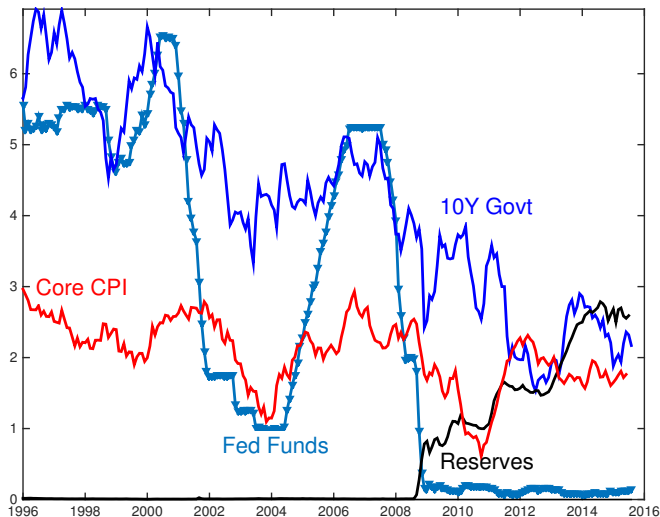


# Eight Heresies of Monetary Policy

John H. Cochrane  
Hoover Institution, Stanford University

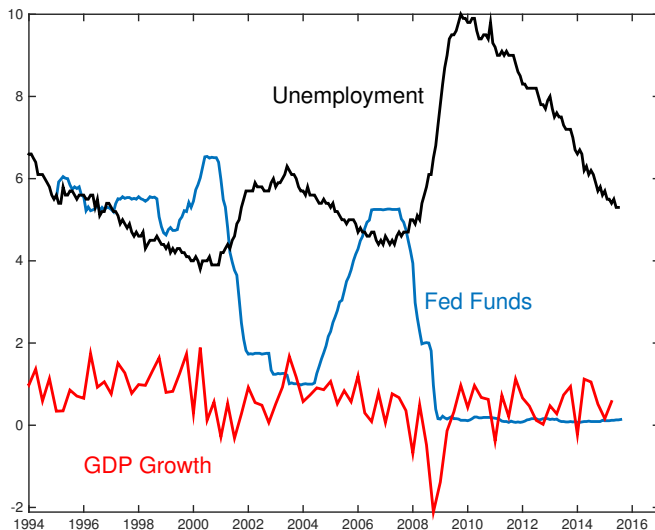
November 16 2017

# Background



- Context: long slow quiet recovery. Interest rates near zero, quantitative easing.

# US unemployment and GDP

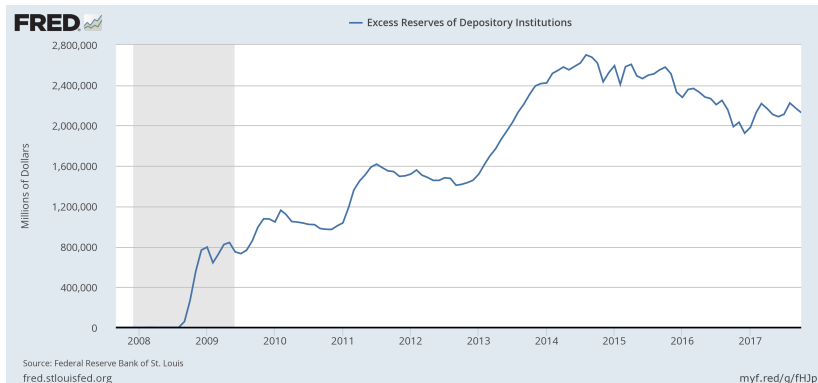


- Larger recession, but typical recovery. GDP growth low, quiet.

