CHAPTER FOURTEEN

Stabilization Policy

macroeconomics

fifth edition

N. Gregory Mankiw

PowerPoint® Slides
by Ron Cronovich

Learning objectives

In this chapter, you will learn about two policy debates:

1. Should policy be active or passive?
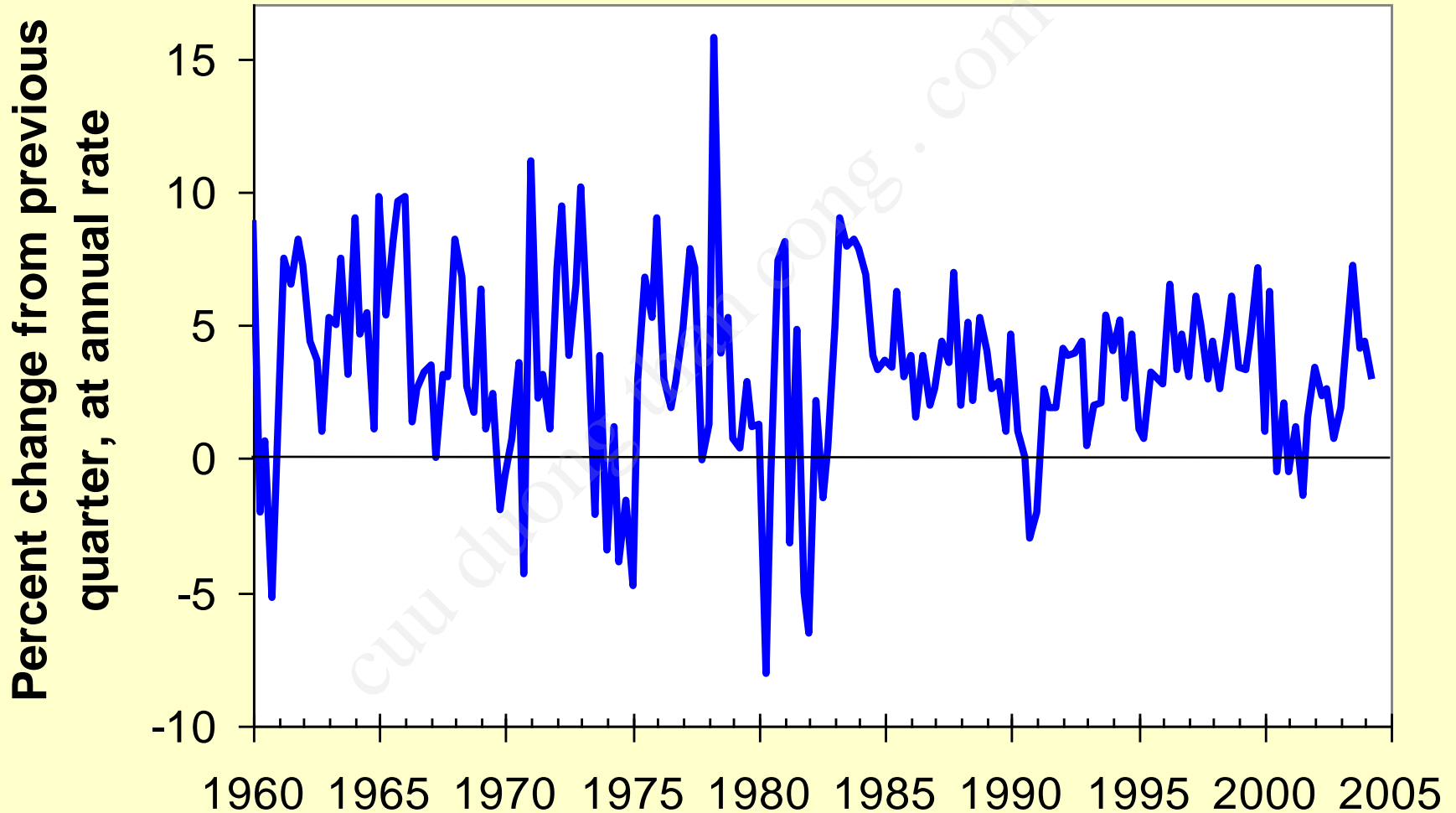
2. Should policy be by rule or discretion?

Question 1:

Should policy be active or passive?

U.S. real GDP growth rate, 1960-2004

Arguments for active policy

- Recessions cause economic hardship for millions of people.

- The Employment Act of 1946:
  "it is the continuing policy and responsibility of the Federal Government to...promote full employment and production."

- The model of aggregate demand and supply (Chapters 9-13) shows how fiscal and monetary policy can respond to shocks and stabilize the economy.

Change in unemployment during recessions

peak	trough	increase in no. of unemployed persons (millions)
July 1953	May 1954	2.11
Aug 1957	April 1958	2.27
April 1960	February 1961	1.21
December 1969	November 1970	2.01
November 1973	March 1975	3.58
January 1980	July 1980	1.68
July 1981	November 1982	4.08
July 1990	March 1991	1.67
March 2001	November 2001	1.50

Arguments against active policy

1. Long & variable lags

   inside lag:
   the time between the shock and the policy response
   - takes time to recognize shock
   - takes time to implement policy, especially fiscal policy

   outside lag:
   the time it takes for policy to affect economy

   If conditions change before policy's impact is felt, then policy may end up destabilizing the economy.

Automatic stabilizers

- definition:
  policies that stimulate or depress the economy when necessary without any deliberate policy change.

- They are designed to reduce the lags associated with stabilization policy.

