CHAPTER 19

MACROECONOMICS

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Government Debt and Budget Deficits

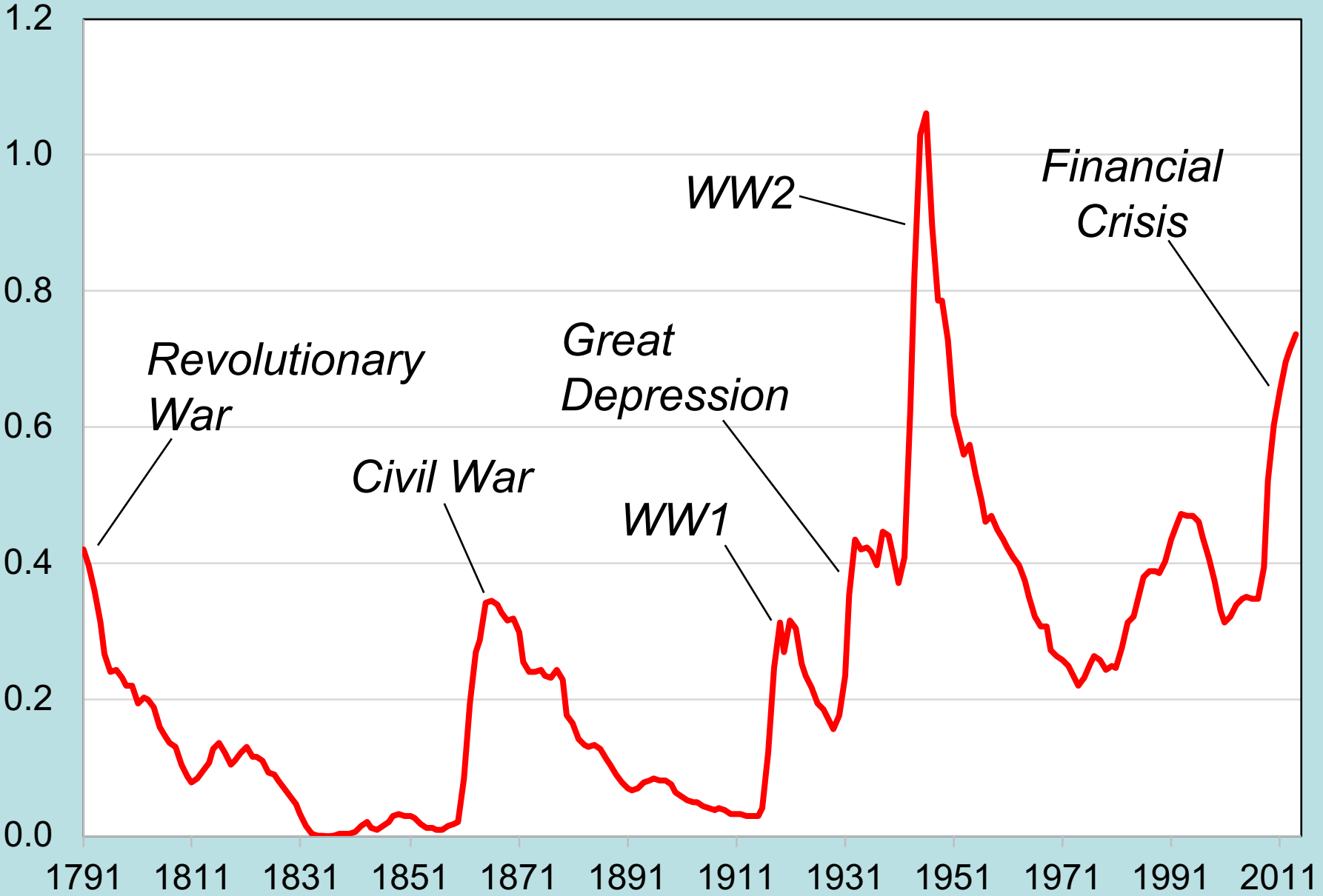
IN THIS CHAPTER, YOU WILL LEARN:

