

# Inflation Expectations and Recovery from the Depression in 1933: Evidence from the Narrative Record

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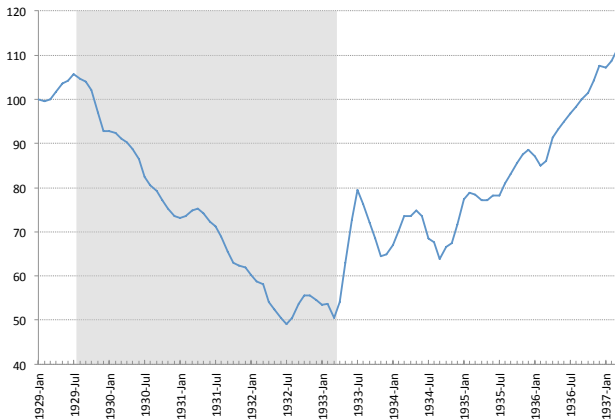
Gisela Rua  
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July 2015

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# Motivation

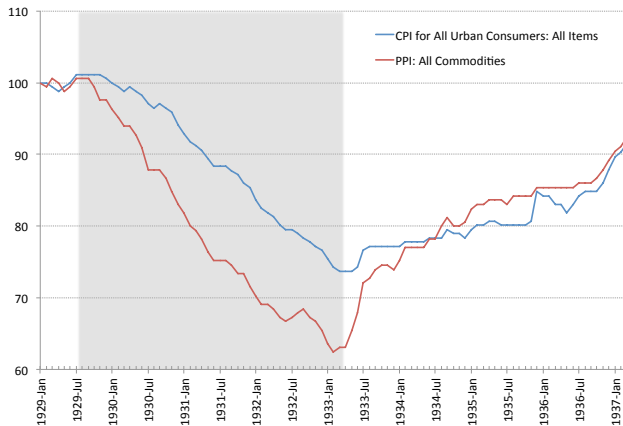
## Industrial Production, SA (Jan 1929=100)



Source: Federal Reserve's G.17 Statistical Release

# Motivation

## CPI and PPI (Jan 1929=100)



Source: FRED series CIAUCNS and PPIACO

## Motivation

- Why did the recovery from the Depression begin during 1933.Q2?
  - ▶ Temin and Wigmore (1990) and Eggertsson (2008) emphasize the role of inflation expectations
  - ▶ Theoretical research on liquidity traps

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- Why did the recovery from the Depression begin during 1933.Q2?
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  - ▶ Theoretical research on liquidity traps
- Did inflation expectations change during 1933.Q2?

## Motivation

- Conflicting evidence in early empirical studies

1933	Cecchetti (1992)			Hamilton (1992)
	MA(2) Model	AR(1) Model	Interest-Rate Model	Commodities Futures Market
Q1	-4.68	-6.48	22.07	
First Third				-6.12
Q2	-10.48	-11.75	12.39	
Second Third				6.21
Q3	7.07	3.51	-4.04	
Final Third				3.96
Q4	22.97	16.62	4.47	

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- ▶ Did contemporary observers make such sophisticated forecasts?
- ▶ Government intervention in commodities markets 1929-1933.
- ▶ Time series forecasts may not work for a regime shift.

## Two Questions

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## Two Questions

1. Did inflation expectations change in 1933.Q2?
2. If so, did the shift in expectations play a causal role in stimulating the recovery?