- Examples:
  - income tax
  - unemployment insurance
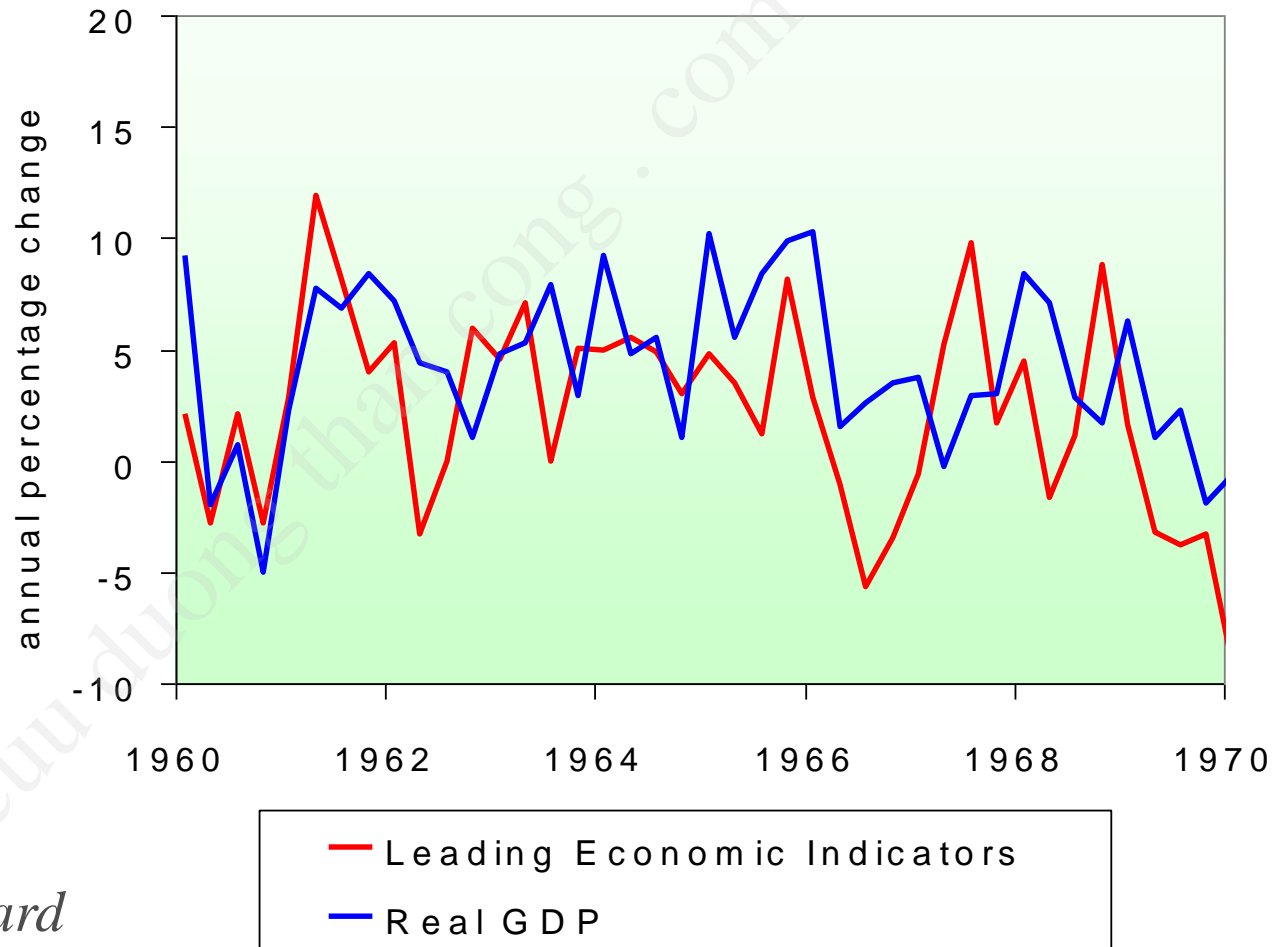 - welfare

Forecasting the macroeconomy

Because policies act with lags, policymakers must predict future conditions.

Ways to generate forecasts:

- *Leading economic indicators*:
  data series that fluctuate in advance of the economy

