

End of Japan's Deflation?

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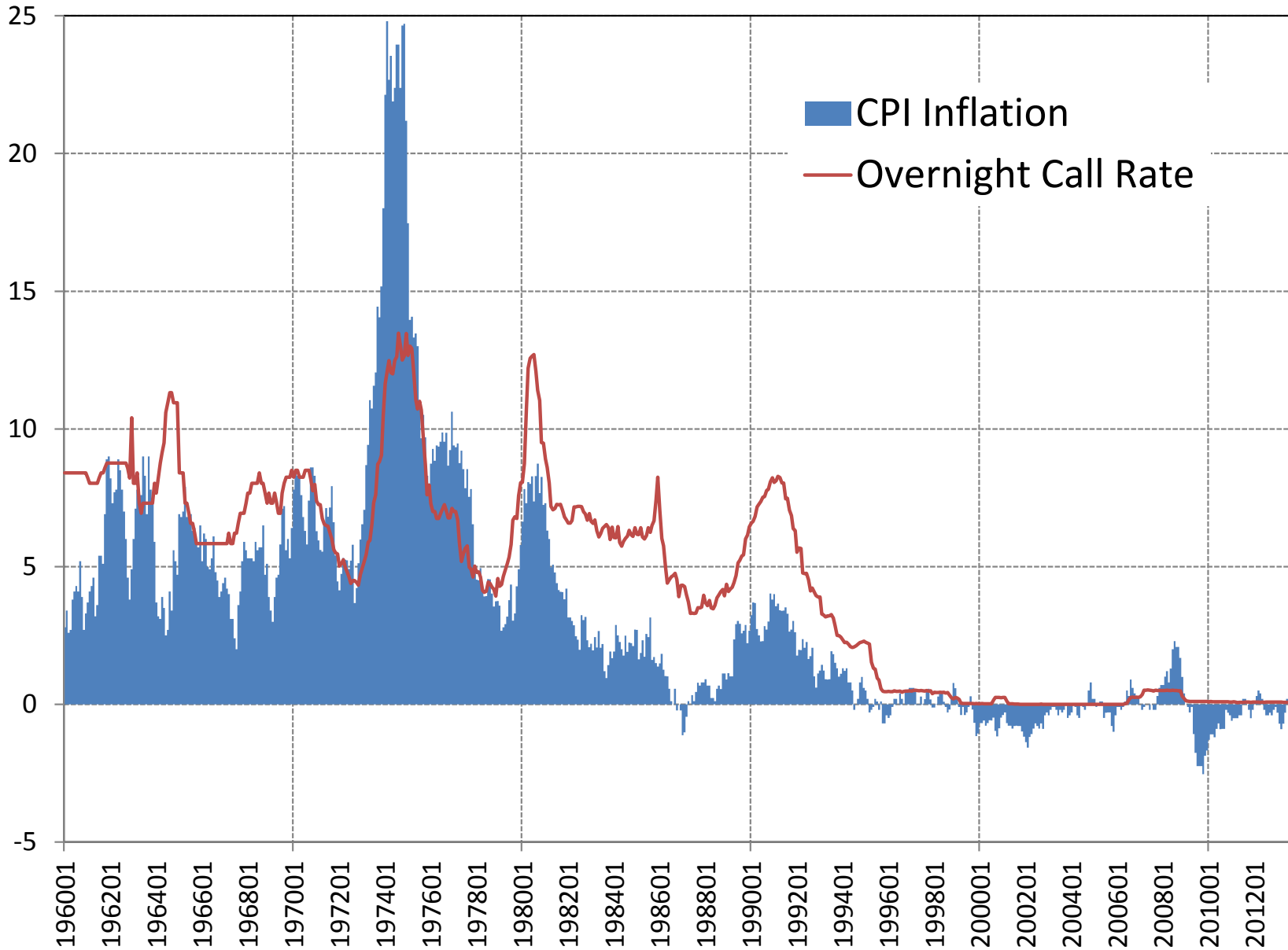
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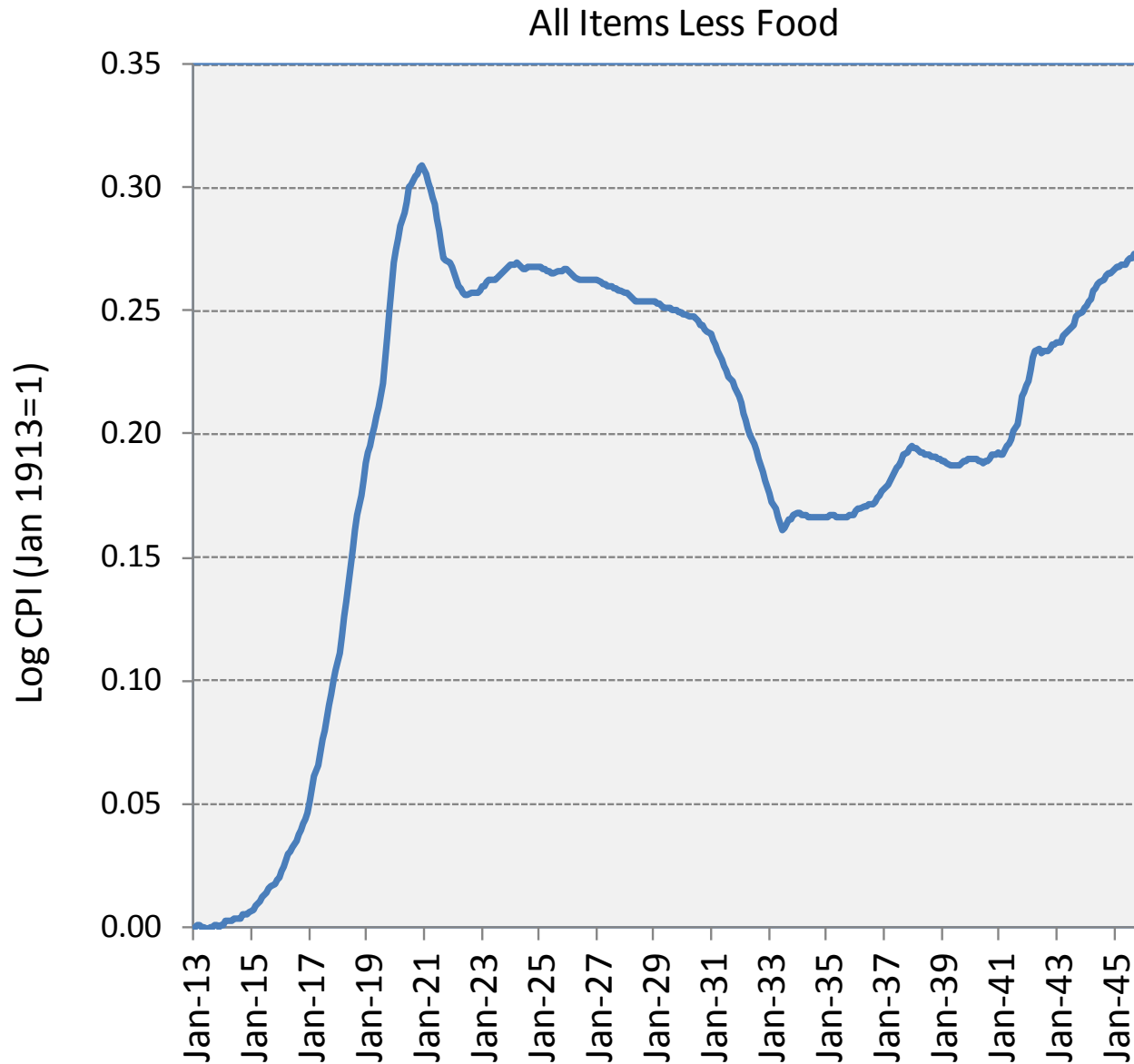
<https://sites.google.com/site/twatanabelab/>

