

Monetary policy and the economy

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All views expressed are those of the author only and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

Overview

- Monetary policy in theory . . . and reality?
- Challenges
 - Monetary policy lags
 - Uncertain present and future

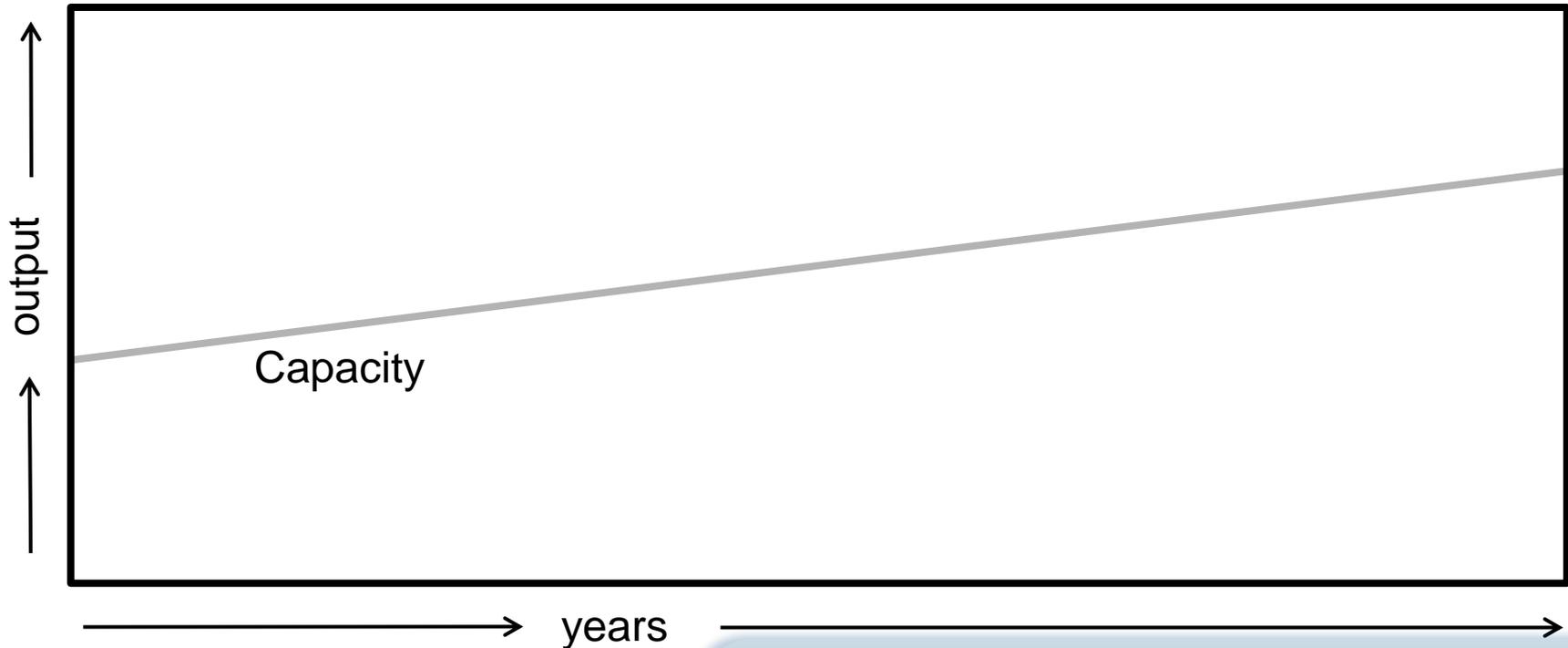


... and reality?

MONETARY POLICY IN THEORY



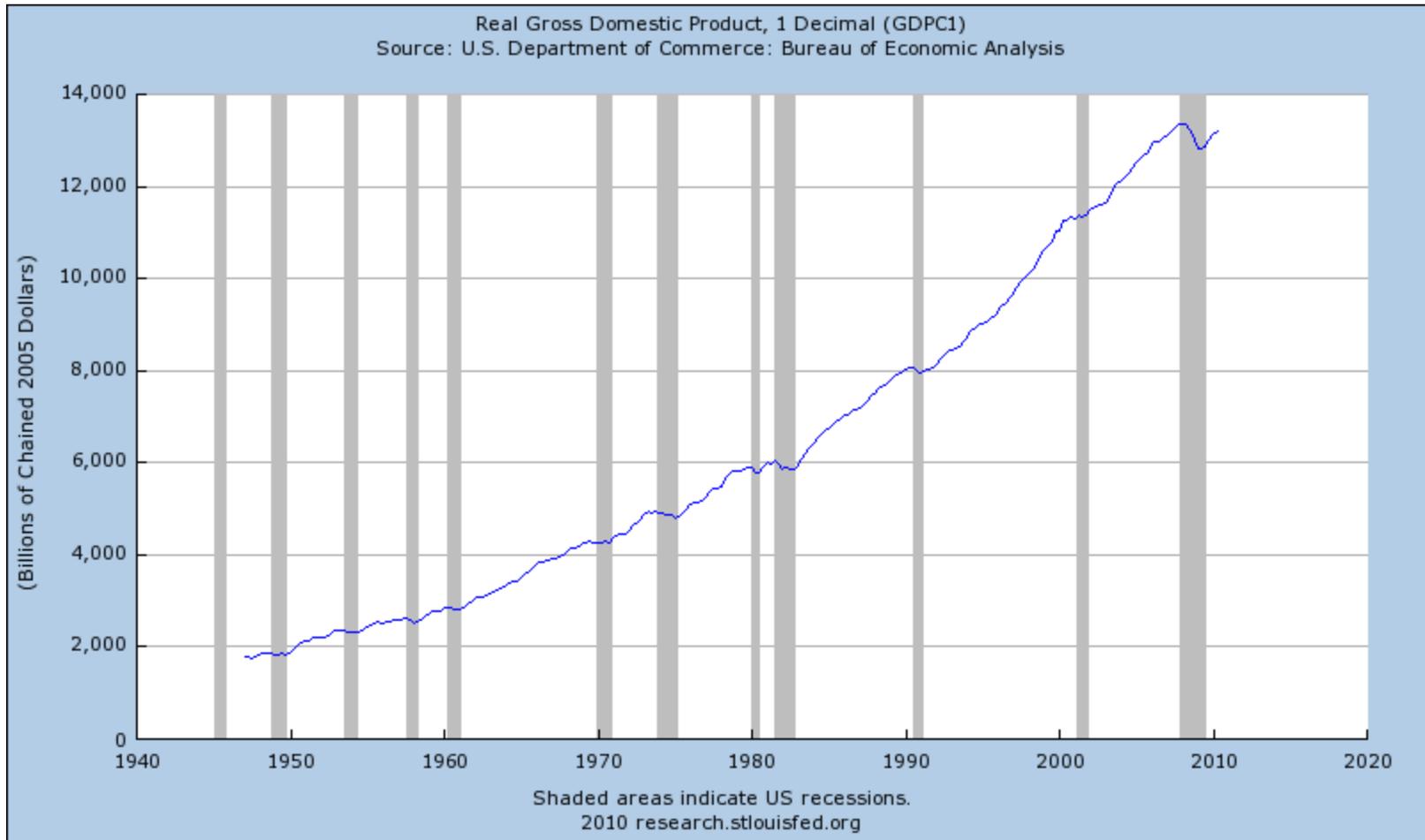
The sustainable output of the economy grows



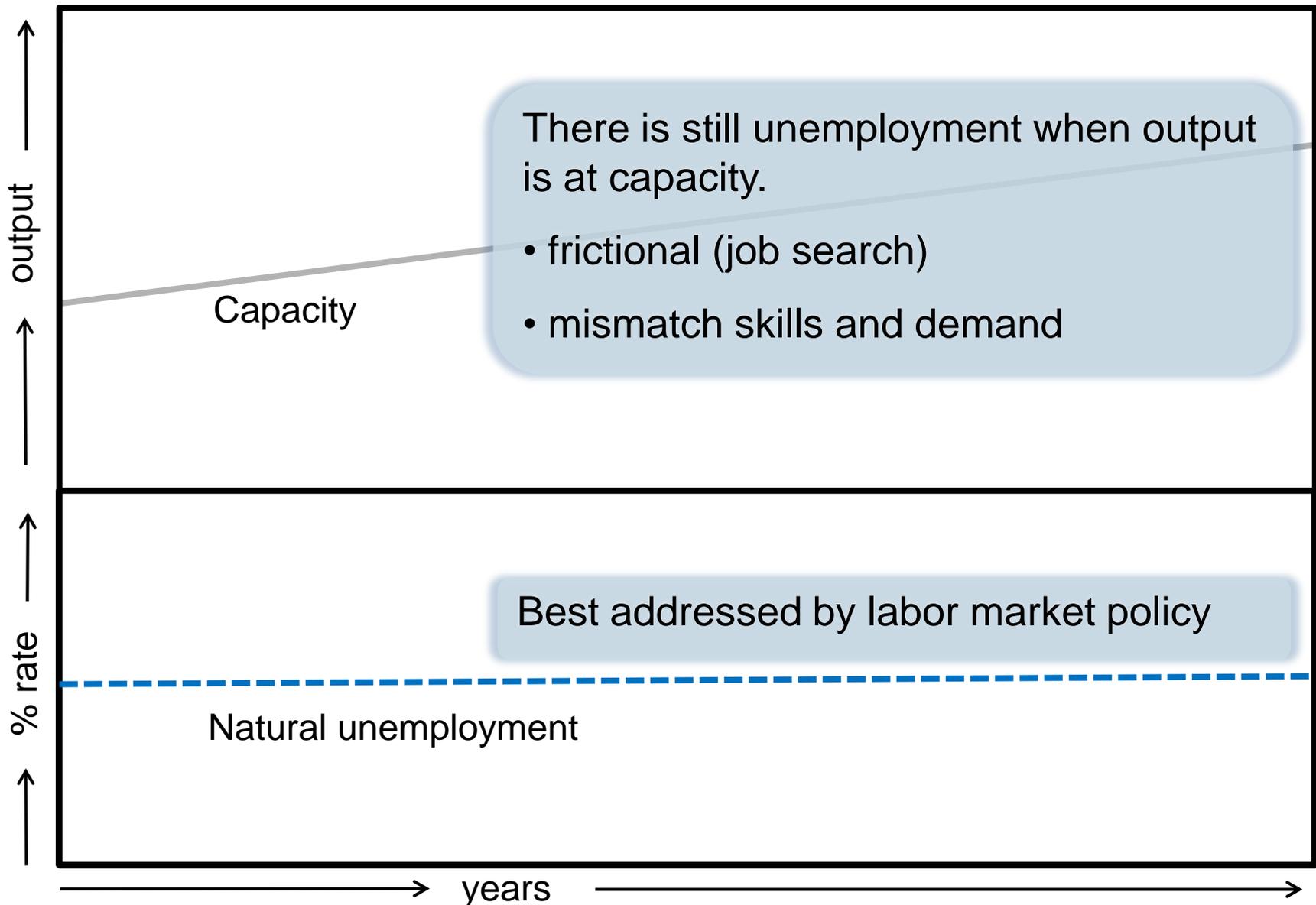
- Long run capacity growth stems from
- labor supply growth
 - labor productivity growth (technology)