- *Macroeconometric models*:
  Large-scale models with estimated parameters that can be used to forecast the response of endogenous variables to shocks and policies
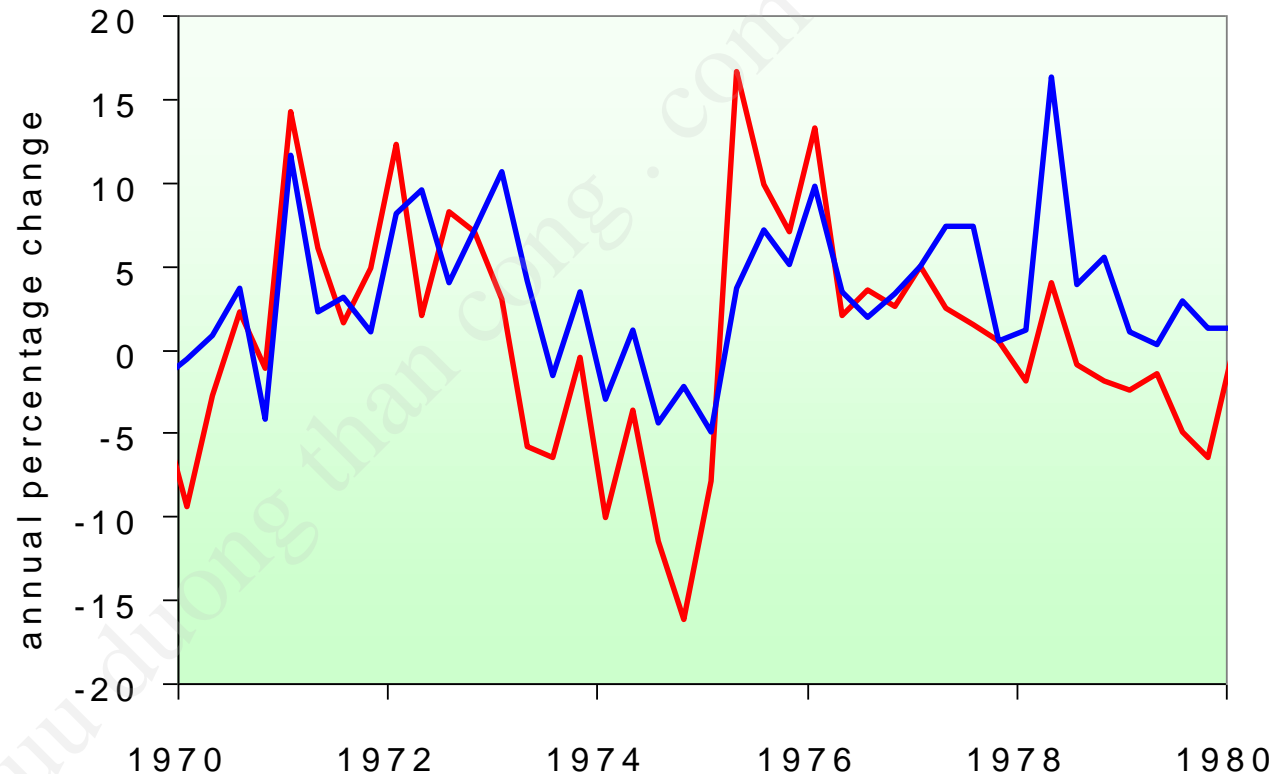
The LEI index and Real GDP, 1960s

The *Index of Leading Economic Indicators* includes 10 data series

(*see FYI box on p.383*).