- about the size of the U.S. government's debt and how it compares to that of other countries
- problems measuring the budget deficit
- the traditional and Ricardian views of the government debt
- other perspectives on the debt

Indebtedness of the world's governments

Country	***Gov Debt*** (% of GDP)	***Country***	***Gov Debt*** (% of GDP)
Japan	142.9	France	70.9
Greece	125.3	U.K.	64.2
Italy	120.4	Germany	42.4
Portugal	99.8	Netherlands	42.3
Belgium	91.6	Canada	40.9
United States	85.5	Switzerland	6.5
Spain	73.3	Australia	3.5

Ratio of U.S. govt debt to GDP



The U.S. experience in recent years

Early 1980s through early 1990s

- debt–GDP ratio: 25.5% in 1980, 48.9% in 1993
- due to Reagan tax cuts, increases in defense spending & entitlements

Early 1990s through 2000

- $290b deficit in 1992, $236b surplus in 2000
- debt–GDP ratio fell to 32.5% in 2000
- due to rapid growth, stock market boom, tax hikes

The U.S. experience in recent years

Early 2000s

- the return of huge deficits due to Bush tax cuts, 2001 recession, Iraq war

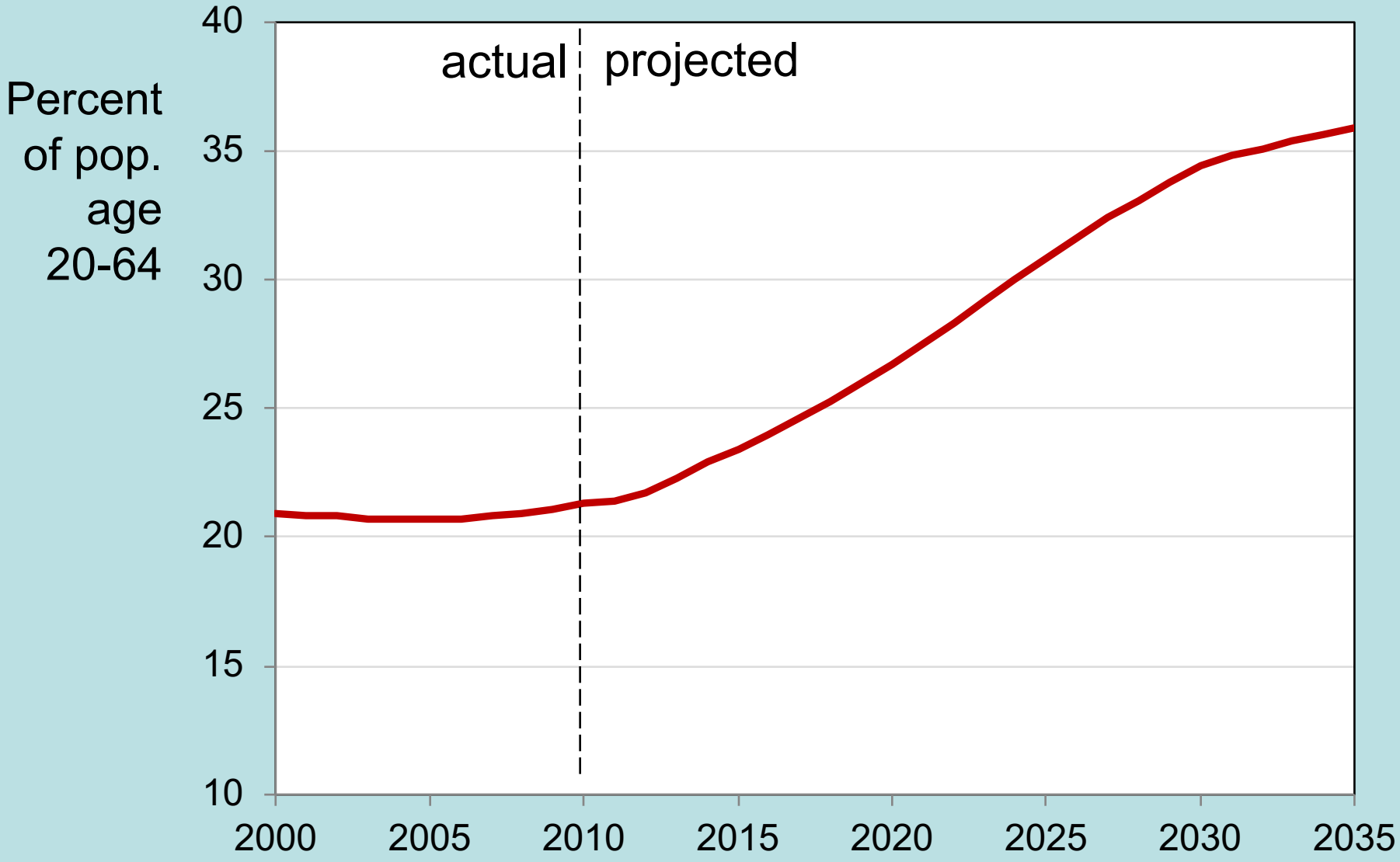
The 2008-2009 recession and its aftermath