# Heresy 1: Interest rates

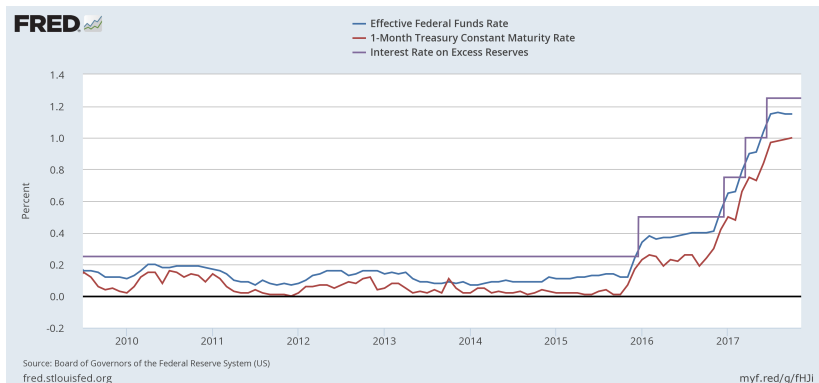
- ▶ Conventional Wisdom: Years of near zero interest rates = loose monetary policy, “extraordinary accommodation.”
- ▶ Heresy 1: Interest rates are roughly neutral. If anything, the Fed has been (unwittingly) holding rates *up* since 2008.
- ▶ Which is it:
  - ▶ Lend out money at low rates, which banks re-lend at higher rates?
  - ▶ Take in money, pay higher rates than they can get elsewhere?

# Excess reserves



- ▶ Excess reserves = money banks voluntarily lend to the Fed, and receive interest

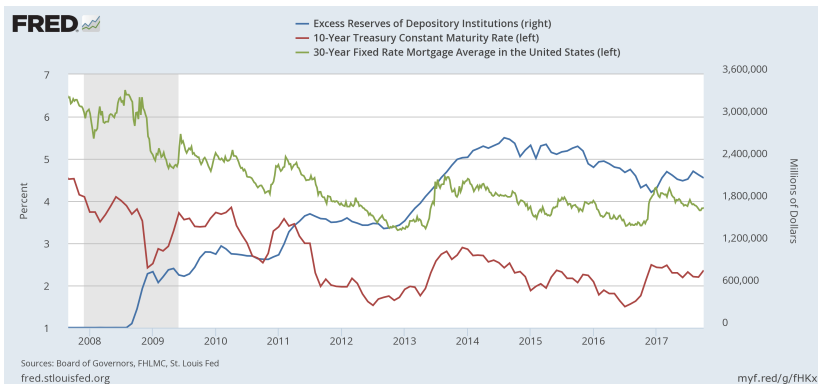
# Interest on reserves, 1 month Treasuries, Federal funds



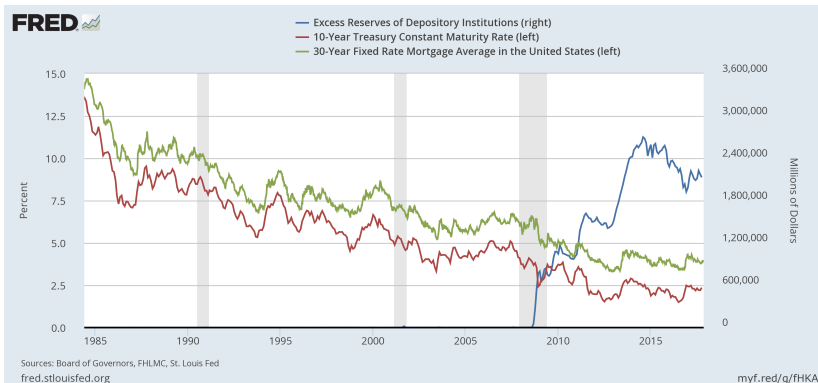
- ▶ Fed pays *more* than banks can earn elsewhere.
- ▶ Fed looks like a CB pushing rates *up*, if anything.
- ▶ Interest rate = real rate + expected inflation.  $0 = -1.5\% + 1.5\%$ ?
- ▶ Plus... where is the inflation, boom?

## Heresy 2: Quantitative easing

- ▶ QE: Fed bought \$3 Trillion of Treasurys, MBS, giving interest-paying reserves in return.
- ▶ CW: QE lowered long term rates, was a big stimulus.
- ▶ Heresy 2: QE did basically nothing to rates, or to stimulus.