source of LEI data: The Conference Board

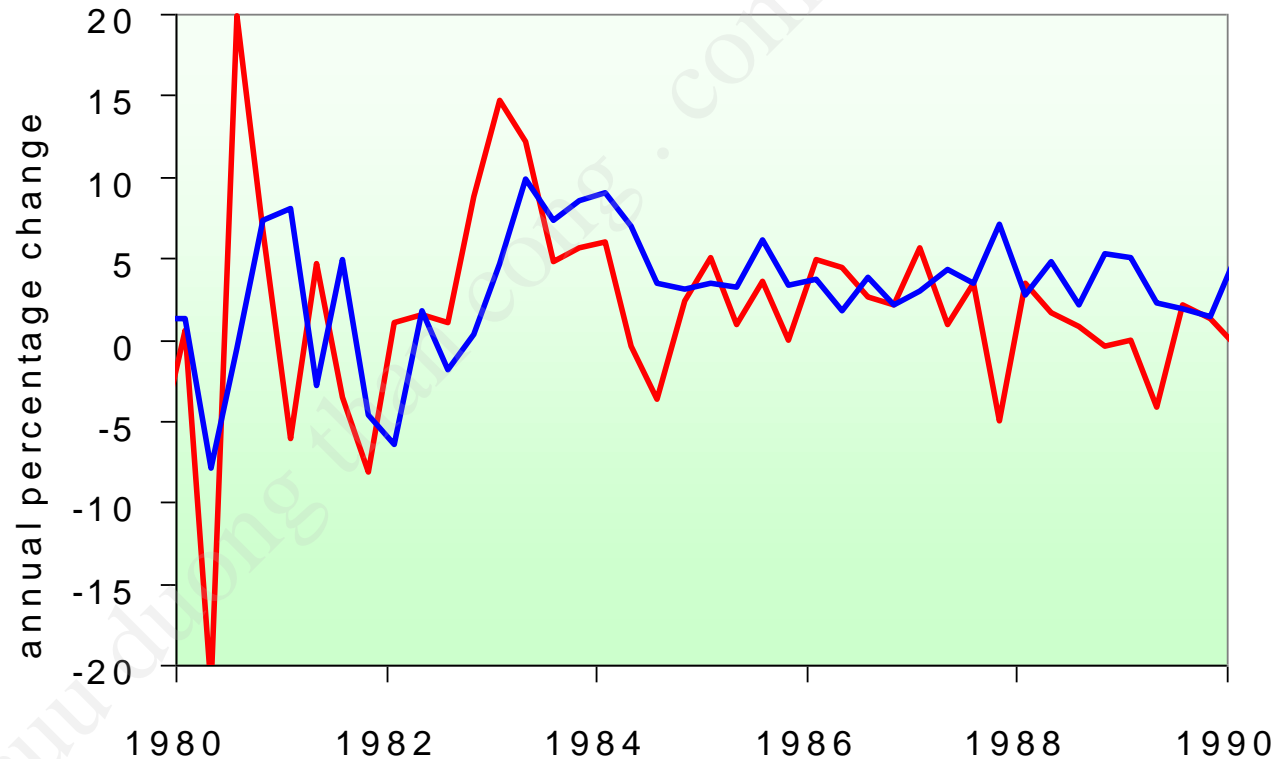# The LEI index and Real GDP, 1970s

source of LEI data:
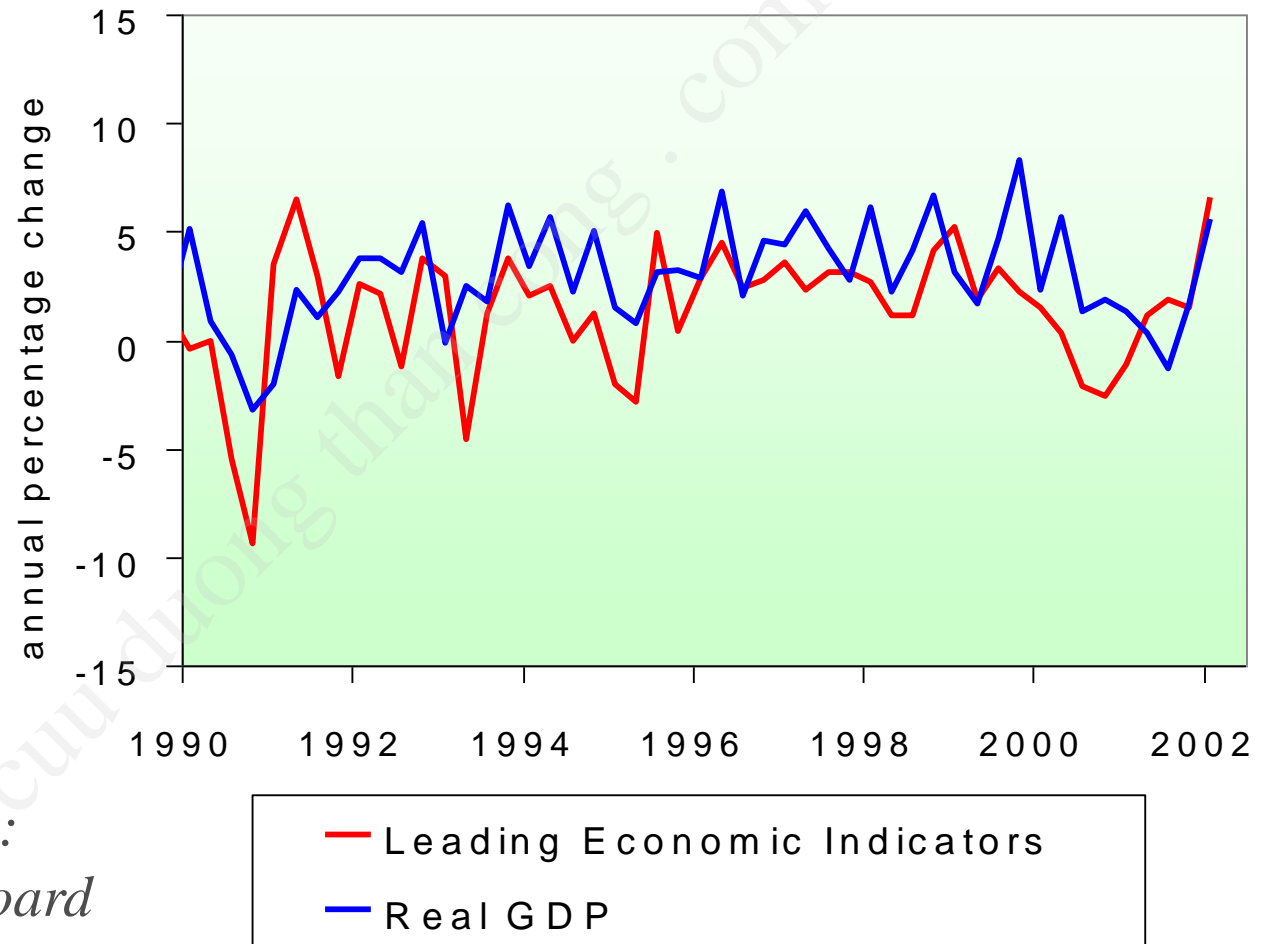*The Conference Board*

The LEI index and Real GDP, 1980s

source of LEI data:
The Conference Board

The LEI index and Real GDP, 1990s

source of LEI data:
The Conference Board

Mistakes Forecasting the Recession of 1982
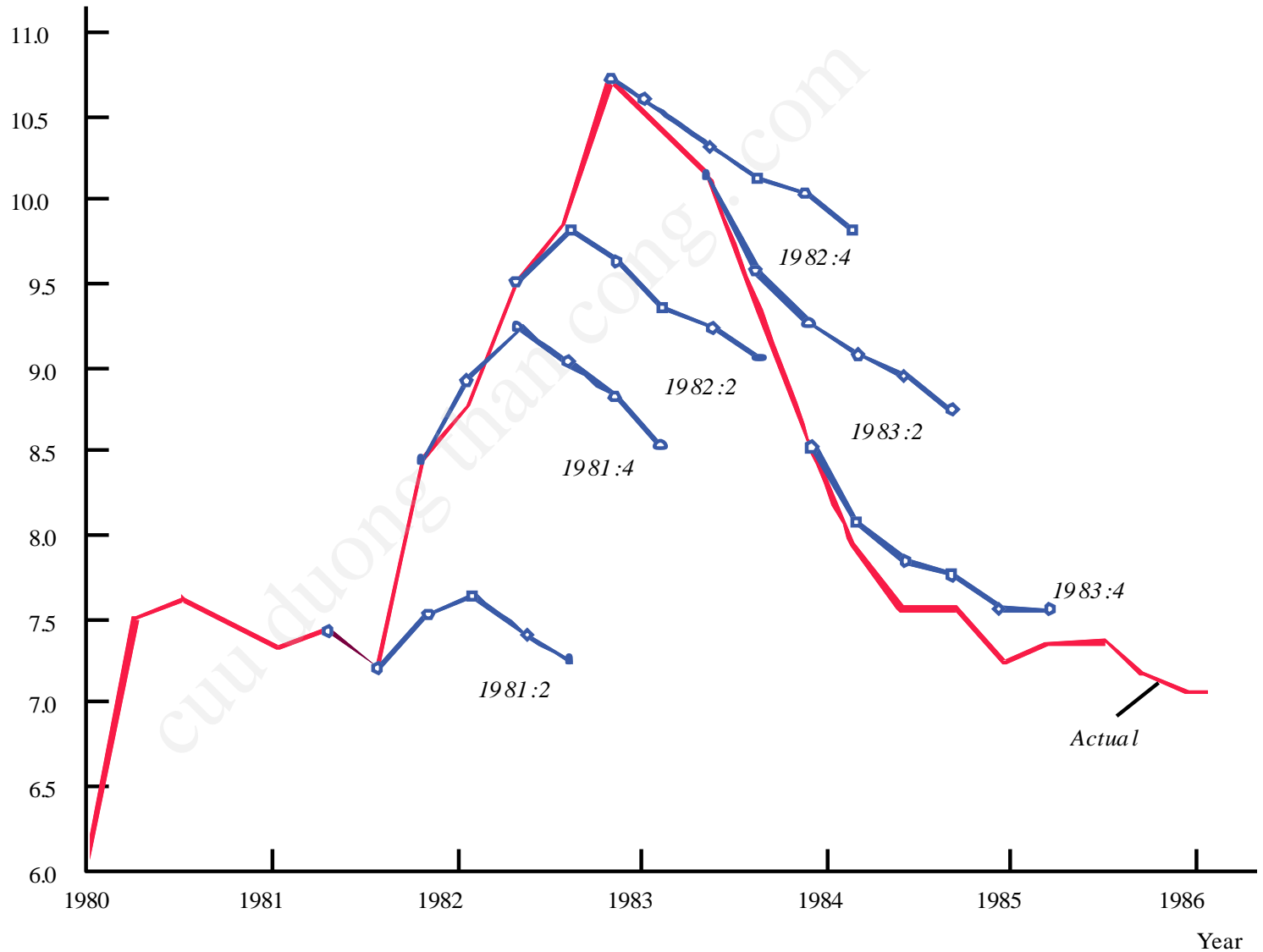
slide 13