- fall in tax revenues
- huge spending increases (bailouts of financial institutions and auto industry, stimulus package)
- a weak recovery did not stop the debt–GDP ratio from rising further

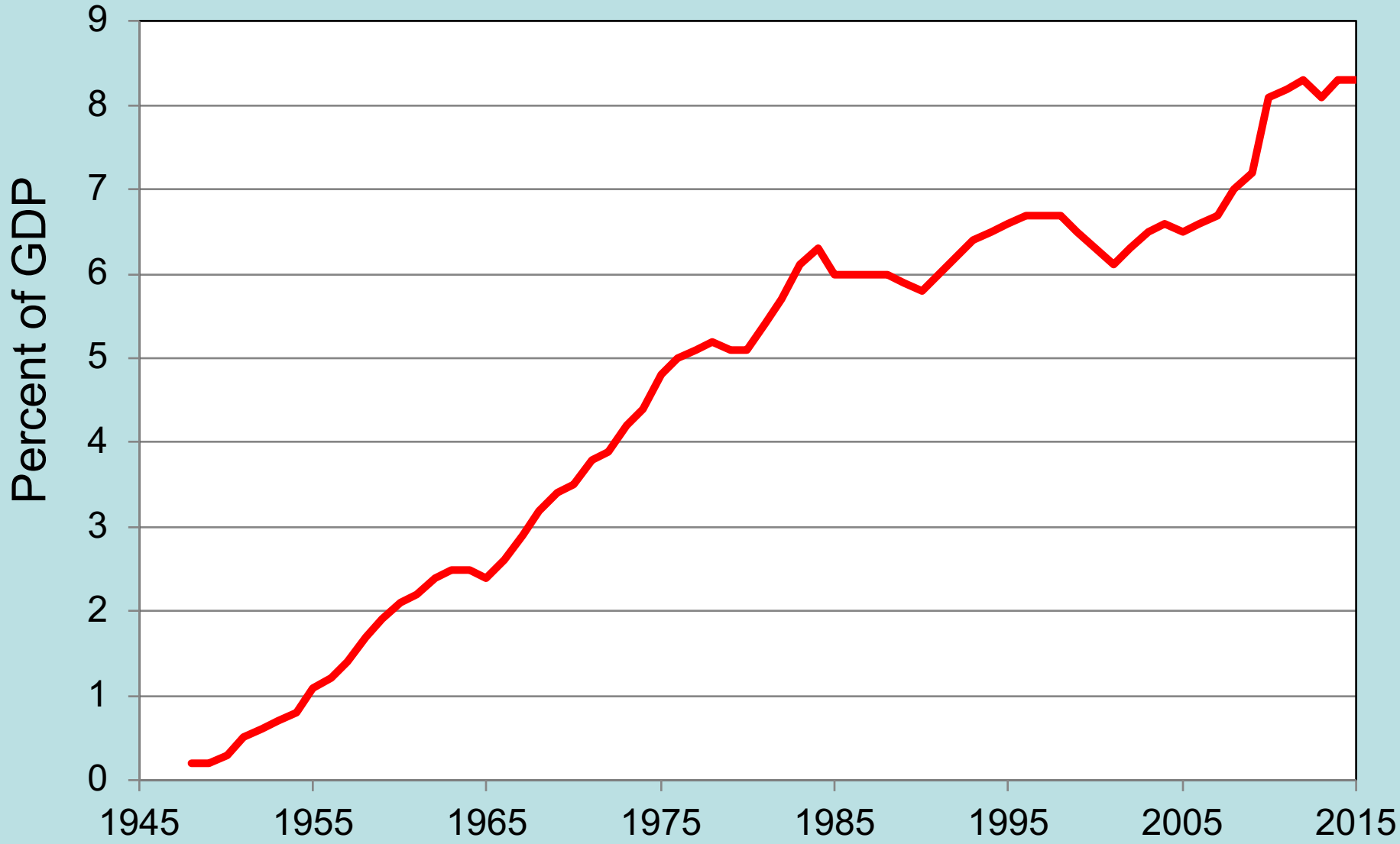
The troubling long-term fiscal outlook

- The U.S. population is aging.