September 27, 2013

Mild but decades long deflation in Japan



U.S. Consumer Price Index during the Great Depression



Three Arrows of Abenomics

1. Aggressive monetary easing
2. Flexible fiscal policy
3. Growth strategy that promotes private investment

Monetary Policy

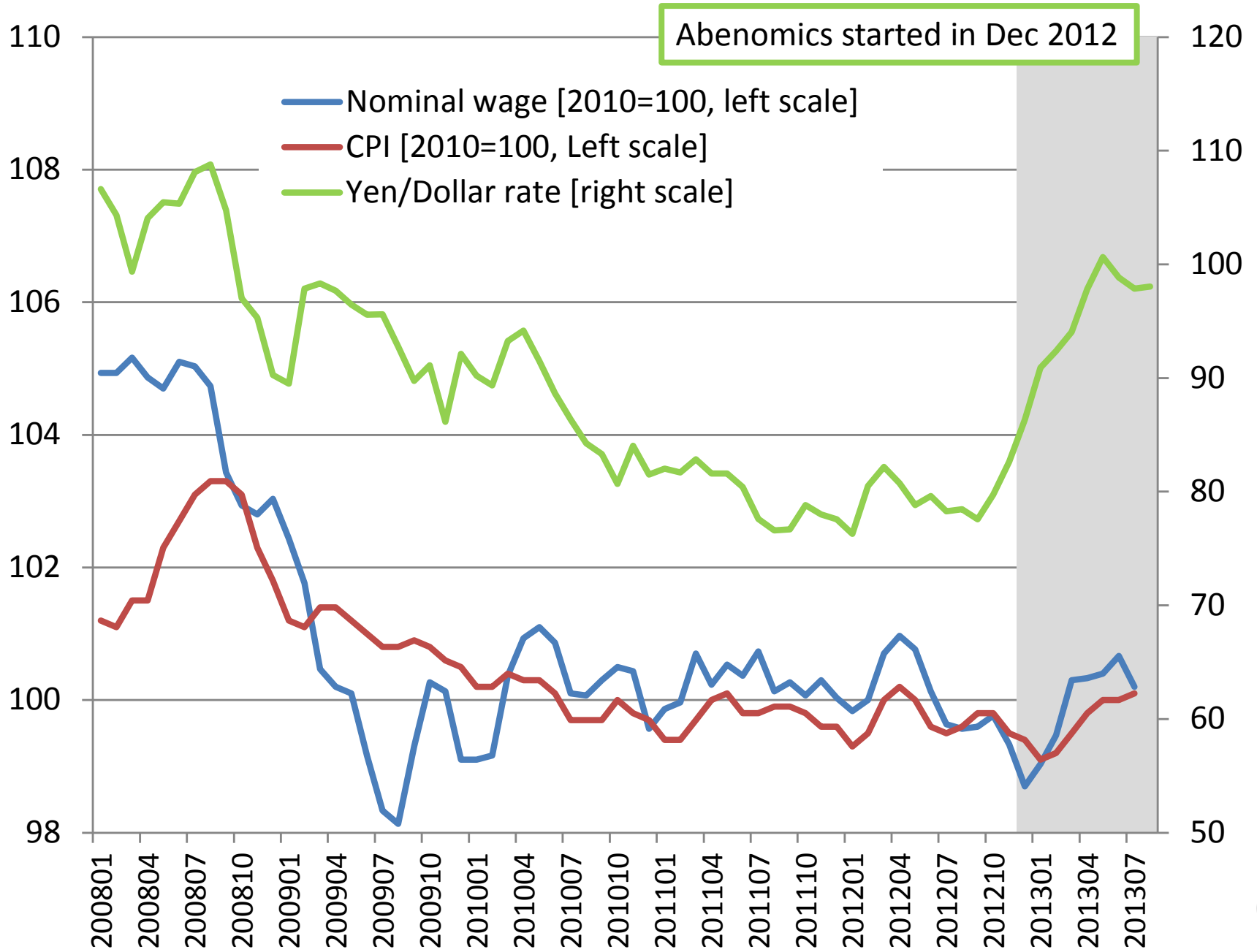