Forecasting the macroeconomy

Because policies act with lags, policymakers must predict future conditions.

The preceding slides show that the forecasts are often wrong.

This is one reason why some economists oppose policy activism.

The Lucas Critique

- Due to Robert Lucas
won Nobel Prize in 1995 for "rational expectations"

- Forecasting the effects of policy changes has often been done using models estimated with historical data.

- Lucas pointed out that such predictions would not be valid if the policy change alters expectations in a way that changes the fundamental relationships between variables.

An example of the Lucas Critique

- Prediction (based on past experience): an increase in the money growth rate will reduce unemployment

- The Lucas Critique points out that increasing the money growth rate may raise expected inflation, in which case unemployment would not necessarily fall.

The Jury's Out…

Looking at recent history does not clearly answer Question 1:

- It's hard to identify shocks in the data,

- and it's hard to tell how things would have been different had actual policies not been used.

Question 2:

Should policy
be conducted by
rule or discretion?

Rules and Discretion: basic concepts

- **Policy conducted by rule**:
  Policymakers announce in advance how policy will respond in various situations, and commit themselves to following through.

- **Policy conducted by discretion**:
  As events occur and circumstances change, policymakers use their judgment and apply whatever policies seem appropriate at the time.

Arguments for Rules

1. Distrust of policymakers and the political process

    - misinformed politicians

    - politicians' interests sometimes not the same as the interests of society

Arguments for Rules

2. The **Time Inconsistency of Discretionary Policy**

    - def: A scenario in which policymakers have an incentive to renege on a previously announced policy once others have acted on that announcement.

    - Destroys policymakers' credibility, thereby reducing effectiveness of their policies.

Examples of Time-Inconsistent Policies

To encourage investment, government announces it won't tax income from capital.

But once the factories are built, the govt reneges in order to raise more tax revenue.

Examples of Time-Inconsistent Policies

To reduce expected inflation, the Central Bank announces it will tighten monetary policy.

But faced with high unemployment, Central Bank may be tempted to cut interest rates.

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Examples of Time-Inconsistent Policies

Aid to poor countries is contingent on fiscal reforms.

The reforms don't occur, but aid is given anyway, because the donor countries don't want the poor countries' citizens to starve.

Monetary Policy Rules

a. Constant money supply growth rate
  - advocated by *Monetarists*
  - stabilizes aggregate demand only if velocity is stable

Monetary Policy Rules

a. Constant money supply growth rate

b. Target growth rate of nominal GDP
   - automatically increase money growth whenever nominal GDP grows slower than targeted; decrease money growth when nominal GDP growth exceeds target.

Monetary Policy Rules

a. Constant money supply growth rate

b. Target growth rate of nominal GDP

c. Target the inflation rate
   - automatically reduce money growth whenever inflation rises above the target rate.
   - Many countries' central banks now practice inflation targeting, but allow themselves a little discretion.

Monetary Policy Rules

a. Constant money supply growth rate

b. Target growth rate of nominal GDP

c. Target the inflation rate

d. The "Taylor Rule"

Target Federal Funds rate based on
- inflation rate
- gap between actual & full-employment GDP

The Taylor Rule

$$r_{ff} = 2 + 0.5(\pi - 2) - 0.5(GDP\ Gap)$$

where:

i_{ff} = nominal federal funds rate

$r_{ff} = i_{ff} - \pi$ = real federal funds rate

$$GDP\ Gap = 100 \times \frac{\overline{Y} - Y}{\overline{Y}}$$

= the percent by which real GDP is below its natural rate

The Taylor Rule

$$r_{ff} = 2 + 0.5(\pi - 2) - 0.5(GDP\ Gap)$$

- If π = 2 and output is at its natural rate, then monetary policy targets the real Fed Funds rate at 2% (and the nominal rate at 4%).