## Why Use Narrative Evidence

- Narrative Approach in Macroeconomics
  - ▶ Friedman and Schwartz (1963)
  - ▶ Others: Romer and Romer (1989, 2004, 2010, 2014), Ramey (2011), Carlson, Mitchener and Richardson (2011), Ramey and Shapiro (1998), Richardson and Troost (2009), Velde (2009), Monnet (2014), Jalil (2014)
- Conflicting evidence from early empirical studies
- Data limitations
  - ▶ No TIPS
  - ▶ No Michigan Survey of Consumers
  - ▶ No Survey of Professional Forecasters
- Potential to identify the sources of any shift in inflation expectations

## Relevance for today

- One way out of a recession at the zero lower bound is by changing expectations
  - ▶ Bernanke, Eggertsson, Krugman, Svensson, Woodford
- Deflation in Europe
  - ▶ Concerns about the prospect of deflationary stagnation
- Japan's *Abenomics*
  - ▶ BOJ's governor Kuroda 2013: Roosevelt's actions showed that monetary policy can quickly raise inflation expectations and start a recovery.
- *How* can policymakers influence expectations?

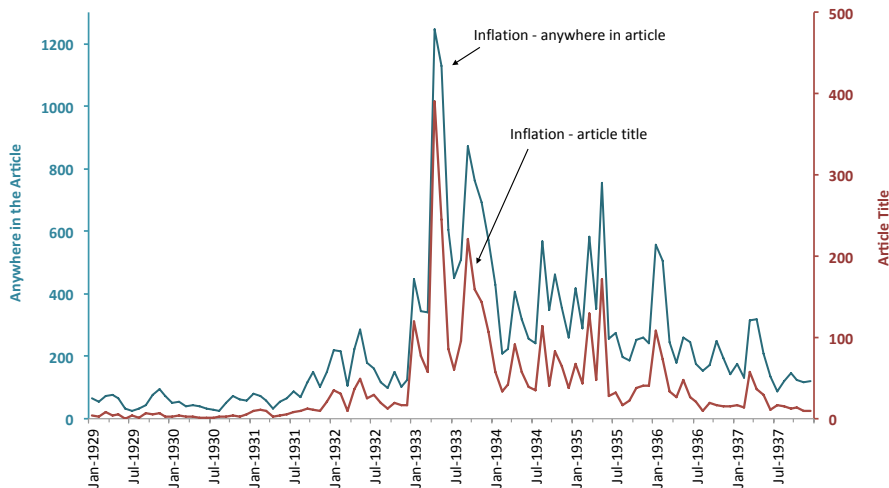
# Outline

- **Narrative evidence on the shift in inflation expectations**
  - ▶ **Inflation news coverage**
  - ▶ Historic news accounts
  - ▶ Forecasts of contemporary business analysts
- Key events that shifted inflation expectations
  - ▶ Narrative record
  - ▶ Event-study analysis
- New evidence on the recovery
- Conclusions

## Inflationary news coverage

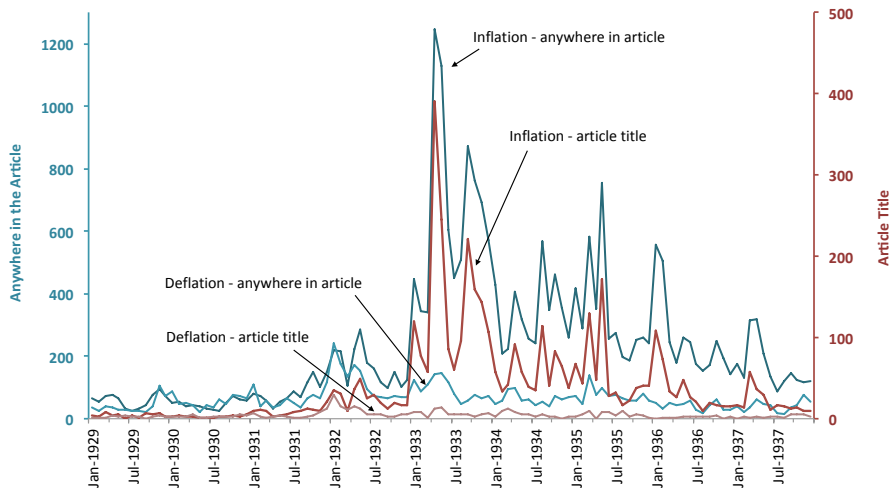
- Was there a shift in inflation news coverage?
- Keyword search in five daily newspapers
  - ▶ NY Times
  - ▶ WSJ
  - ▶ Washington Post
  - ▶ Chicago Tribune
  - ▶ LA Times

