The Long-term Impact of Aging on the Federal Budget

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Demographic Change and the Federal Budget

Aging affects budget directly by increasing spending for old-age entitlement programs

- Social Security (public pensions)
- Medicare (health insurance)

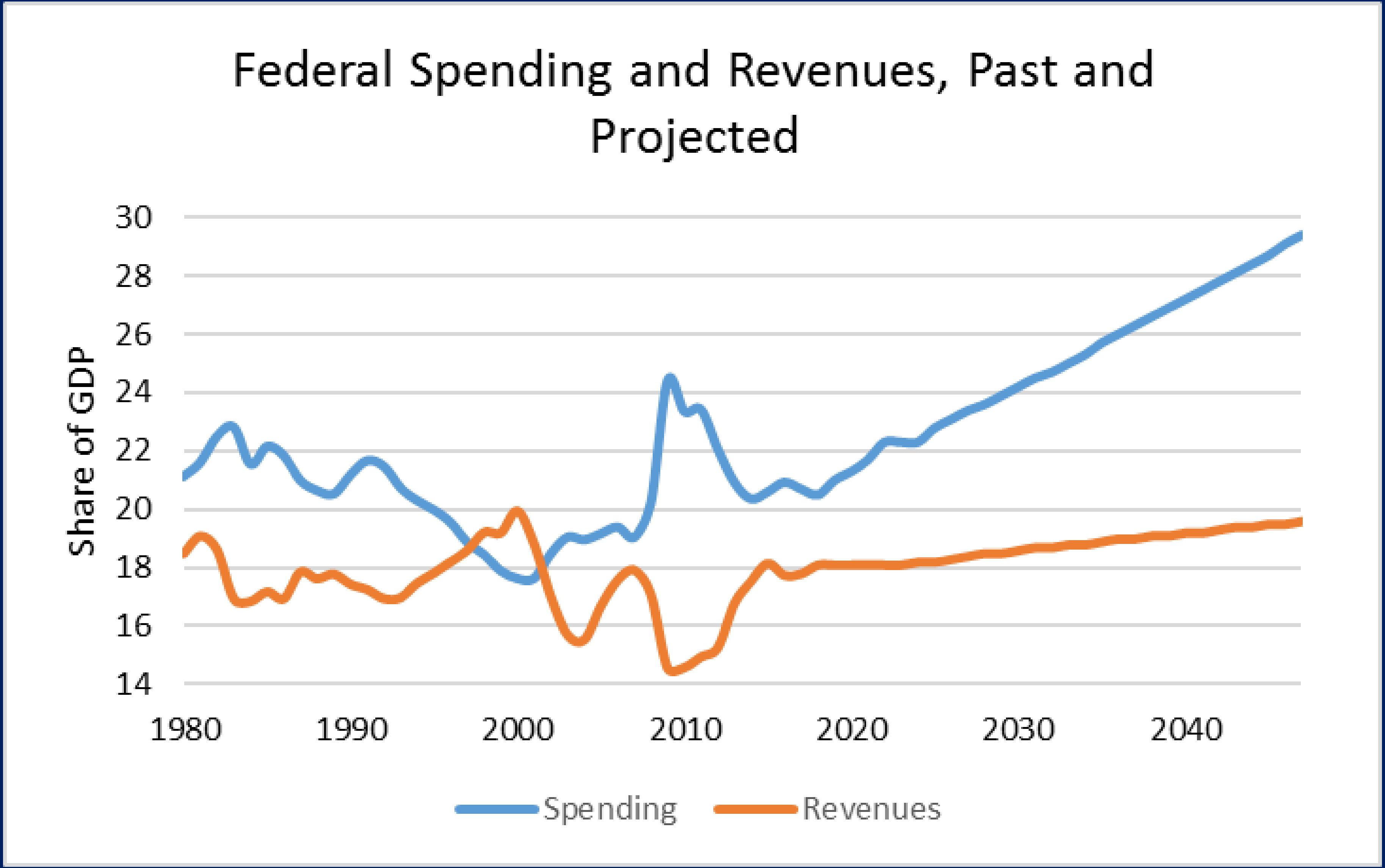
Aging might also have macroeconomic effects that affect the budget:

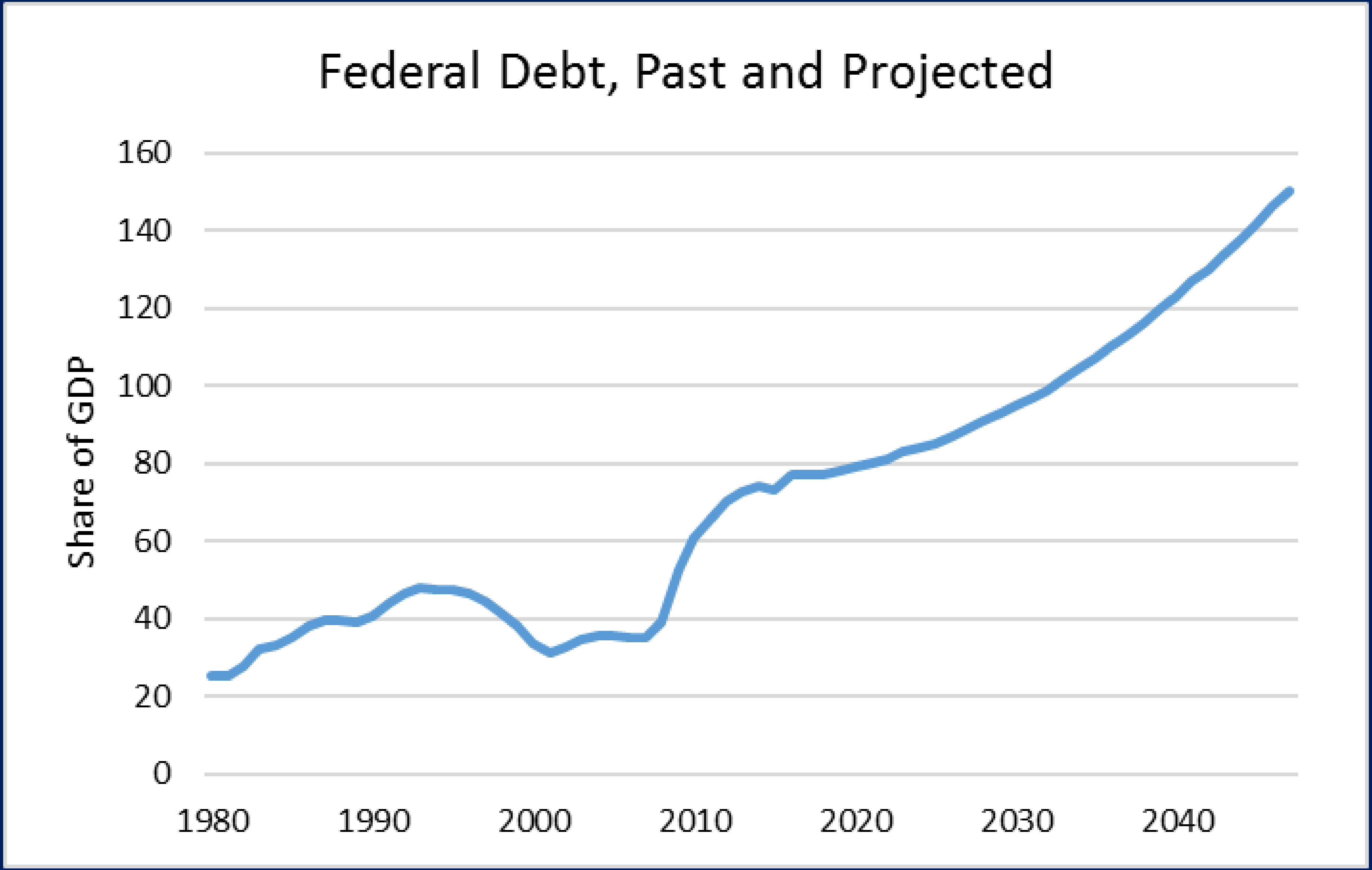
- Interest rates
- Labor Productivity and TFP

Fact that aging is expected to be permanent means long-term policy adjustments inevitable

Biggest policy questions: when to make those changes, and what should they be?