- For each one-point increase in π, mon. policy is automatically tightened to raise the real Fed Funds rate by 0.5

- For each one percentage point that GDP falls below its natural rate, mon. policy automatically eases to reduce the Fed Funds Rate by 0.5.

Does Greenspan follow the Taylor Rule?
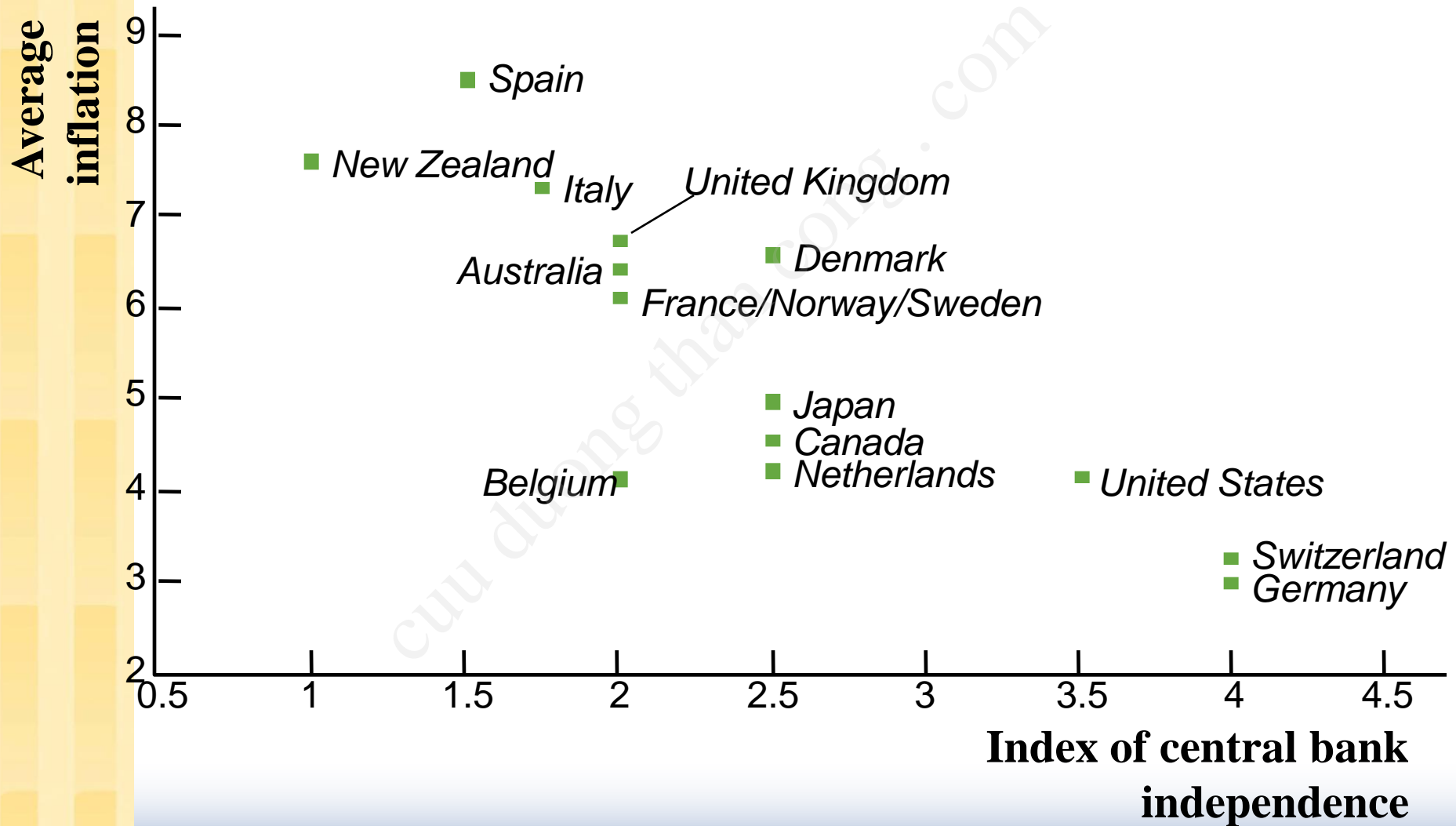

The Federal Funds Rate
Actual and Suggested
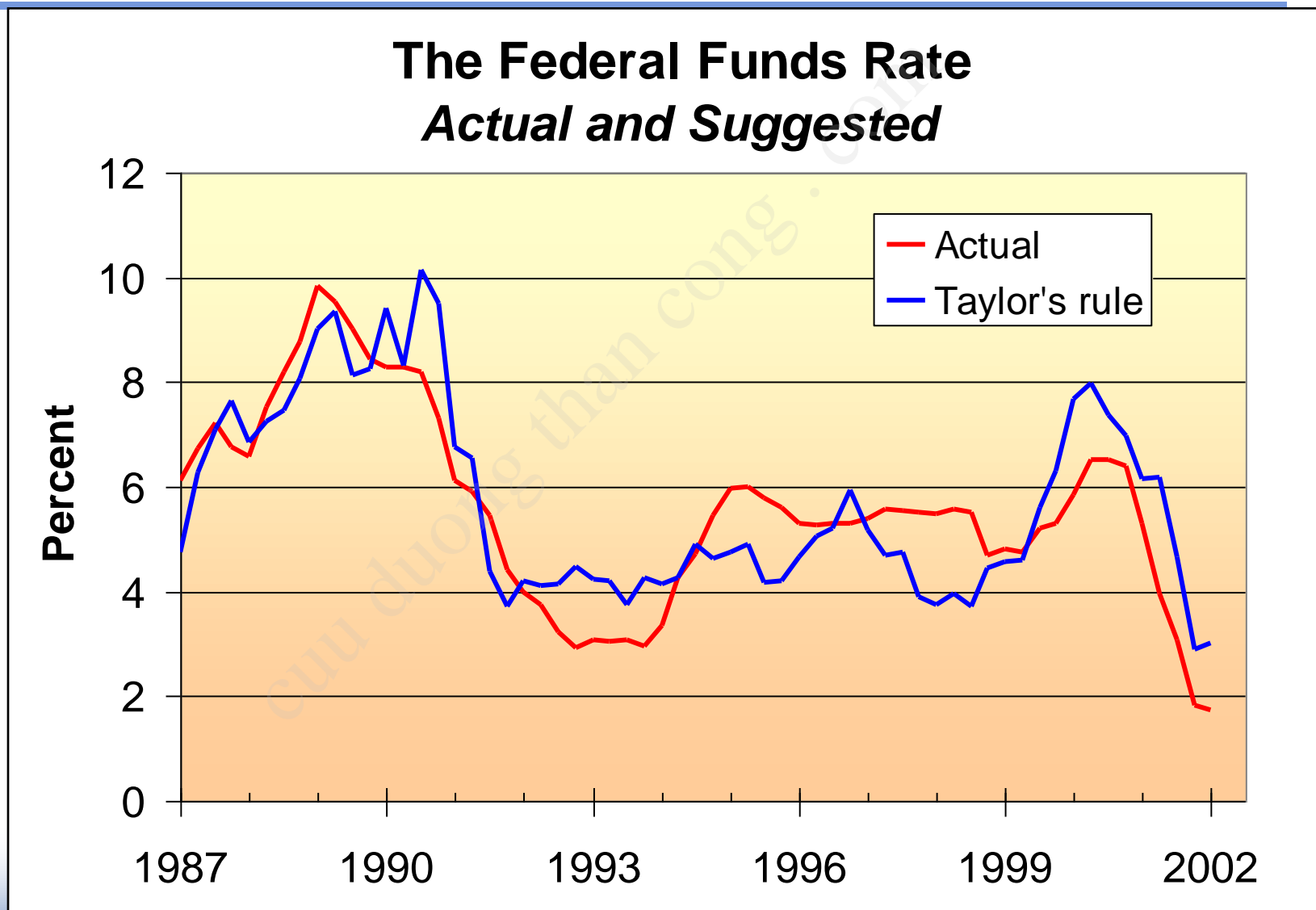
Central Bank Independence

- A policy rule announced by Central Bank will work only if the announcement is credible.

- Credibility depends in part on degree of independence of central bank.

Inflation and Central Bank Independence

Average inflation (vertical axis, 2 to 9) vs. Index of central bank independence (horizontal axis, 0.5 to 4.5)

Data points:
- Spain
- New Zealand
- Italy
- United Kingdom
- Australia
- Denmark
- France/Norway/Sweden
- Japan
- Canada
- Netherlands
- Belgium
- United States
