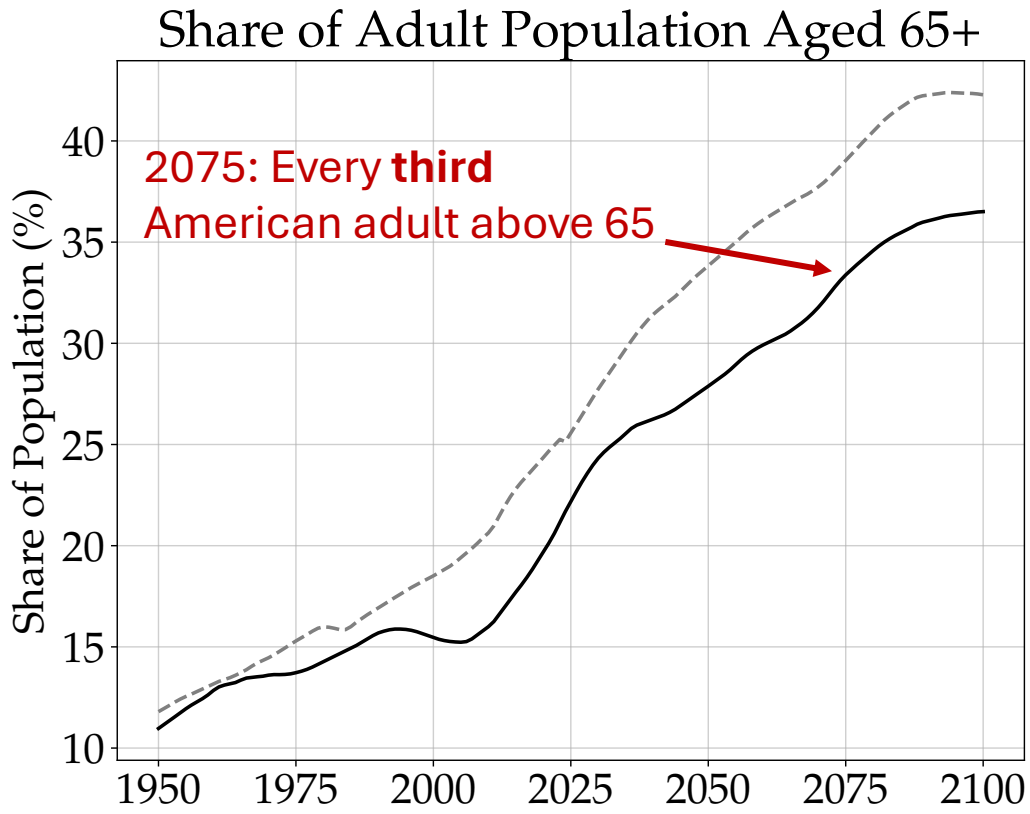
AUG. 21-23, 2025

THE RACE BETWEEN ASSET SUPPLY AND ASSET DEMAND

LUDWIG STRAUB

The demographic transition





Demographic change and fiscal sustainability

Rising supply of government debt (e.g. rising costs of Medicare, Social Security)

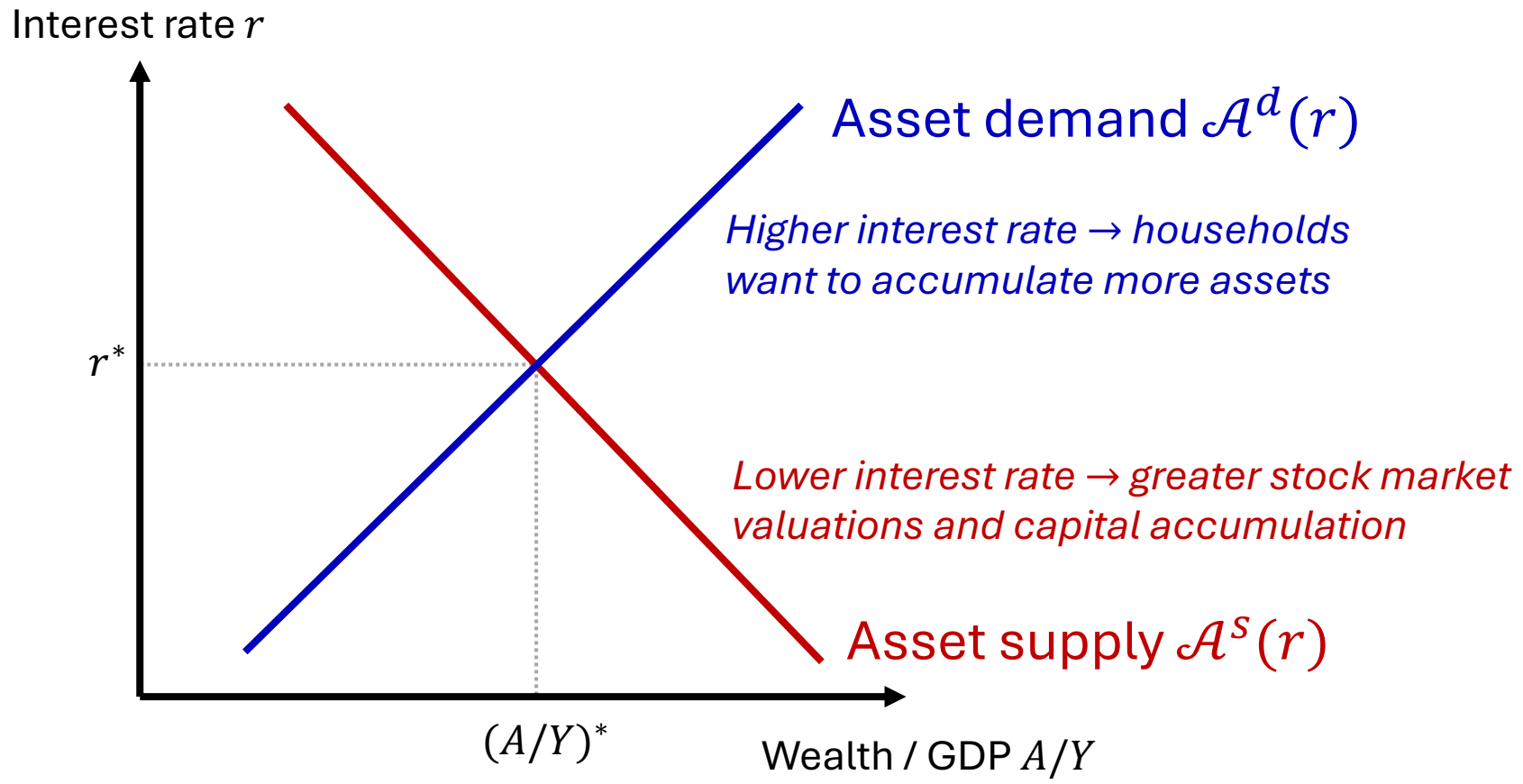
Rising demand of government debt

This project: Race between asset supply and asset demand!