Best addressed by fiscal or regulatory policy

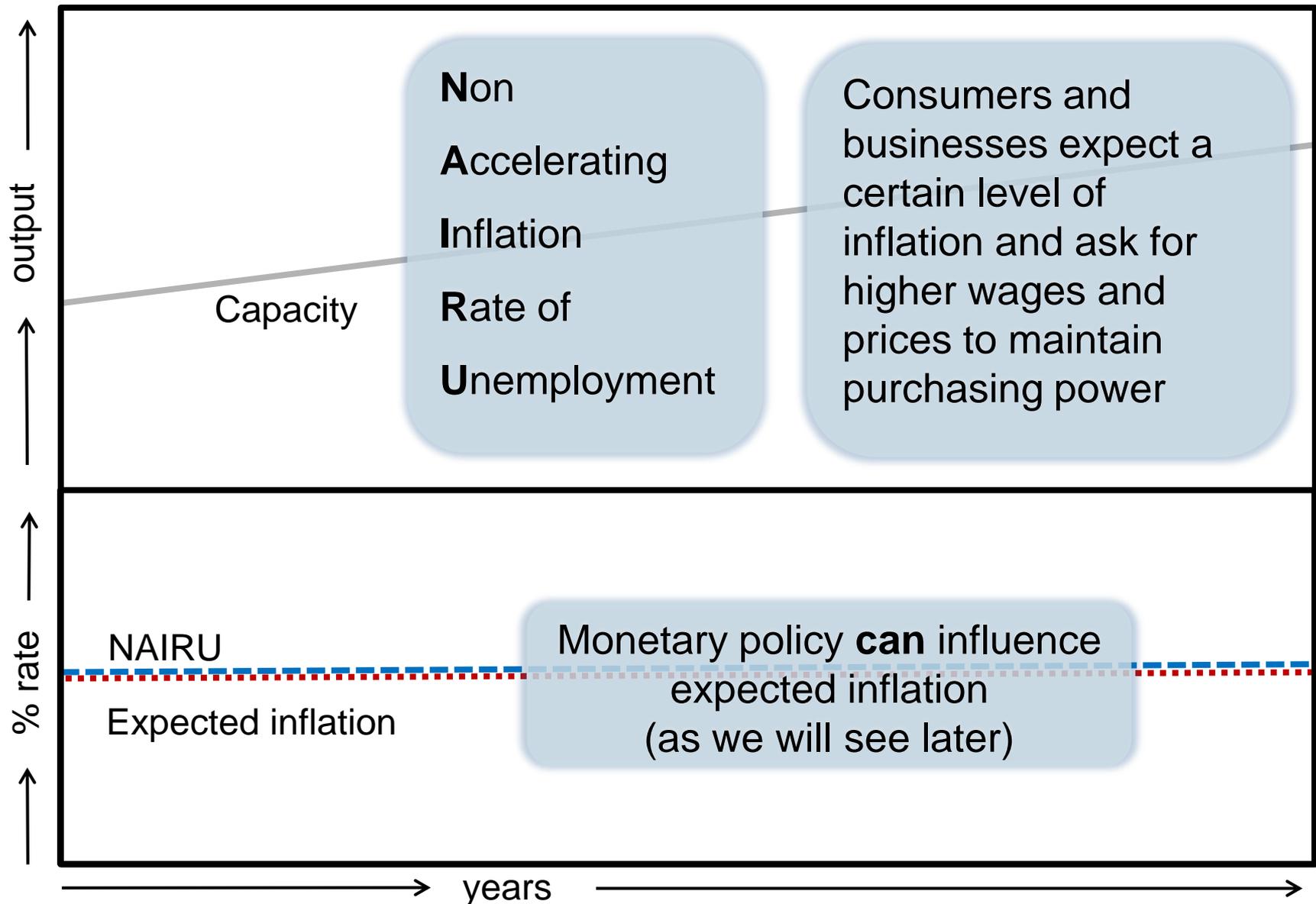
Gross domestic product



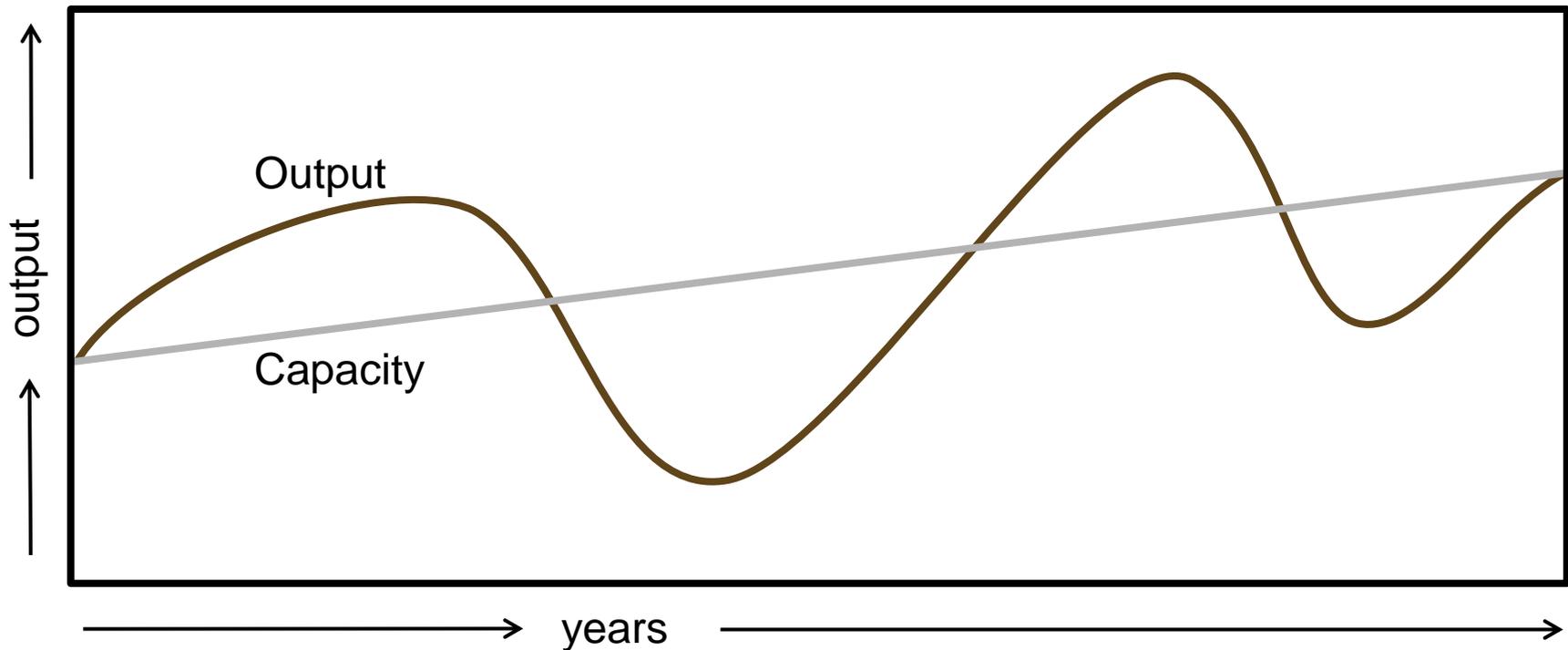
Unemployment when output is at capacity is “natural”



Inflation at capacity is “expected”



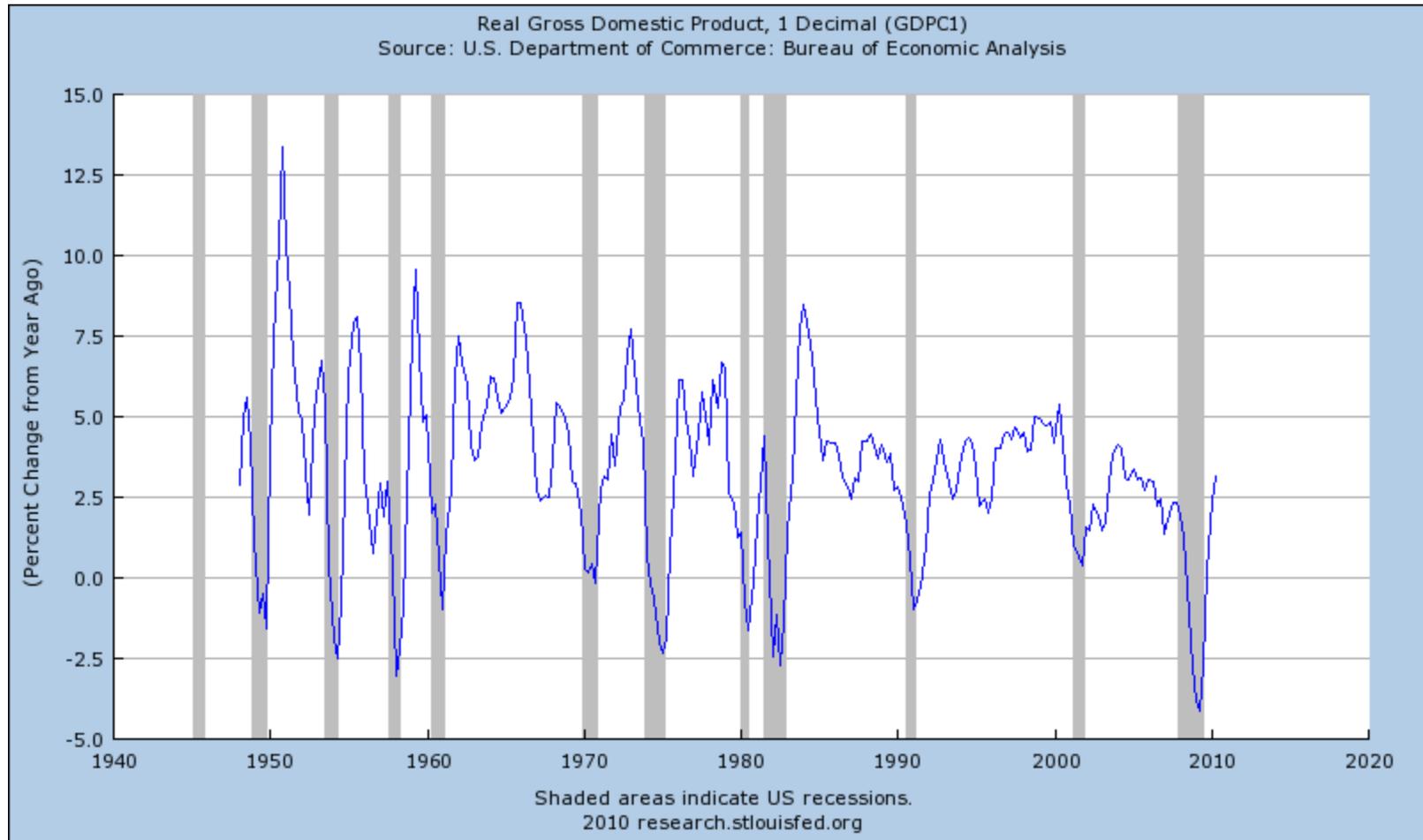
Actual output exhibits fluctuations



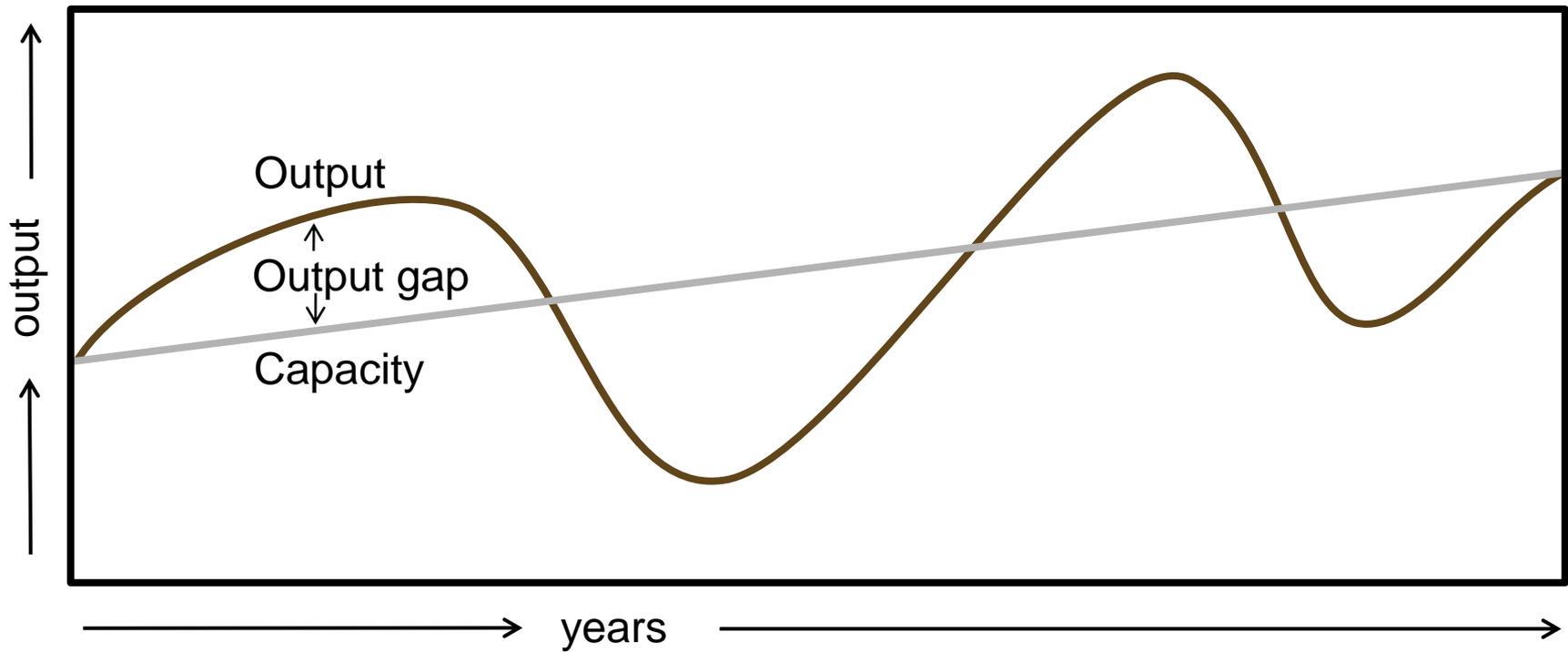
Output can deviate in short run
Changes in demand cause
persist output deviations due to
“sticky” prices and wages



