

LECTURE 12

REGIME SHIFTS AT THE ZERO LOWER BOUND  
FEBRUARY 28, 2018

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II. THE UNITED STATES IN 1933

- A. Recovery in the 1930s
- B. Roosevelt's regime shift
- C. Impact of the regime shift of expectations
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- F. Discussion

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Economics 134  
Spring 2018

David Romer

## LECTURE 12

# Regime Shifts at the Zero Lower Bound



February 28, 2018

# Announcements

- Hand in Problem Set 2.
- Suggested answers will be posted on Friday.

# Announcements (cont.)

- **Midterm logistics:**
  - Wednesday, March 7, 5:10–6:30.
  - If your GSI is Matthias Hoelzlein, go to 2040 VLSB.
  - Students with DSP accommodations should have received an email from me. If not, let me know.
  - Everyone else should come to the usual room.
  - You do not need a blue book.

## Announcements (cont.)

- **Midterm format:**
  - Multiple choice; short answer questions; problems; probably a short essay.
  - (More about the multiple choice questions.)
  - See the “sample exam questions” packet for a guide to the style of questions.
- **Midterm coverage:**
  - Everything up through and including the material for next Monday, March 5.
  - Multiple choice questions about the outside readings are fair game.

## Announcements (cont.)

- Hints for studying:
  - Start now!
  - Study problem set suggested answers.
  - Do problems (from the packet of sample exam questions, “Short-Run Fluctuations,” and “A Non-Technical Introduction to Regressions”) by yourself.
  - Pose yourself problems.
  - Review lecture notes and slides.
  - Reread “A Non-Technical Introduction to Regressions” and review Lecture 5.

## Announcements (cont.)

- **Midterm Q&A session:**
  - Sunday, March 4, 5–7 P.M., GPBB100.
- **My office hours this week and next:**
  - Monday (2/26 and 3/5), 3:30–5:00.
- **For next time:**
  - You do not need to read the brief paper by Blanchard and Leigh.

# I. INTRODUCTION

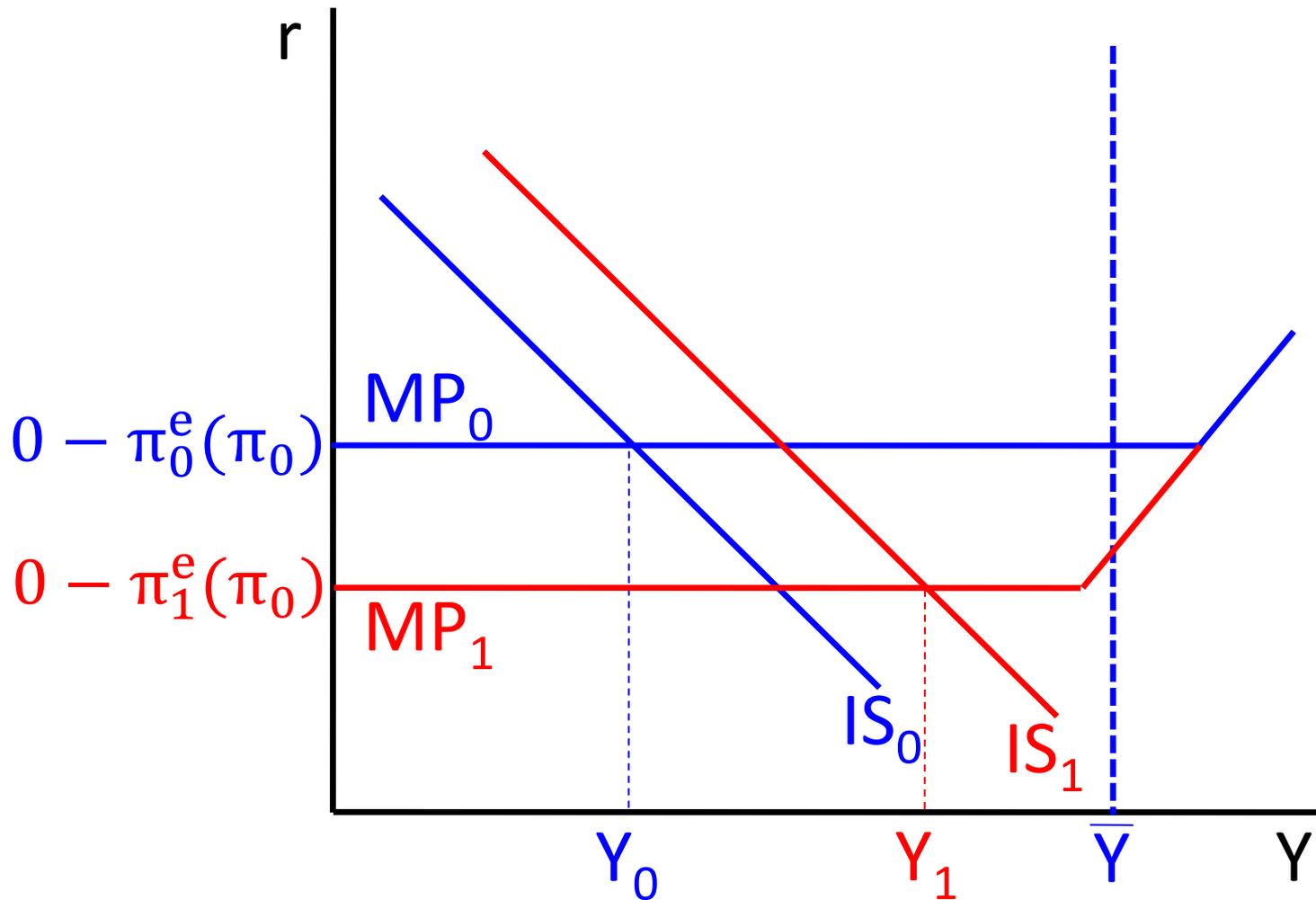
# What Do We Mean by a “Regime Shift”?

- A fundamental change in how policy is made.
- Possible examples in the context of monetary policy:
  - Adopting or leaving the gold standard (U.K. in 1931; U.S. in 1933).
  - Switching from an interest rate rule to money targeting and making a forceful commitment to lowering inflation (U.S. in October 1979).

# A Regime Shift at the Zero Lower Bound

- Intended to cause a large outward shift of the IS and – perhaps especially – a large rise in expected inflation.