## Inflationary news coverage



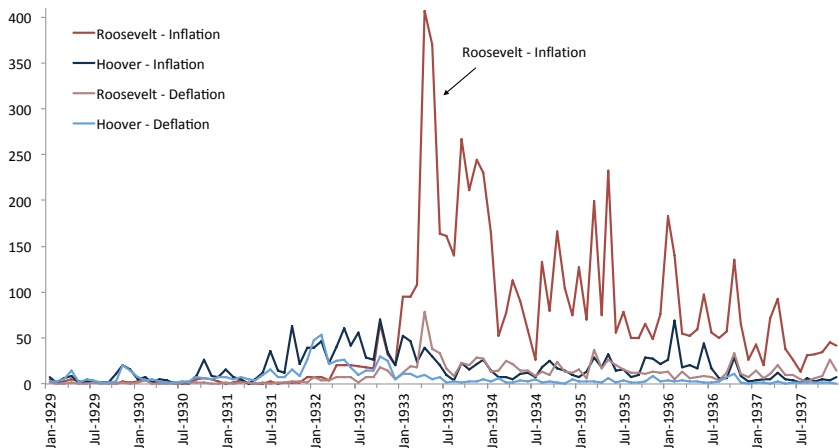
Sources: New York Times, WSJ, Washington Post, Chicago Tribune, and LA Times.

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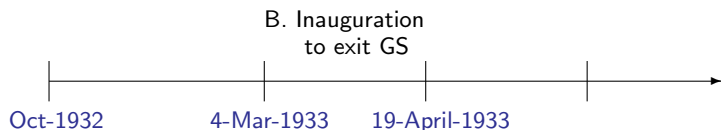
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## Historic news accounts

- Two weekly news sources
  - ▶ *Business Week* and *The Economist*
  - ▶ Oct 1932 – July 1933
  - ▶ Domestic and international perspective
  - ▶ Contemporaries' view on current and prospective macroeconomic developments in the U.S.



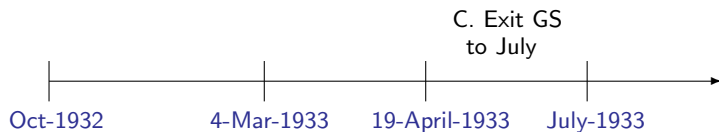
- Roosevelt's policies were not expected to end the Depression  
“No well-informed man in Wall Street expects the outcome of the election to make much real difference in business prospects.” (Economist, 10/29/32)
- Despite growing public support for inflation, Roosevelt was  
“amply committed, both by the party platform and by his own campaign speeches, against any attempt to tamper with the currency.” (Economist, 2/4/33)



- Speculation about Roosevelt pursuing inflationary policies to fight the Depression

**“The excited rumor goes the rounds in Washington and in Wall Street that inflation is imminent . . . This is inflation, if you like, in the sense that it is the reverse of deflation. . .”** (Business Week, 4/19/33)

“For a week or so before President Roosevelt announced his abandonment of the gold standard, **Wall Street was ‘talking inflation.’**” (Economist, 4/22/33)

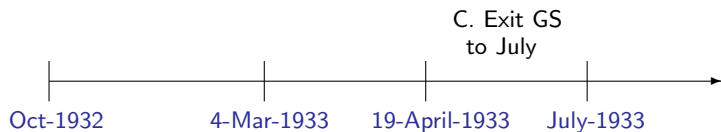


- The abandonment of the gold standard

**“The long debate as to whether we are or are not going to attempt inflation is over—the Administration is committed.”** (Business Week, 4/26/33)

**“Inflation has begun.** The Administration is definitely committed to reducing the purchasing power of the dollar.” (Business Week, 4/26/33)