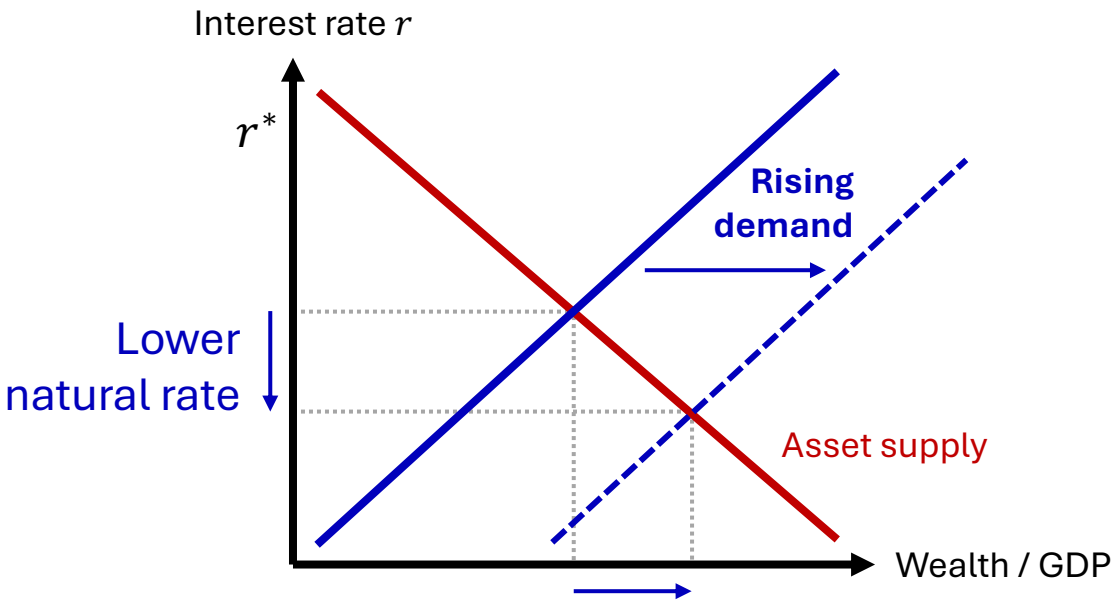
1. Asset market equilibrium
2. Past shifts in asset supply and demand
3. The race ahead and fiscal sustainability

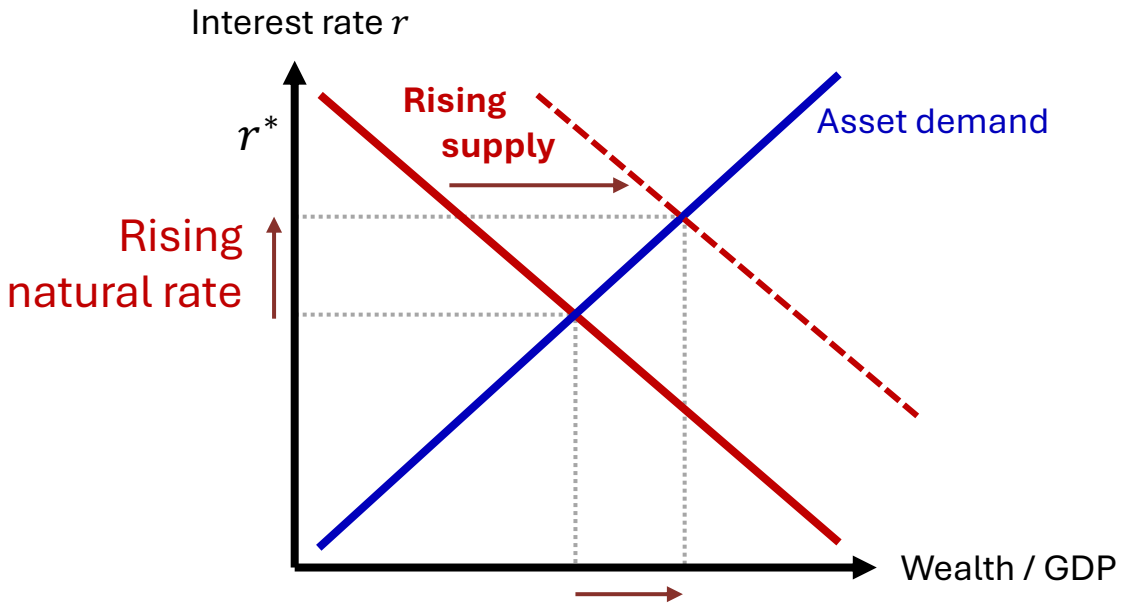
Bottom line: U.S. may start looking like Japan!

Part 1: **Equilibrium in the Asset Market**



Shifts in the Asset Market





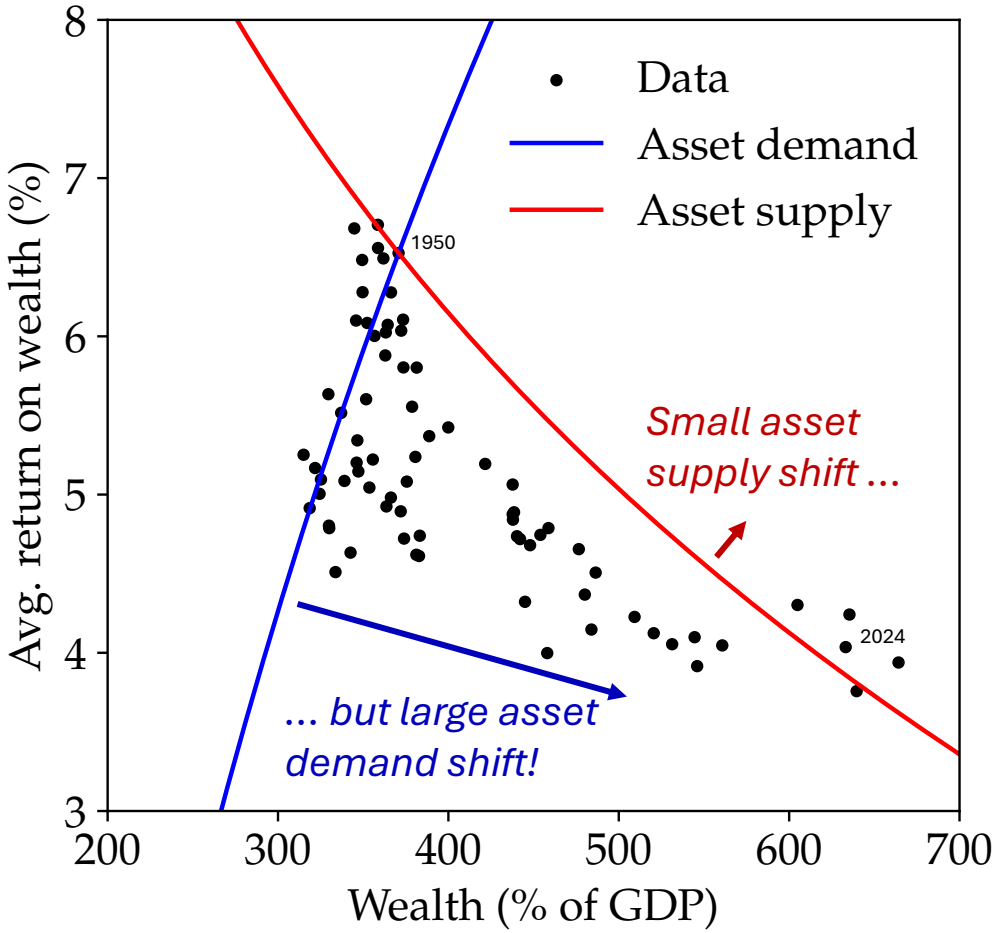
If **asset demand** pulls ahead:

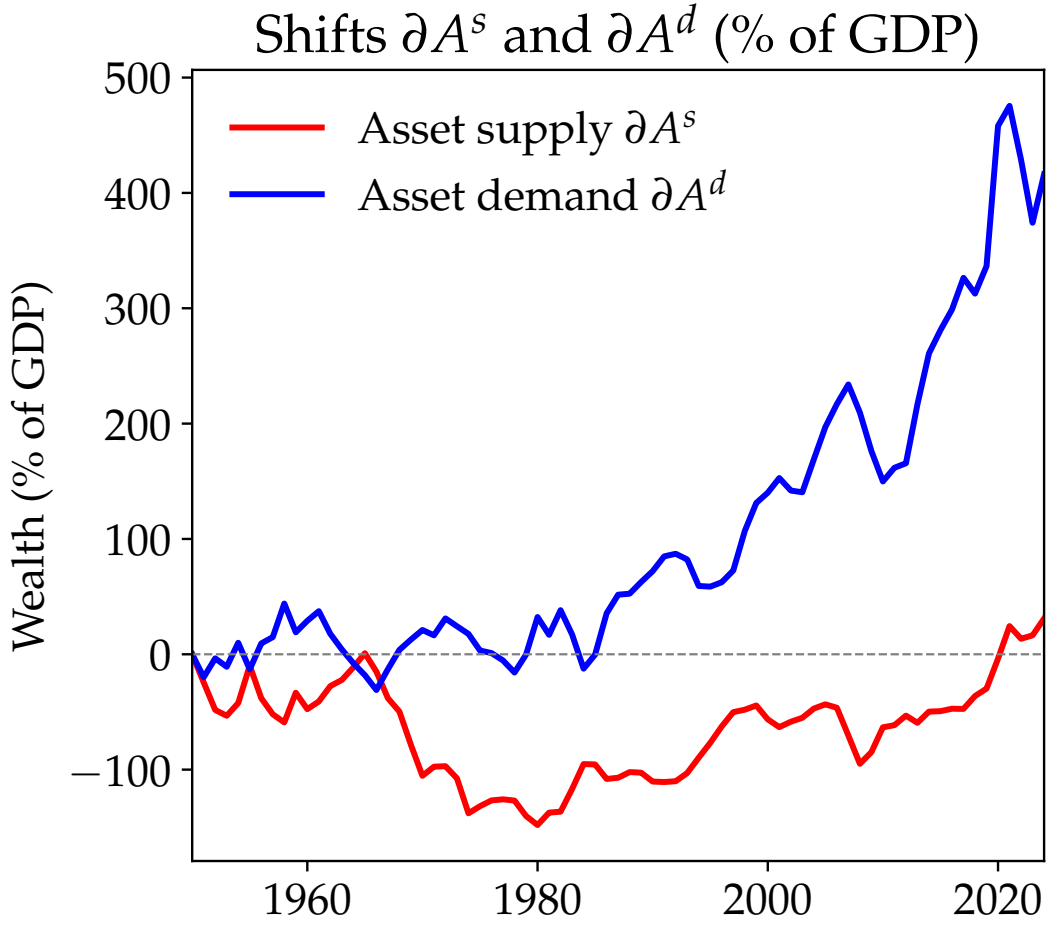
- **lower** natural rate
- ZLB, secular stagnation
- more fiscal space
- fiscal expansion desirable

If **asset supply** pulls ahead:

- **higher** natural rate
- no more binding ZLB
- less fiscal space
- fiscal consolidation needed

Identifying Shifts in the Asset Market



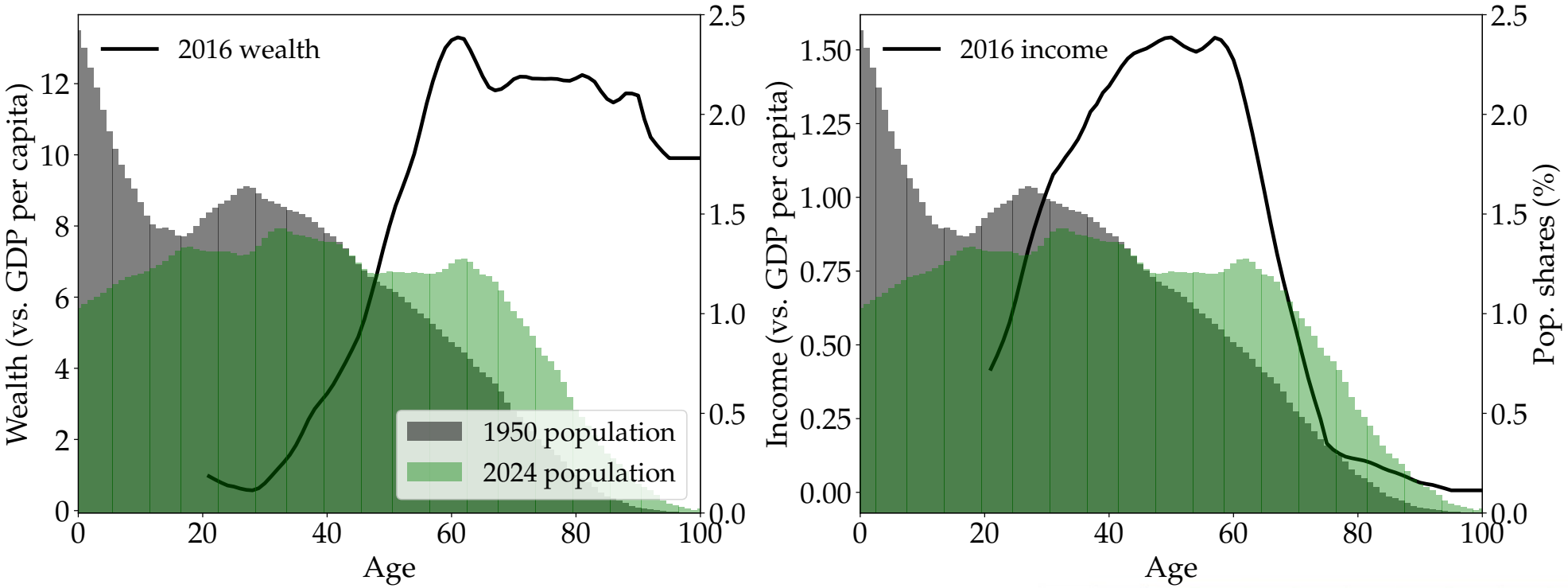


Avg. return on wealth = weighted average of expected real rate on government debt and expected return on capital. Wealth = household wealth minus NFA.

Part 2: **Past Shifts in Asset Supply & Demand**

Demographic shift-share

$$\Delta \log \frac{A^{\text{household}}}{Y} = \log\left(\frac{\sum_{\text{age}} Share^{2024}_{\text{age}} \times \text{Wealth}_{\text{age}}}{\sum_{\text{age}} Share^{1950}_{\text{age}} \times \text{Wealth}_{\text{age}}}\right) - \log\left(\frac{\sum_{\text{age}} Share^{2024}_{\text{age}} \times \text{Income}_{\text{age}}}{\sum_{\text{age}} Share^{1950}_{\text{age}} \times \text{Income}_{\text{age}}}\right)$$