# The Intended Effects of a Regime Shift at the ZLB



## II. UNITED STATES IN THE 1930s

# Real GDP growth was both fast and slow in the recovery from the Great Depression.

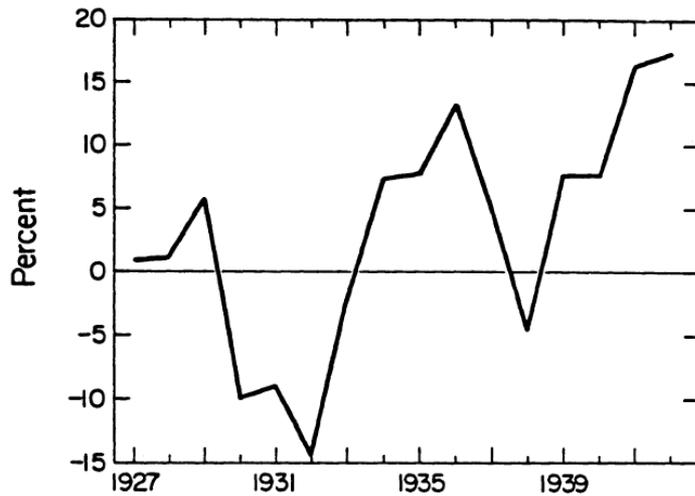


FIGURE 1

PERCENTAGE CHANGES IN REAL GROSS NATIONAL PRODUCT, 1927-1942

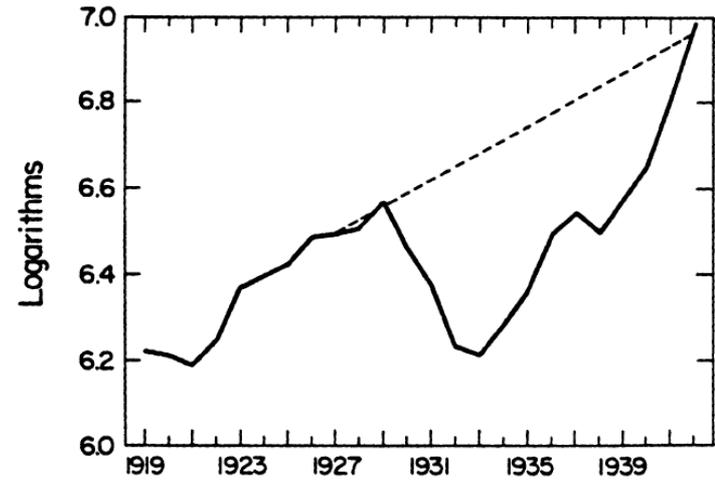


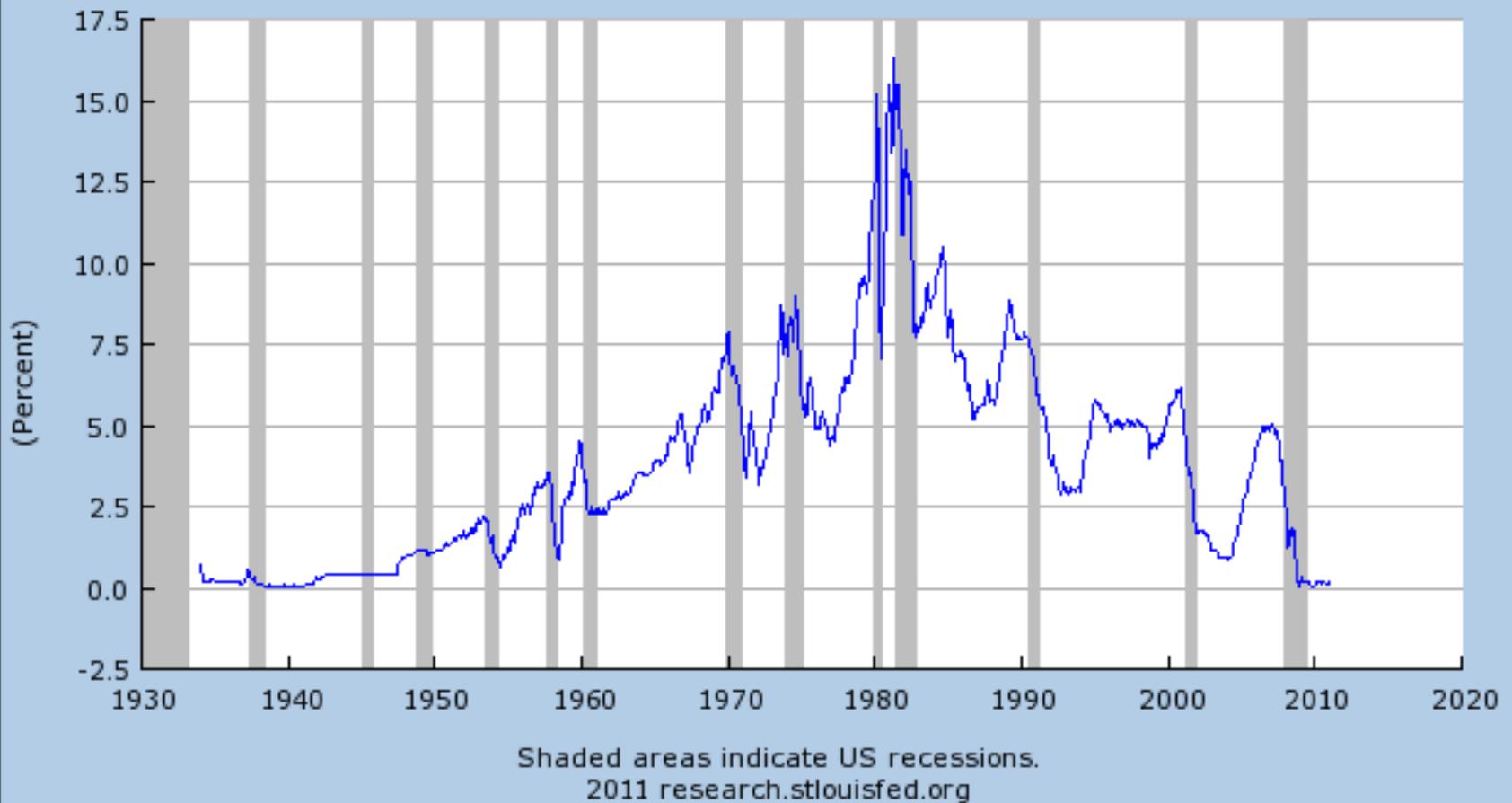
FIGURE 2

ACTUAL AND TREND REAL GROSS NATIONAL PRODUCT, 1919-1942

Source: Christina Romer, "What Ended the Great Depression?," *Journal of Economic History*, 1992.

It was fast in an absolute sense, but slow relative to the recovery needed.

3-Month Treasury Bill: Secondary Market Rate (TB3MS)  
Source: Board of Governors of the Federal Reserve System



Safe interest rates have been approximately zero two times in the U.S.: the mid- and late 1930s and recently.

# Roosevelt's Regime Shift

- Roosevelt replaced Hoover's fiscal and monetary austerity with expansionary policy.
- Especially: Abandonment of the gold standard.
- Also: Shift to fiscal expansion; communication.