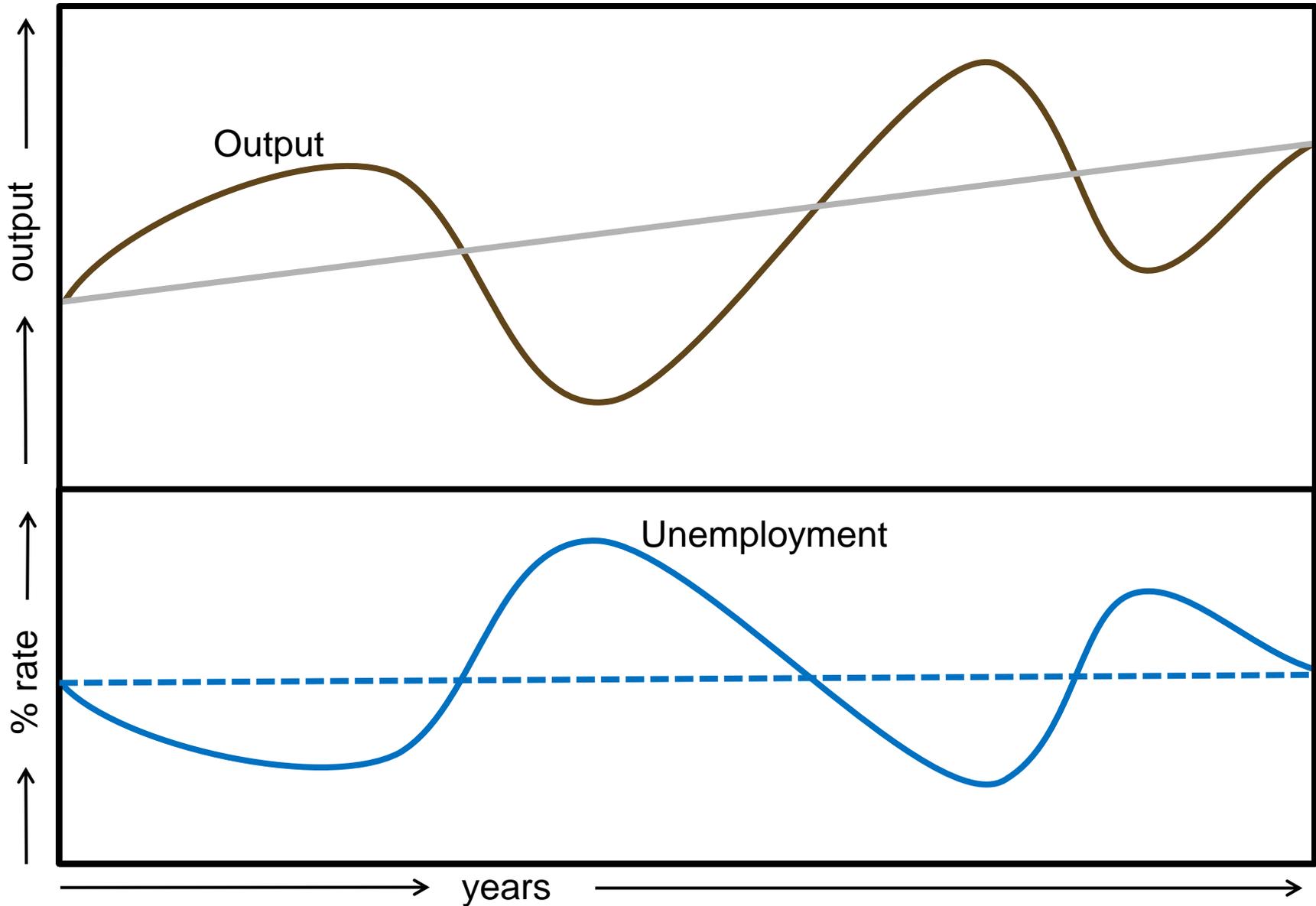
GDP % change over one year



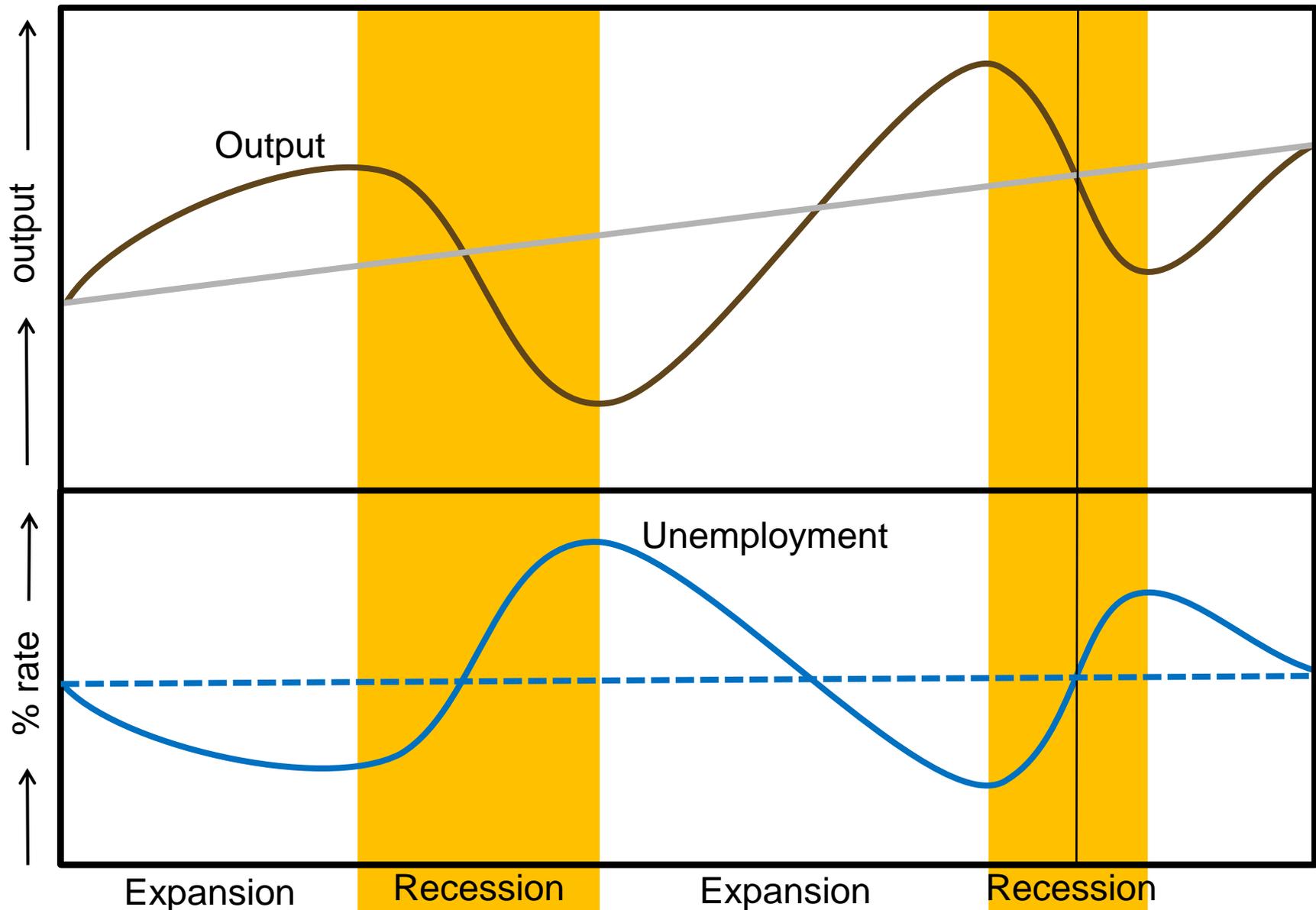
The output gap = output - capacity



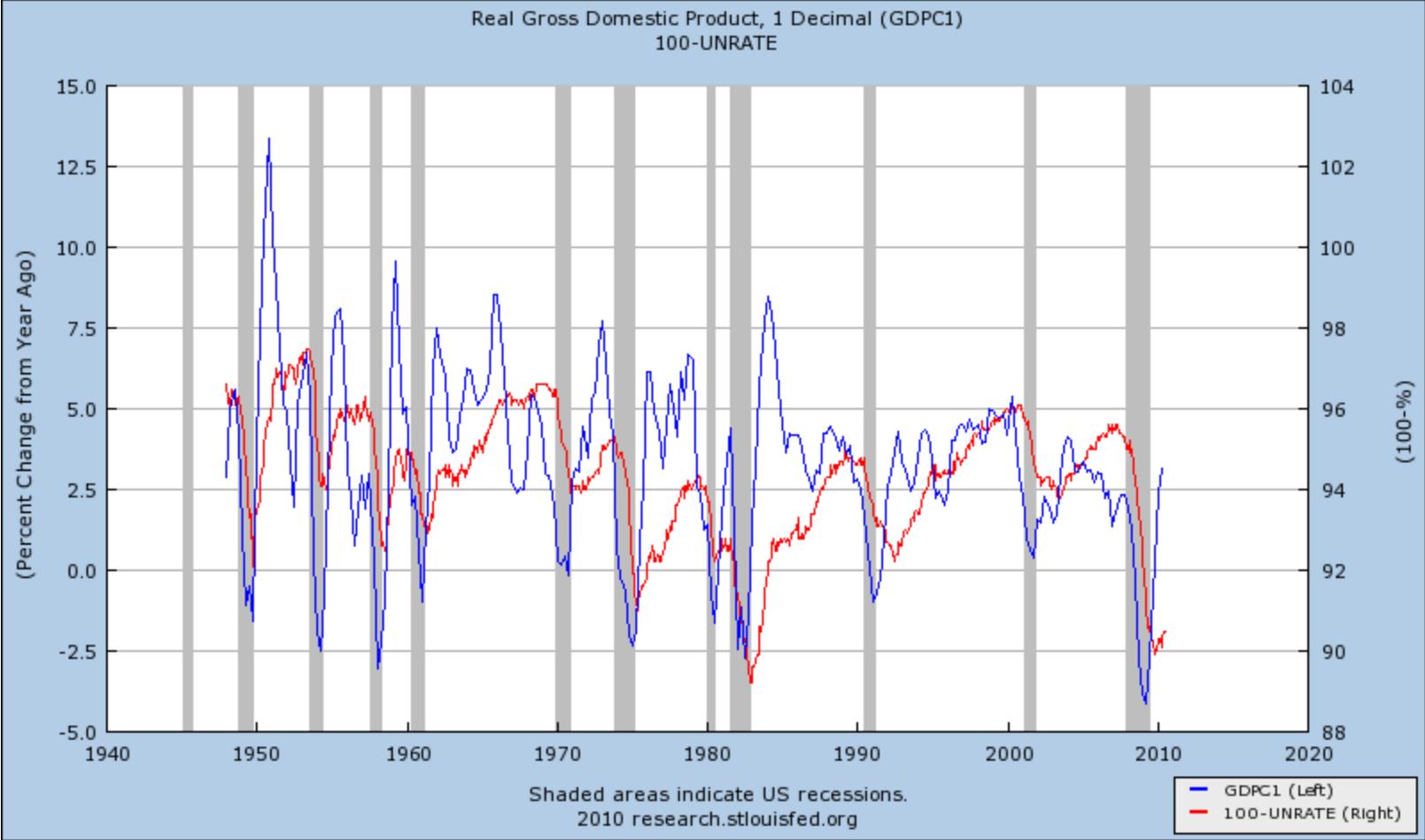
Unemployment fluctuates with output



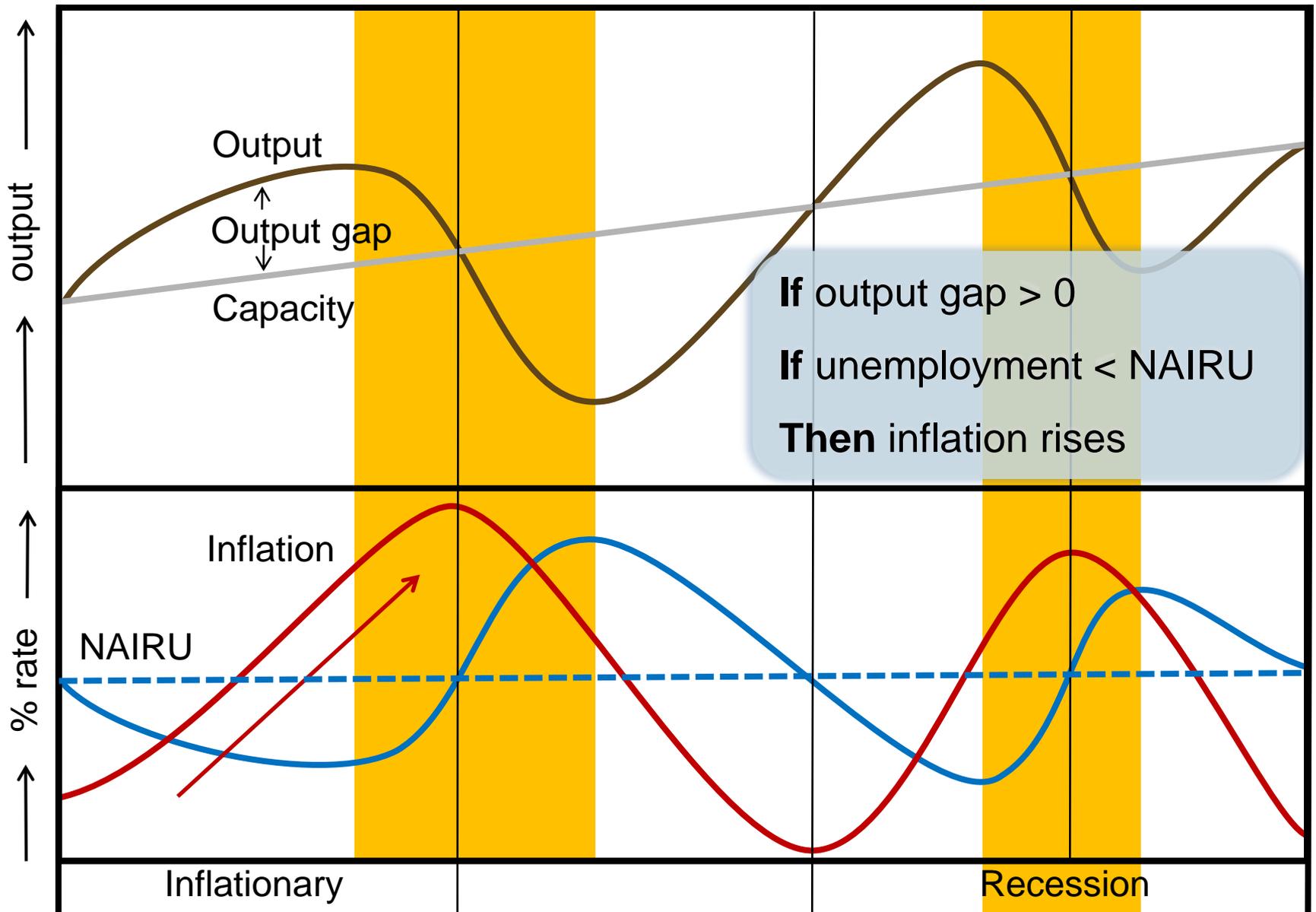