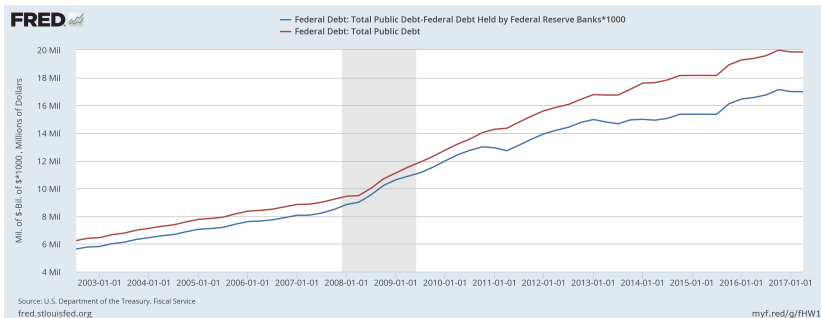


# QE and interest rates, a longer view



- ▶ Fed = a big money market fund. Hold directly or via Fed.
- ▶ Open change operations.
- ▶ Catch 22. Segmented or not, make up your mind.

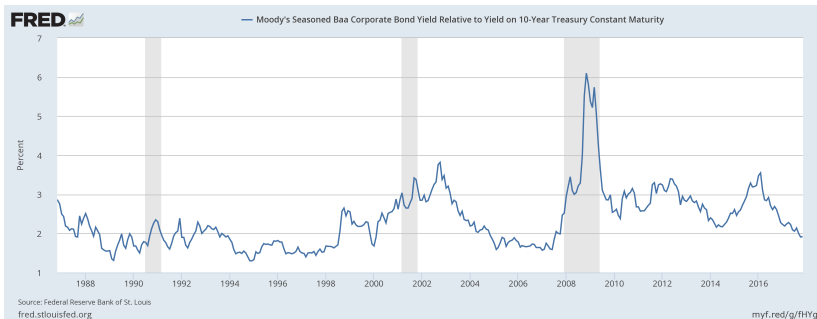




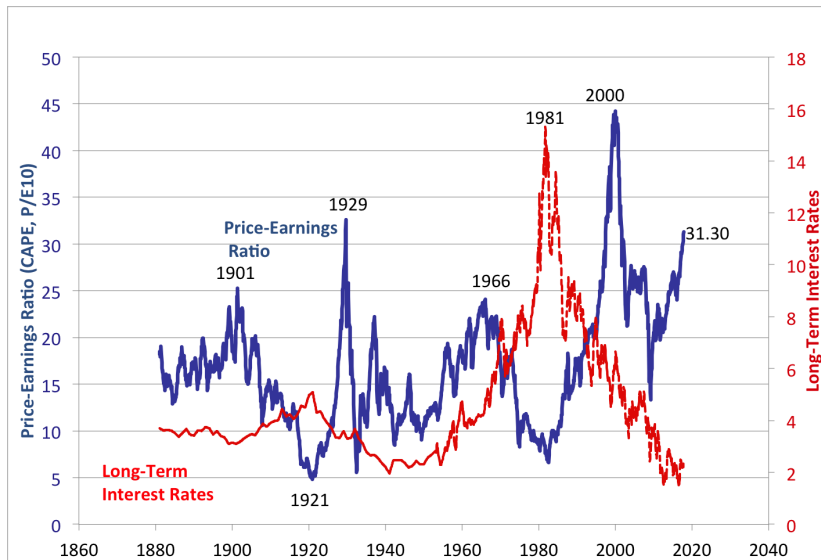
- Treasury sells more than Fed buys.

# Heresy 3: Low rates, QE and financial markets

- ▶ Conventional Wisdom: QE / low rates set off a “reach for yield,” “asset price bubble,” low risk premium.
- ▶ Heresy 3: No unusual premium, and Fed has nothing to do with it.
- ▶ How? Borrow at 1%, lend at 3% = borrow at 6%, lend at 8%.
- ▶ Facts? Unusually low risk premium, and tied to rates & QE?