Projections from the Congressional Budget Office




Federal Debt, Past and Projected
Share of GDP
160
140
120
100
80
60
40
20
0
1980
1990
2000
2010
2020
2030
2040

Drivers of Long-term Budget Outlook

Demographic change *and*

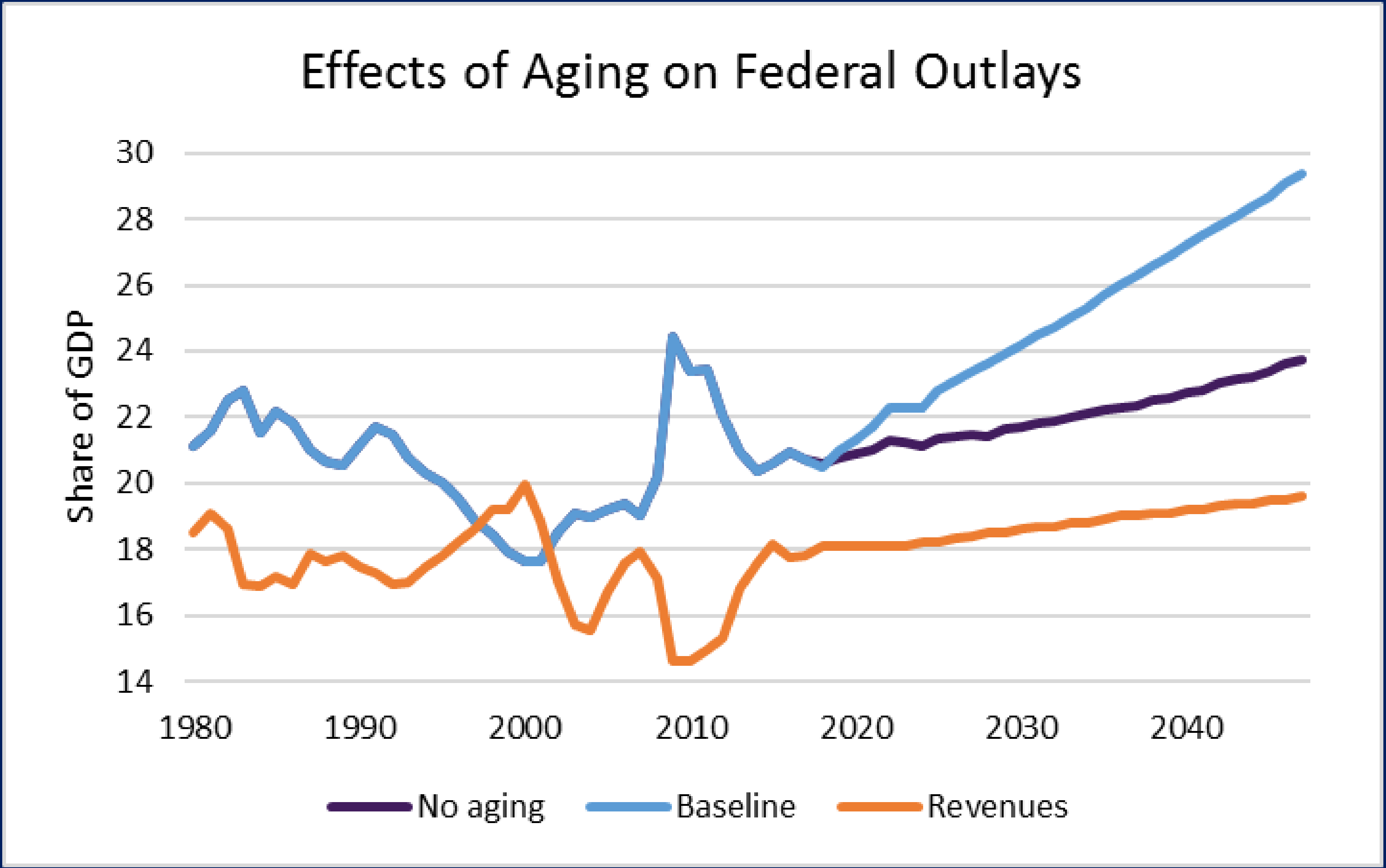
Rapid increases in per person health spending

Offset by

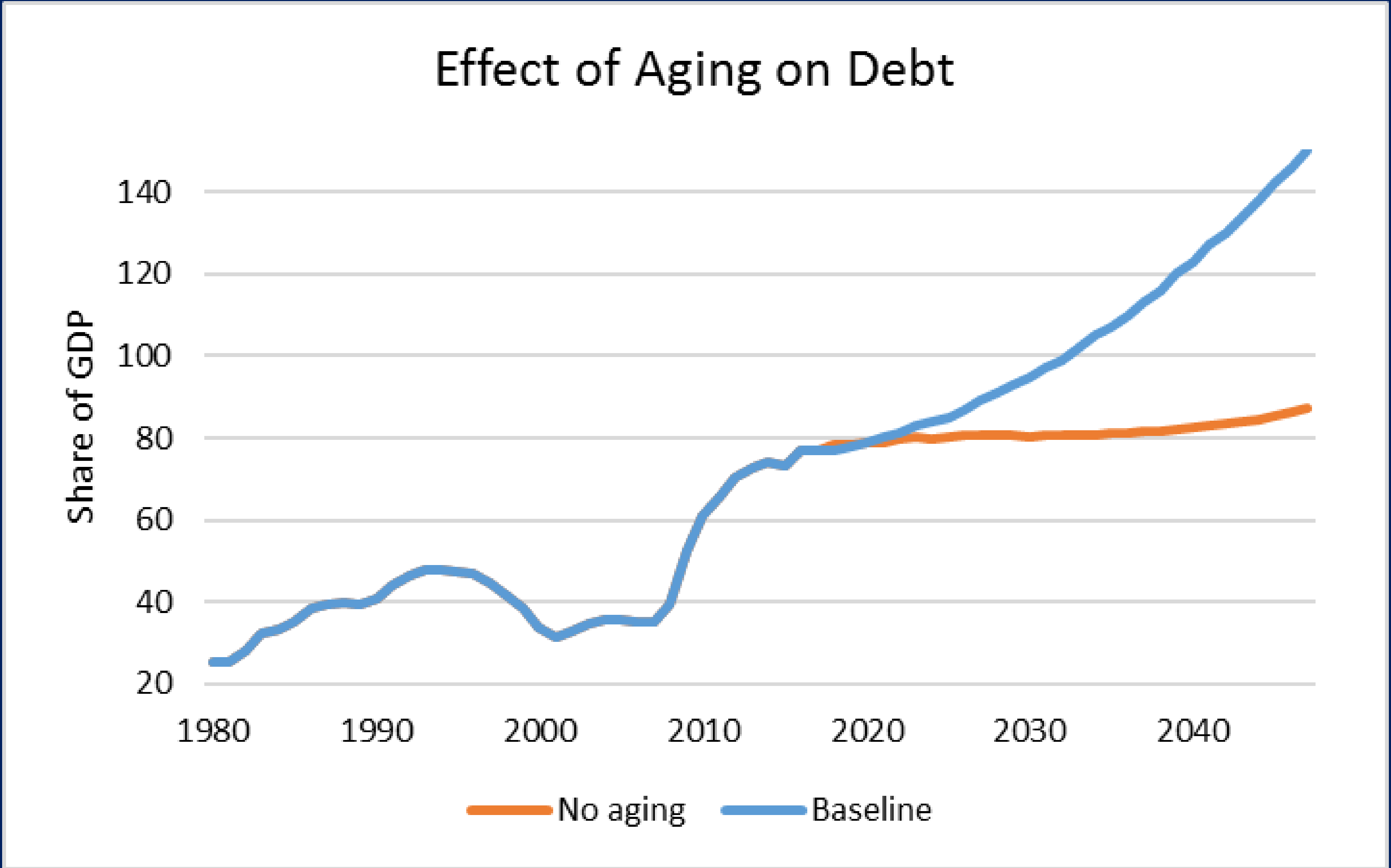
Increased revenues “real bracket creep” *and*