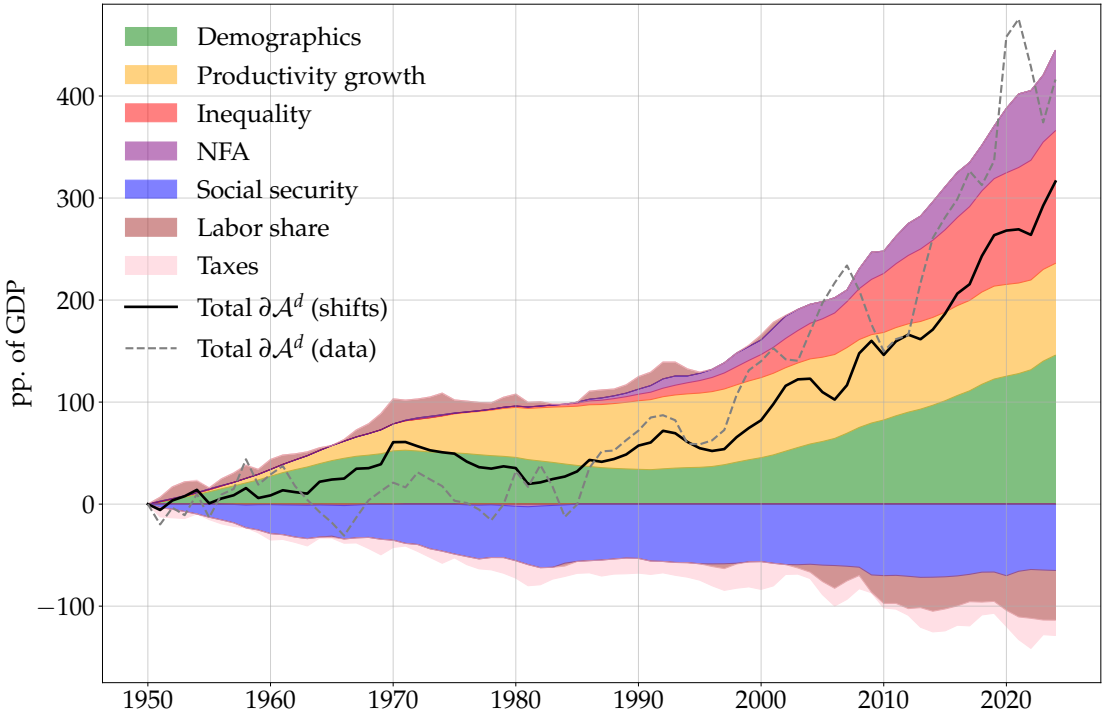


Wealth, income from Survey of Consumer Finances. Population shares from UN.

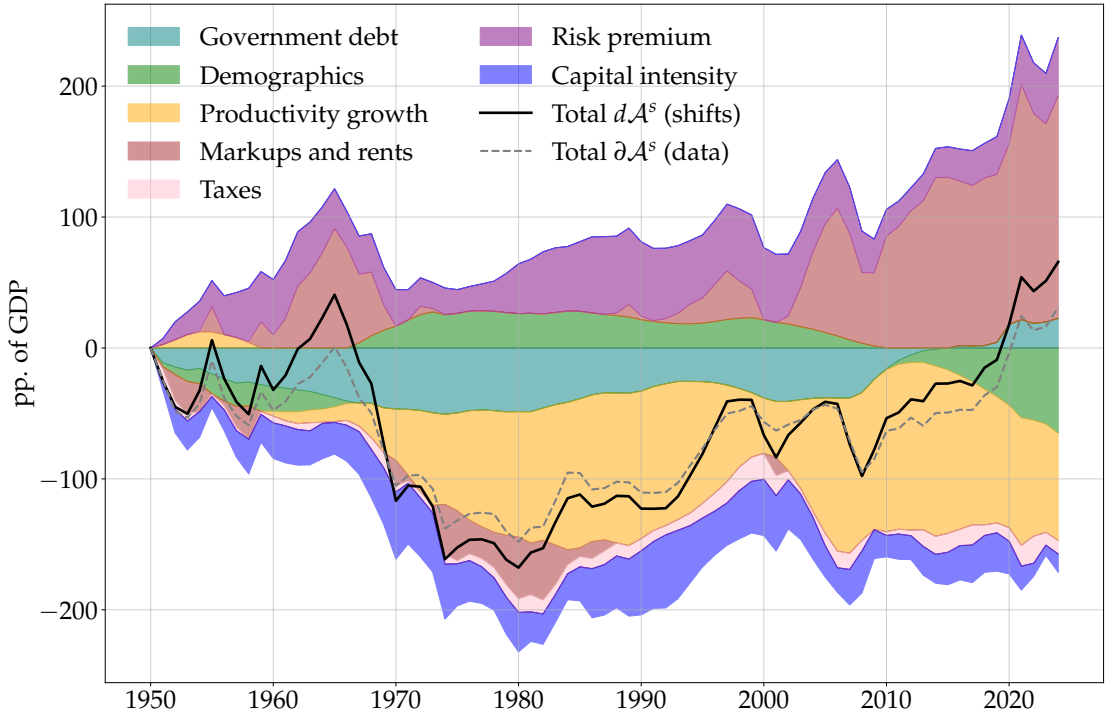
Why did Asset Demand Win?

Demographics, Inequality, Productivity, and the Global Saving Glut

Drivers of **asset demand**



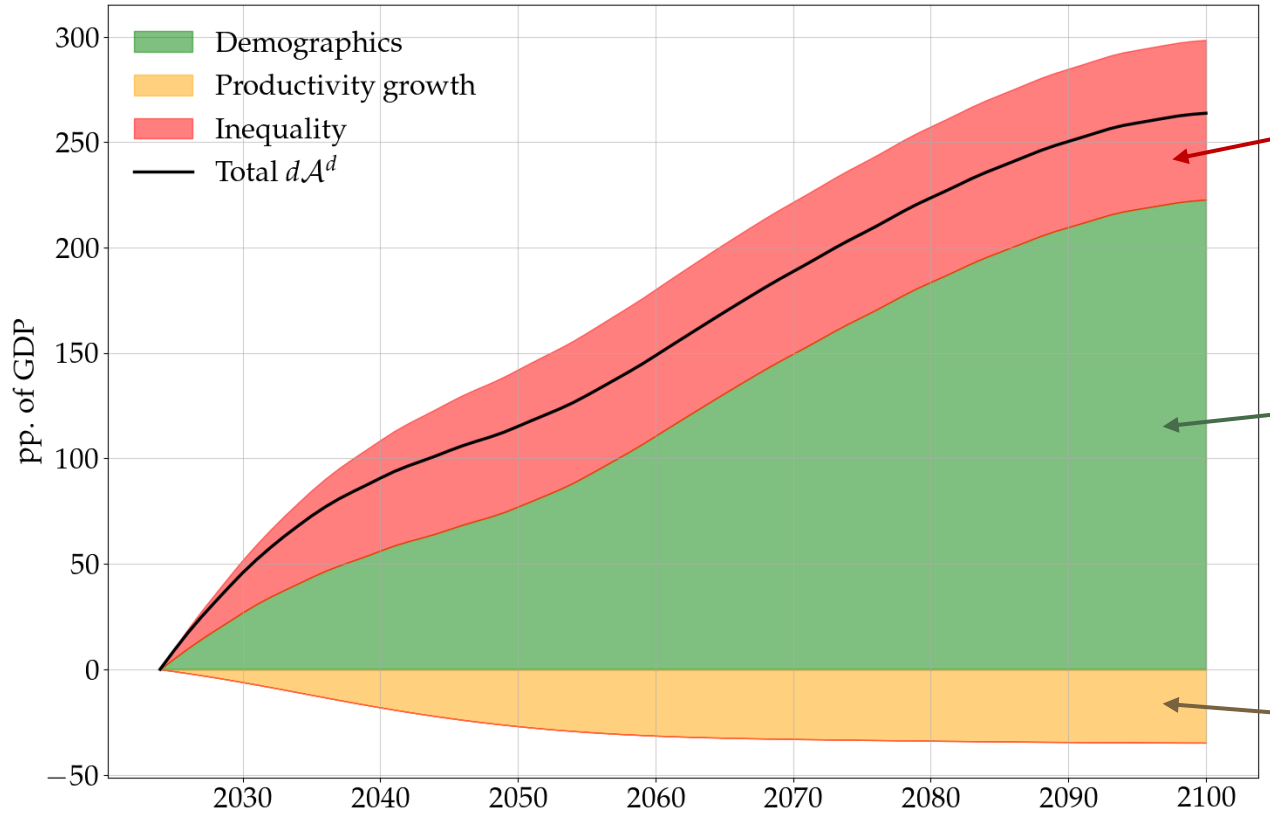
Drivers of **asset supply**



***Demographics**: shift-share with age distribution. **Inequality**: shift-share with within-cohort income distribution. **Productivity growth**: shift-share with income distribution across cohorts. **NFA**: negative of U.S. net foreign asset position / GDP. **Social security**: life-cycle model implied crowding out of private saving. **Taxes, labor share**: life-cycle model implied reduction of asset demand due to less after-tax labor income.*