“It is evident that the **tide of inflationary sentiment** is running at full flood.” (Economist, 5/5/33)



- Roosevelt's commitment to raise prices  
“**The administration has the definite objective of raising commodity prices** [such] that those who borrowed will on the average be able to repay with the same kind of dollar which they borrowed” (Roosevelt, “Second Fireside Chat,” 5/7/33)
- The Thomas Inflation Amendment  
“... the passage of the Thomas amendment ... has **answered the question of whether we are going to have inflation.**” (Business Week, 5/17/33)

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## Forecasts of contemporary business analysts

- Five sources:
  - ▶ Moody's Investment Survey
  - ▶ Standard Trade and Securities
  - ▶ The Magazine of Wall Street
  - ▶ Business Week
  - ▶ Review of Economic Statistics
- Same as those used by Romer (1990)
- No sophisticated statistical analyses and no precise numerical estimates
- Forecasts of future movements in output and inflation



<b>Forecaster</b>	<b>Issue</b>	<b>Forecast</b>
<i>Business Week</i>	Apr 19	Our forecast is an <b>inflation</b> which will almost precisely parallel the wartime inflation.
<i>The Magazine of Wall Street</i>	Apr 29	We move toward <b>inflation</b> .
<i>Review of Economic Statistics</i>	May 15	It has rather suddenly become evident that some sort of <b>inflation</b> is to come.
<i>Moody's Investment Survey</i>	May 18	The feeling seems to be that <b>higher prices</b> and activity will in any event be forced by more direct methods.
<i>Standard Trade and Securities</i>	May 24	A policy of <b>price stimulation</b> will be carried out.

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## Key events that shifted inflation expectations

- Inflationary news shocks
  - ▶ Source: daily news accounts in the New York Times and the Wall Street Journal
  - ▶ Definition: events that rose the prospects for inflation **in the eyes of contemporary observers**

## Key events that shifted inflation expectations

<b>Date</b>	<b>Inflationary news shocks</b>
Apr 19	Exit from Gold Standard Pledge by Roosevelt to raise prices
Apr 28	Passage of Thomas Inflation Amendment at Senate
May 24	Announcement of open market operations
May 26	Roosevelt's plan to repeal the gold clause Reduction in the NY Fed's rediscount rate
Jun 19	Roosevelt's message to World Economic Conference

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## Event-study analysis

$$\Delta f_t = \alpha + \beta_0 N_t + \beta_1 N_{t-1} + \varepsilon_t$$

- Daily frequency: April 1 to July 31
- $\Delta f_t$ : log change in
  - ▶ stock prices
  - ▶ dollar-to-pound exchange rate
  - ▶ dollar-to-franc exchange rate
  - ▶ frequency of the word “inflation”
- $N_t$ : news shock dummy that equals one on the day of an inflationary news shock

## Event-study analysis

	Stock prices	Dollar-Pound	Dollar-Franc	News Inflation
$N_t$	0.047** (0.013)	0.018** (0.006)	0.021** (0.006)	-0.287 (0.283)
$N_{t-1}$	0.023 (0.014)	0.011 <sup>+</sup> (0.006)	0.004 (0.007)	0.612* (0.283)
Constant	0.002 (0.003)	0.001 (0.001)	0.002 (0.001)	-0.013 (0.059)
Observations	100	101	101	121
R-squared	0.13	0.11	0.11	0.05

Standard errors in parentheses, <sup>+</sup> $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$

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## New evidence on the recovery

- Any explanation of the recovery must be consistent with an increase in velocity
  - ▶  $MV = PY$
  - ▶ M changed very little in 1933.Q2
  - ▶ P increased some, Y grew rapidly
  - ▶ Velocity must have increased

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  - ▶  $MV = PY$
  - ▶ M changed very little in 1933.Q2
  - ▶ P increased some, Y grew rapidly
  - ▶ Velocity must have increased
- Narrative evidence of an increase in velocity

“Though much has been heard of America’s ‘inflationary’ intentions, of actual inflation, so far, there has been none.