- January 22, 2013

Joint statement of the Government and Bank Japan on overcoming deflation and achieving sustainable economic growth
BoJ set the inflation target at 2 percent

- April 4, 2013

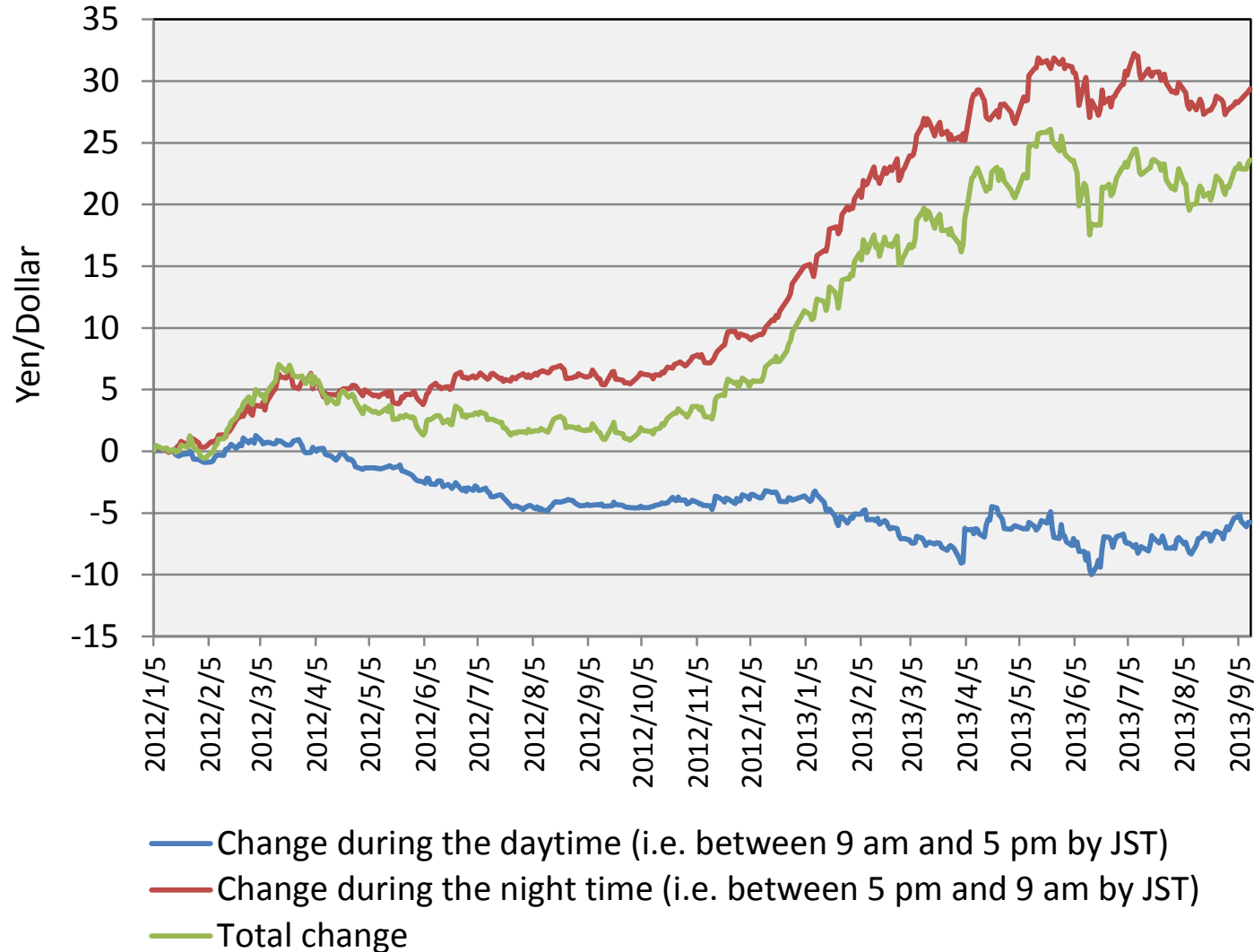
BoJ introduced Quantitative and Qualitative Monetary Easing (QQME)