Reduction in discretionary spending

Without aging, budget deficits would increase slowly over time



But would be close to sustainable



Effect of aging on macroeconomic variables

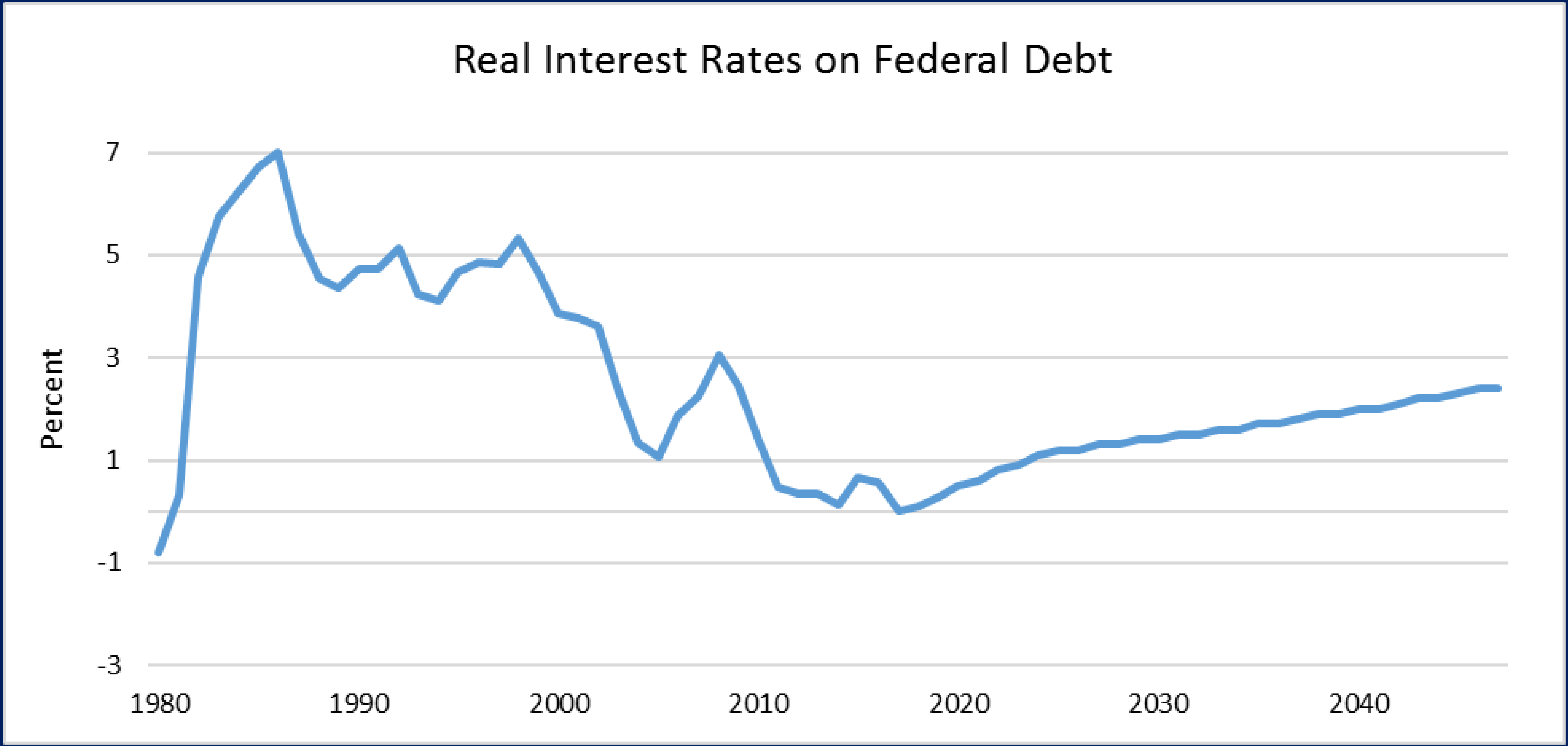
These counterfactuals held interest rates and productivity growth constant

Both interest rates and productivity growth have slowed, and slowdowns don’t appear to be because of Great Recession