- Health care costs are rising.
- Spending on entitlements like Social S;ecurity and Medicare is growing.
- Deficits and the debt are projected to significantly increase…

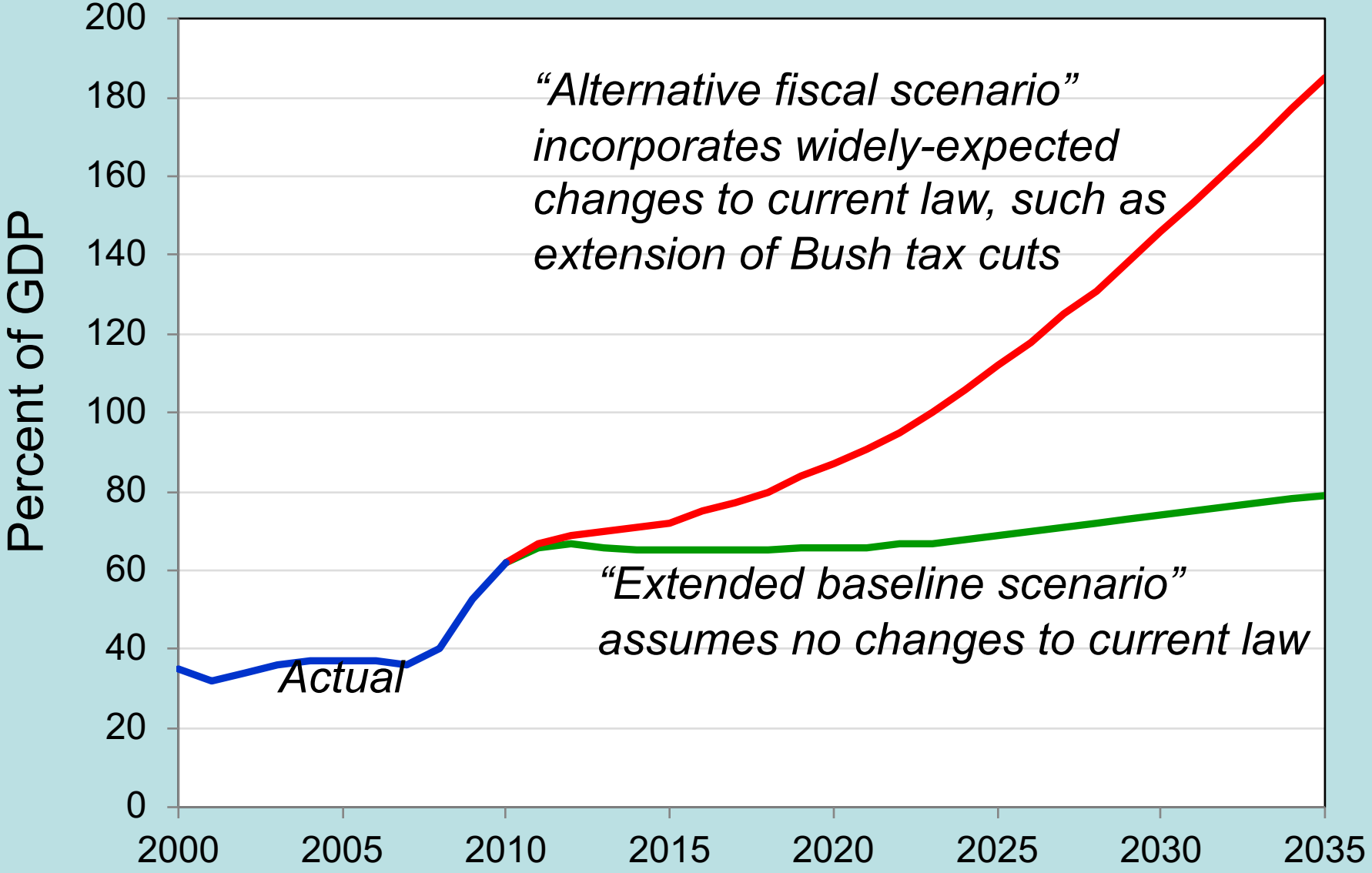
U.S. population age 65+, as percent of population age 20–64