**The entire increase in America’s economic activity is due to enhanced velocity of monetary circulation, reflecting a change in national psychology.”** (Economist, 7/1/33)

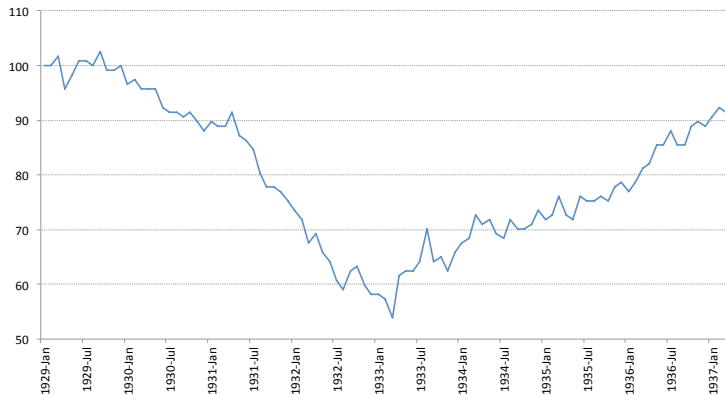
## Narrative evidence on the causal link

- Consumers increased their spending

“The depreciation of the dollar gave rise to **fear—or hope—of inflation**, which made people anxious to transfer their money into goods.” (Economist, 7/8/33)

## Narrative evidence on the causal link

Retail Sales, SA (Jan 1929 = 100)



Source: NBER macrohistory database series m06002a

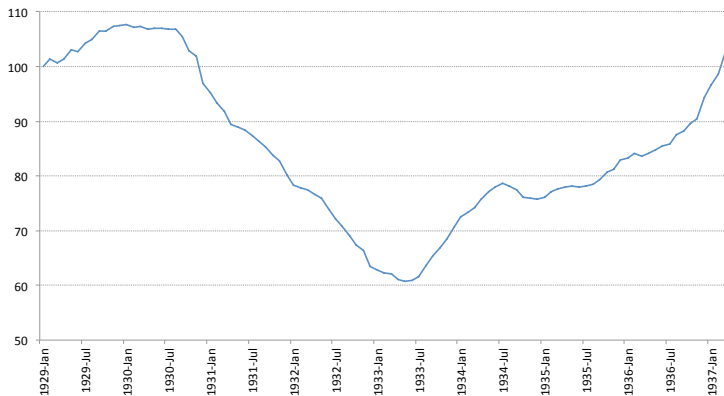
## Narrative evidence on the causal link

- Wholesalers built up their inventory holdings

“It appears that active buying has come from **jobbers and wholesalers who are replenishing or accumulating stocks in anticipation of further advances in price**. It is hardly too much to say that the rise in price has been more the cause than the result of demand.” (Economist, 5/27/33)

## Narrative evidence on the causal link

Manufacturers' Inventories, SA (Jan 1929=100)



Source: NBER macrohistory database series m05104a

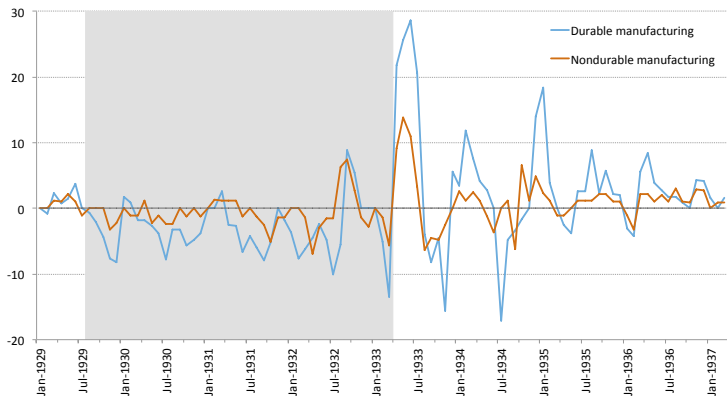
## New evidence on the recovery

- Firms increased production

“It is already being appreciated that the remarkable expansion in industrial activity is partly in **anticipation of a rise in working costs and partly a gamble on a sustained increase in consumption.**” (Economist, 7/15/33)