Part 3: **The Race Ahead**

Demographics Keeps Pushing Up Asset Demand



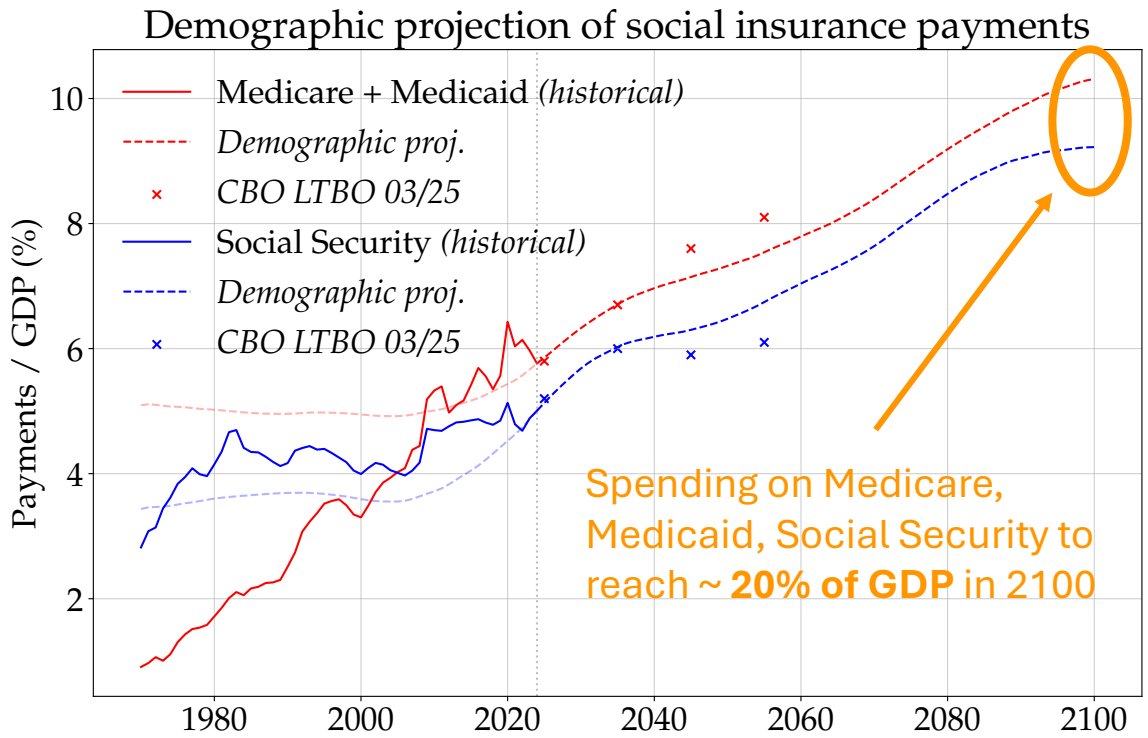
Pre-2024 increases in inequality still fuel 80% of GDP in further asset demand

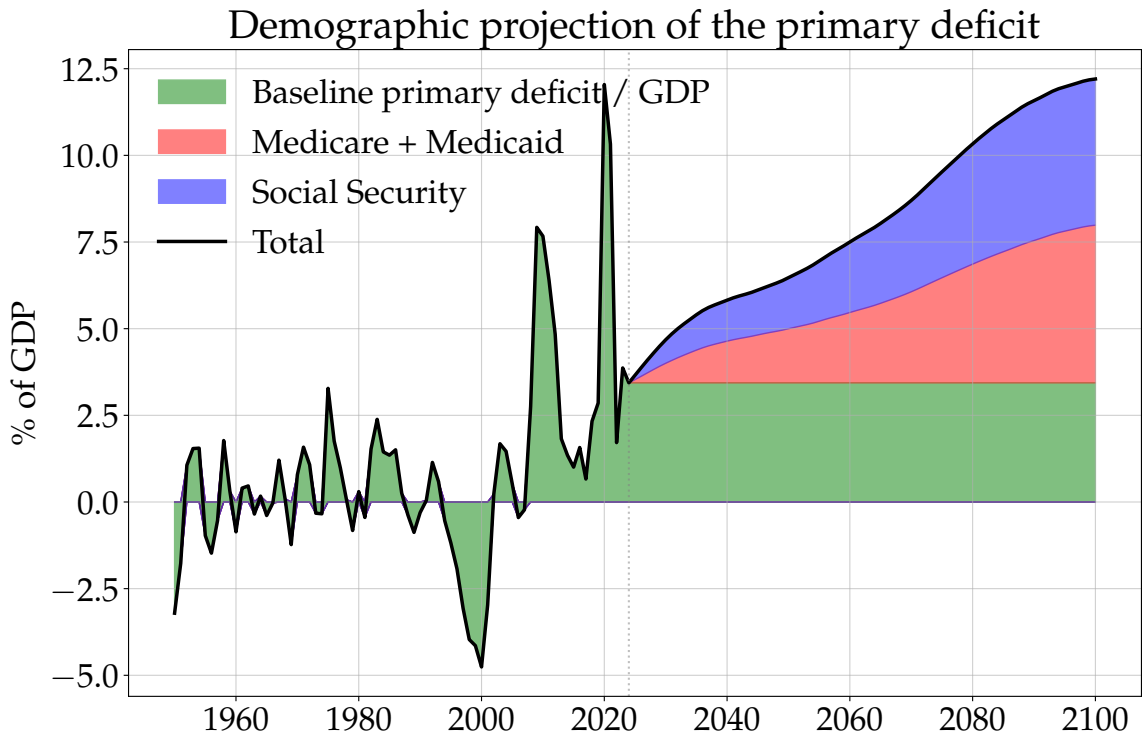
Aging drives up asset demand by 220% of GDP

Pre-2024 productivity slowdown reduces asset demand by 30% of GDP

Demographic projection constructed as weighted average between UN's "medium fertility" and "low fertility" scenarios. Projection assumes no further increase in inequality or reduction in growth. Delayed effects emerge as very unequal recent cohorts start accumulating more wealth as they age.