Declining output and rising unemployment: recession



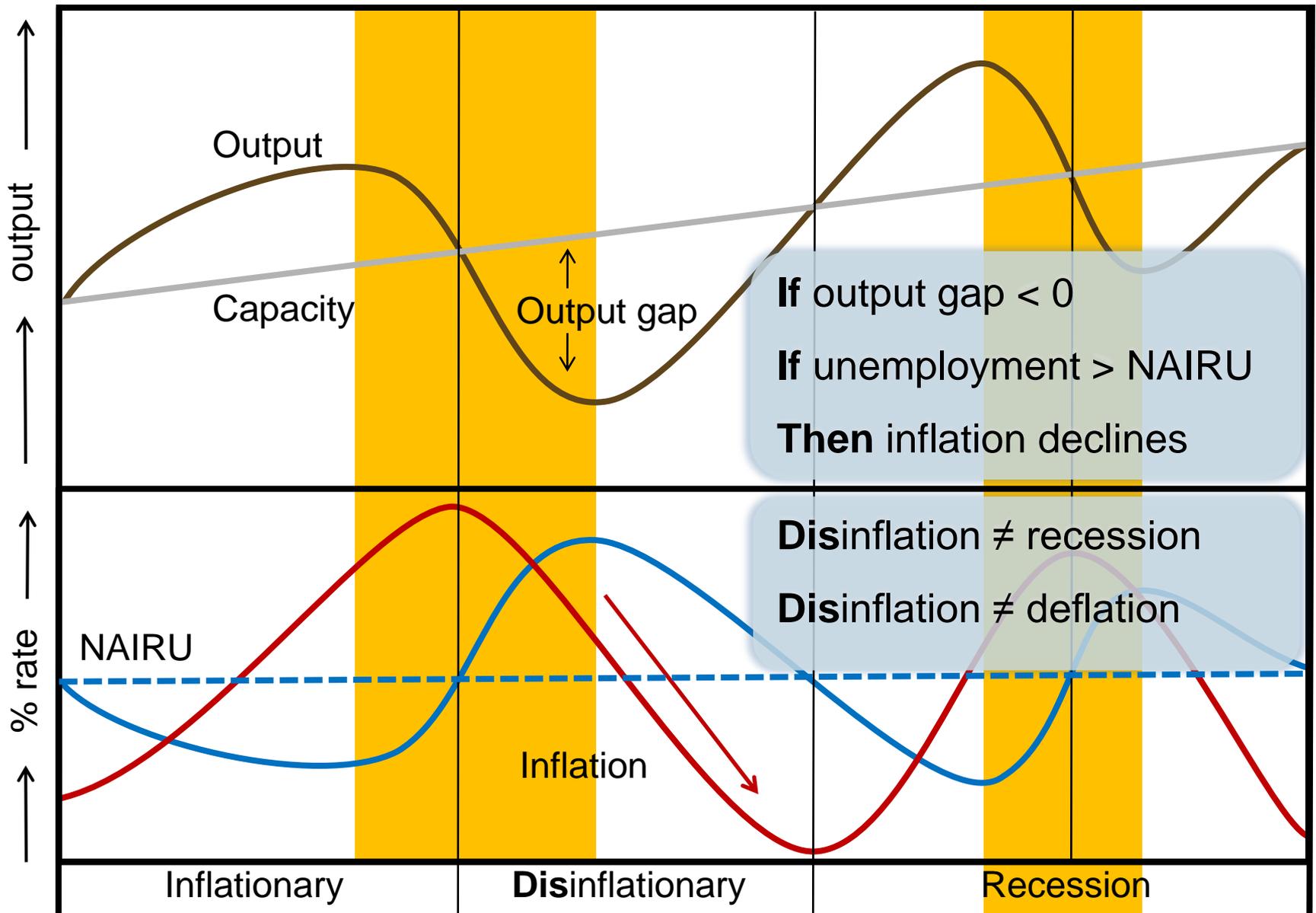
GDP growth (past year) and flipped unemployment rate



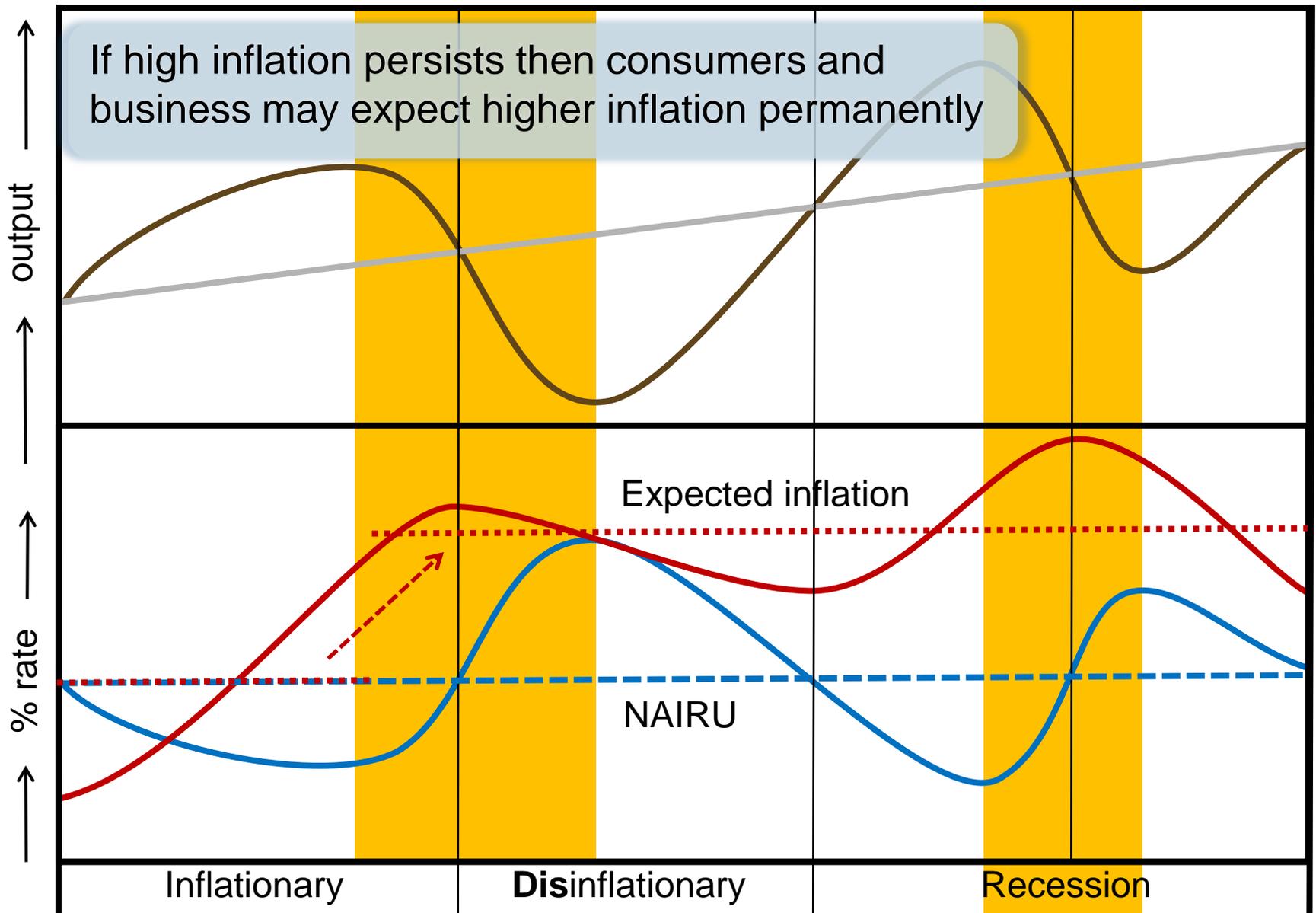
Periods of excess demand push up inflation



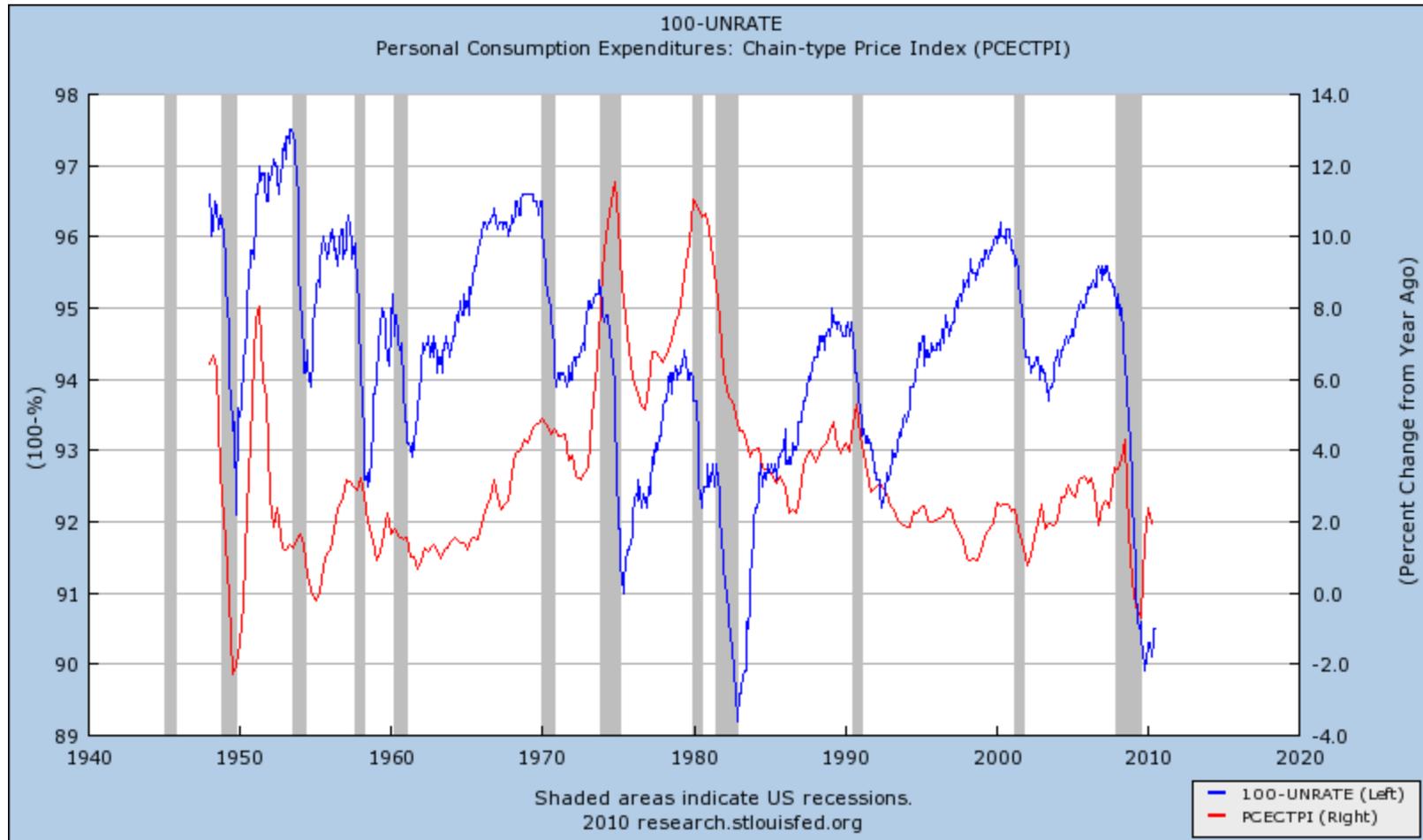
Periods of low demand push down inflation