- “The Bank will achieve the price stability target of **2 percent** in terms of the year-on-year rate of change in the CPI at the earliest possible time, with a time horizon of about **two years**.”
- “It will **double** the monetary base and the amounts outstanding of Japanese government bonds (JGBs) as well as exchange-traded funds (ETFs) in two years, and more than double the average remaining maturity of JGB purchases.”



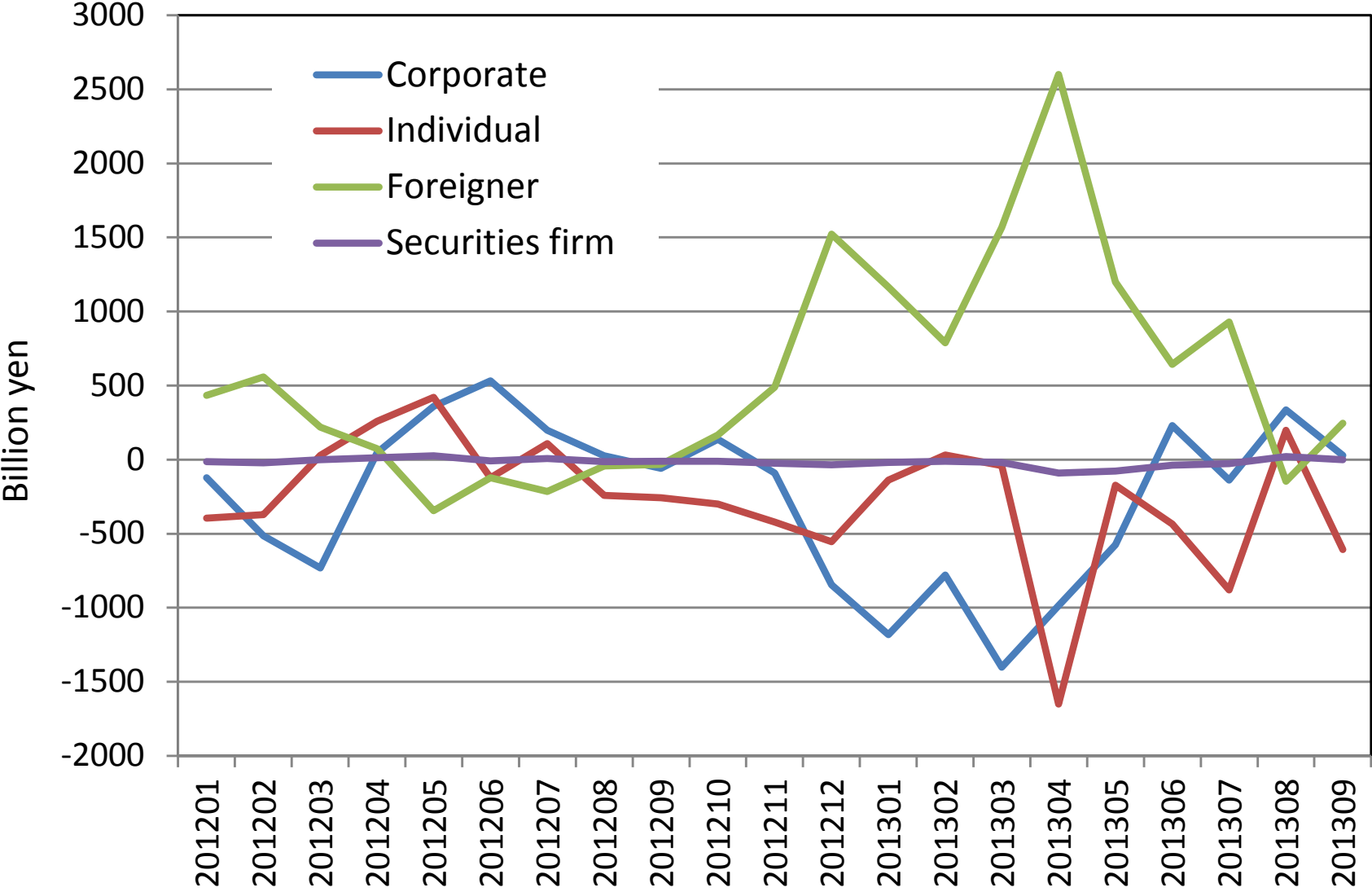
Yen Depreciates At Night

Accumulated Change in Yen/Dollar Rate since Jan 2012



Source: Fukuda (2013)

Net Purchase By Sector in the Tokyo Stock Exchange



Quarterly Consensus Forecast

September 9, 2013

	2013 Q1	Q2	Q3	Q4	2014 Q1	Q2	Q3	Q4	2015 Q1	Q2