## Price of Cotton and the Exchange Rate, 1930-36

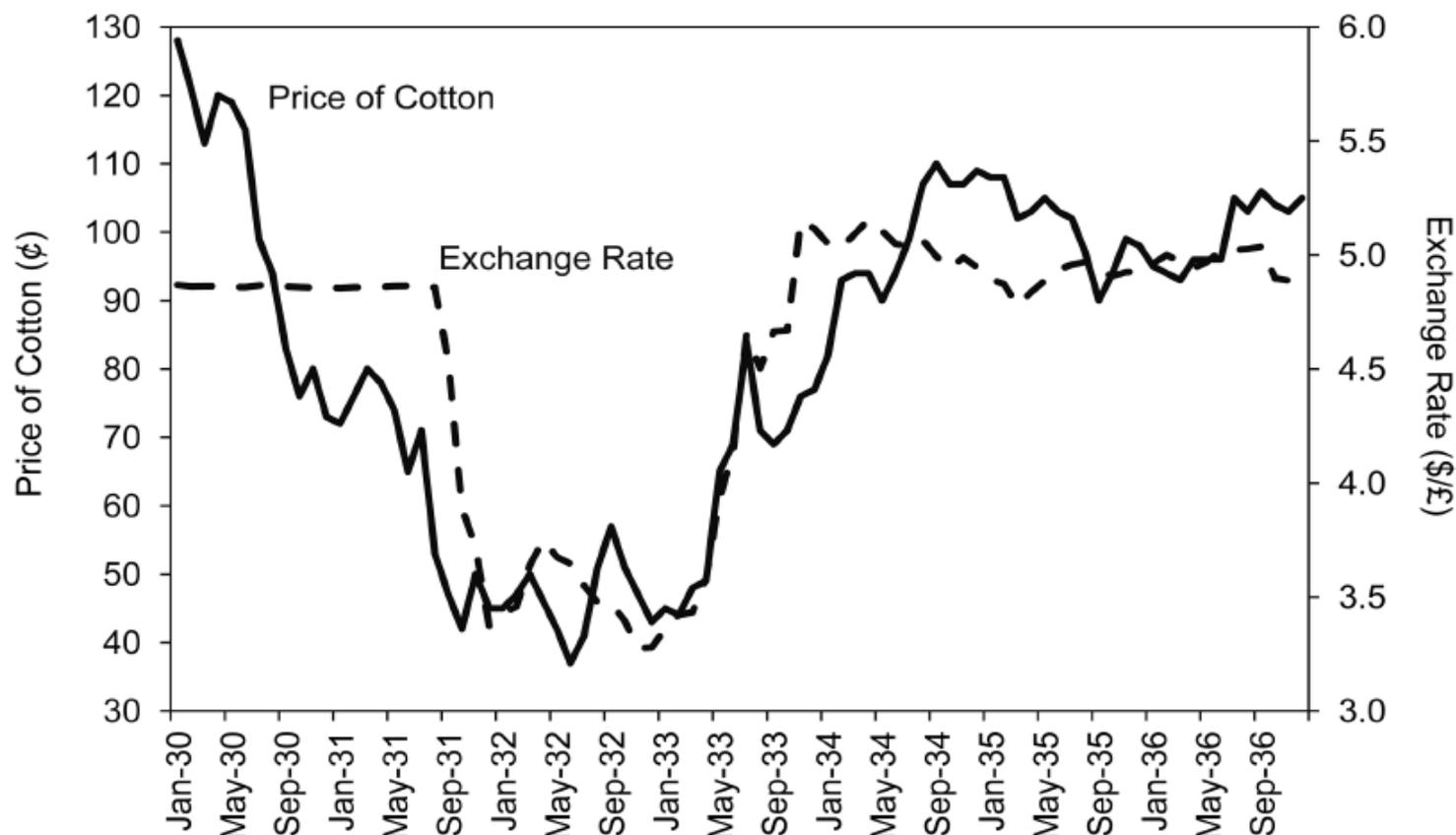


Fig. 1. Dollar devaluation and the price of cotton

Devaluation raised the price of tradable goods, especially agricultural products, and hence farm incomes.

## Short Inflation Film

- Shows that devaluation and subsequent policies were a big deal.
- The fact that there was a film shown in theaters suggests deliberate effort to change expectations.

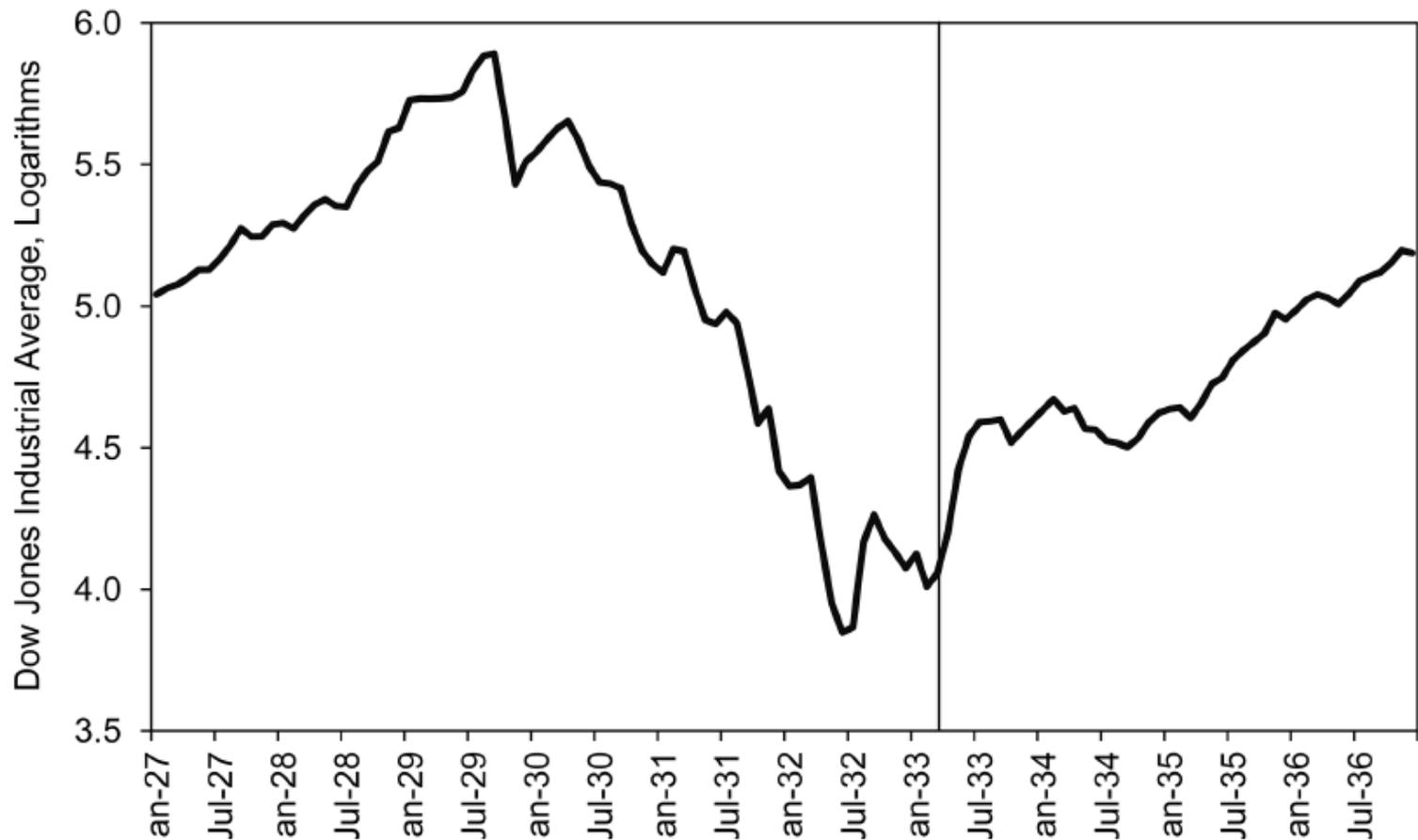


Fig. 6. Stock prices

Source: Federal Reserve Bank of St. Louis, FRED Economic Data, Series M1109BUSM293NNBR.

Jump in stock prices could be a sign of a change in expectations.