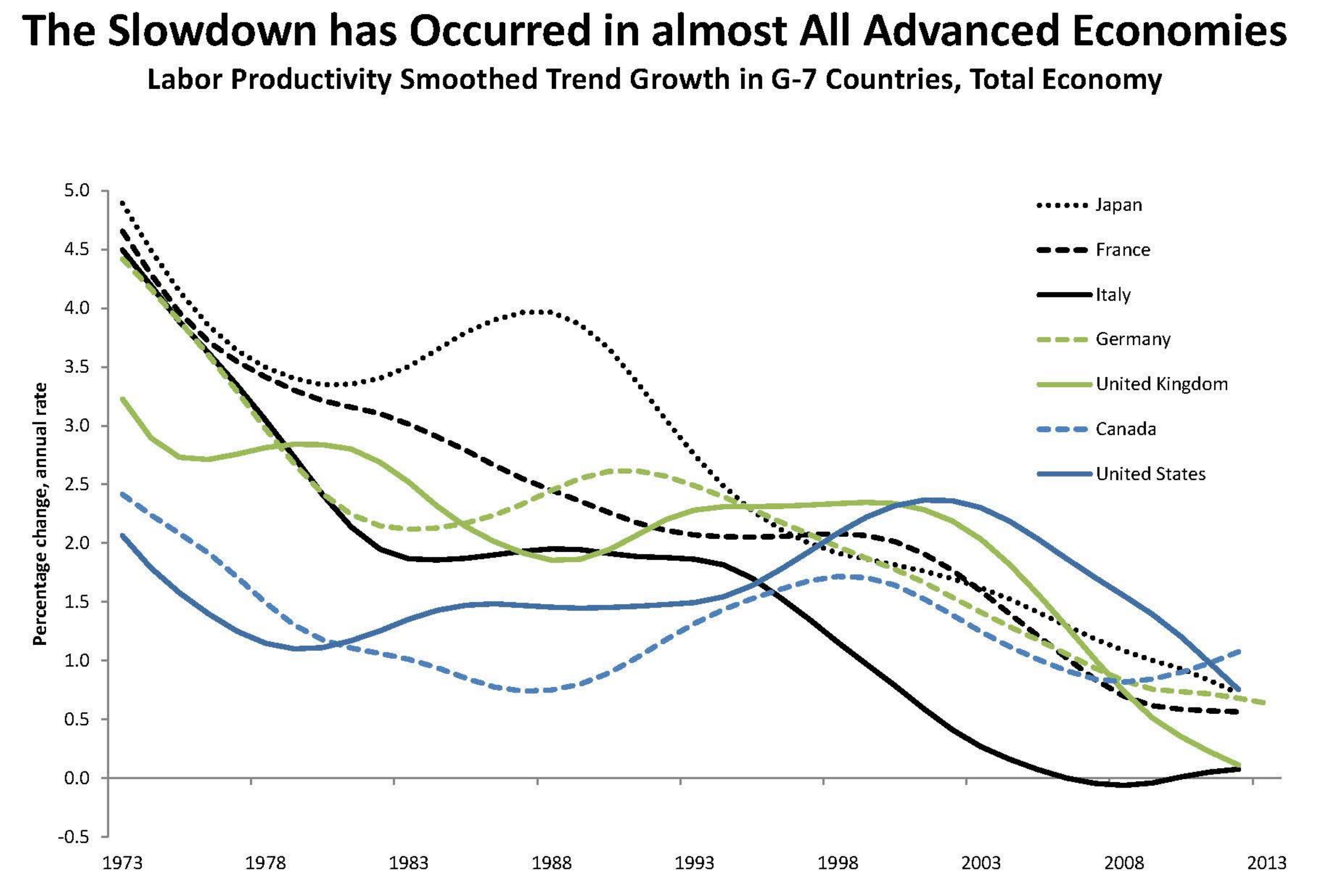
Some evidence that aging might affect interest rates and productivity growth

Both of these have budget implications

Secular decline in government borrowing costs



Decline in productivity growth



Aging and Interest Rates

Aging:

- Life expectancy increases (1/3)
- Fertility decline after baby boom (2/3)

Longer life expectancy: need to increase saving to maintain consumption in retirement

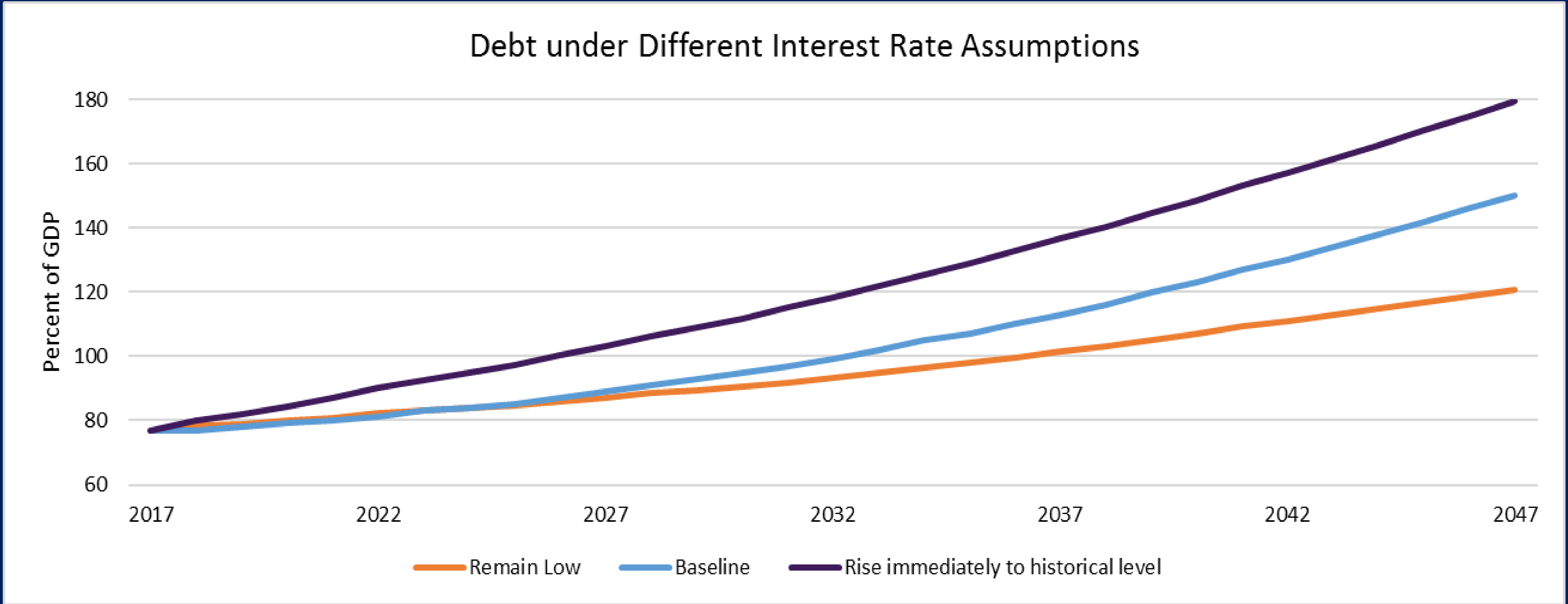
Fertility decline: increased share of people in high saving years – increases aggregate saving

Social planner model (Ramsey) – temporary (but long lasting) increase in capital labor ratio