Real GDP Y/Y percent	0.1	1.3	2.8	3.4	3.5	1.4	1.1	0.7	0.0	1.5
CPI Y/Y percent	-0.6	-0.2	0.5	0.7	0.9	2.8 (1.0)	2.7 (0.9)	2.6 (0.8)	2.8 (1.0)	0.6

Note: Numbers in parentheses indicate the inflation rate without consumption tax increase planned in April 2014.

Source : Consensus Economics Inc.

Is Japan on track to beat deflation?

1. Recent improvement in CPI is mainly from “cost push” shocks
2. Japanese CPI contains substantial upward bias
3. The Phillips curve is flat, and there is no sign of upward shift

Recent improvement in CPI is from “cost push” shocks rather than “demand pull” shocks

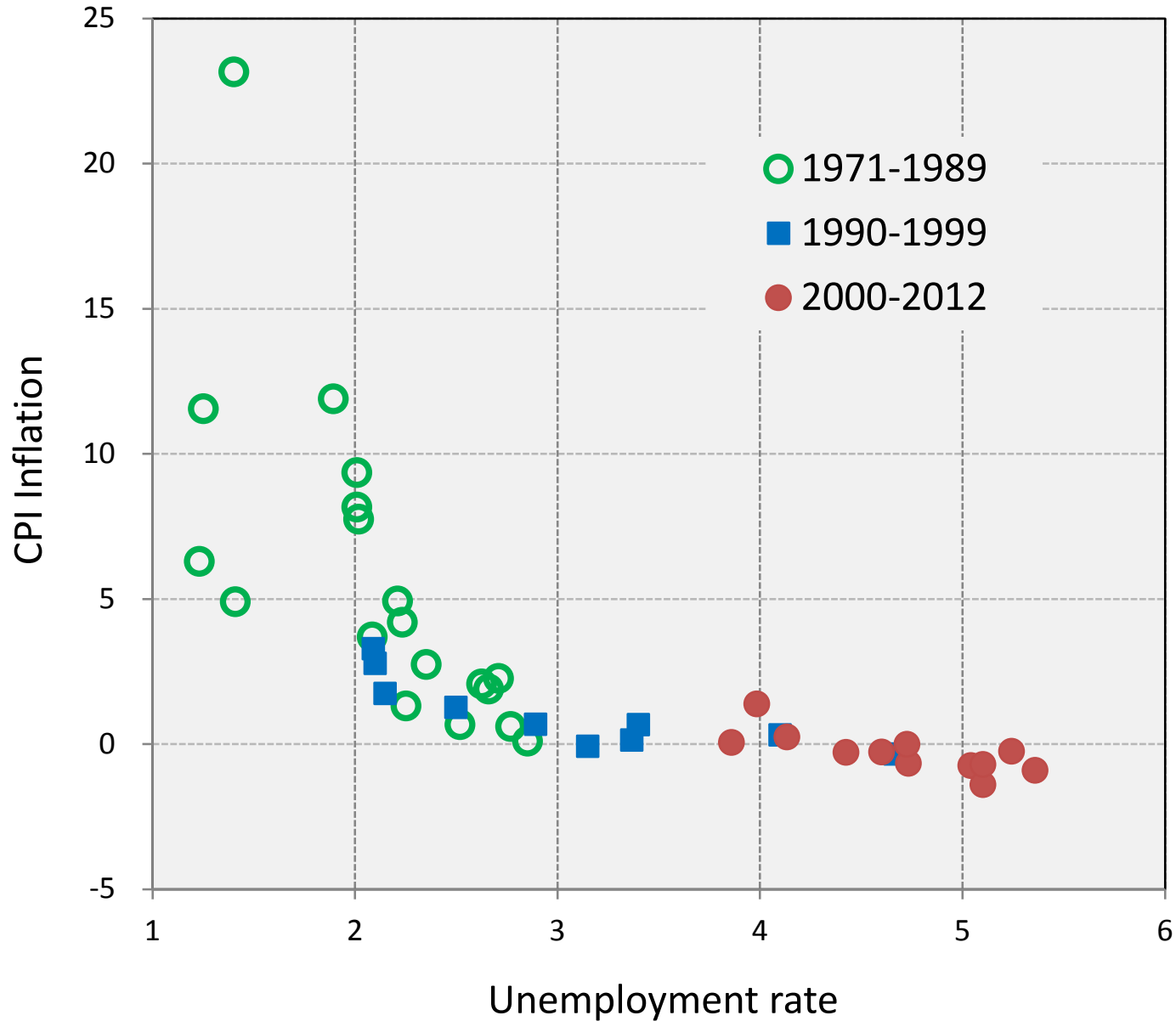
Items with large contributions to the change in Y/Y inflation rate between Nov 2012 and July 2013