## New evidence on the recovery

### Manufacturing Production, SA (monthly percent changes)



Source: Federal Reserve Bulletin, August 1940



## Why were the effects so rapid?

- Price-level targeting vs. Inflation targeting
  - ▶ Roosevelt's commitment to a price-level target led market participants to expect inflation until prices were back at that higher-set target.
- General perception that prices would rise rapidly
  - ▶ "Inflation Will Catch You IF YOU DON'T WATCH OUT" (ad in Business Week, 5/10/33)



# Inflation Will Catch You

IF YOU DON'T WATCH OUT » »

## U.S. Off Gold Standard, Roosevelt to Rule Currency; Dollar Drops Abroad, Stocks and Commodities Soar

**NATION IS OFFICIALLY DECLARED Inflation** **Coin Prices Soar at Chicago** **Coup Mean**  
**OFF GOLD BASIS TO LIFT PRICES;** **On Inflation and Sterling Rise By President**  
**STOCKS AND COMMODITIES SOAR** **Rate Up Sharply** **To Lift Price**

**Roosevelt and Leaders Agree** **Steel Operating** **Wheat Holds 15¢ at 2 1/2 Cent Advance, 40¢**  
**On Plan to Control Currency** **Rate Up Sharply** **On Inflation and Sterling Rise By President**  
**Steel Operating Rate Up Sharply** **To High for '33 Metal Prices Advance Sharply,**  
**Wheat Holds 15¢ at 2 1/2 Cent Advance, 40¢** **With Copper Crossing 6 Cents**  
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**Woodin Calls on Reserve Banks to Liberalize Loan Policy in 'Inflation' Program**

**Banking** **Planned to Aid** **STOCK, COMMODITY** **Embargo Held**  
**Trade Upturn** **PRICES UP SHARPLY** **Aid to U. S. in**  
**INSPIRED TRADING** **World Parley**

**LIFT COMMODITY PRICES** **Markets Have U.S. OFFICIALLY GOES**  
**Second Day of OFF GOLD STANDARD** **Second Day of OFF GOLD STANDARD**  
**Alphabet Rise TO LIFT PRICE LEVEL** **Alphabet Rise TO LIFT PRICE LEVEL**

**Markets Push On** **Markets Push On**  
**Markets Push On** **Markets Push On**  
**Markets Push On** **Markets Push On**

Inflation means distribution of buying power, credit expansion, rising prices, restoration of markets, increased business turnover.

But its benefits will not be distributed equally. Inflation will mean most to the business man who meets it half way, who increases his business pace to keep up with the accelerated dollar, who unleashes his jealously guarded cash reserves and credit, who first woos anew the markets he has neglected in the years just past.

The business market will be the first to expand under inflationary influences. The market for everything that business and business men buy will develop first and fastest.

Inflation is already under way, will gather speed daily. Advertising is the only selling force that works fast enough to keep up with market expansion. Publications with fast publishing schedules and frequency of appearance can hold the necessary pace.

Don't let inflation catch your advertising napping.

THE BUSINESS WEEK  
 PRIMARY FOR BUSINESS  
 1933

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## Conclusions

- Inflation expectations shifted dramatically during 1933.Q2
- Event-study analysis: Inflationary news shocks had substantial effects on financial markets
- Narrative evidence indicates a causal link
- Bolsters the results of Temin and Wigmore (1990) and Eggertsson (2008)
- Suggests that a well-targeted communications strategy can dramatically shift market expectations and set off a recovery in a liquidity trap