Theoretical link between aging and interest rates

Some cross-country evidence as well

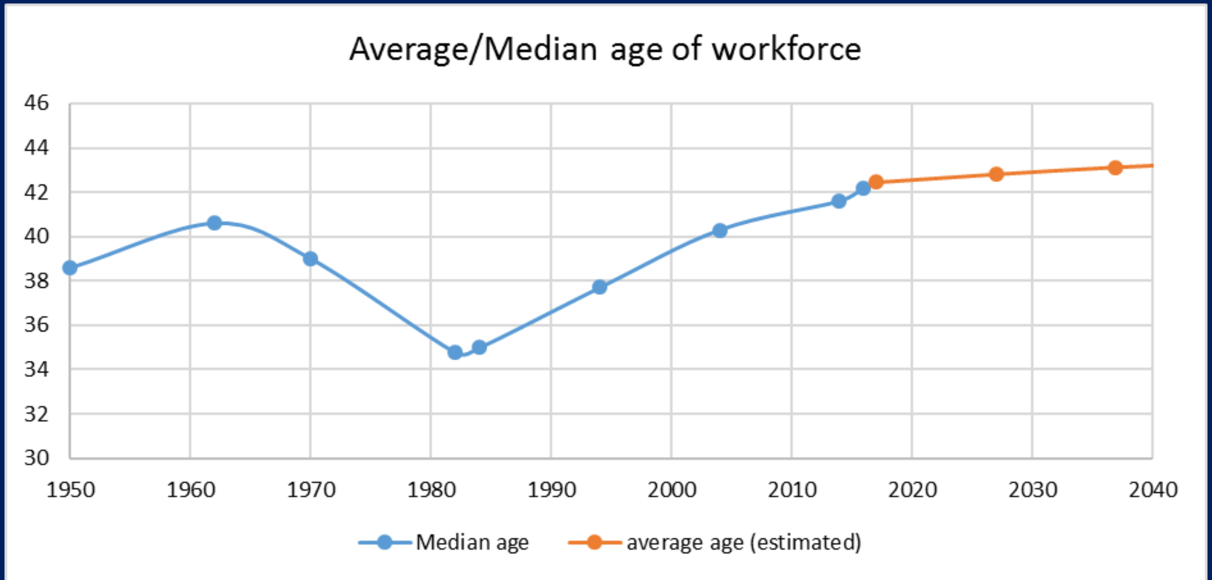
Lower Interest Rates Good for Budget Outlook



Aging and Productivity: Much Less Clear

Level of productivity and aging

- Older workforce:
  - Productivity lower– decline in cognitive and physical skills, inability to learn new technologies.
  - Productivity higher—more experience, more emotional control
- More capital deepening
  - Increases labor productivity, doesn’t affect TFP



Aging and Productivity: Much Less Clear

TFP growth and aging

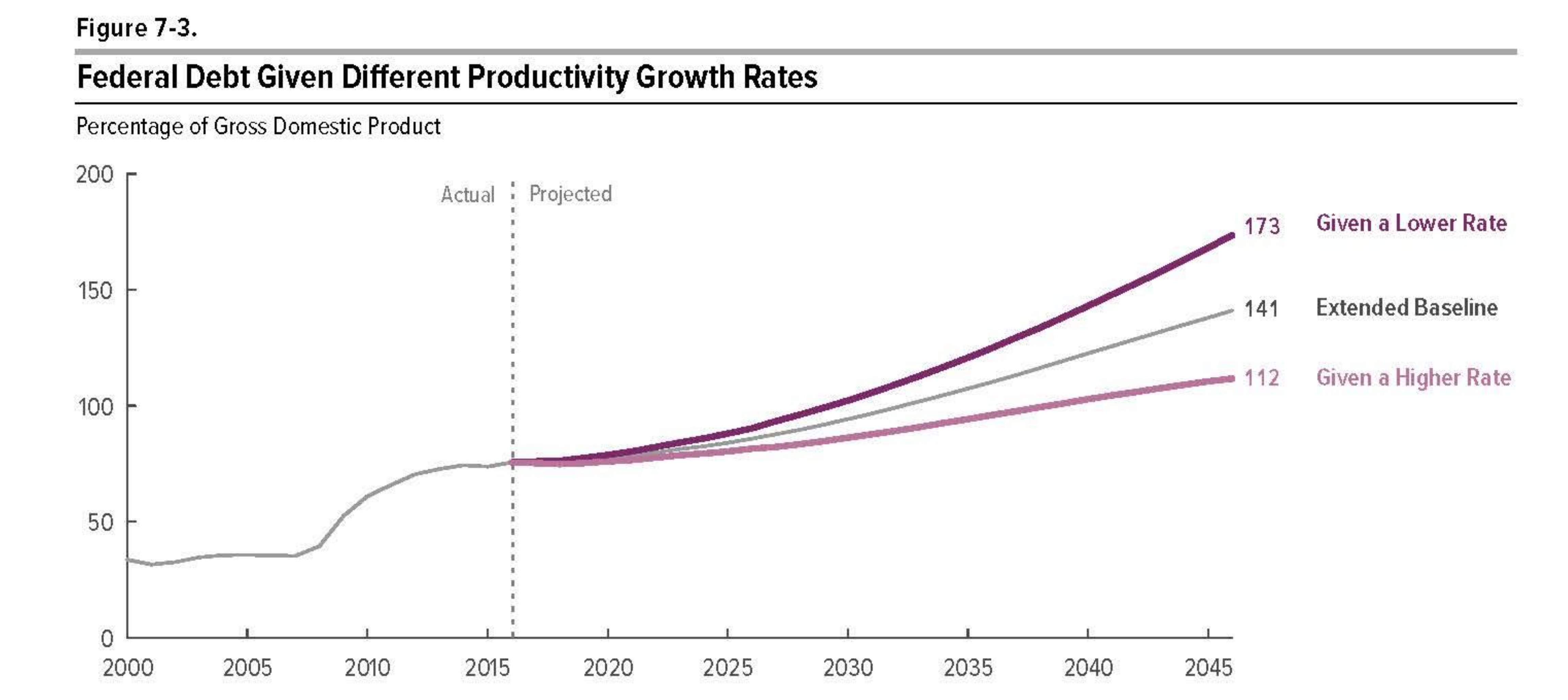
- Older workforce less likely to make scientific breakthroughs (age of Nobel=prize winning discoveries
- Slower labor force growth means less investment (even with capital deepening). Less adoption of new technologies.; less incentive to develop new technologies.

- Empirical results: some positive, some negative. Unresolved.

- CBO assumes interest rates move with productivity growth – lessens impact of slower productivity growth (slower GDP, but also lower interest rates)