Item	Weight	Y/Y Nov 2012	Y/Y July 2013	Contribution
Total CPI	10000	-0.2	0.7	0.900
1. Gasoline	229	2.6	10.5	0.177
2. Electricity	317	4.8	10.1	0.164
3. Cabbage	9	-28.9	41.9	0.062
4. Cellular phones	54	-13.2	-1.5	0.062
5. Automotive insurance premium	34	0.0	13.6	0.045
6. Handbags (imported)	16	0.0	27.5	0.043
7. Personal computers (notes)	20	-14.0	5.4	0.038
8. Kerosene	50	3.4	10.0	0.032
9. Hamburgers	22	0.0	14.7	0.032
10. Personal computers (desktops)	10	-7.7	23.1	0.030

Upward Bias in CPI

	Grocery CPI			Total CPI
	Compiled by SBJ	Compiled by UTokyo		
	Laspeyres	Tornqvist	CPI bias	
Jan-13	-0.72%	-1.06%	0.34%	-0.30%
Feb-13	-0.68%	-1.13%	0.45%	-0.70%
Mar-13	-0.70%	-1.00%	0.30%	-0.90%
Apr-13	-0.78%	-1.09%	0.31%	-0.70%
May-13	-0.66%	-0.97%	0.31%	-0.30%
Jun-13	-0.54%	-0.82%	0.28%	0.20%
Jul-13	-0.52%	-0.79%	0.28%	0.70%
Aug-13	n.a.	-0.63%		n.a.
Sep-13	n.a.	-0.43%		n.a.