Demographics Push Up the Primary Deficit

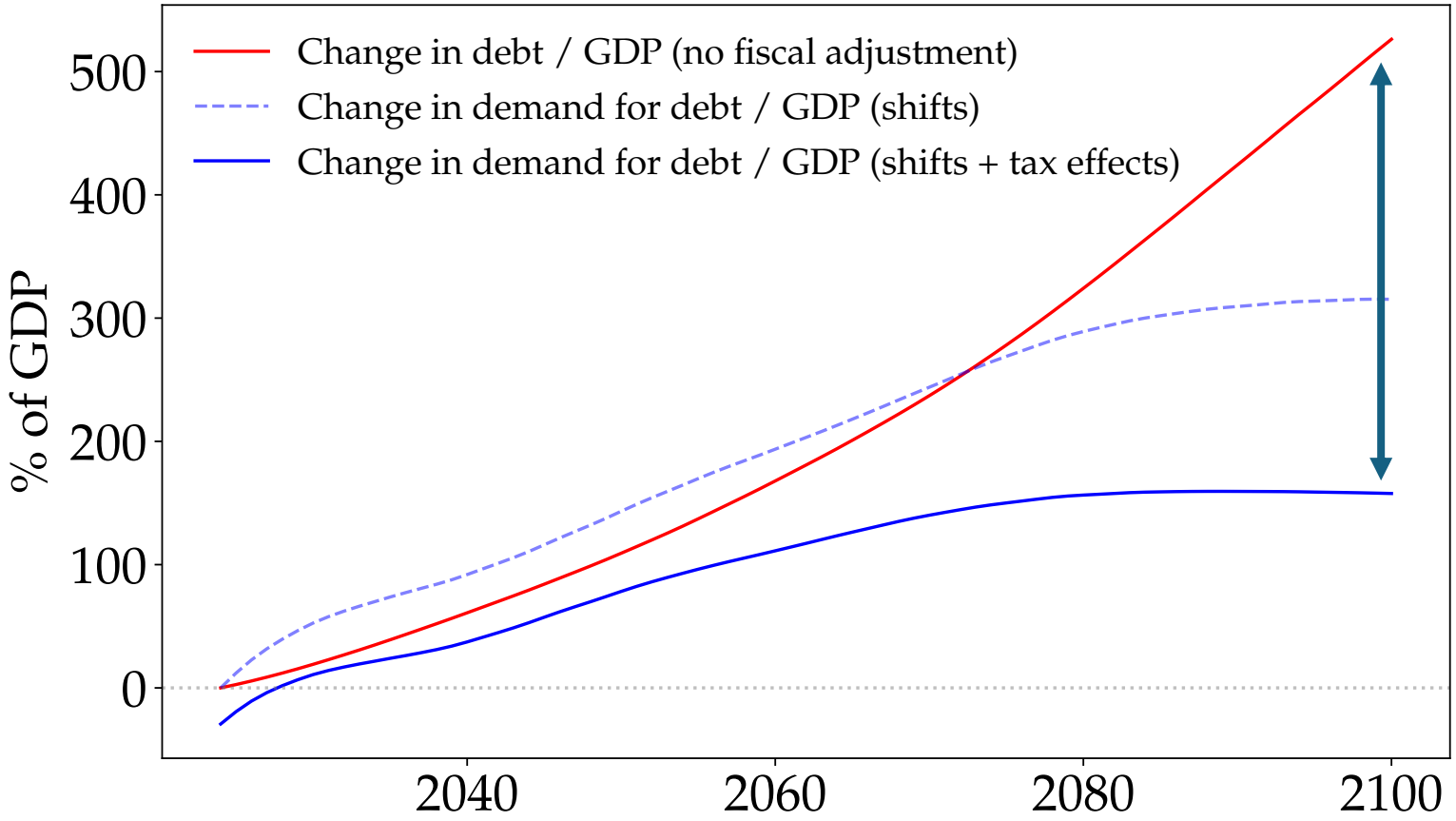




Baseline primary deficit = 2024 primary deficit. All projections assume that the average benefit by age is constant relative to GDP / capita and exclude increases in the retirement age. The only driving force pushing up payments is a shifting age distribution.

Who is Winning the Race Ahead?

Without fiscal adjustment, debt far outpaces demand



Without any fiscal adjustment, debt increases by **500% of GDP** until 2100

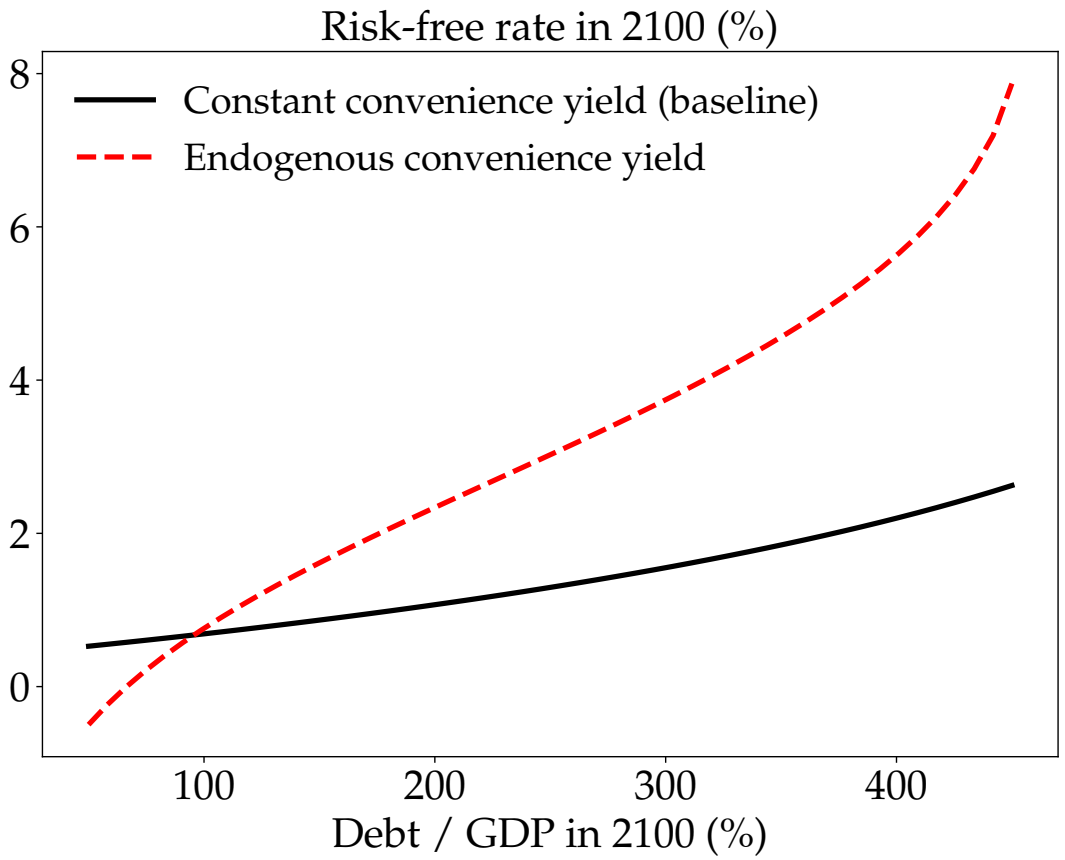
Demand for gov. debt increases by 300% of GDP …