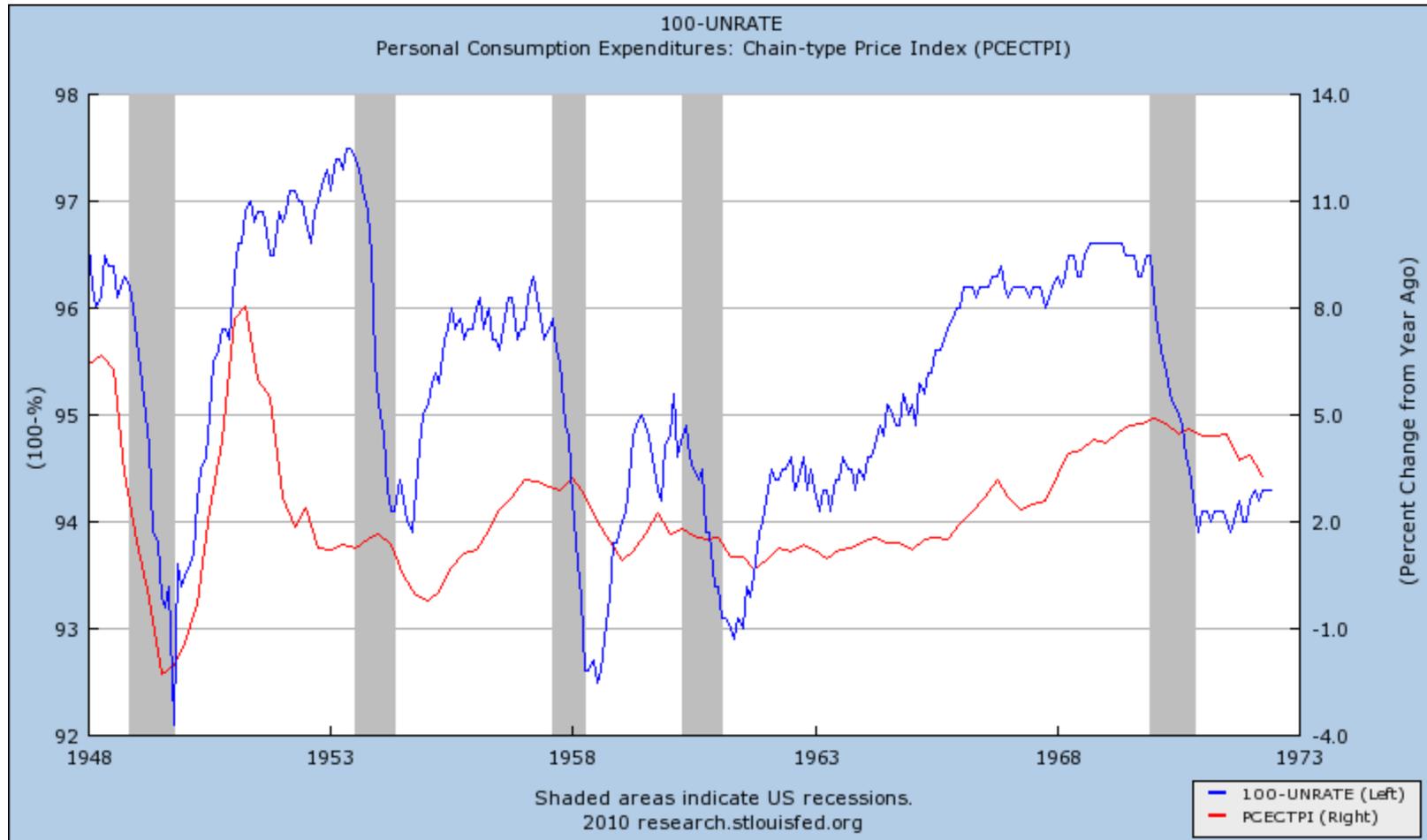
Inflation can become “unanchored”



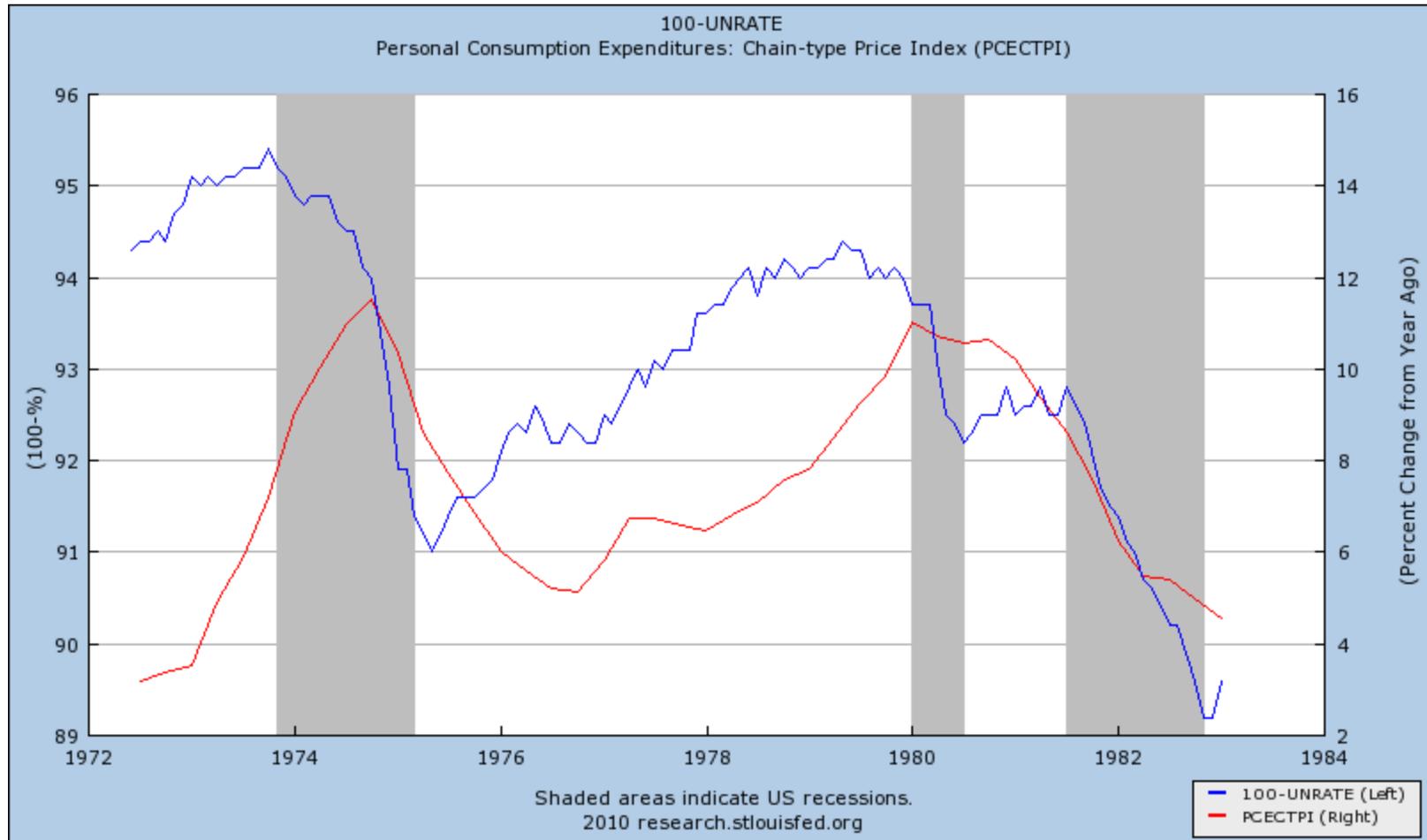
Flipped unemployment rate and PCE price index % change over the year



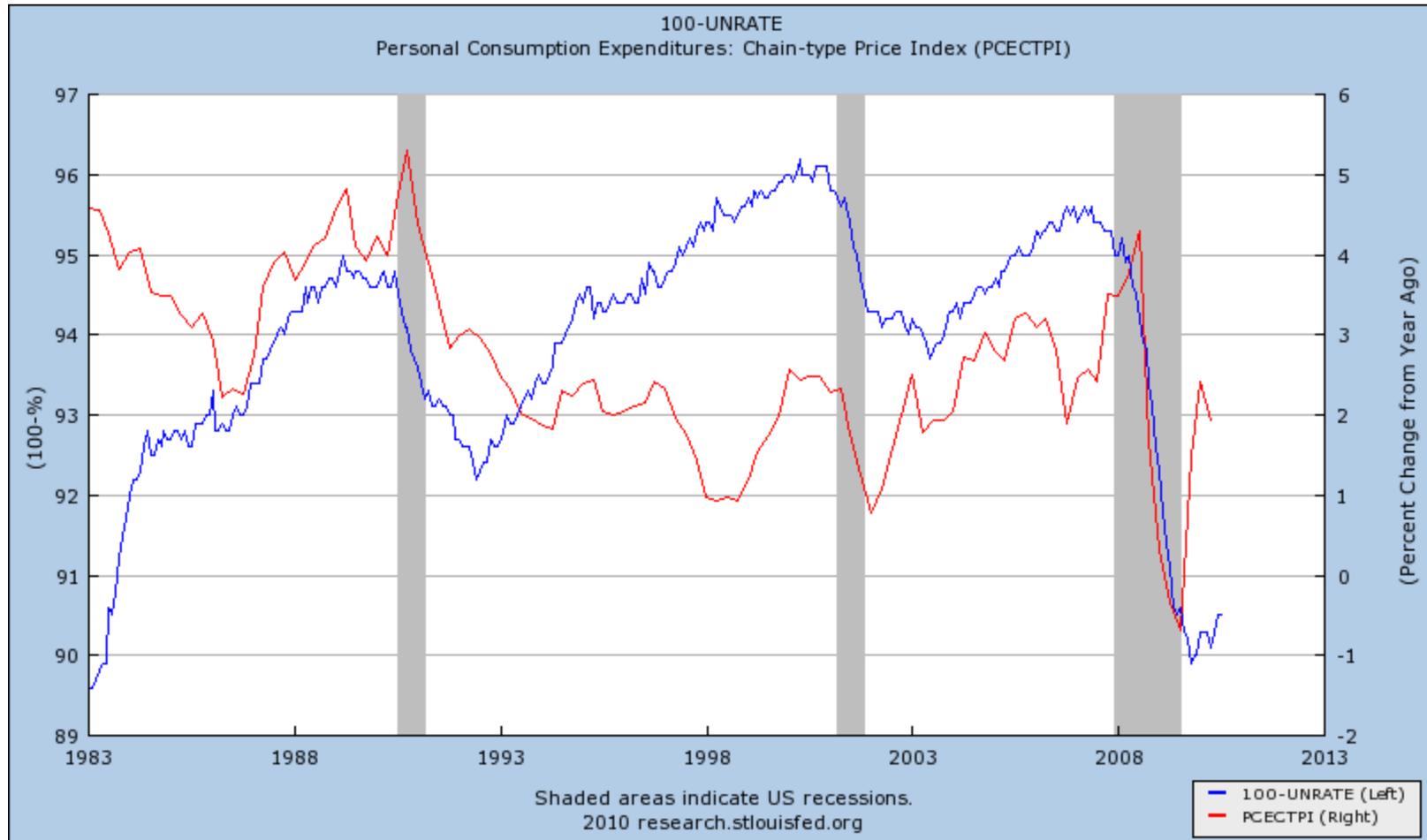
Flipped unemployment rate and PCE price index % change over the year