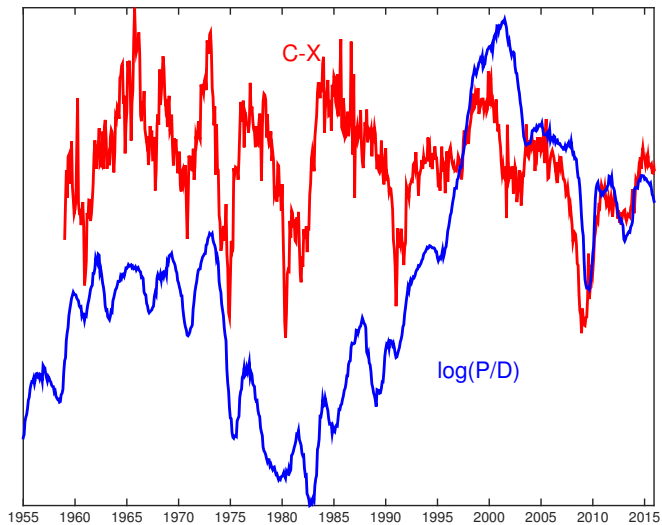


# Shiller PE



- ▶ Always high at business cycle peaks.
- ▶ Still high.. but risk premium or low real rate?

PE is always high in late expansions



$$X_t = 0.9X_{t-1} + (1 - 0.9)C_t$$

## PE – low risk premium or low real rate?

$$\frac{P}{E} = \frac{1}{E(r) - g} = \frac{1}{r^f + E(r - r^f) - g}$$
$$\frac{P}{E} = 25 = \frac{1}{0.04}$$

1% decline in real rate gives

$$\frac{P}{E} = 33 = \frac{1}{0.03}$$

with no change in risk premium.

## Heresy 4: Real rates

- ▶ CW: Central banks are the primary force behind movements in the real rate of interest (rate - inflation). BoJ kept rates low (negative!) for 20 years. Fed, ECB gave us 10 years of low real rates.
- ▶ Heresy 4: The Fed has little to do with real rates (past  $\approx 1$  year).
- ▶ How? Econ 101:

$$\text{real rate} = \text{impatience} + (\approx 1 - 2) \times \text{growth rate}$$

$$\text{real rate} = \text{marginal product of capital}$$

- ▶ In recessions/stagnation real rate should be lower. In booms, it should be higher. No Fed needed. Not much Fed can do.
- ▶ Many forces for low real rates.
- ▶ Real rates are low everywhere in the world.
- ▶ Fed is nowhere near as powerful as CW suggests. Growth comes from productivity.

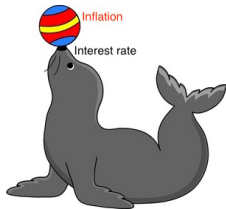
## Heresies 1-4



*There's a global recovery underway ... However, unlike prior recoveries, this one is closely tied to trillions in central bank intervention and negative real policy rates. ... Something on the order of 11 Trillion dollars ... There's a lot of liquidity that's going to have to be drained from the system at some point as monetary policy gets normalized.*

Michael Cembalest, JP Morgan Asset Management. <https://am.jpmorgan.com/private-bank/public/gl/en/eotm-outlook-2018>

## Heresy 5: Is the economy stable or not?



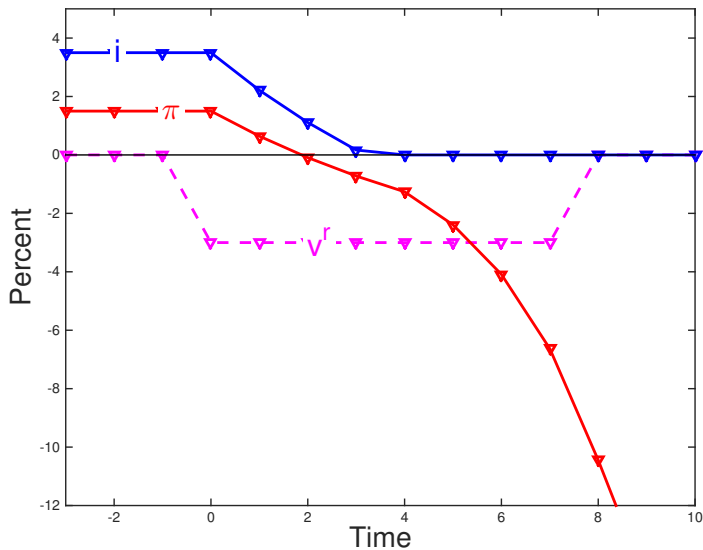
- ▶ Conventional wisdom: If the Fed does not adjust interest rates, inflation (and economy) will spiral out of control.