U.S. government spending on Medicare and Social Security, 1948–2014



Projected U.S. federal government debt in two scenarios, 2000–2035



Problems measuring the deficit

1. Inflation
2. Capital assets
3. Uncounted liabilities
4. The business cycle

MEASUREMENT PROBLEM 1:
Inflation

- Suppose the real debt is constant, which implies a zero real deficit.
- In this case, the nominal debt ***D*** grows at the rate of inflation:

$$\Delta D/D = \pi \quad \text{or} \quad \Delta D = \pi D$$

- The reported deficit (nominal) is πD even though the real deficit is zero.
- Hence, should subtract πD from the reported deficit to correct for inflation.

MEASUREMENT PROBLEM 1:
Inflation

- Correcting the deficit for inflation can make a huge difference, especially when inflation is high.
- Example: In 1979,

  nominal deficit = \$28 billion

  inflation = 8.6%

  debt = \$495 billion

  πD = 0.086 × \$495b = \$43b

  real deficit = \$28b − \$43b = \$15b surplus

MEASUREMENT PROBLEM 2:
Capital Assets

- Currently, deficit = change in debt
- Better, **capital budgeting:**
  deficit = (change in debt) − (change in assets)
- EX: Suppose govt sells an office building and uses the proceeds to pay down the debt.
  - under current system, deficit would fall
  - under capital budgeting, deficit unchanged, because fall in debt is offset by a fall in assets.
- Problem w/ cap budgeting: Determining which govt expenditures count as capital expenditures.

MEASUREMENT PROBLEM 3:
Uncounted liabilities

- Current measure of deficit omits important liabilities of the government:
  - future pension payments owed to current govt workers
  - future Social Security payments
  - contingent liabilities, *e.g.*, covering federally insured deposits when banks fail

    (Hard to attach a dollar value to contingent liabilities, due to inherent uncertainty.)