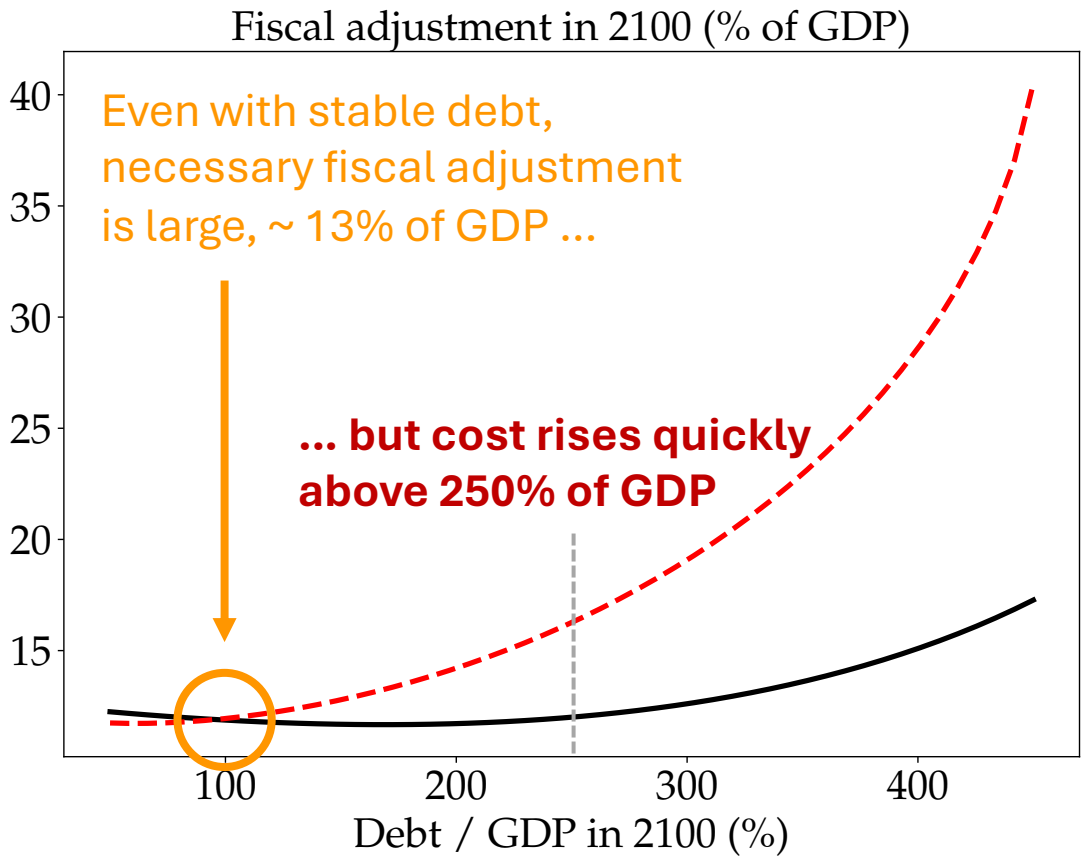
… but raising taxes to pay for rising social insurance costs lowers this to **150% of GDP**

→ 250% debt to GDP may be sustainable in 2100 without rising interest rates

Red: projected increase in asset supply under projected primary deficit without any fiscal adjustment. Blue dashed: projected increase in asset demand without tax adjustment. Blue: increase in asset demand if taxes increase to pay for rising social insurance costs.

Letting asset supply win may be very expensive

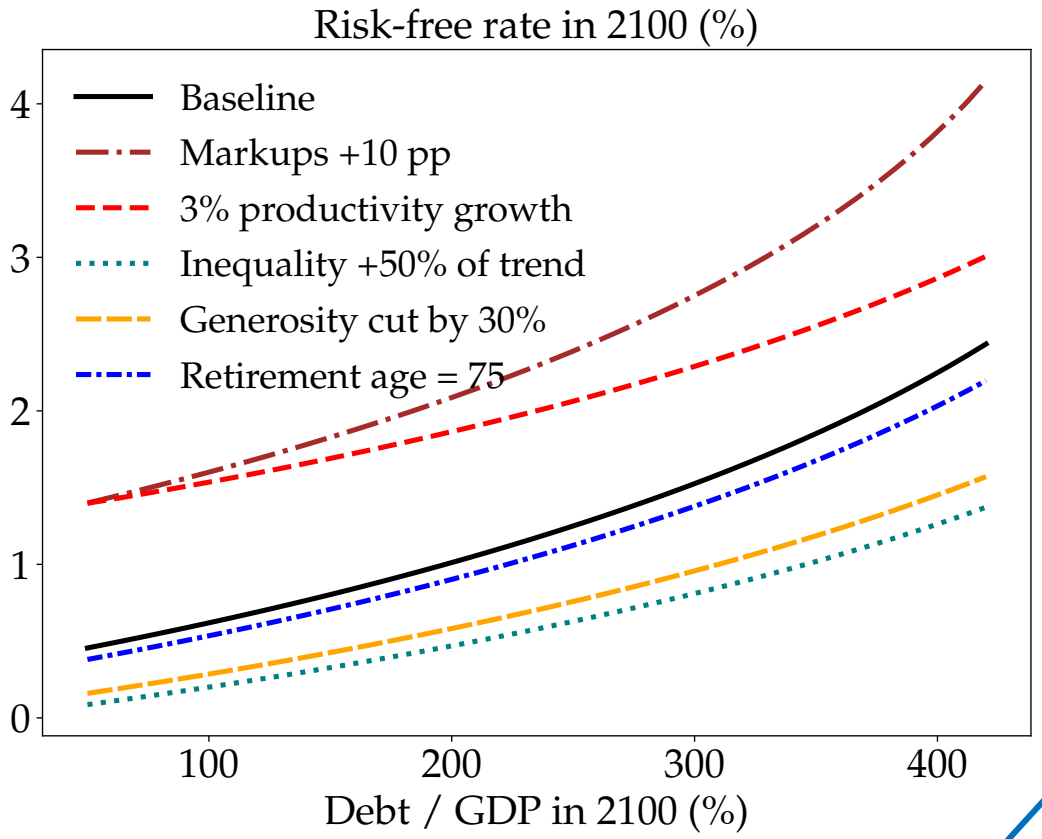


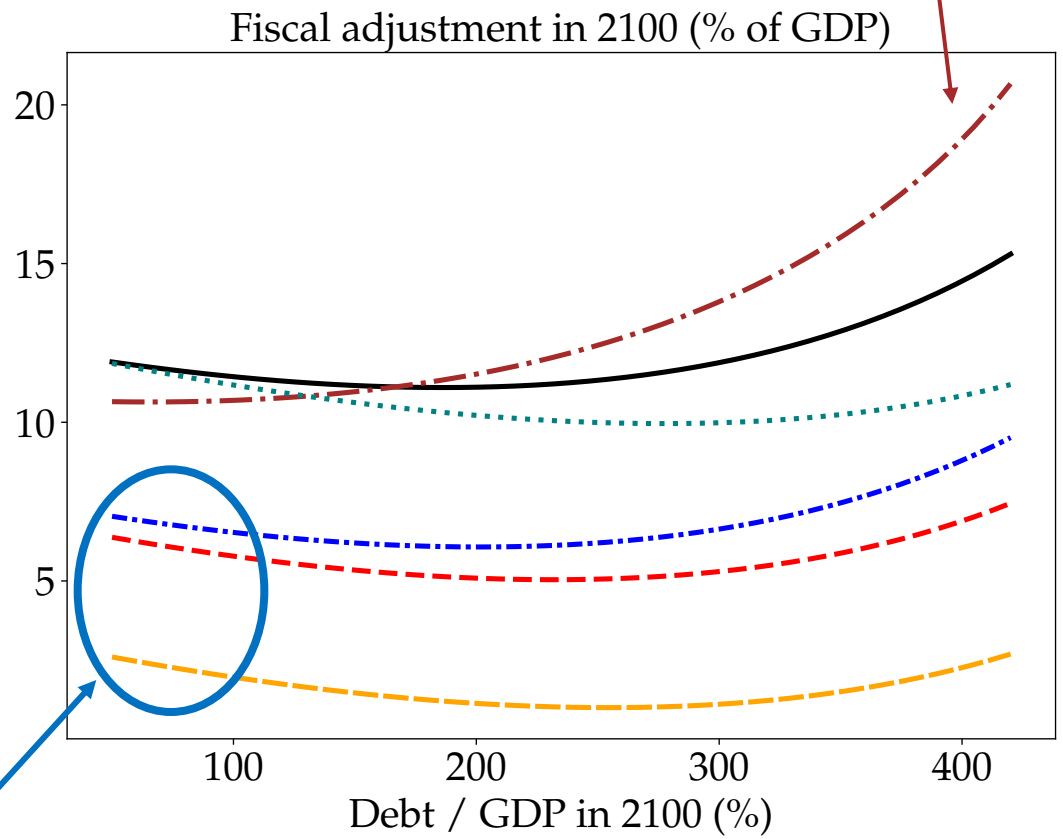


Endogenous convenience yield assumes gap between safe and risky rate falls with higher debt / GDP such that safe rate rises by 2 bp for each 1% extra debt / GDP.