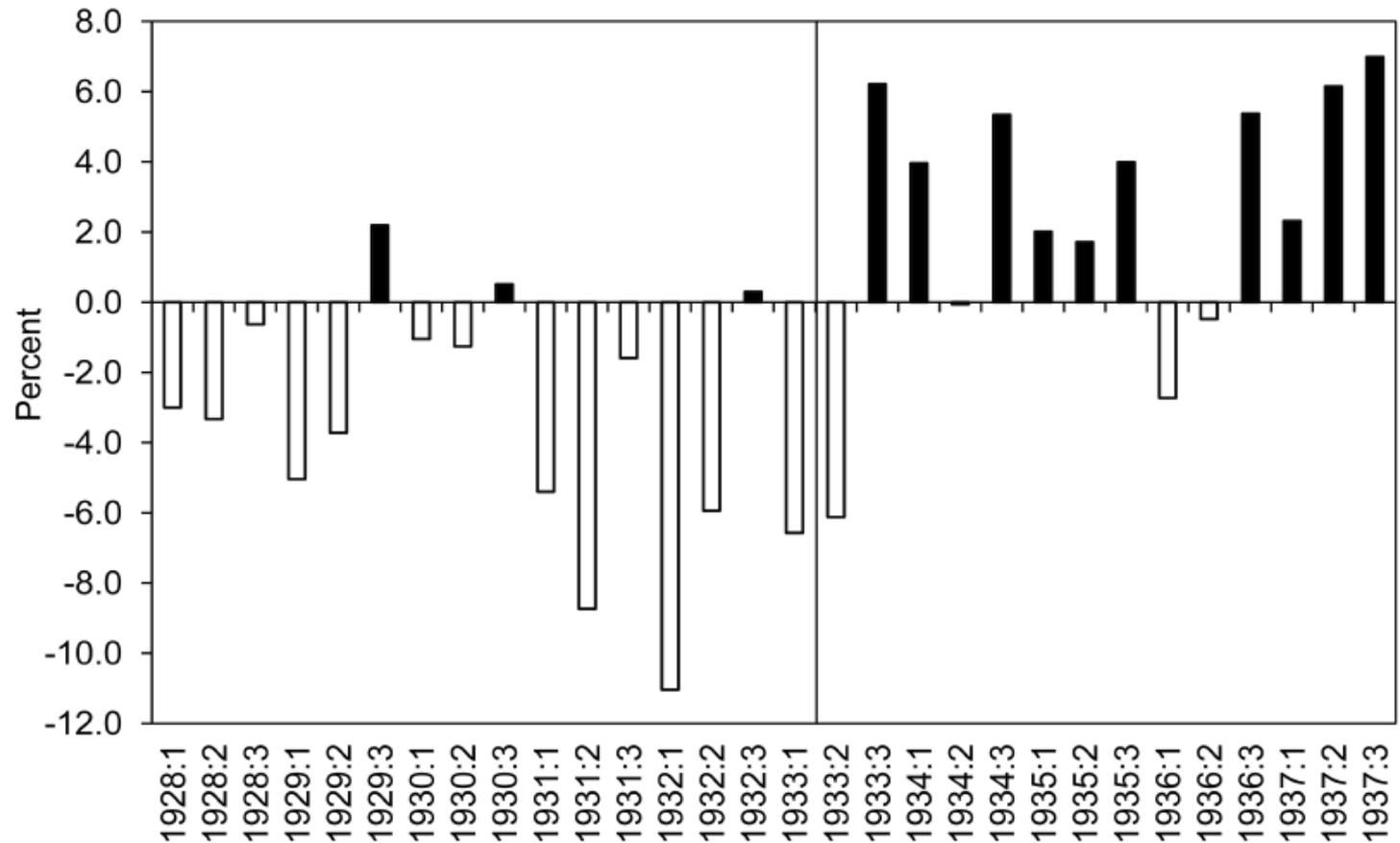


Fig. 7. Expected inflation as measured using commodity futures prices

Source: Hamilton (1992, table 7, 171).

Expected inflation rose (and real interest rates fell) beginning in 1933.

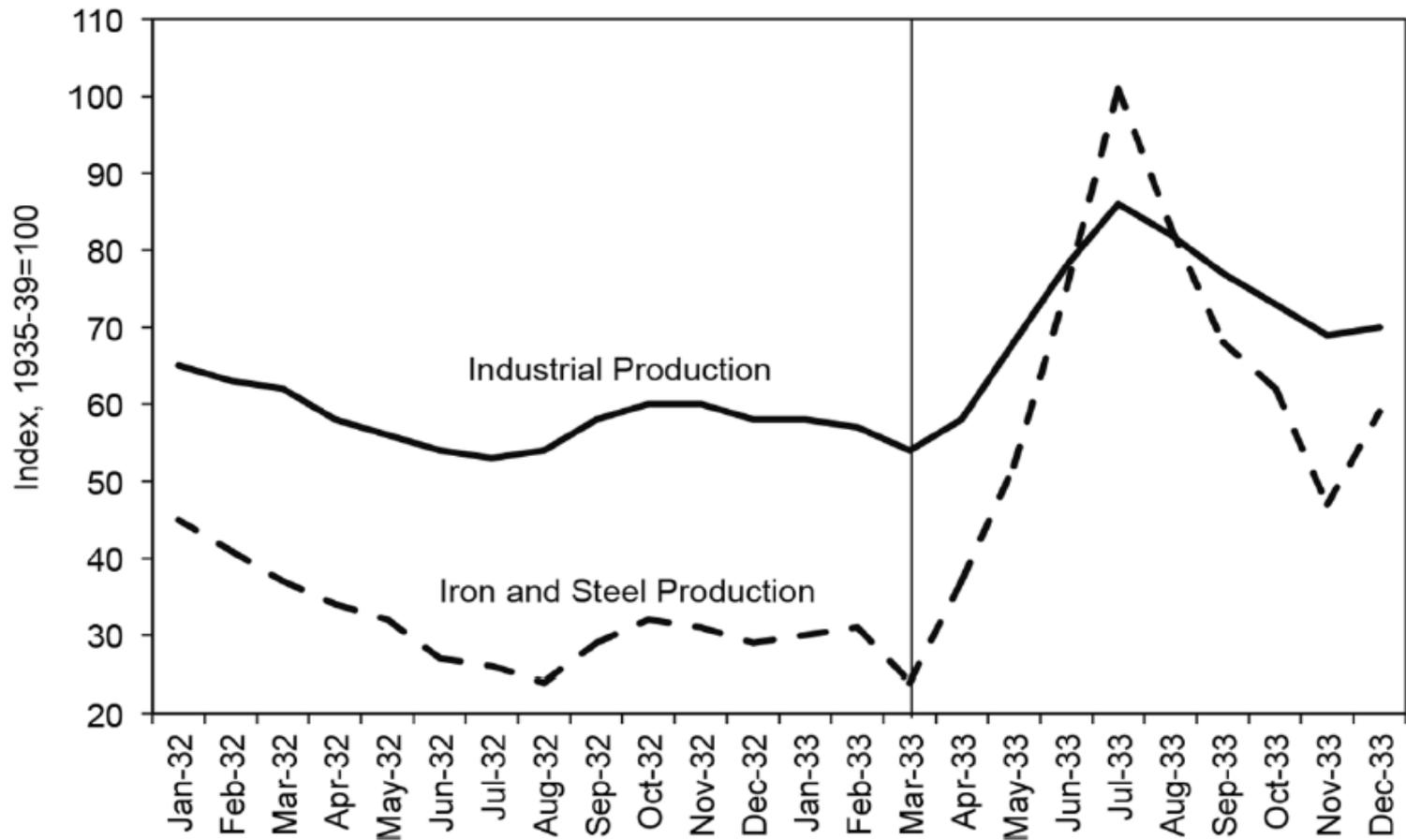


Fig. 5. Industrial and steel production indexes, 1932–1933

Steel production rose so much, Temin and Wigmore say it must reflect a big change in expectations of future demand.