- Switzerland
- Germany

Chapter summary

1. Advocates of active policy believe:
    - frequent shocks lead to unnecessary fluctuations in output and employment
    - fiscal and monetary policy can stabilize the economy

2. Advocates of passive policy believe:
    - the long & variable lags associated with monetary and fiscal policy render them ineffective and possibly destabilizing
    - inept policy increases volatility in output, employment

Chapter summary

3. Advocates of discretionary policy believe:

   - discretion gives more flexibility to policymakers in responding to the unexpected

4. Advocates of policy rules believe:

   - the political process cannot be trusted: politicians make policy mistakes or use policy for their own interests
   - commitment to a fixed policy is necessary to avoid time inconsistency and maintain credibility

Government Debt
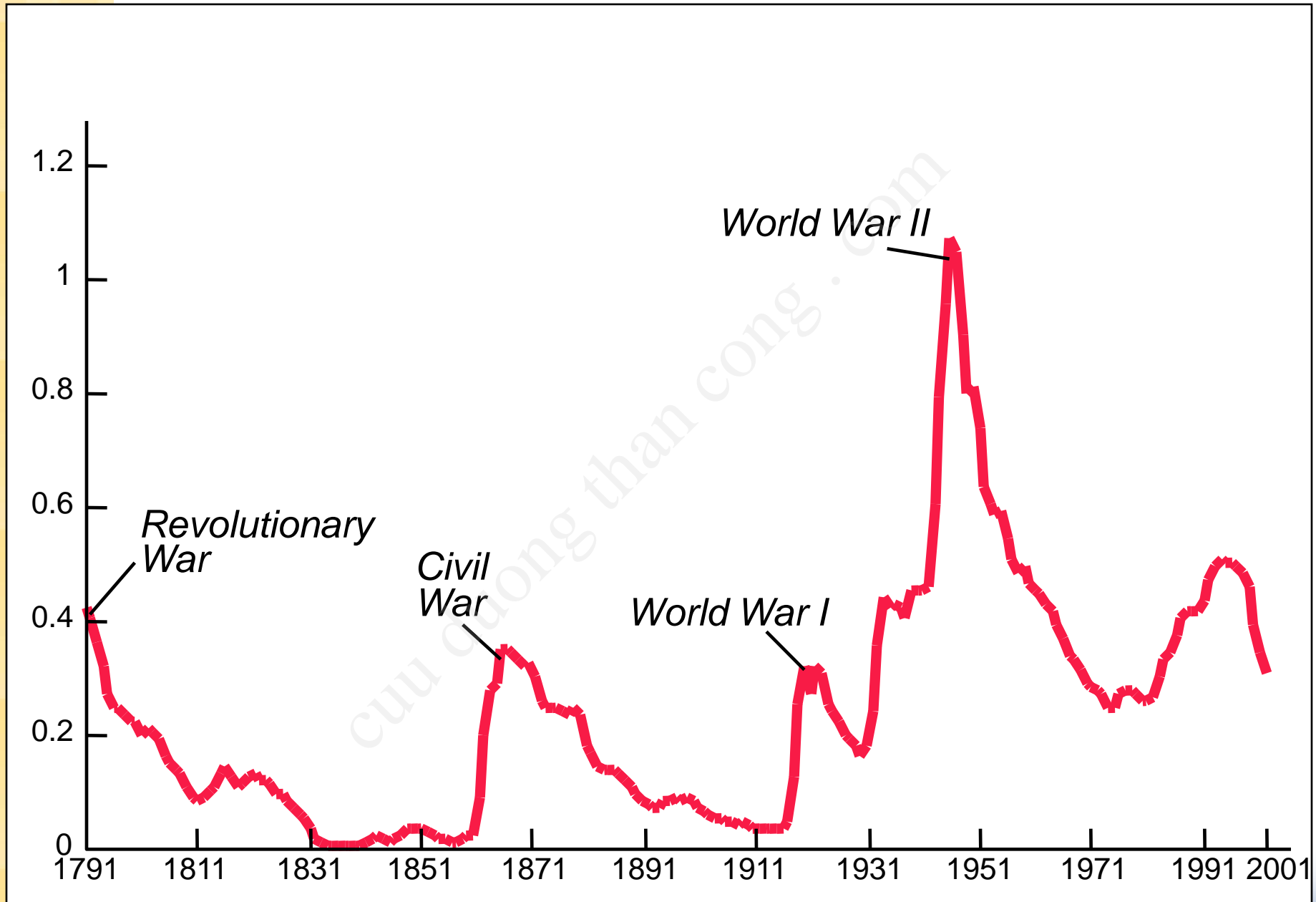
(chapter 15)