But What If … ?

Rising profits can crowd out demand for government debt

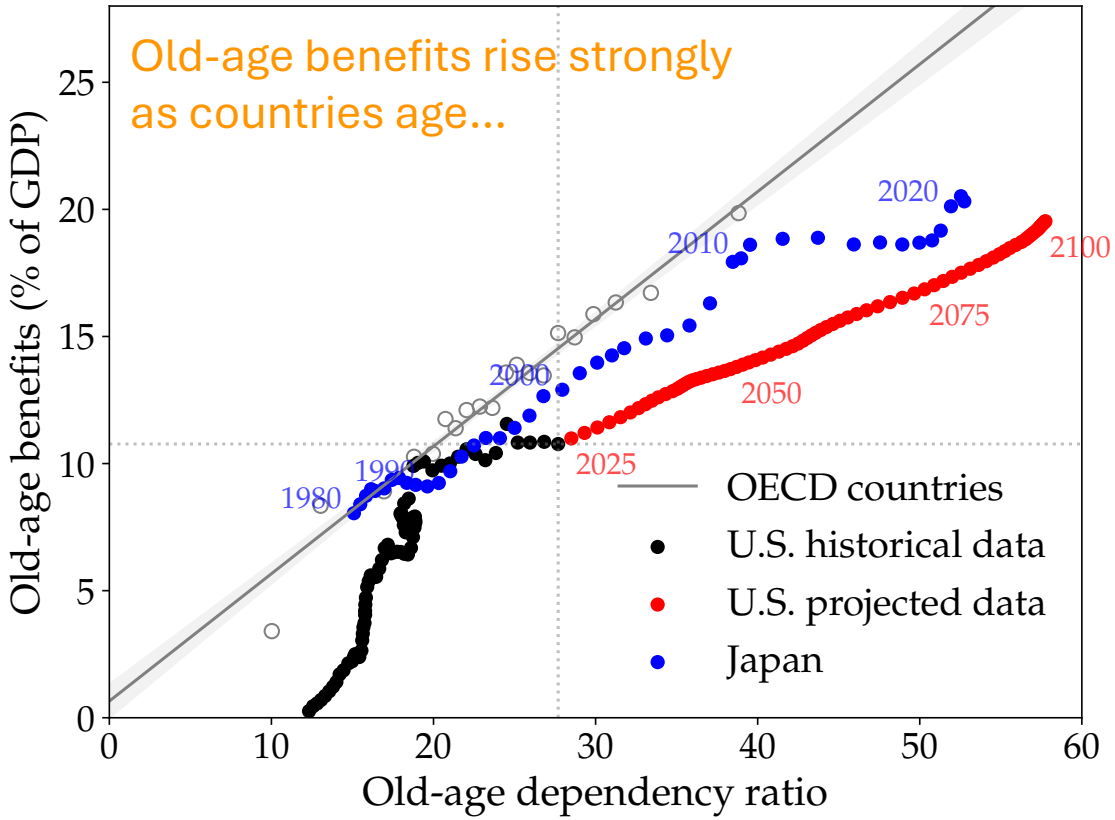


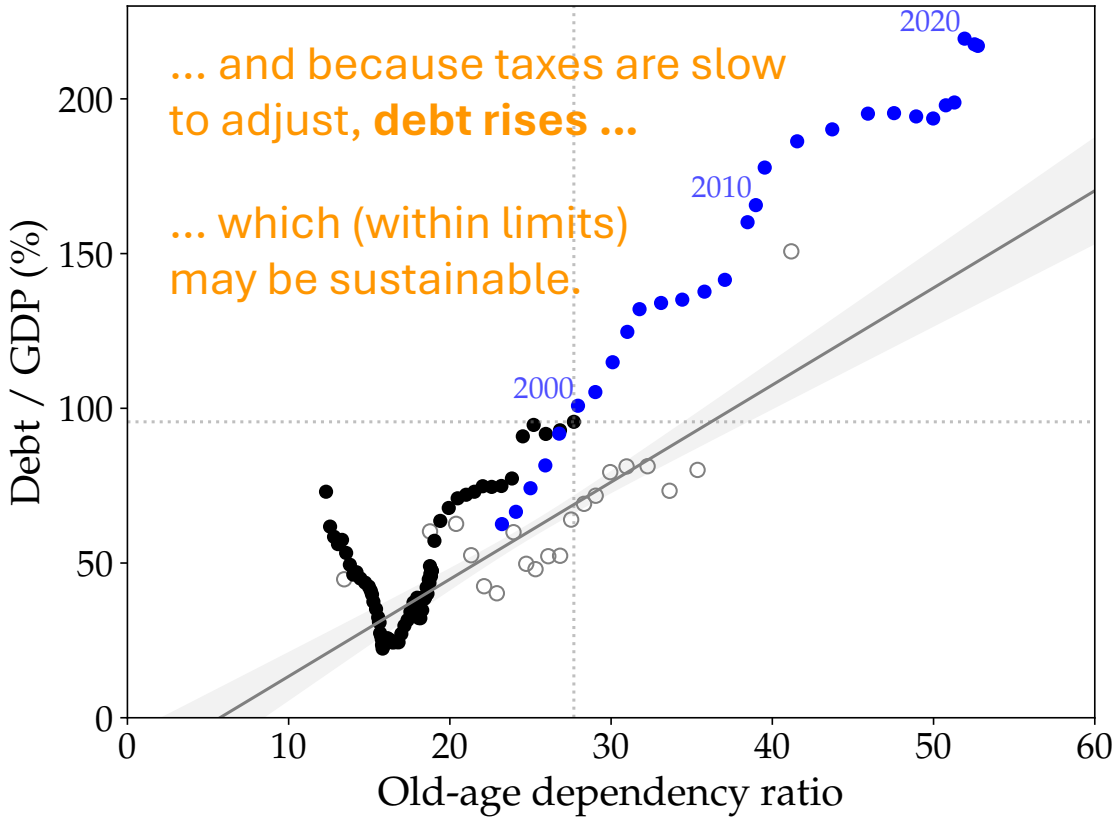


Retirement age of 75, Social Security + Medicare + Medicaid generosity cut of 30%, 3% productivity growth all help

Are we following the “Japanese playbook”?

Old-age payments grow, taxes stay put, debt shoots up





Data from OECD. Pooled sample across all years. “Old-age benefits” = General gov. spending on old-age and survivors’ benefits and health. Debt = Central gov. gross debt as share of GDP.