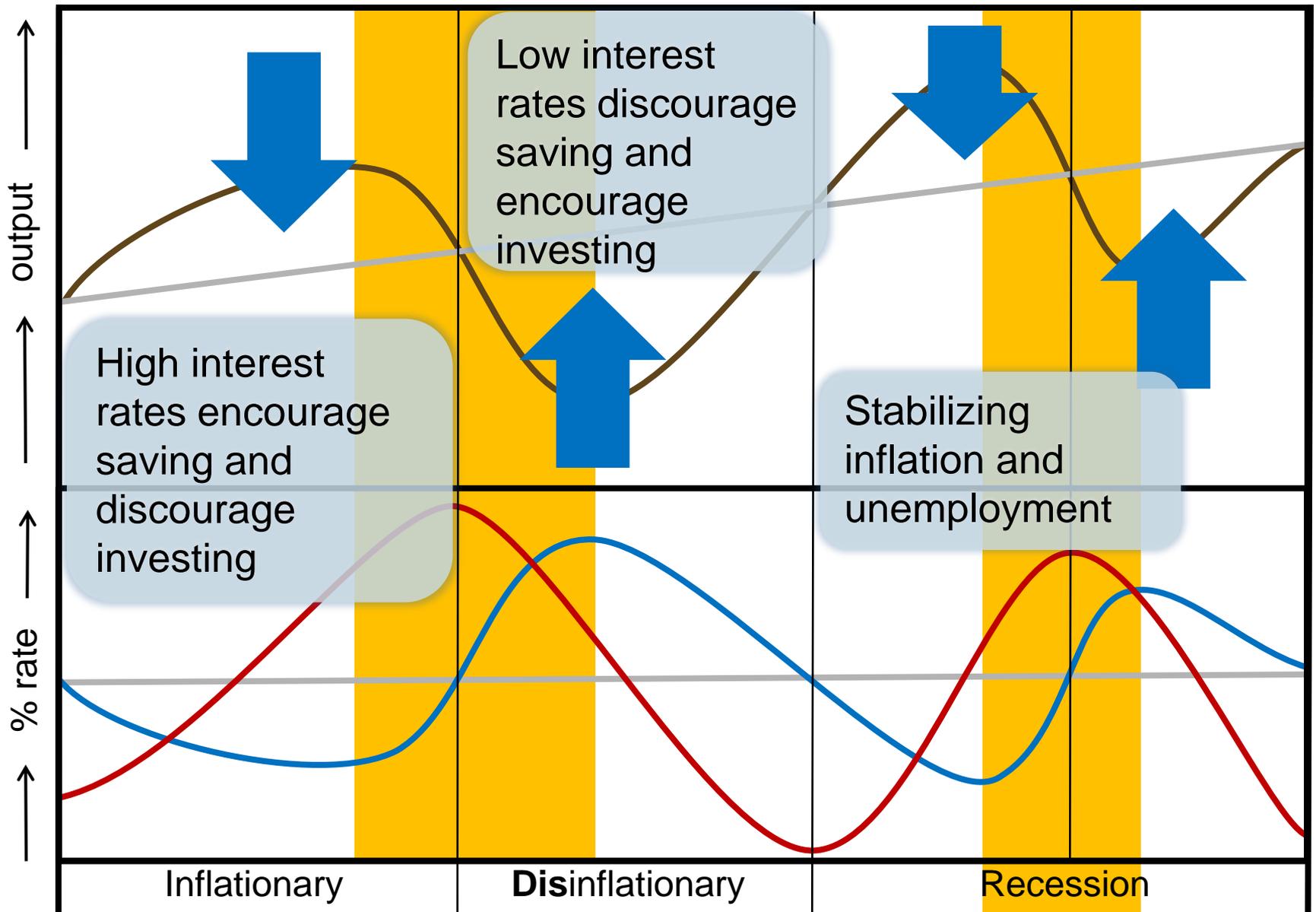
Flipped unemployment rate and PCE price index % change over the year



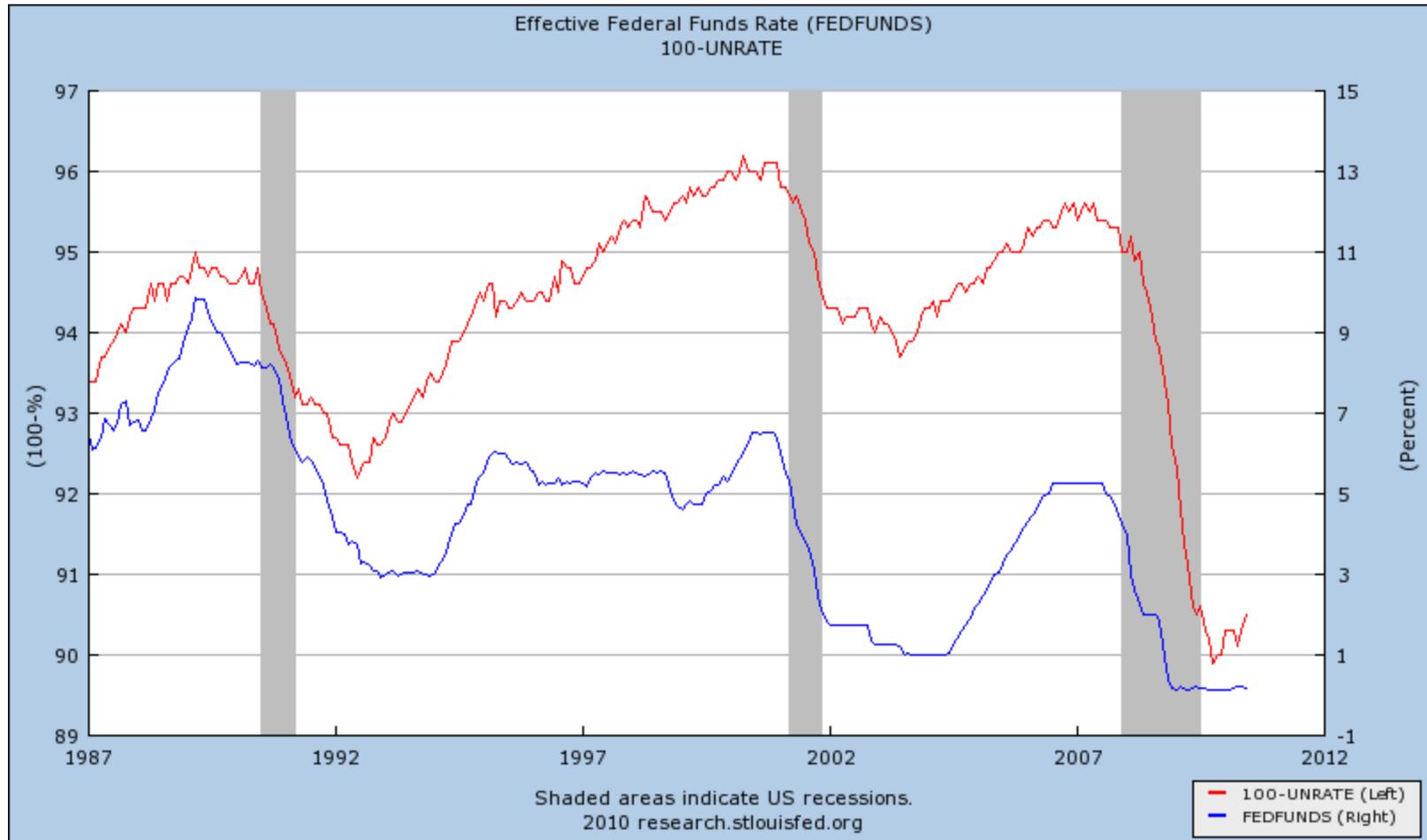
Flipped unemployment rate and PCE price index % change over the year



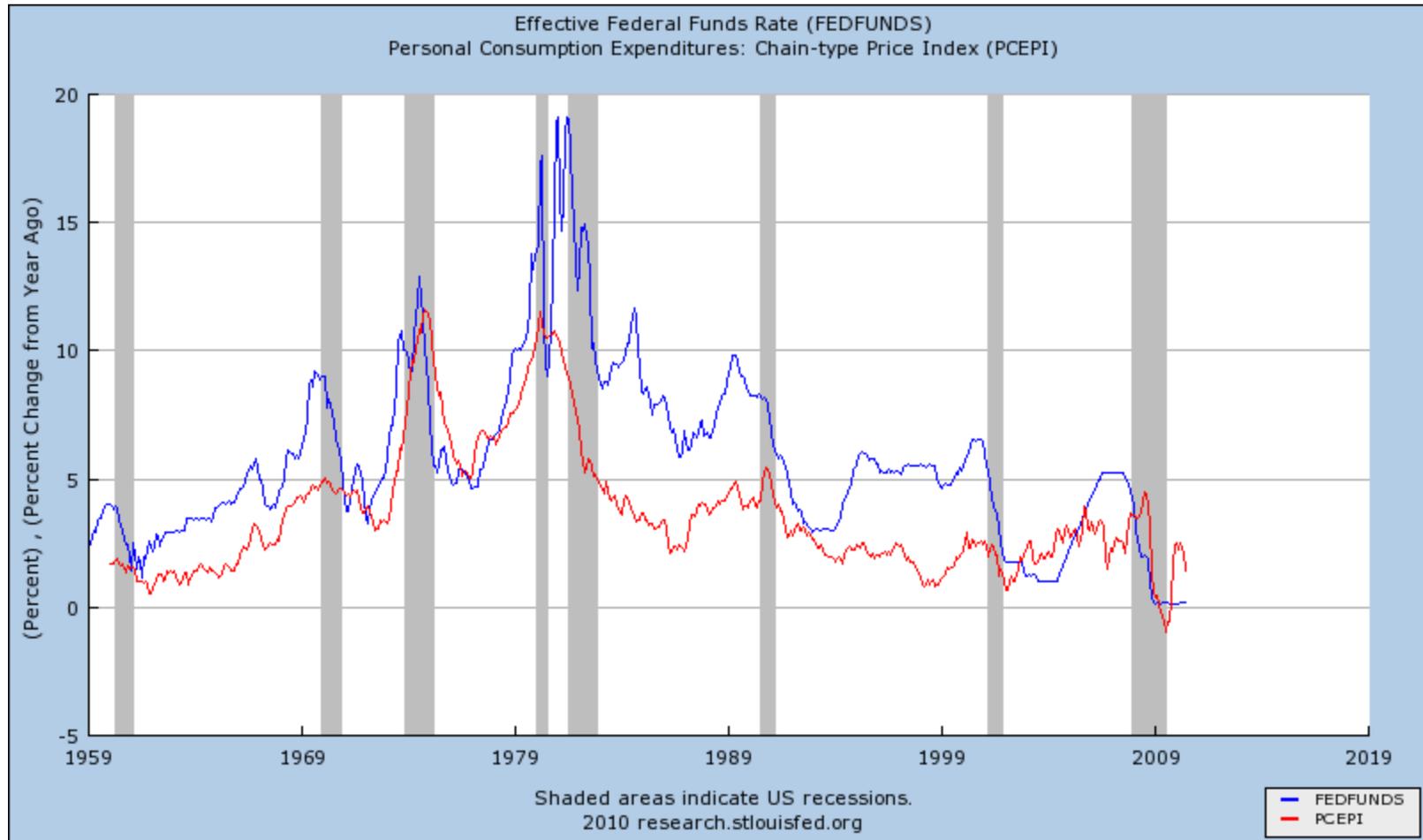
Fed can dampen the cycle to fulfill its dual mandate



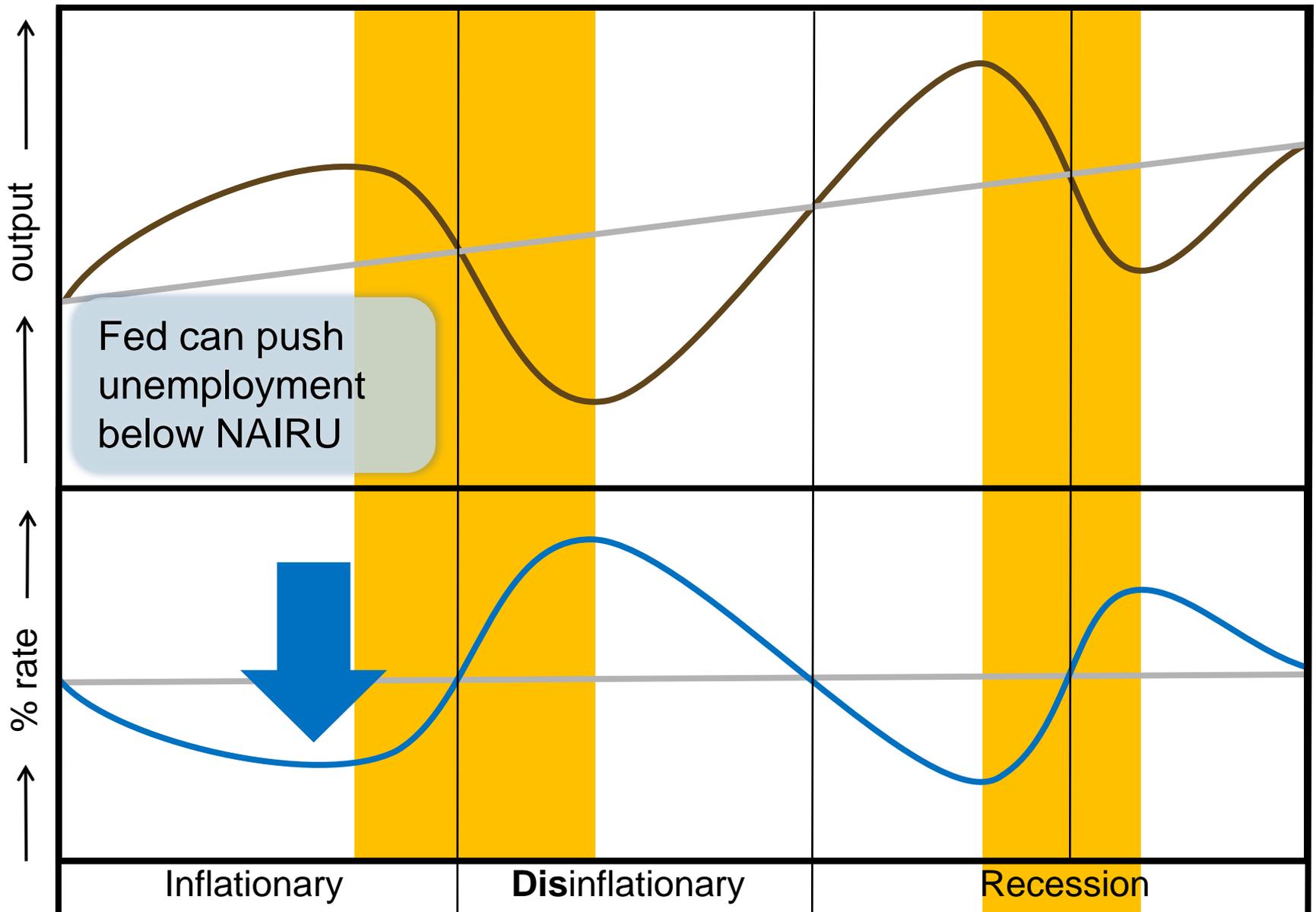
Fed funds rate and flipped unemployment rate