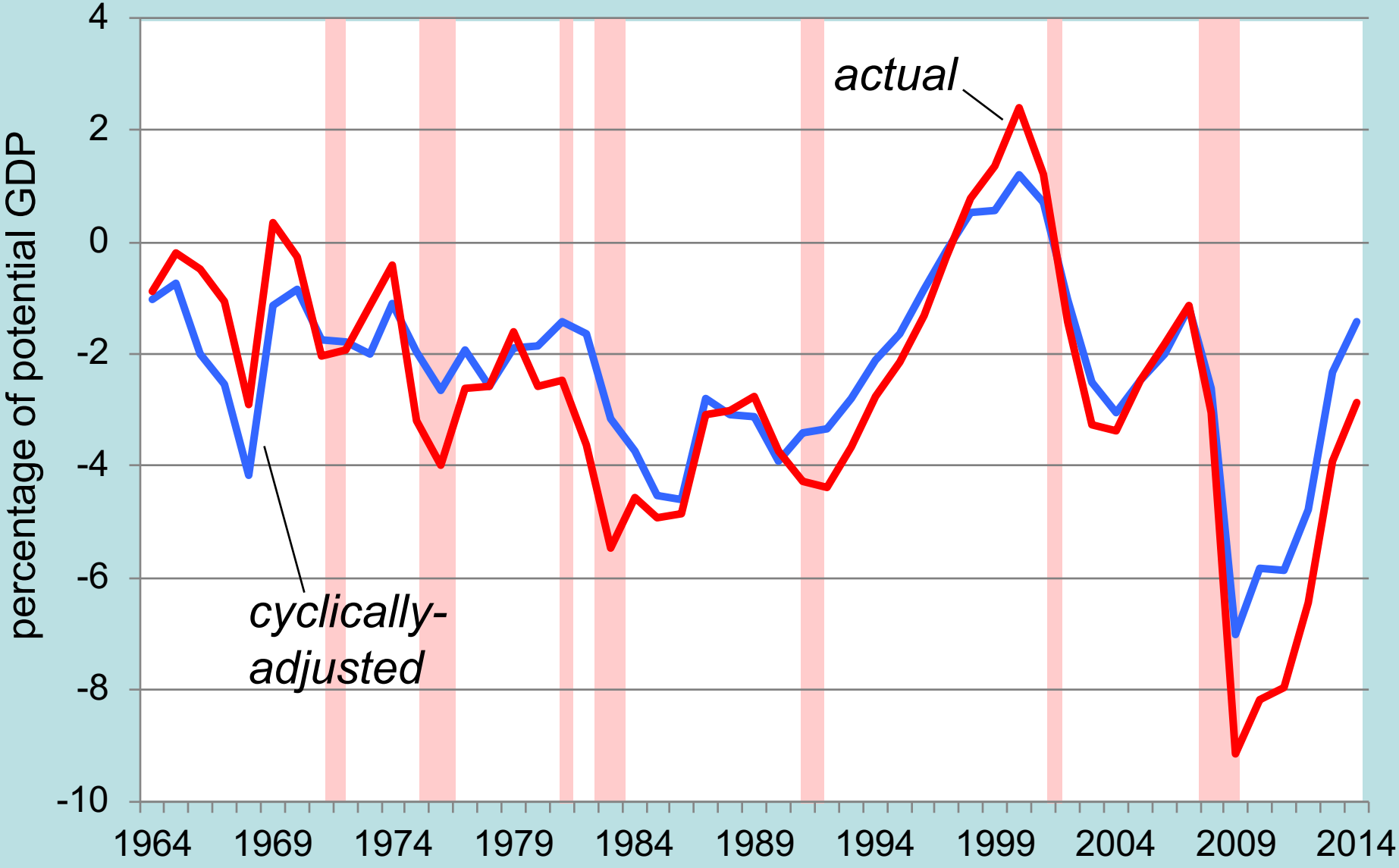
MEASUREMENT PROBLEM 4:
The business cycle

- The deficit varies over the business cycle due to automatic stabilizers (unemployment insurance, the income tax system).
- These are not measurement errors but do make it harder to judge fiscal policy stance.
  - *E.g.*, is an observed increase in deficit due to a downturn or an expansionary shift in fiscal policy?

MEASUREMENT PROBLEM 4:
The business cycle

- Solution: **cyclically-adjusted budget deficit** (aka full-employment deficit) based on estimates of what govt spending & revenues would be if economy were at the natural rates of output and unemployment.

The actual and cyclically-adjusted U.S. federal budget surpluses/deficits



The bottom line

We must exercise care
when interpreting
the reported deficit figures.

Is the govt debt really a problem?

Consider a tax cut with corresponding increase in the government debt.