# Interest-sensitive spending recovered quickly in 1933.

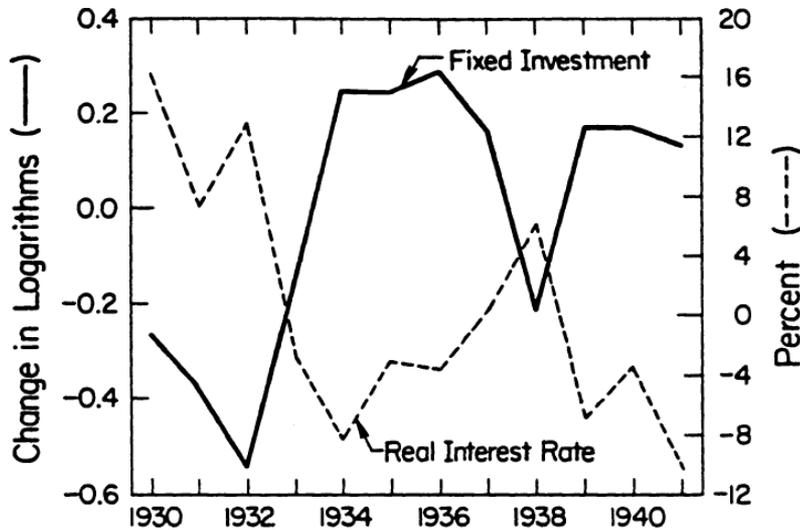


FIGURE 9

REAL FIXED INVESTMENT AND EX ANTE REAL RATES, 1930-1941

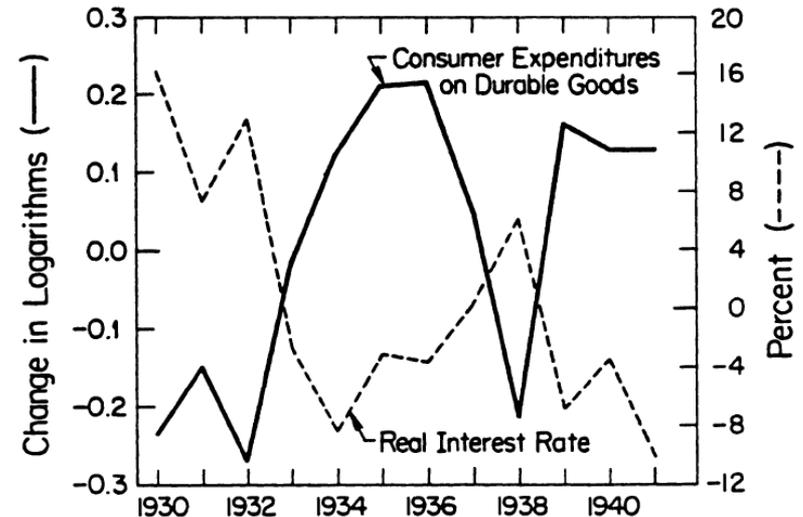


FIGURE 10

REAL CONSUMER EXPENDITURES ON DURABLE GOODS AND EX ANTE REAL RATES, 1930-1941

Source: Christina Romer, "What Ended the Great Depression?," *Journal of Economic History*, 1992.

Movements in spending appear to be correlated with real interest rate changes.

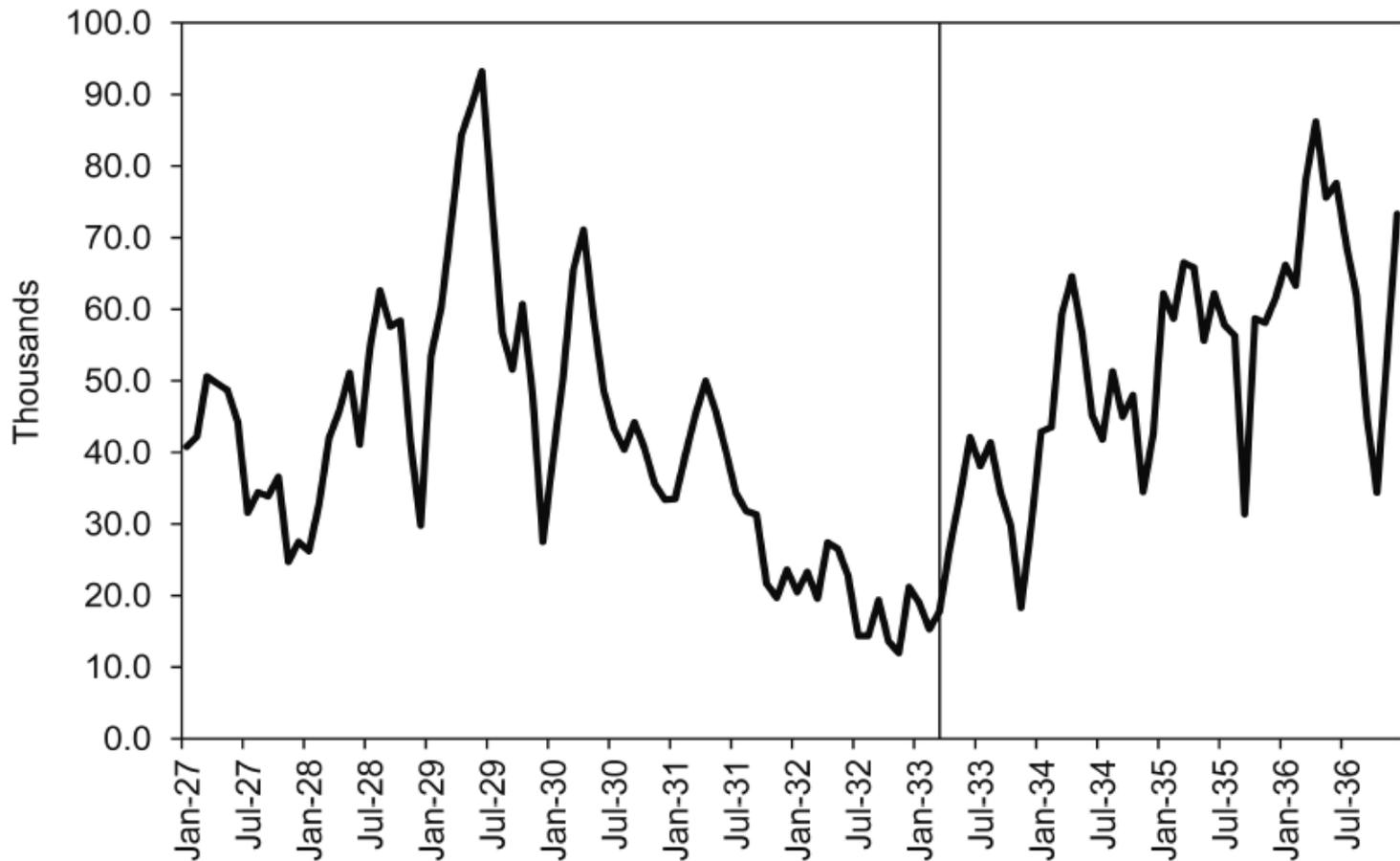


Fig. 9. Truck production

Production of trucks (for which farmers were a major source of demand) took off in April 1933.