Flattening of the Phillips curve

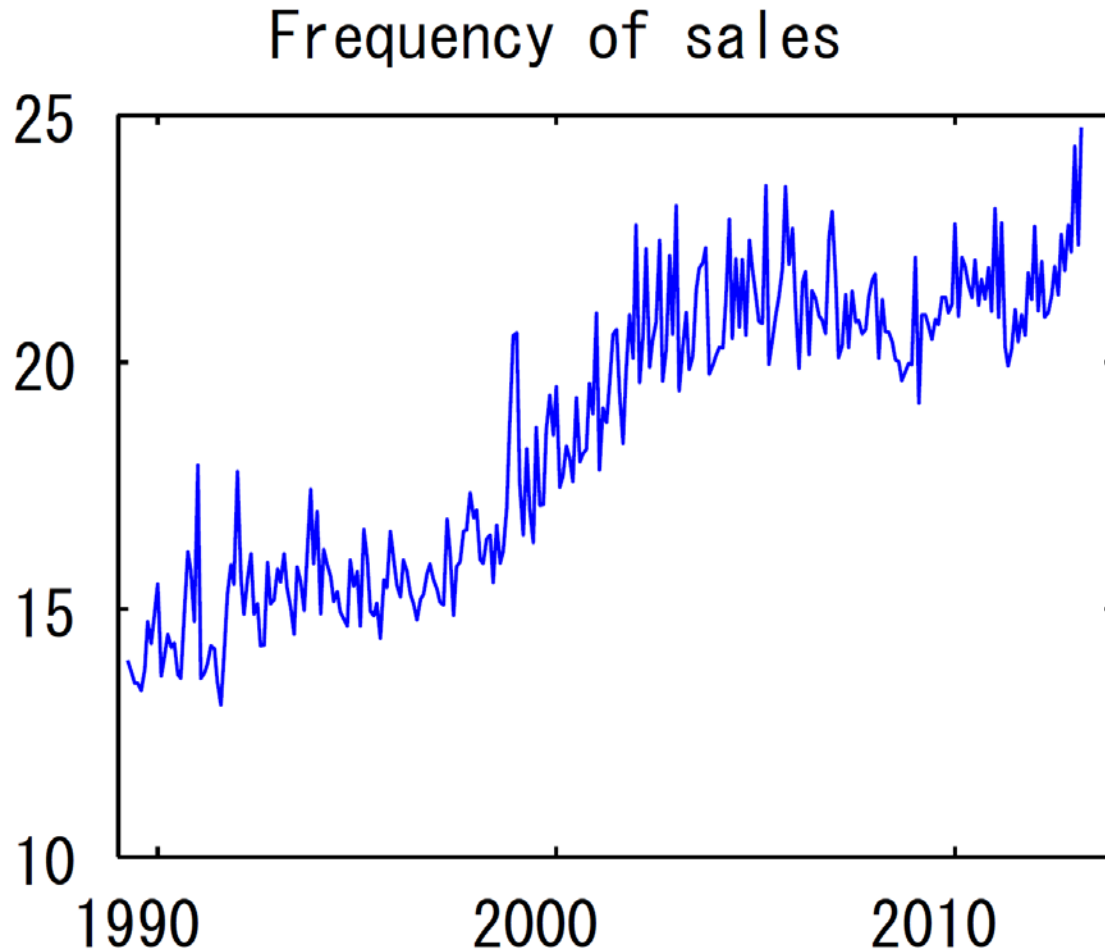


Firms price setting behavior behind the flattening of the Phillips curve

- To what extent do you raise your product prices in response to a marginal cost increase?
 - Almost 100% pass-through: **21%**
 - Half: **23%**
 - Less than half: **12%**
 - No pass-through: **26%**
 - Other: **18%**
- Why you do not raise your price?
 - Need to keep long term relationship with customers: **53%**
 - Rival firms may not raise their prices: **44%**
 - Need to avoid substantial decline in sales: **34%**
 - Prices are determined not by sellers but by customers: **20%**

Source: Annual Report on the Japanese Economy and Public Finance, July 2013

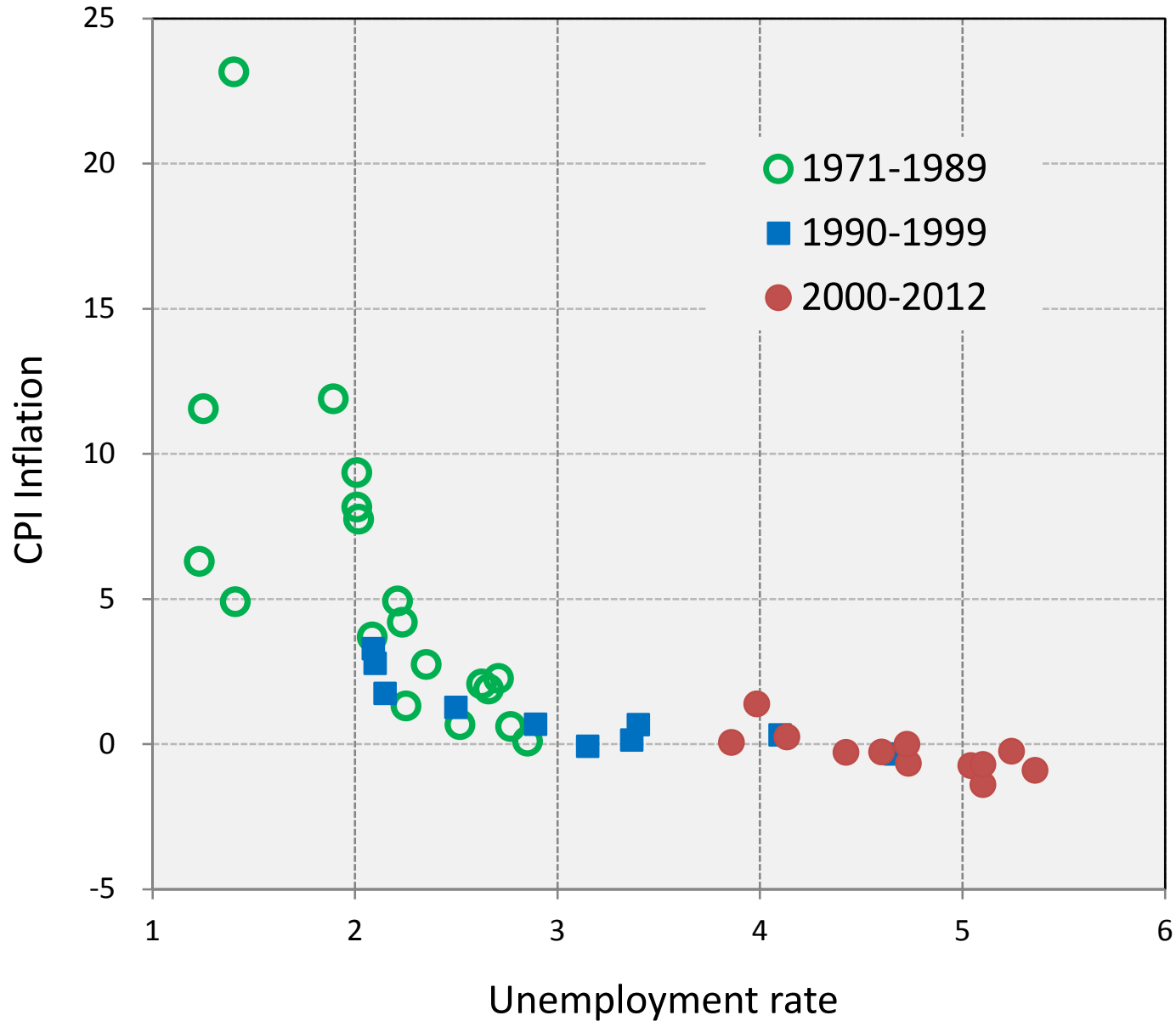
Frequency of temporary price reductions at supermarkets estimated using scanner data