Two viewpoints:

1. Traditional view
2. Ricardian view

The traditional view

- Short run: $\uparrow Y$, $\downarrow u$
- Long run:
  - Y and u back at their natural rates
  - closed economy: $\uparrow r$, $\downarrow I$
  - open economy: $\uparrow \varepsilon$, $\downarrow NX$
    (or higher trade deficit)
- Very long run:
  - slower growth until economy reaches new steady state with lower income per capita

The Ricardian view

- due to David Ricardo (1820), advanced more recently by Robert Barro
- According to **Ricardian equivalence**, a debt-financed tax cut has no effect on consumption, national saving, the real interest rate, investment, net exports, or real GDP, even in the short run.

The logic of Ricardian Equivalence

- Consumers are forward-looking,
  know that a debt-financed tax cut today
  implies an increase in future taxes
  that is equal – in present value – to the tax cut.
- The tax cut does not make consumers better off,
  so they do not increase consumption spending.

  Instead, they save the full tax cut in order to repay the future tax liability.
- Result: Private saving rises by the amount public saving falls, leaving national saving unchanged.

Problems with Ricardian Equivalence

- **Myopia**: Not all consumers think so far ahead; some see the tax cut as a windfall.
- **Borrowing constraints**: Some consumers cannot borrow enough to achieve their optimal consumption, so they spend a tax cut.
- **Future generations**: If consumers expect that the burden of repaying a tax cut will fall on future generations, then a tax cut now makes them feel better off, so they increase spending.

OTHER PERSPECTIVES:
Balanced budgets vs. optimal fiscal policy

- Some politicians have proposed amending the U.S. Constitution to require balanced federal govt budget every year.
- Many economists reject this proposal, arguing that deficit should be used to:
  - stabilize output & employment
  - smooth taxes in the face of fluctuating income
  - redistribute income across generations when appropriate

OTHER PERSPECTIVES:
Fiscal effects on monetary policy

- Govt deficits may be financed by printing money
- A high govt debt may be an incentive for policymakers to create inflation (to reduce real value of debt at expense of bond holders)

Fortunately:

- little evidence that the link between fiscal and monetary policy is important
- most governments know the folly of creating inflation
- most central banks have (at least some) political independence from fiscal policymakers