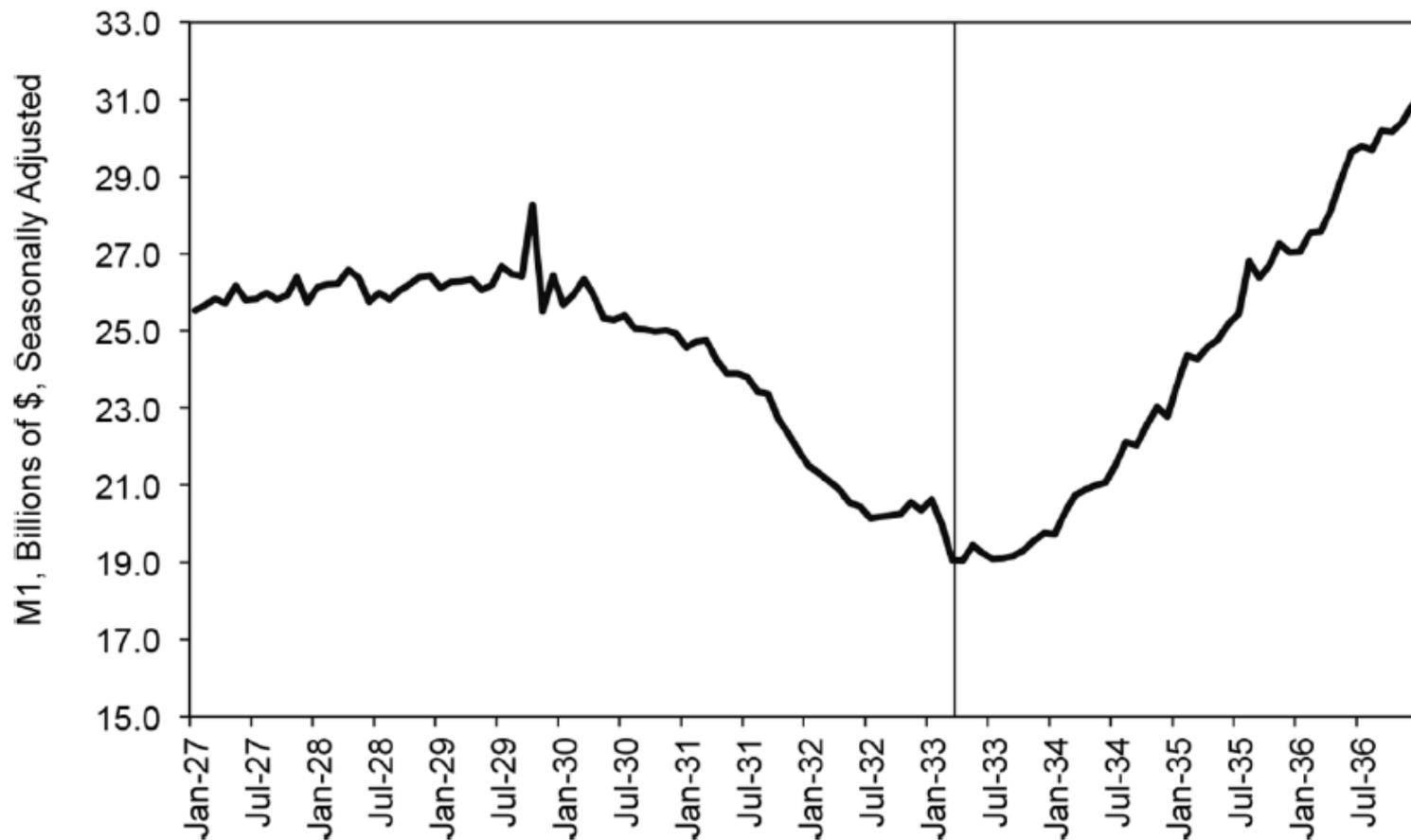


Fig. 2. Money supply

Money growth was very rapid in the mid-1930s.

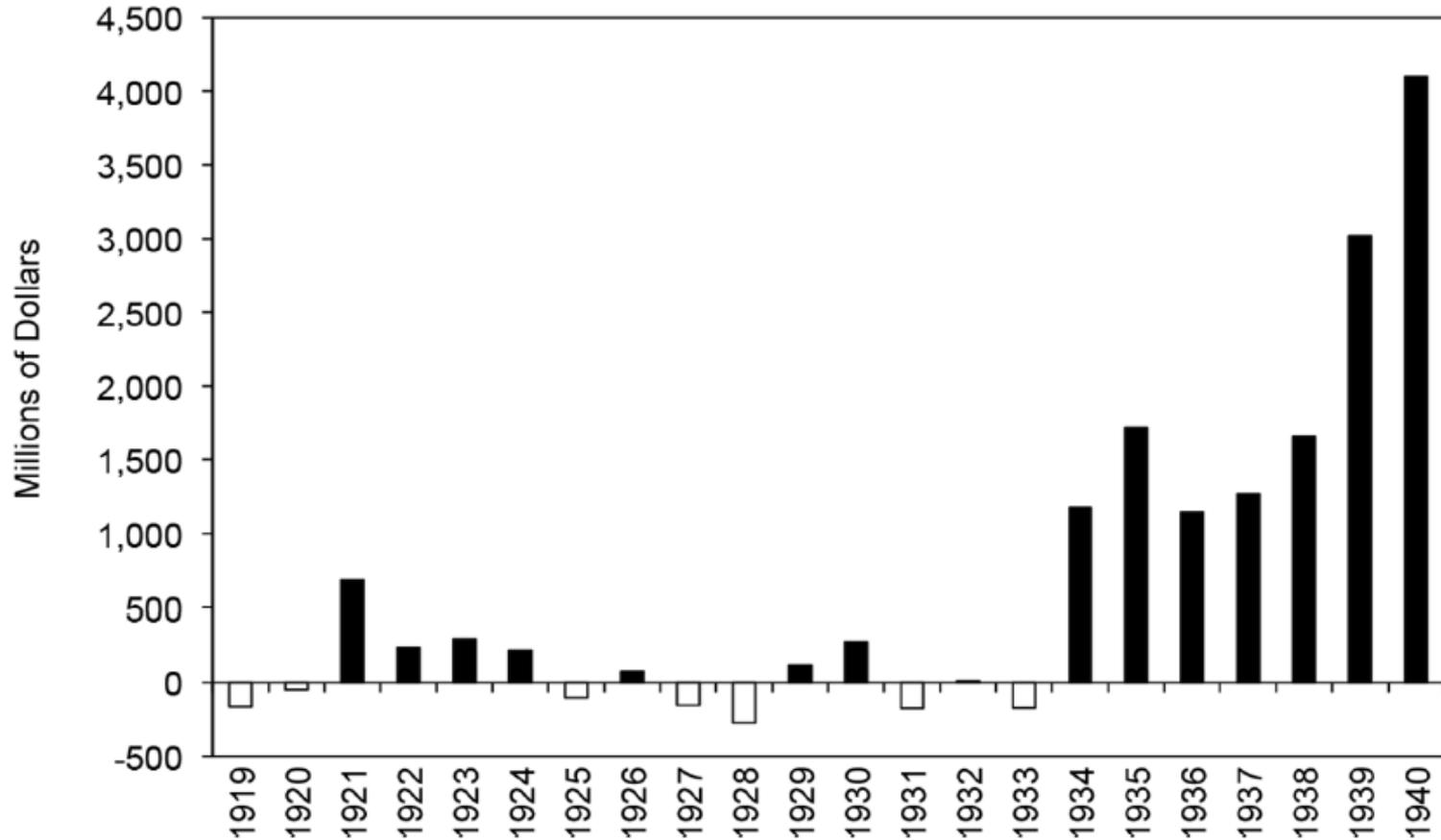


Fig. 3. Gold flows to the United States

Gold inflows surged starting in 1934, and were a key source of monetary expansion.

# Discussion

- Are you persuaded? Do you have concerns?

### III. ABENOMICS

# Overview

- Shinzō Abe became Prime Minister in December 2012.
- The three arrows of Abenomics:
  - Expansionary monetary policy.
  - Expansionary fiscal policy.
  - Structural reforms.

# Initial Changes in the Framework (January 2013)

- Change in leadership at Bank of Japan.
- Change in inflation target (from 1% to 2%).
- Deliberate depreciation of the Yen.

# How Might Policymakers Bring about a Depreciation without Direct Intervention in Foreign Exchange Markets?

- Provide information suggesting that the rate of return on domestic assets is likely to be low.
- One way to think about the effects: reduces demand for domestic currency in foreign exchange markets -> currency depreciates.

## Initial Implementation (April 2013)

- “The Bank will achieve the ...target of 2 percent ... at the earliest possible time, with a time horizon of about two years.”
- “Quantitative and qualitative monetary easing”: Double the monetary base by December 2014, large-scale asset purchases (larger relative to the size of the economy than QE in the U.S.).

## Subsequent Measures

- October 2014: “Expansion of the Quantitative and Qualitative Monetary Easing.”
- December 2015: “Supplementary Measures for Quantitative and Qualitative Monetary Easing.”
- January 2016: “Introduction of ‘Quantitative and Qualitative Monetary Easing with a Negative Interest Rate’.”
- September 2016: “Quantitative and Qualitative Monetary Easing with Yield Curve Control,” including “an inflation-overshooting commitment.”

# What Evidence Does Romer Cite from the First Few Months under the Policies?

- April 2013 was too soon to see effects on output and inflation.
- Instead:
  - Stock prices.
  - Exchange rate.
  - Information on expected inflation from financial markets and surveys.