- Still powerful effect on budgets

Low productivity growth bad for budget outlook



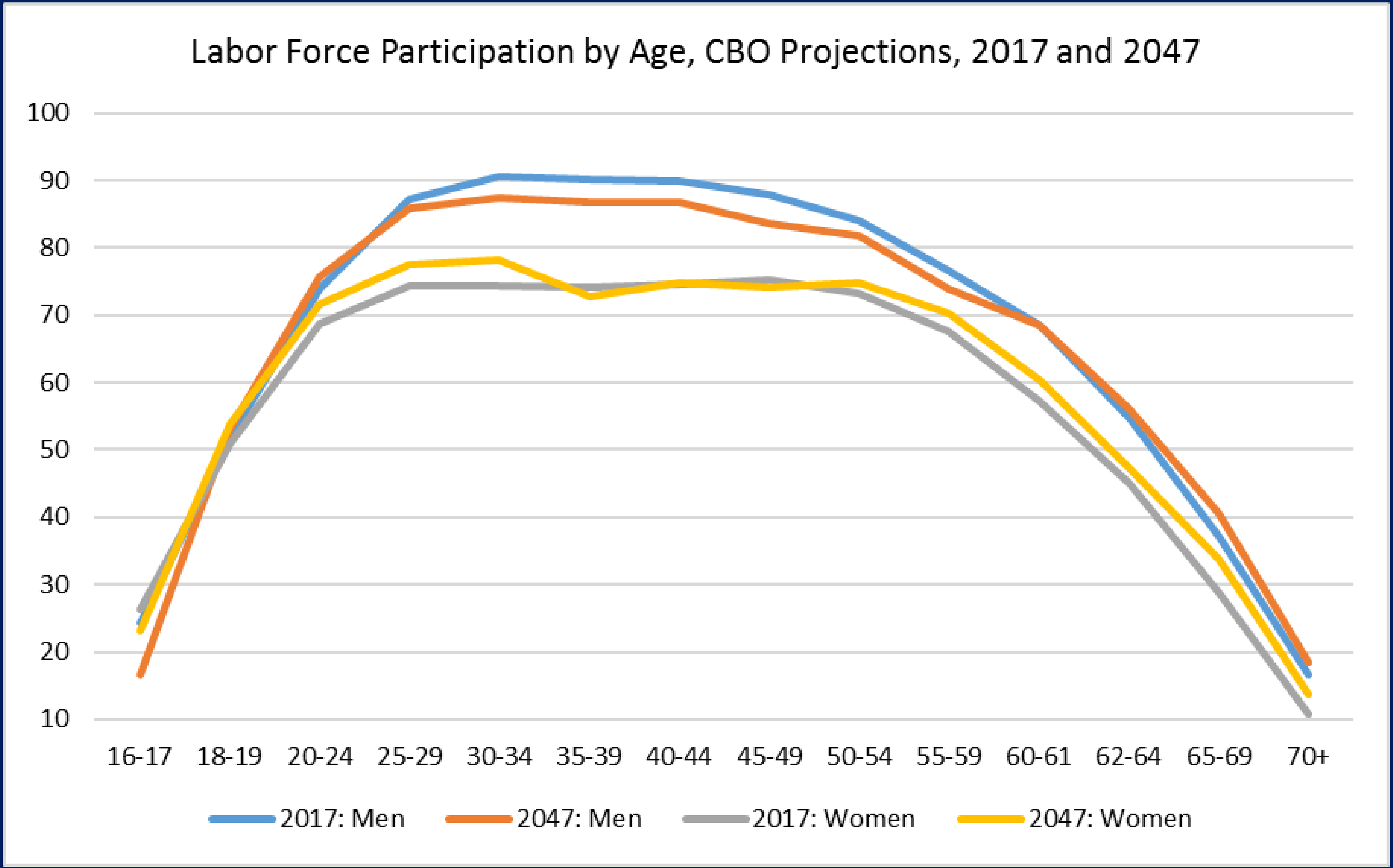
Policy Responses

- Effects of aging on budget depend on ratio of retirees to workers
- Increased labor force participation to “undo” aging?
- If not, must cut spending or raise taxes

Magnitude of changes in LFP Needed

Baseline	Workers (millions)	Beneficiaries 62+ (millions)	Ratio Workers to Beneficiaries	Share of 62+ in Labor Force	Overall Participation Rate
2017	171	46	3.7	25%	63%
2047	188	73	2.6	25%	59%
Changes in 2047 to get ratio to 2017 level					
Increased labor force participation, Unchanged benefits	270	73	3.7	25%	85%
Delayed retirement with benefit cuts	205	56	3.7	43%	65%

CBO LFP Projections: Not much change



How much could good LFP policy accomplish?

Women's labor force catches up with men

Labor Force Participation schedule shifts 2 years (so 56 year old has LFP of 54 year old)

- Time in labor force after age 62 increases about 2 years – about same as increase in life expectancy between now and 2047

Ad hoc experiment, but seems fairly optimistic

Increase in LFP without benefits cuts doesn't do much for budget

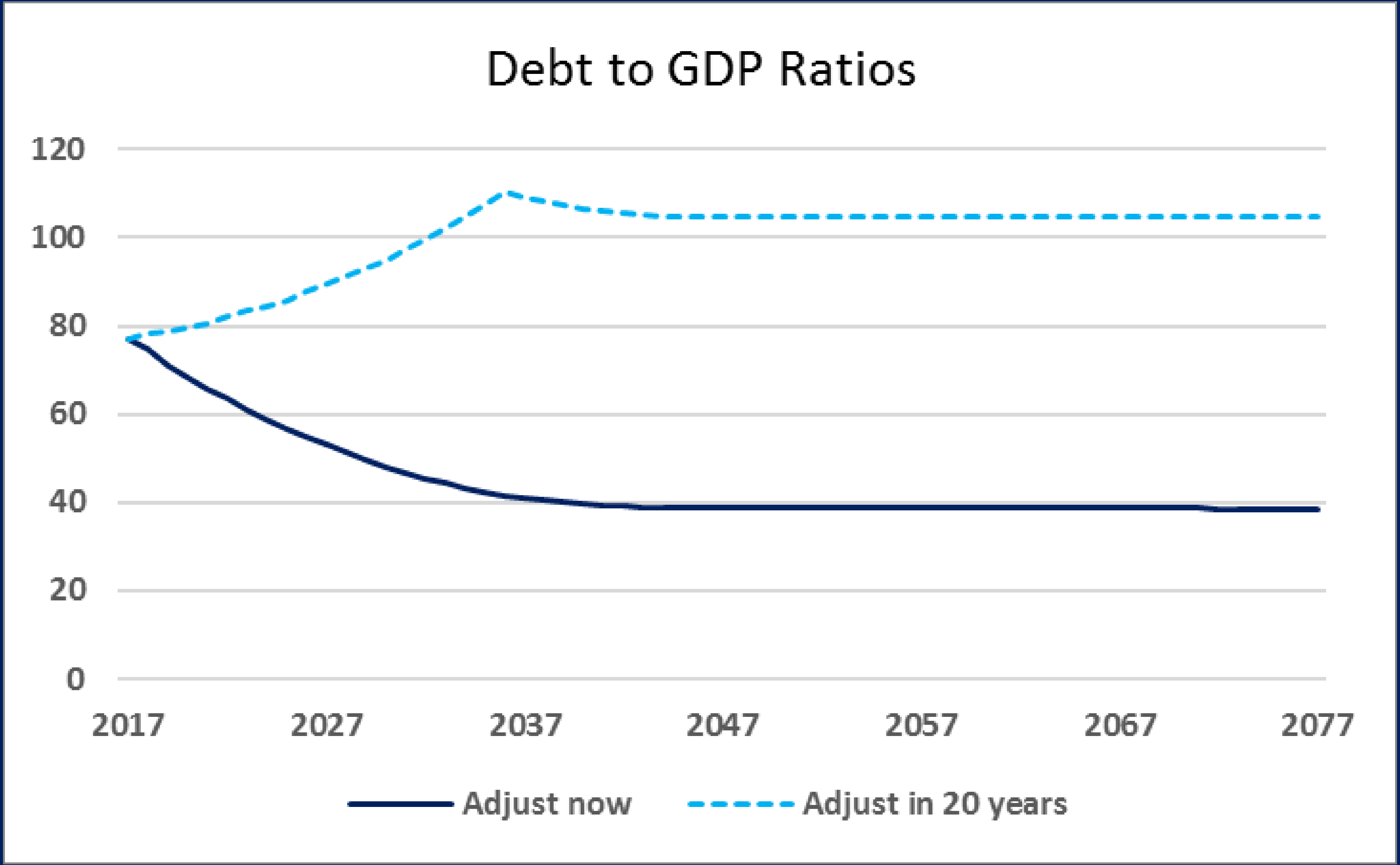
Baseline	Workers (millions)	Beneficiaries 62+ (millions)	Ratio Workers to Beneficiaries	Share of 62+ in Labor Force	Overall Participation Rate
2017	171	46	3.7	25%	63%
2047	188	73	2.6	25%	59%
Assume benefits don't change					
Delay retirement	193	73	2.6	29%	61%
Increase women's LFP	202	73	2.8	30%	64%
Do both	209	73	2.9	35%	66%
Assume increased work effort is offset by lower benefits					
Delay retirement	193	69	2.8	29%	61%
Increase women's LFP	202	68	3.0	30%	64%
Do both	209	63	3.3	35%	66%