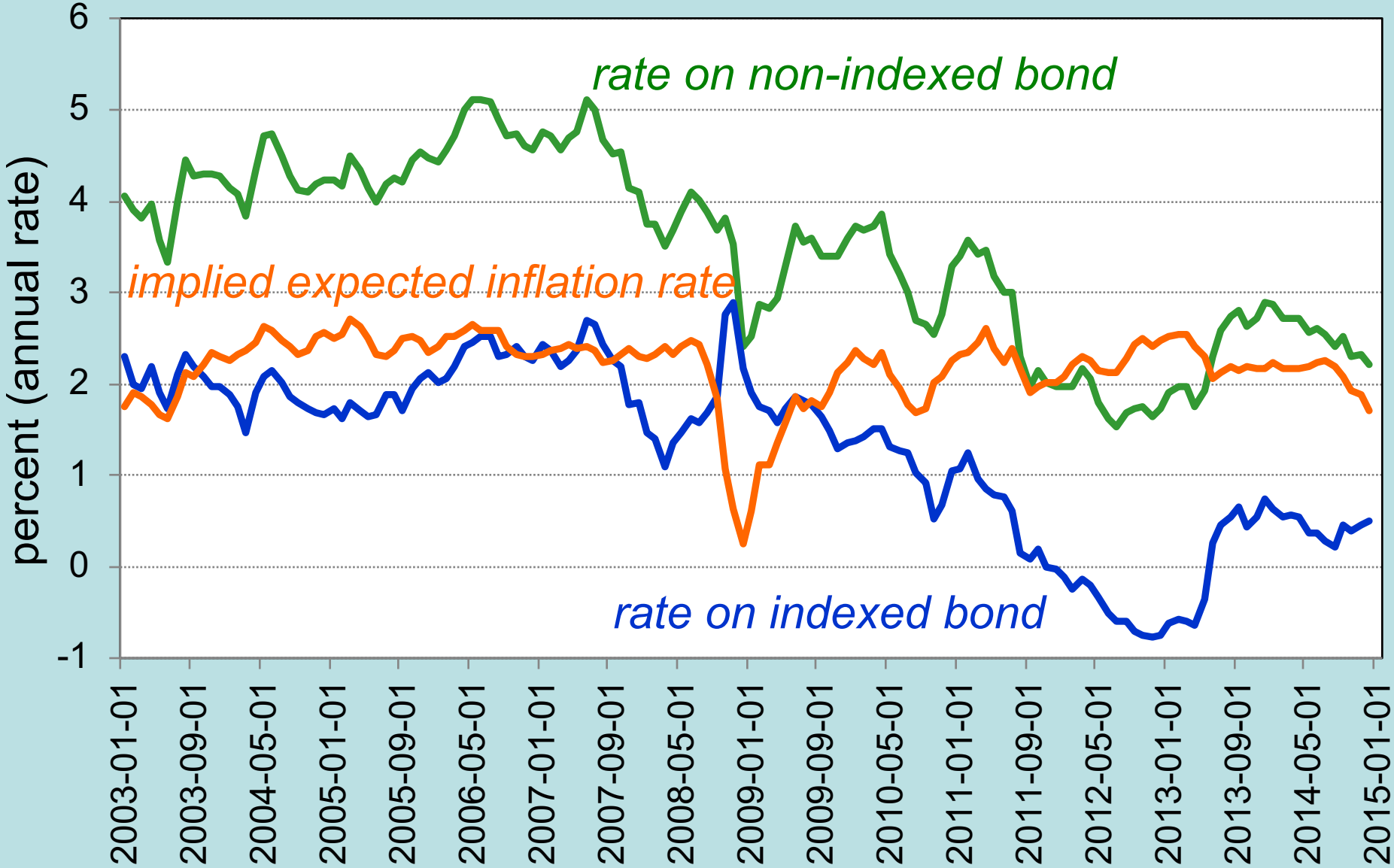
OTHER PERSPECTIVES:
International dimensions

- Govt budget deficits can lead to trade deficits, which must be financed by borrowing from abroad.
- Large govt debt may increase the risk of capital flight, as foreign investors may perceive a greater risk of default.
- Large debt may reduce a country's political clout in international affairs.

CASE STUDY:
Inflation-indexed Treasury bonds

- Starting in 1997, the U.S. Treasury issued bonds with returns indexed to the CPI.
- Benefits:
  - Removes **inflation risk**, the risk that inflation – and hence real interest rate – will turn out different than expected.
  - May encourage private sector to issue inflation-adjusted bonds.
  - Provides a way to infer the expected rate of inflation…

CASE STUDY:
Inflation-indexed Treasury bonds



CHAPTER SUMMARY

1. Relative to GDP, the U.S. government's debt is moderate compared to that of other countries.
2. Standard figures on the deficit are imperfect measures of fiscal policy because they:
   - are not corrected for inflation.
   - do not account for changes in govt assets.
   - omit some liabilities (e.g., future pension payments to current workers).
   - do not account for effects of business cycles.

CHAPTER SUMMARY

3. In the traditional view, a debt-financed tax cut increases consumption and reduces national saving. In a closed economy, this leads to higher interest rates, lower investment, and a lower long-run standard of living. In an open economy, it causes an exchange rate appreciation, a fall in net exports (or increase in the trade deficit).

4. The Ricardian view holds that debt-financed tax cuts do not affect consumption or national saving and therefore do not affect interest rates, investment, or net exports.

CHAPTER SUMMARY

5. Most economists oppose a strict balanced budget rule, as it would hinder the use of fiscal policy to stabilize output, smooth taxes, or redistribute the tax burden across generations.

6. Government debt can have other effects:
   - may lead to inflation
   - politicians can shift burden of taxes from current to future generations
   - may reduce country's political clout in international affairs or scare foreign investors into pulling their capital out of the country