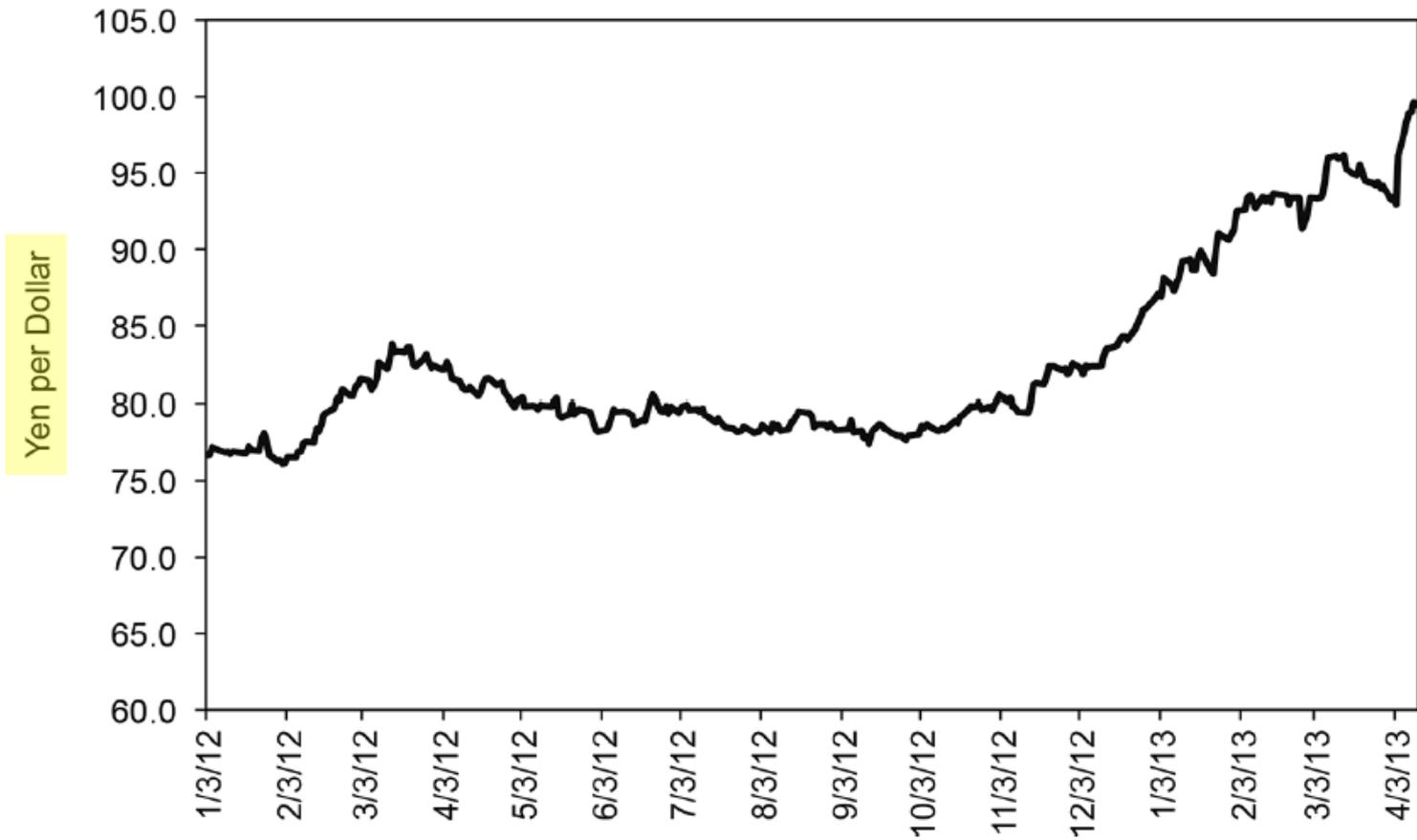
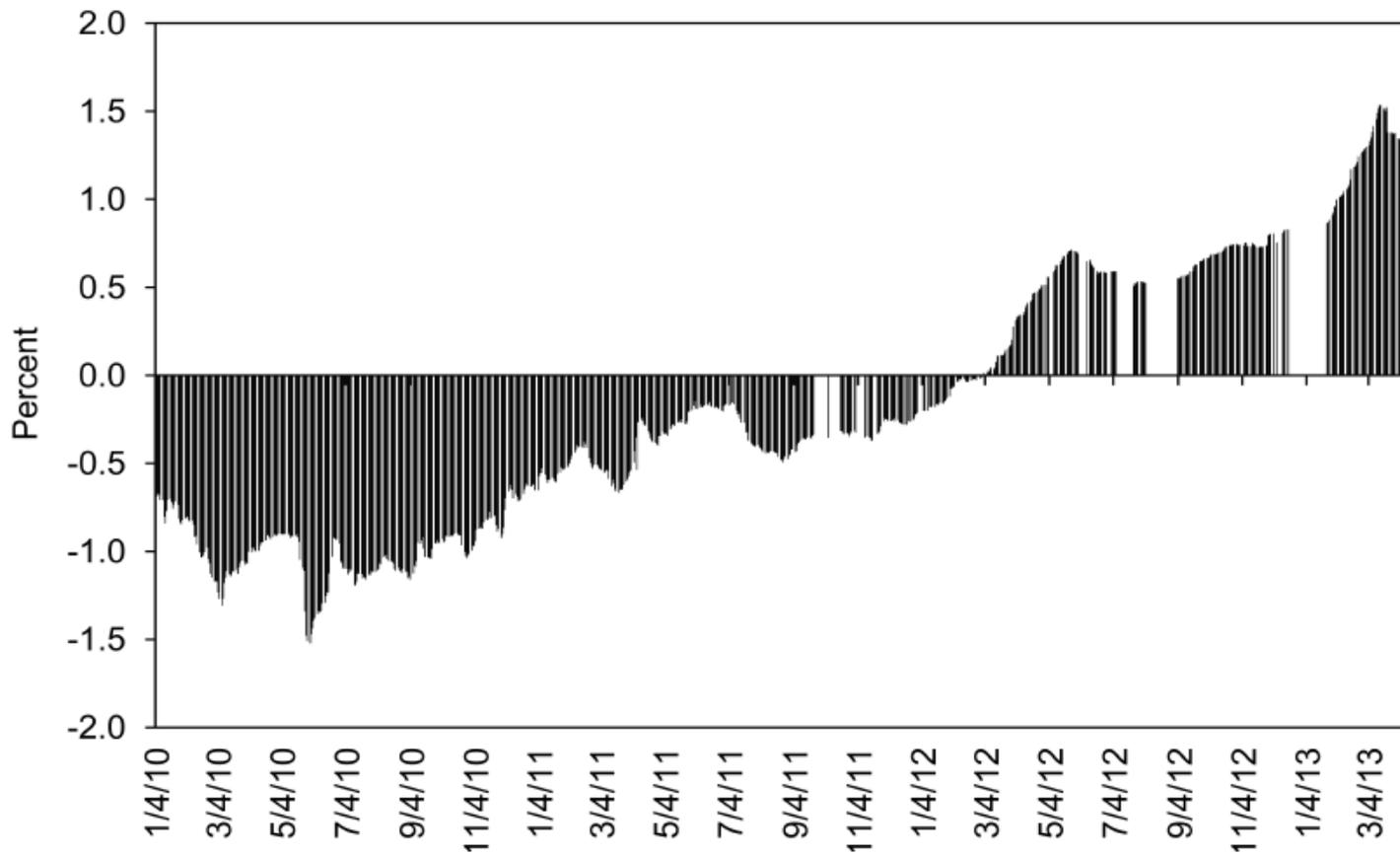


Fig. 11. Yen-dollar exchange rate

Source: Federal Reserve Bank of St. Louis, FRED Economic Data, Series DEXJPUS.

The yen depreciated substantially when the new policies were announced.



