

**CHAPTER FIFTEEN**

**Government Debt**

**macroeconomics**

fifth edition

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PowerPoint® Slides  
by Ron Cronovich

# In this chapter you will learn about

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- 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

<b>Country</b>	<b>Gov Debt (% of GDP)</b>	<b>Country</b>	<b>Gov Debt (% of GDP)</b>
Japan	119	Ireland	54
Italy	108	Spain	53
Belgium	105	Finland	51
Canada	101	Sweden	49
Greece	100	Germany	46
Denmark	67	Austria	40
U.K.	64	Netherlands	27
U.S.A.	62	Australia	26
France	58	Norway	24
Portugal	55		

# The U.S. Government Debt-GDP ratio



# The U.S. experience in recent years

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## 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

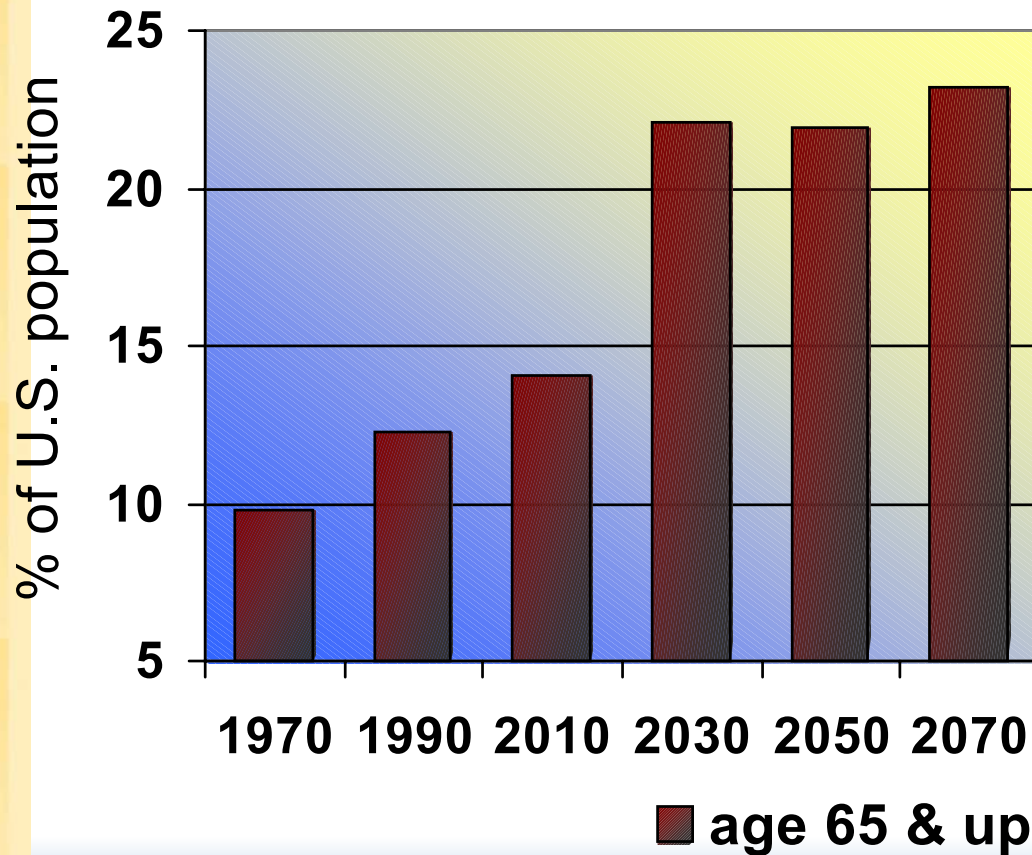
## Early 1990s through 2000

- \$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

## 2001

- The return of deficits, due to Bush tax cut and economic slowdown

# The Fiscal Future



The aging population:

- lower birth rates
- increased life expectancy
- retirement of Baby Boomers

# The Fiscal Future

- The number of people receiving Social Security, Medicare is growing faster than the number working, paying taxes
- Congressional Budget Office projections:

year	debt-GDP ratio
2030	40%
2040	93%
2050	206%



# Problems Measuring the Deficit

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

# Measurement problem 1: Inflation

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- To see why inflation is a problem, 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:

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

- The reported deficit (nominal) is  $\pi \mathbf{D}$  even though the real deficit is zero.
- Hence, should subtract  $\pi \mathbf{D}$  from the reported deficit to correct for inflation.

# Measurement problem 1: Inflation

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- 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
  - $\pi \mathbf{D} = 0.086 \times \$495\text{b} = \$43\text{b}$
  - real deficit = \$28b – \$43b = **\$15b surplus**

# Measurement problem 2: Capital Assets

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- 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**

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Current measure of deficit omits important liabilities of the government:

- future pension payments owed to current govt workers
- future Social Security payments
- contingent liabilities (though hard to attach a dollar value when the outcome is uncertain)

# Measurement problem 4:

## The business cycle

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- 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.  
EX: Is an observed increase in deficit due to a downturn or expansionary shift in fiscal policy?
- 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 & unemployment.

# The bottom line

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We must exercise care  
when interpreting  
the reported deficit figures.

# *Is the govt debt really a problem?*

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Two viewpoints:

- 1.** Traditional view
- 2.** Ricardian view

# The traditional view of a tax cut & corresponding increase in govt debt

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

# The Ricardian View

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- due to David Ricardo (1820), more recently advanced 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

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- 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.
- Thus, the tax cut does not make consumers better off, so they do not raise consumption.
- 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

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- **Myopia:**  
Not all consumers think that far ahead, so they see the tax cut as a windfall.
- **Borrowing constraints:**  
Some consumers are not able to borrow enough to achieve their optimal consumption, and would therefore 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.

# *Evidence against Ricardian Equivalence?*

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- Early 1980s:  
Huge Reagan tax cuts caused deficit to rise. National saving fell, the real interest rate rose, the exchange rate appreciated, and **NX** fell.
- 1992:  
President George H.W. Bush reduced income tax withholding to stimulate economy. This merely delayed taxes but didn't make consumers better off.  
Yet, almost half of consumers used part of this extra take-home pay for consumption.

# *Evidence against Ricardian Equivalence?*

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- Proponents of R.E. argue that the Reagan tax cuts did not provide a fair test of R.E.
  - Consumers may have expected the debt to be repaid with future spending cuts instead of future tax hikes.
  - Private saving may have fallen for reasons other than the tax cut, such as optimism about the economy.
- Because the data is subject to different interpretations, both views of govt debt survive.

# Other perspectives on govt debt

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## 1. **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 on govt debt

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## 2. 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 on govt debt

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## 3. Debt and politics

“Fiscal policy is not made by angels...”  
- Greg Mankiw, p.424

Some do not trust policymakers with deficit spending. They argue that

- policymakers do not worry about the true costs of their spending, since the burden falls on future taxpayers
- future taxpayers cannot participate in the decision process, and their interests may not be taken into account

This is another reason for the proposals for a balanced budget amendment, discussed above.

# Other perspectives on govt debt

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## 4. 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.

# Chapter summary

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1. Relative to GDP, the U.S. government's debt is moderate compared to 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

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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

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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