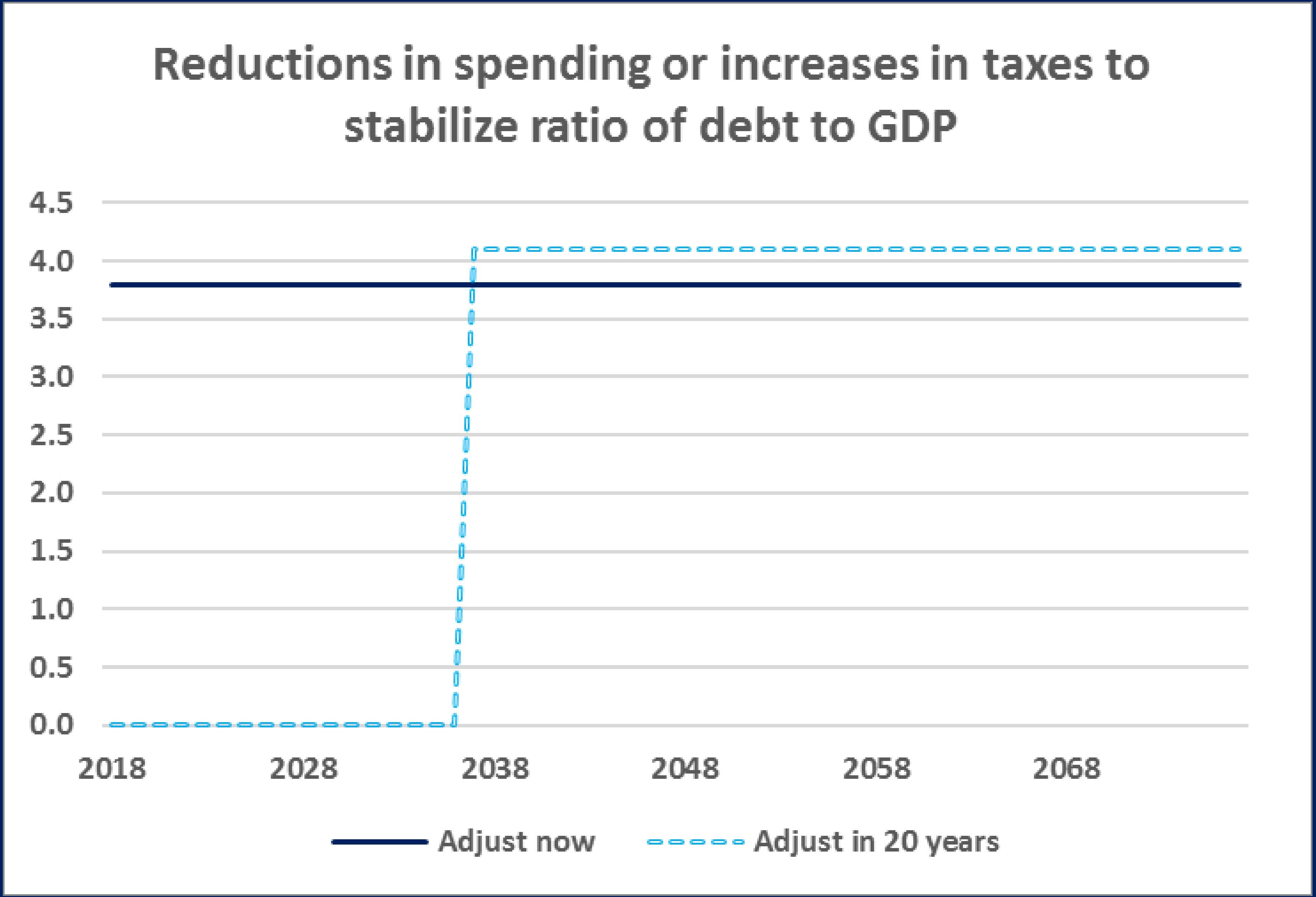
Spending Cuts and Tax Increases

- How much should we act now to mitigate changes needed later?
- What should be cut?

Low interest rates make consumption smoothing expensive and maybe not worth it

- Taking action now to lower deficits lowers future interest costs and so can help minimize changes required later
- But with interest rates so low, this helps very little
- Two experiments: (1) Take permanent action now, so that long-term budget is sustainable (no further action needed)
- Don’t change policy now, change it in 20 years to restore long-term sustainability


Debt to GDP Ratios
120
100
80
60
40
20
0
2017
2027
2037
2047
2057
2067
2077
Adjust now
Adjust in 20 years