**Fig. 12.** Expected inflation in Japan

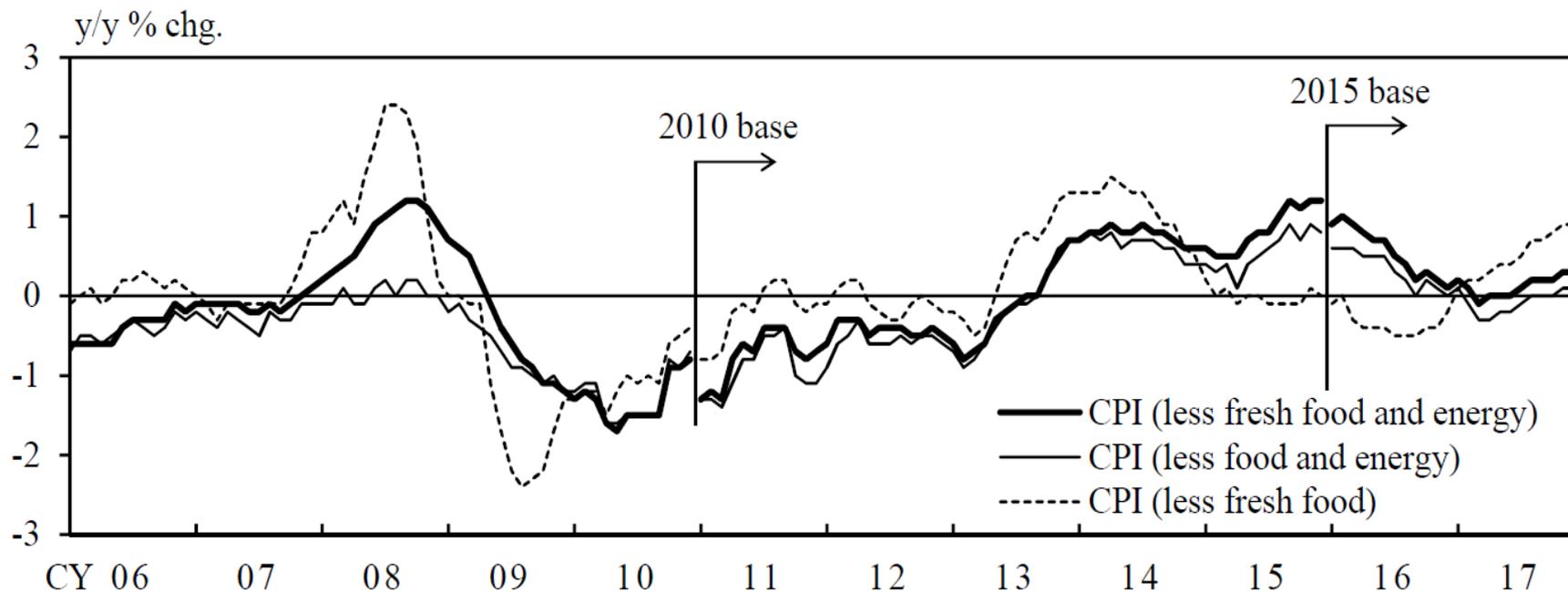
*Source:* Bloomberg, series-code JYGGBE05, five-year break-even inflation rate derived from the relationship between real and nominal bond yields.

**And expected inflation rose.**

# Overall Economic Performance

## Measures of Underlying Inflation

(1) All Items (Less Fresh Food and Energy) and All Items (Less Food and Energy)



Note: Figures are adjusted for changes in the consumption tax rate. The same applies to the charts below.

**Source: Bank of Japan.**

**Inflation has turned slightly positive but has stayed well below the 2% target.**

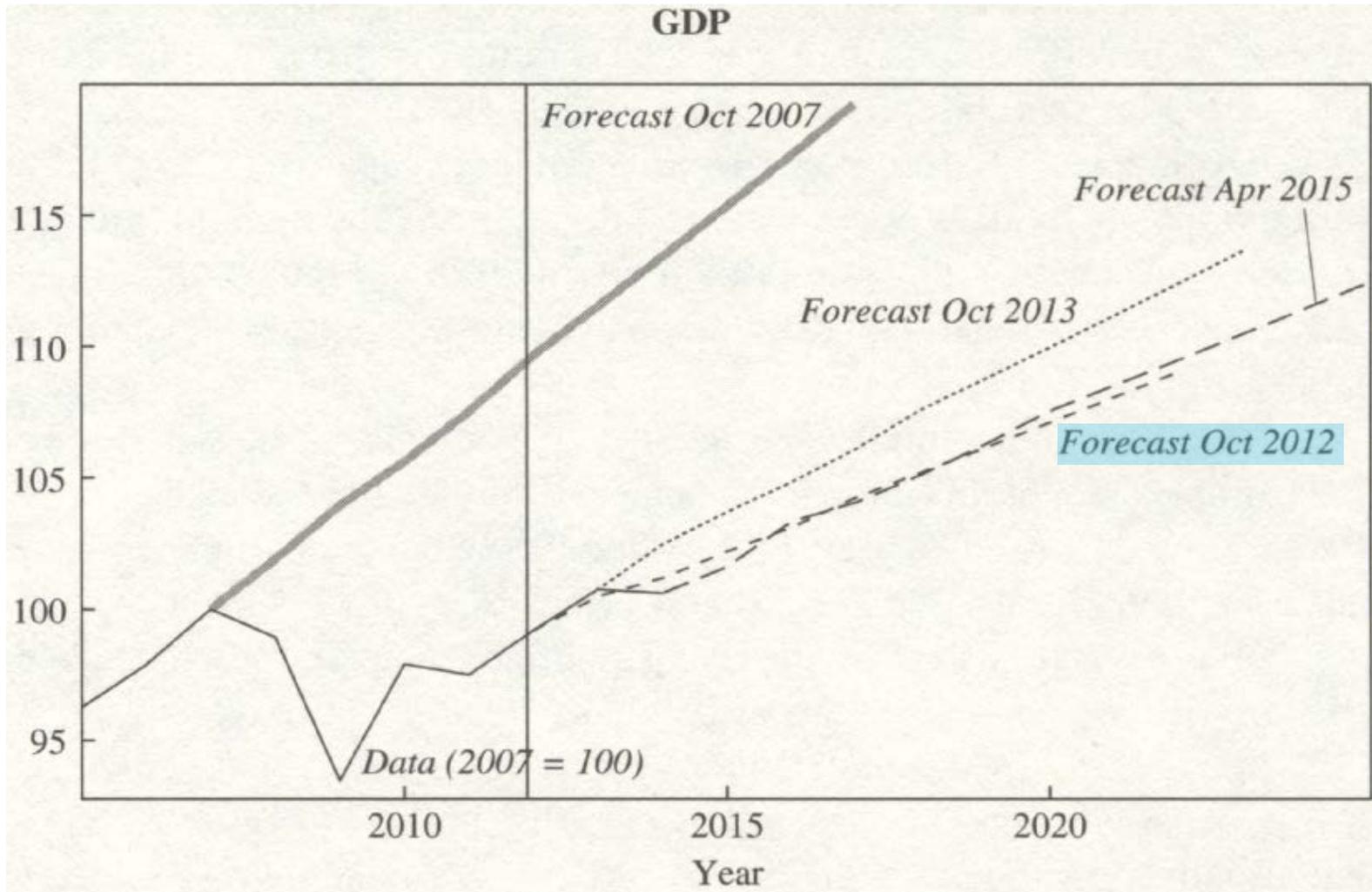


Source: JP. Cabinet Office

myf.red/g/IJRO

Real GDP growth has been 1 to 2 percent per year since the start of Abenomics.

# Half empty?



Source: Hausman and Wieland.

Real GDP is barely above forecasts made before Abenomics.

## Or Half Full?

- Japan's population of working age is *declining* by about 1½% per year.
- In the U.S., it is rising by about ½% per year.
- Recall that GDP growth under Abenomics has been 1 to 2% per year.
- So to get the same growth in GDP per person of working age that Japan has been having, the U.S. would need GDP growth of 3 to 4% per year.

# What Two Puzzles about Specific Components of Output Do Hausman and Wieland Highlight?

- Consumption seems to have responded little to the changes in monetary policy.
- Net exports seem to have responded little to the exchange rate depreciation.

Could Japanese Policymakers Do More? Are  
There Dangers in What They Have Already  
Done?

## The Most Recent Developments

- July 2017: BoJ pushes back timing for reaching inflation target for sixth time
- 2/15/18: Abe nominates Kuroda to serve a second term. If confirmed, Kuroda will be the first Governor of the Bank of Japan to serve a second term since 1961.
- A second VAT increase is scheduled for October 2019.