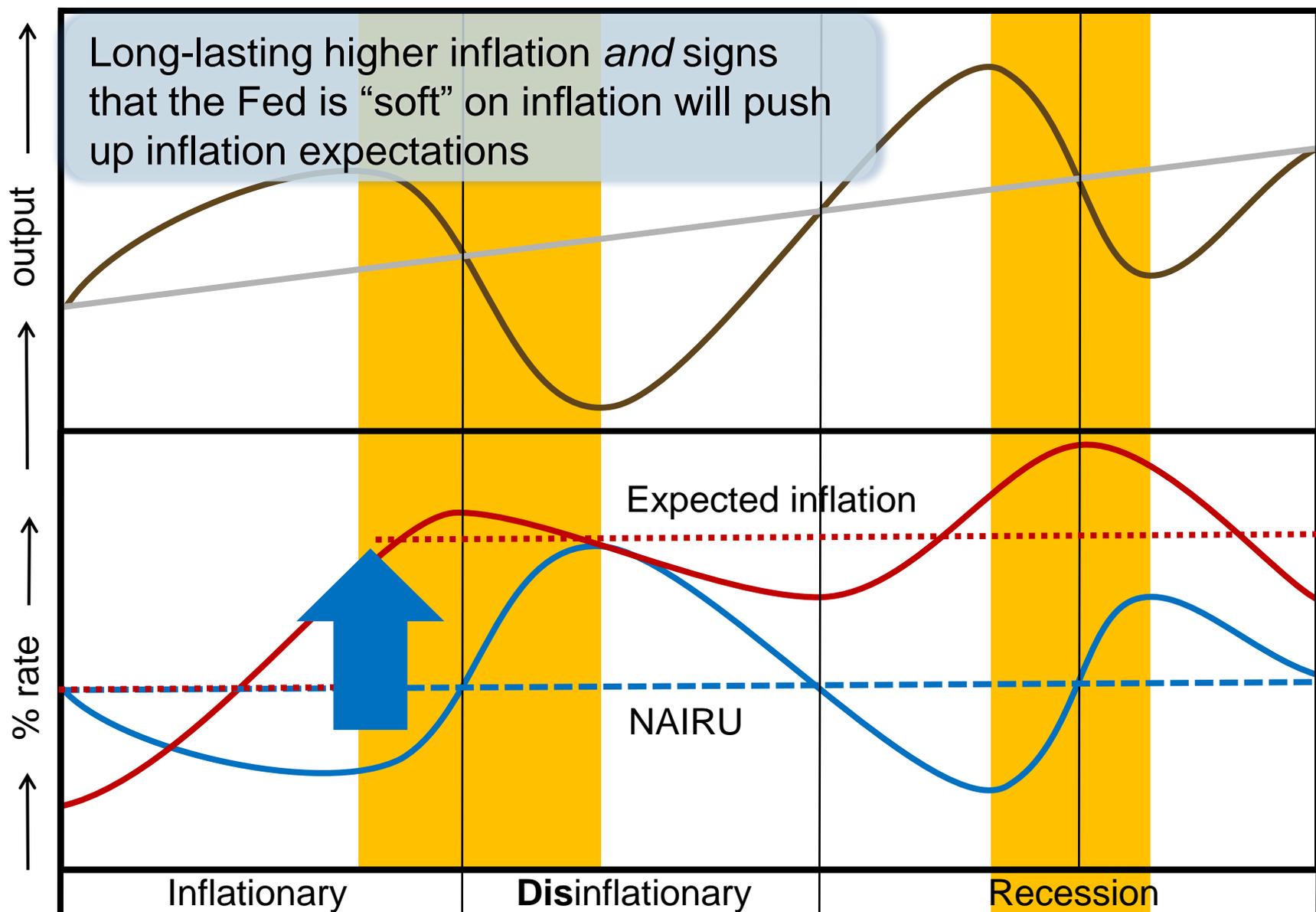
Fed funds rate and PCE price index change % over the year



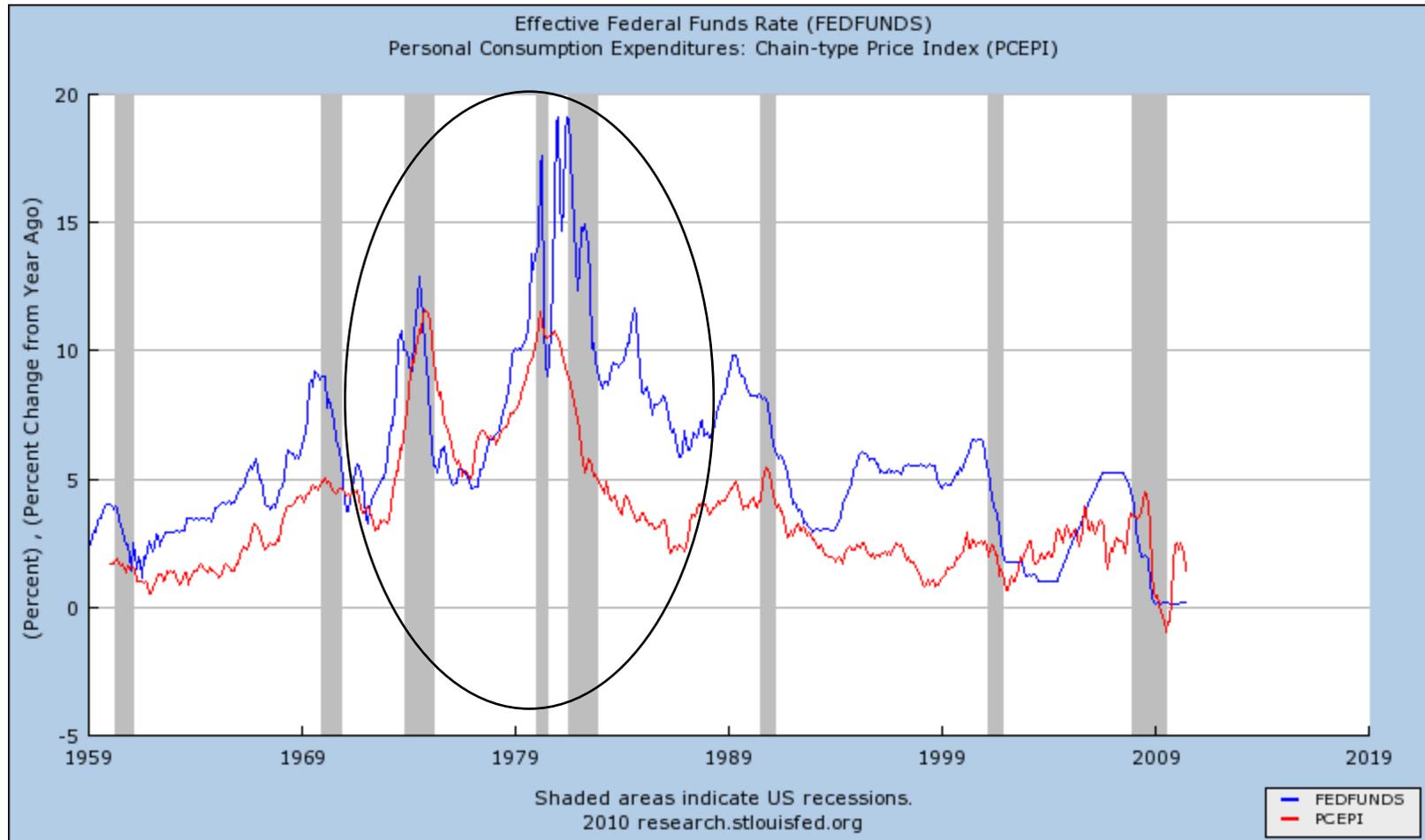
Fed can create “unnaturally” low unemployment . . .



... but this will permanently raise inflation



Fed funds rate and PCE price index change % over the year

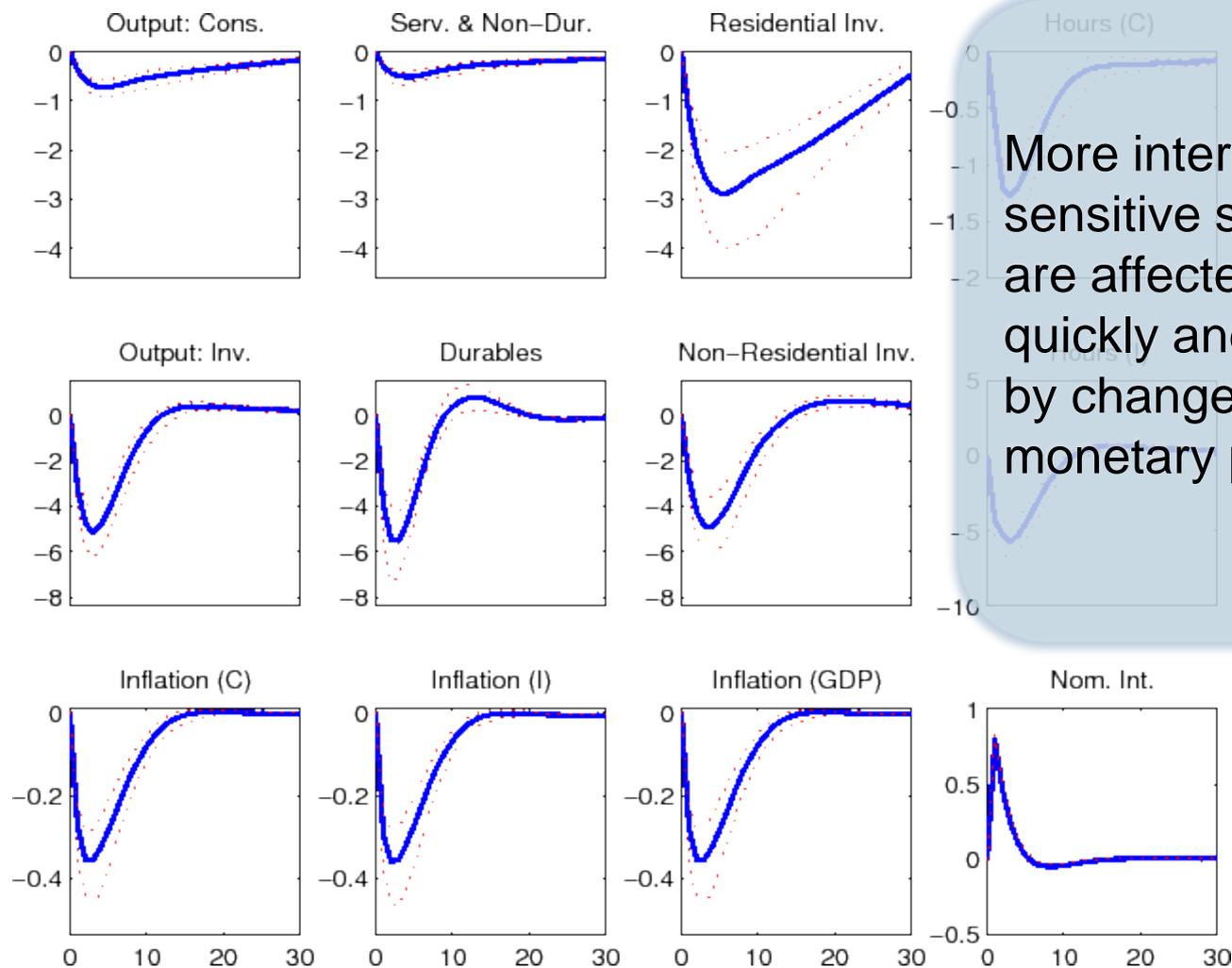


Challenge #1: Lags in monetary policy's effect on the economy

“STEERING THE TANKER”