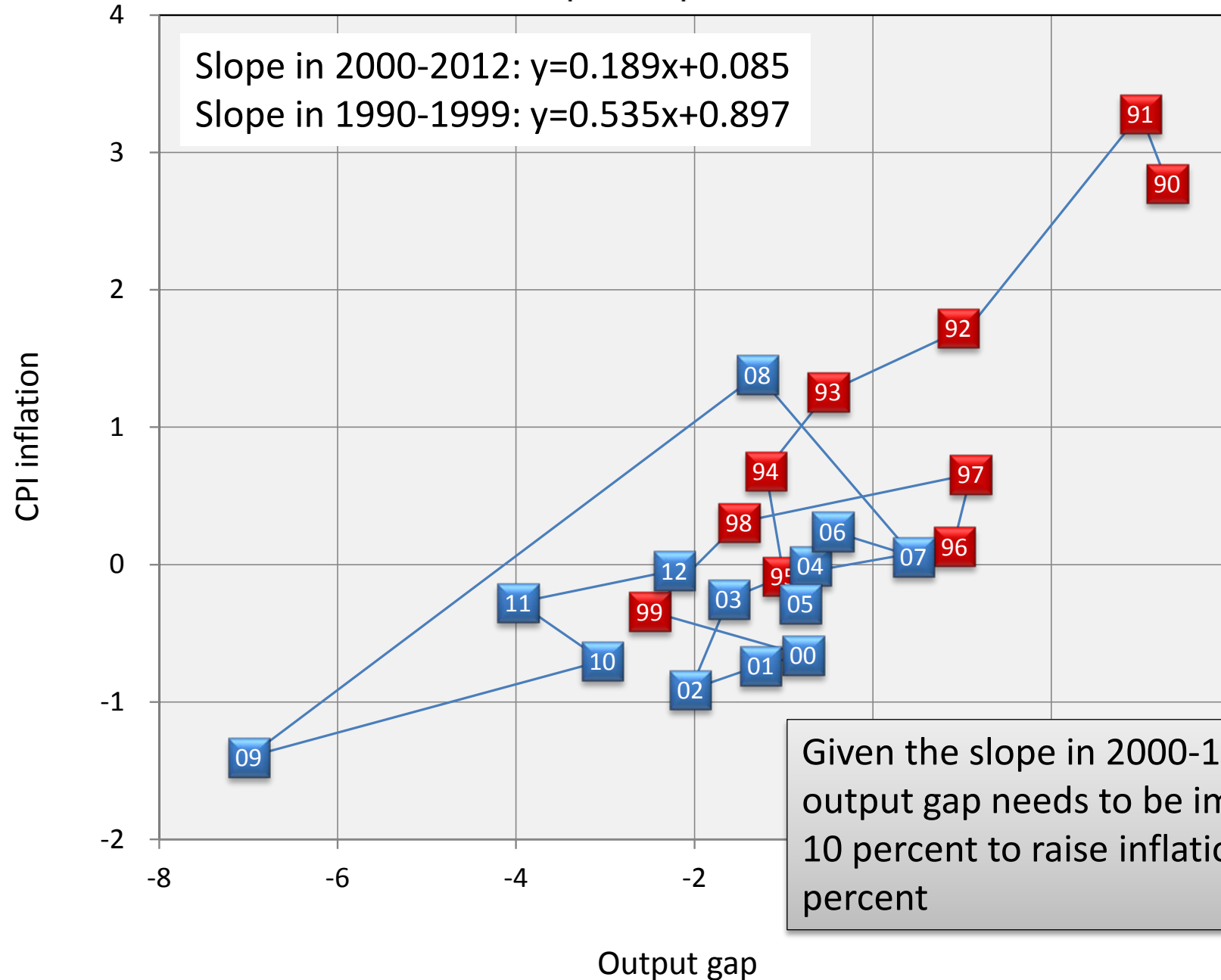
Temporary price reduction occurs once a four days

Source: Sudo et al (2013)

Flattening of the Phillips curve



Output Gap vs. CPI Inflation



Slope in 2000-2012: $y=0.189x+0.085$
Slope in 1990-1999: $y=0.535x+0.897$

Given the slope in 2000-12, the output gap needs to be improved by 10 percent to raise inflation by 2 percent

Any sign of upward shift in the Phillips curve?

Phillips Curves in Jan 2009 - July 2013