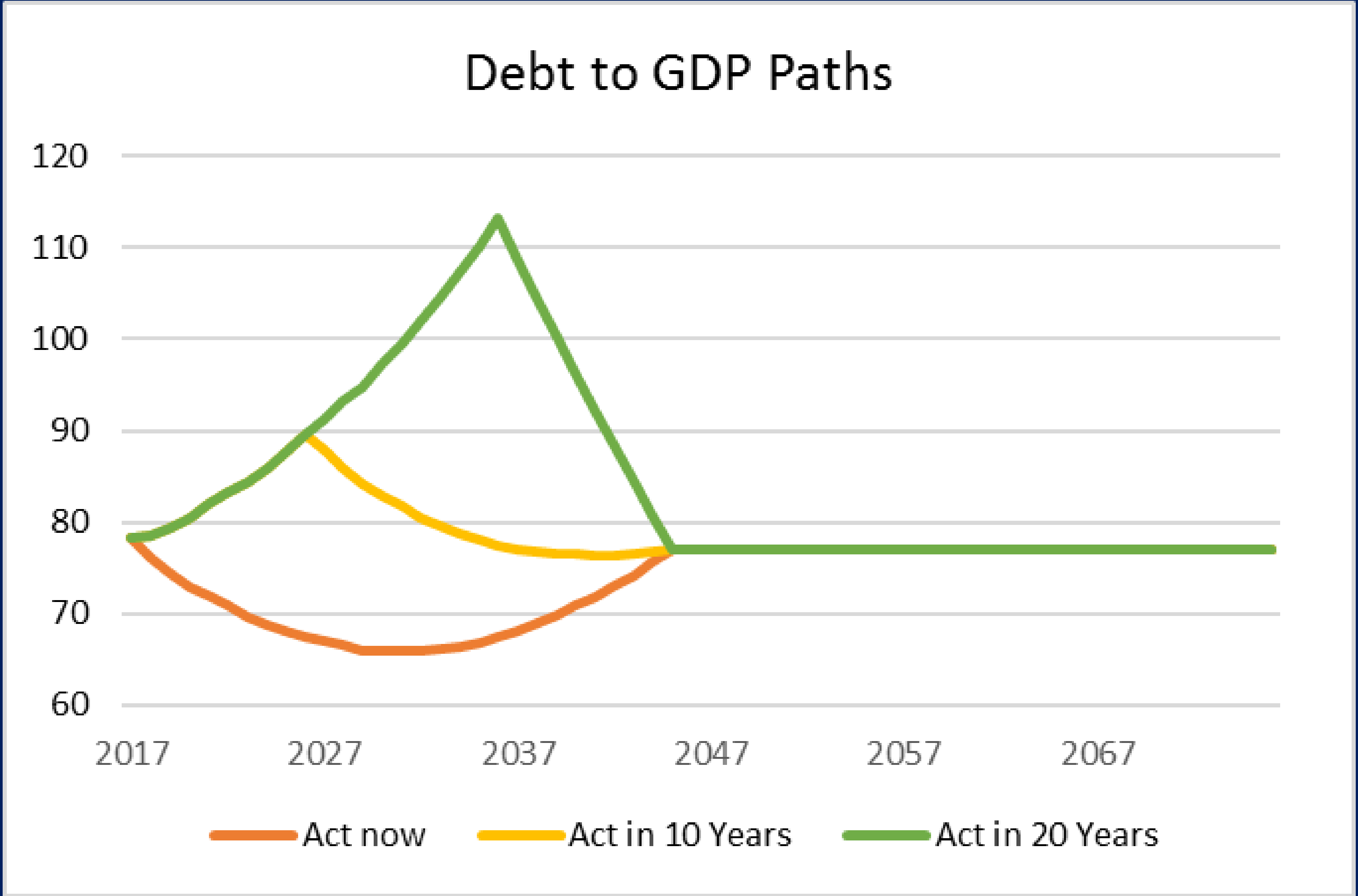


Reductions in spending or increases in taxes to stabilize ratio of debt to GDP
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2018
2028
2038
2048
2058
2068
Adjust now
Adjust in 20 years

Alternative Experiment

- Assume we want debt to GDP ratio in 2047 to be same as today
- Then compare current versus delayed action
- If we don't act now, debt to GDP ratio rises above 77% (current level)
- Then need much more action to bring it back down and put it on path to sustainability going forward

Fix debt to GDP ratio in 2047



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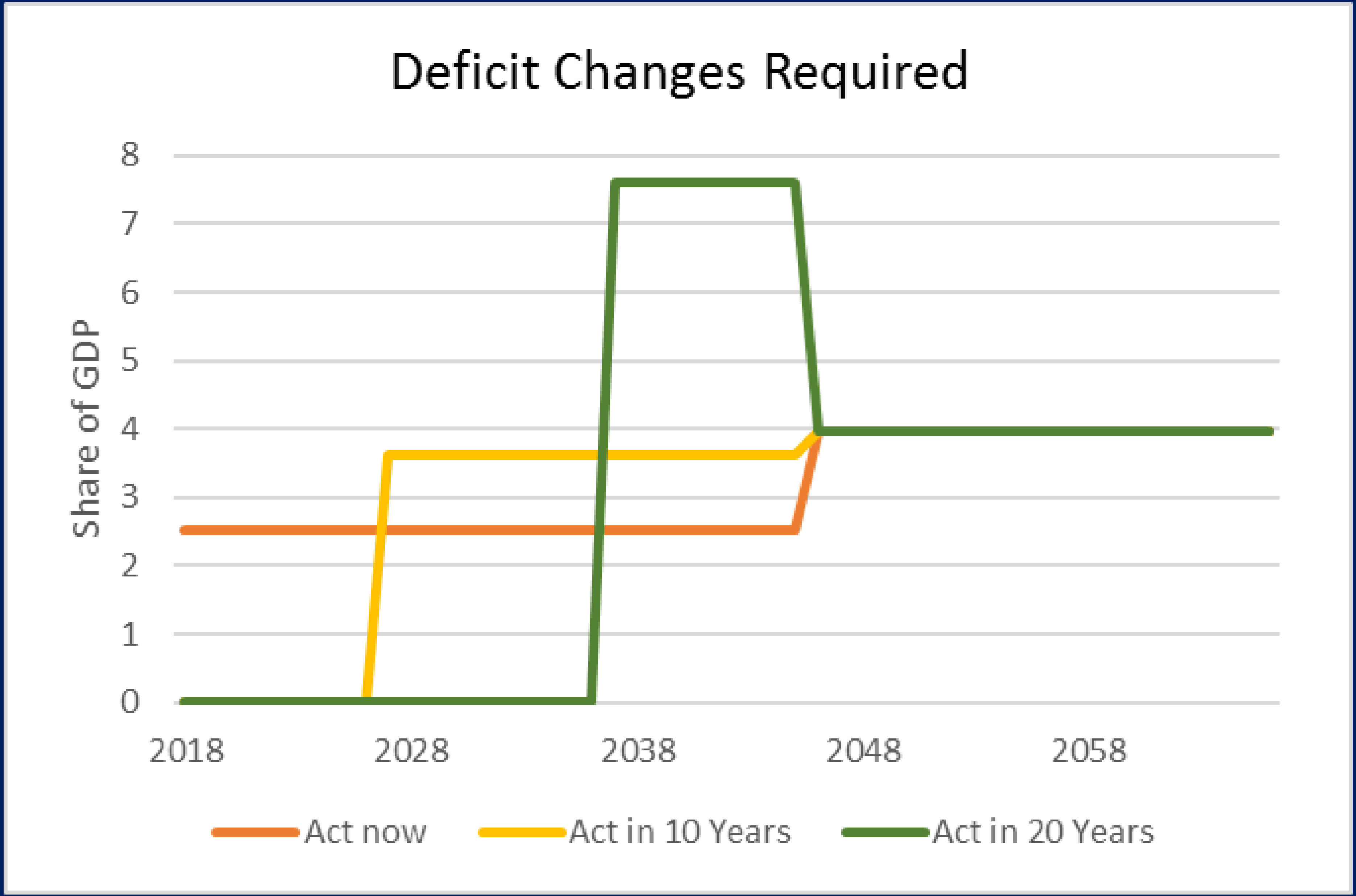

What types of changes should be enacted?

Political matter, but should be informed by economic research

Problem is not so much that programs have become too generous; mostly structural issue related to relative sizes of cohorts.

Means all changes should be on the table – tax increases, spending cuts, entitlement reform.

But cutting investment counterproductive—won't help future generations.

- Many types of spending should be considered investment: physical infrastructure, education, and transfers to low-income families.

Another huge issue: widening disparity in life expectancy by income in the US.

- Life expectancy gap between lowest and highest income quintiles 5 years for 1930 cohort; if recent trends continue, will be 12 years for 1960 cohort.

Means entitlement programs have already become much less progressive. Any benefit cuts shouldn't make that worse.

Conclusions

- Aging undoubtedly will put pressure on federal budget.
- Increased LFP can help, but won’t be enough.
- Given current interest rates, benefits of making large adjustments now are small.
- But should start the process of deciding how to respond.
- Good legislative process takes time, and people need time to adjust spending and workforce habits.