Interest rates have diverse and lagged impacts



Source:

Documentation of the Research and Statistics Division's Estimated DSGE Model of the U.S. Economy: 2006 Version

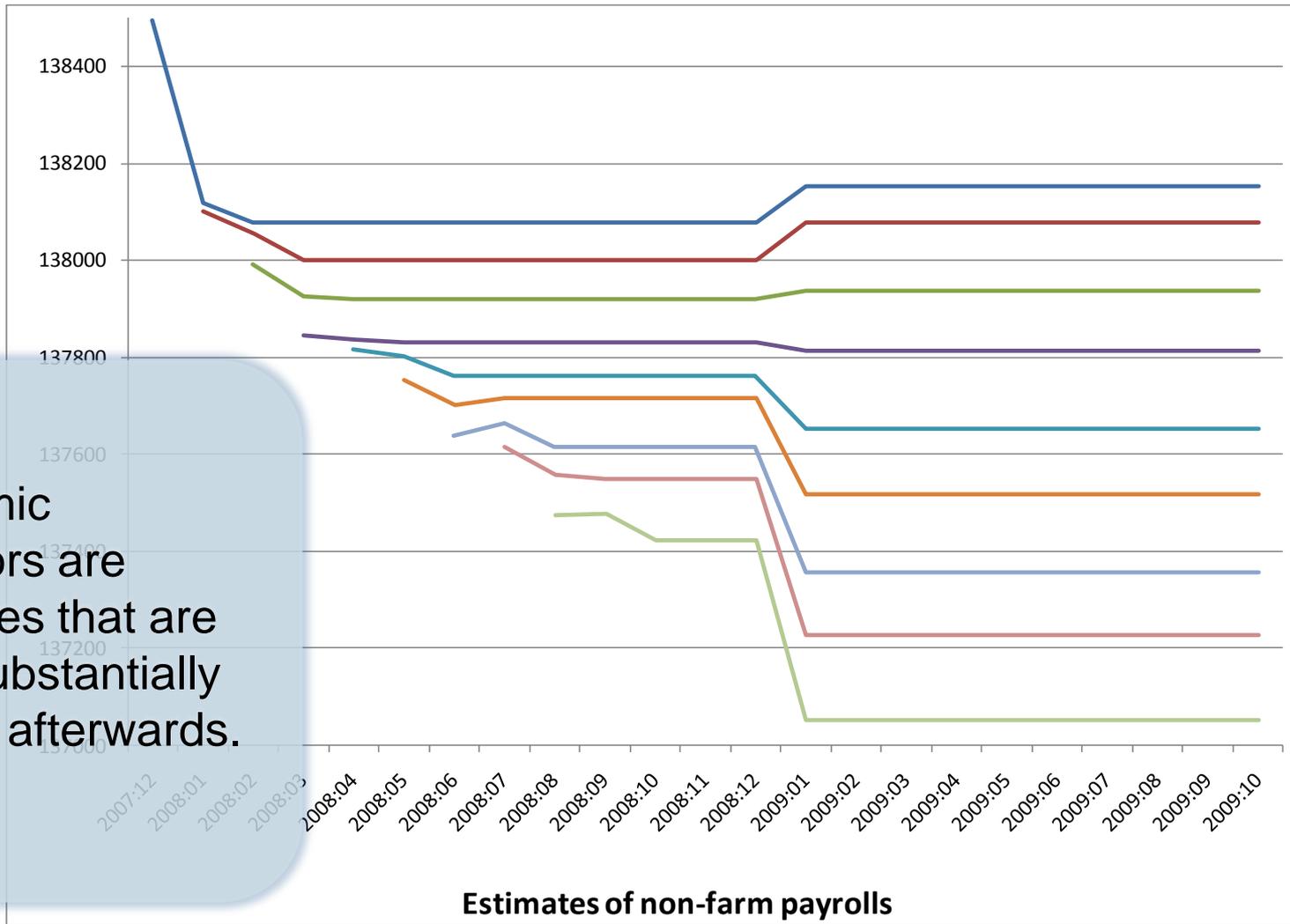
Rochelle M. Edge, Michael T. Kiley, and Jean-Philippe Laforte

Challenge # 2: Measuring is difficult and forecasting is even more so

UNCERTAIN PRESENT AND FUTURE



Measuring the present is difficult

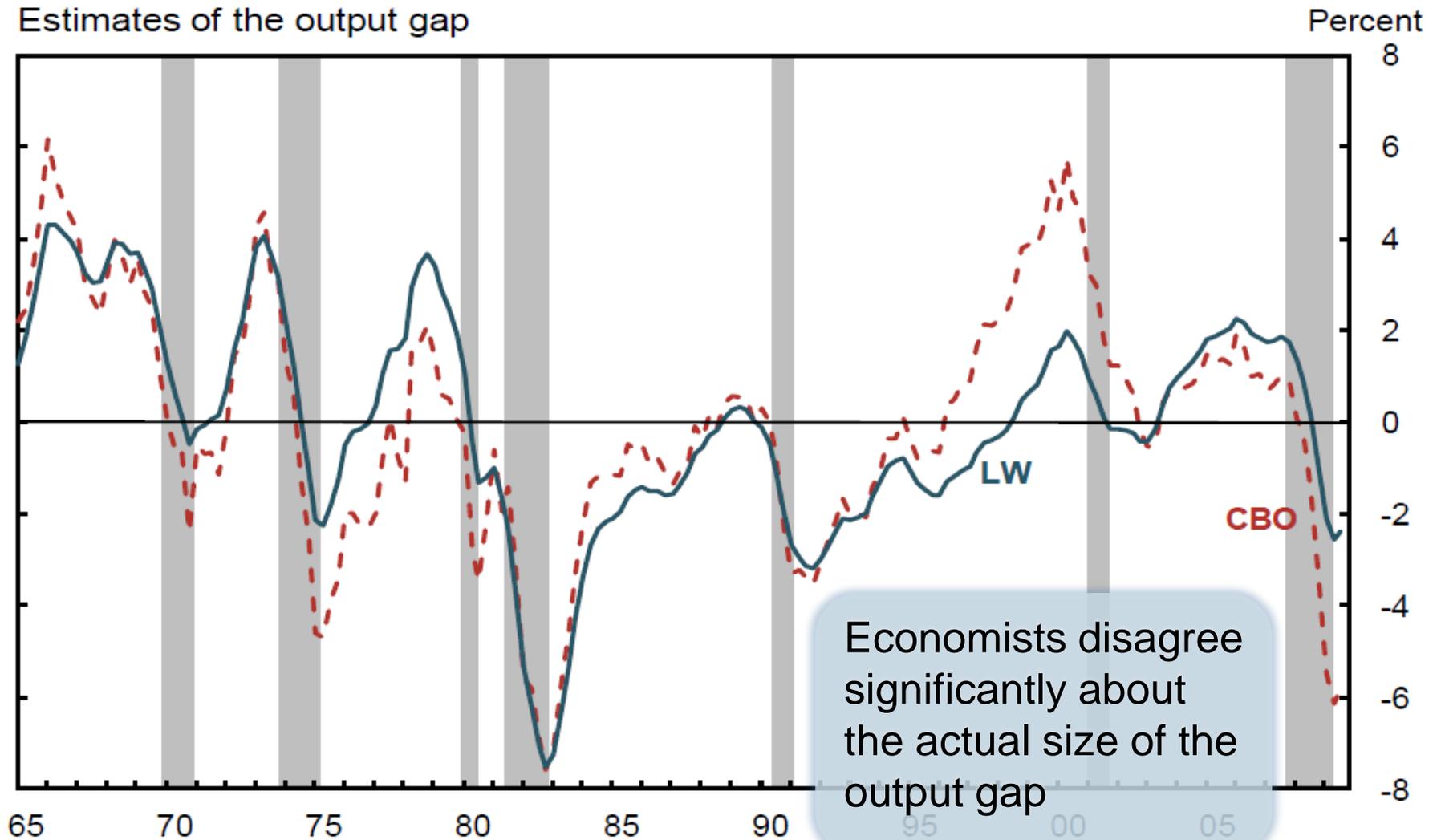


Economic indicators are estimates that are often substantially revised afterwards.

Source: Federal Reserve Bank of Philadelphia

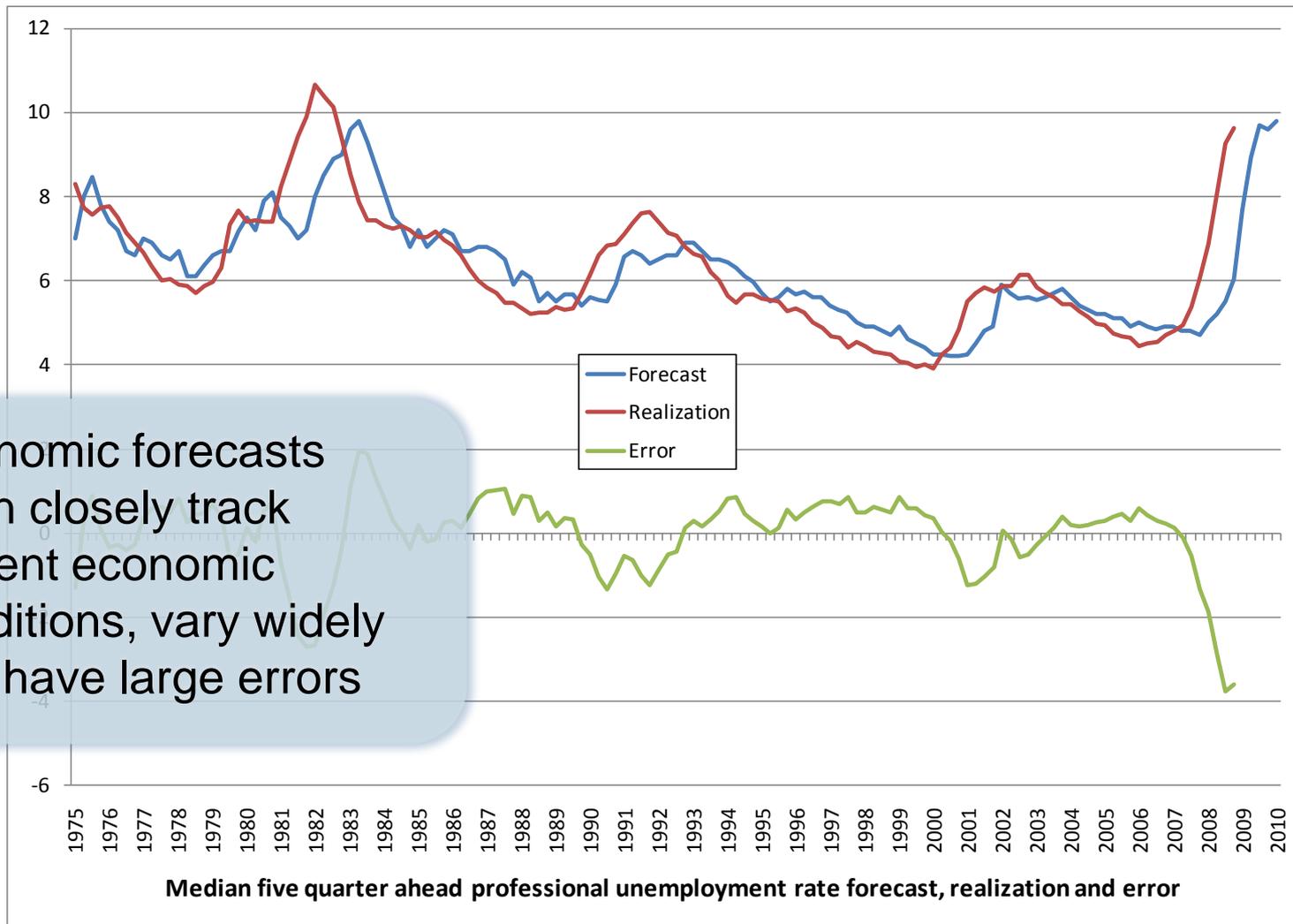
The output gap is particularly difficult to estimate

Estimates of the output gap



Source: Update of "How big is the output gap" by Justin Weidner and John Williams, San Francisco Federal Reserve Bank

The future is even more difficult to forecast



Economic forecasts often closely track current economic conditions, vary widely and have large errors

Main takeaways

- Theory
 - Long run capacity growth = labor supply growth + labor productivity growth
 - If economy is producing at capacity, then
 - Unemployment rate = NAIRU
 - Inflation = expected inflation
 - Output gaps (cycles, fluctuations) happen
 - Recession = Declining output and rising unemployment:
 - Expansion = Rising output and falling or stable unemployment
 - Output gap = Output – capacity
 - Gap > 0 → unemployment < NAIRU → inflation rises (permanently?)
 - Gap < 0 → unemployment > NAIRU → inflation falls (permanently?)
 - Fed's monetary policy dampens cycles to fulfill its dual mandate
- Implementation challenges
 - Lags: monetary policy actions have uneven and lagged impacts
 - Uncertainty
 - Size of current output gap
 - Forecasting future conditions