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	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. 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
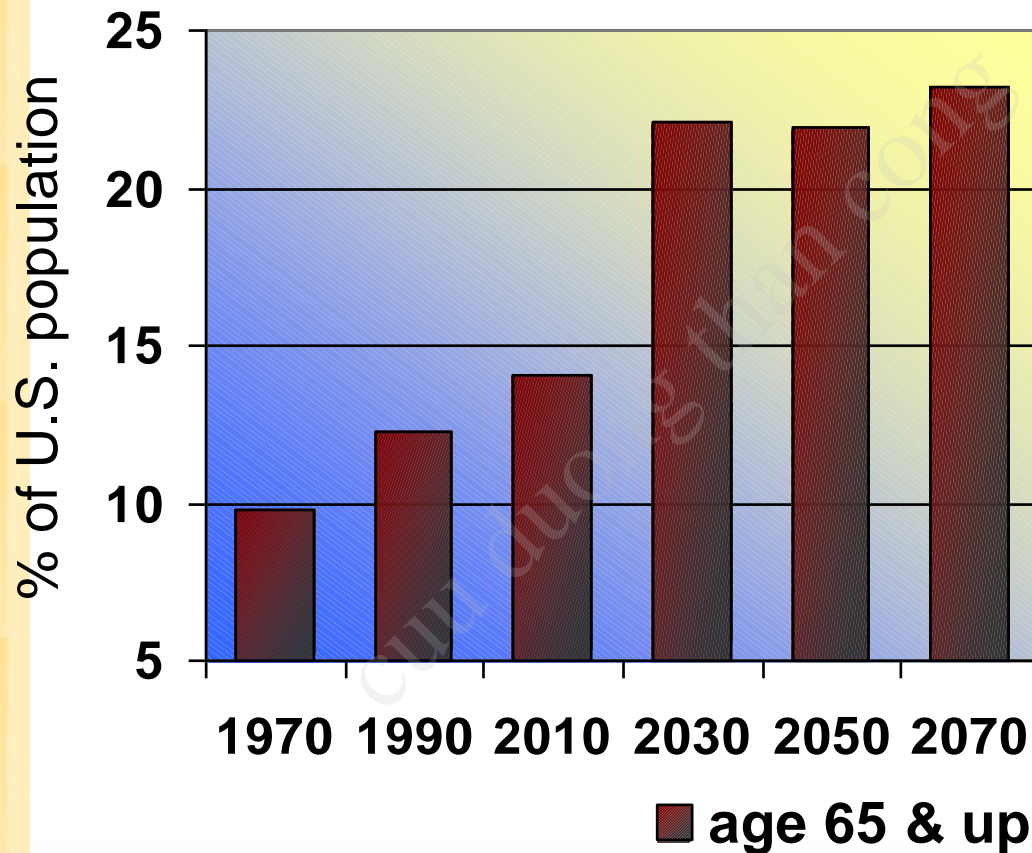
Early 1990s through 2000
- $290b deficit in 1992, $236b surplus in 2000
- debt-GDP ratio fell to 32.5% in 2000
- Due to rapid growth, stock market boom, tax hikes

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

1. Inflation

2. Capital assets

3. Uncounted liabilities

4. The business cycle

Measurement problem 1: Inflation

- 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:

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

- 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

  $\pi \boldsymbol{D}$ = 0.086 $\times$ $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 (though hard to attach a dollar value when the outcome is uncertain)

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.
  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

*We must exercise care
when interpreting
the reported deficit figures.*

Is the govt debt really a problem?

Two viewpoints:

1. Traditional view

2. Ricardian view

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

- 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), 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, <u>even in the short run</u>.

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.

- 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.

Limitations on Ricardian Equivalence

- 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?

- 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?

- 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

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

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

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.

Chapter summary

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

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