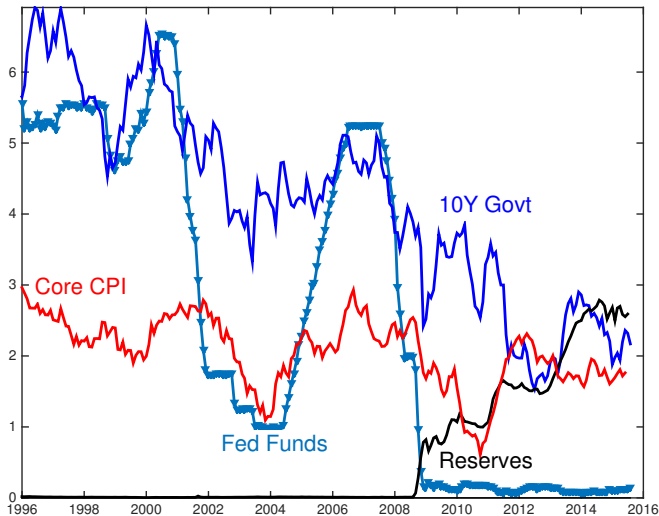
- ▶ Heresy 5: The economy is stable. As real interest rates get to normal, inflation will adjust to the nominal interest rate.



## Conventional wisdom's clear prediction: spiral



## Fact: No spiral

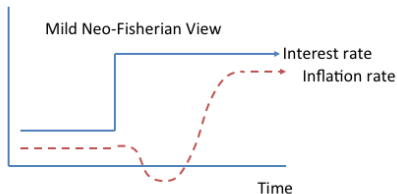
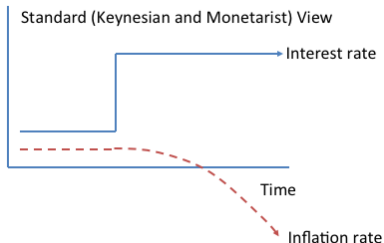


- ▶ Theory and fact: Inflation and economy are *stable* with fixed rates.
- ▶ Implication: Rates should still vary to match real rates, Taylor. But zero bound, slow movement is not a spiral-inducing disaster.

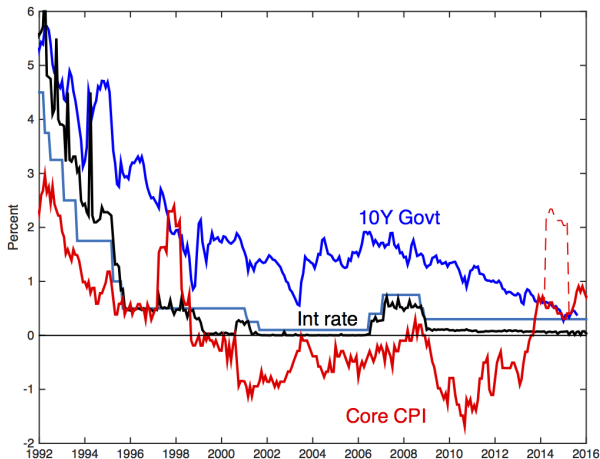
## Heresy 6: How does this thing work anyway?



- ▶ Conventional wisdom: Raising interest rates lowers inflation, & vice-versa.
- ▶ Heresy 6 (implication of stability & modern theory). After a short run negative effect, persistently higher rates raise inflation.
- ▶ Are we past bump, at point that low rates = low inflation?

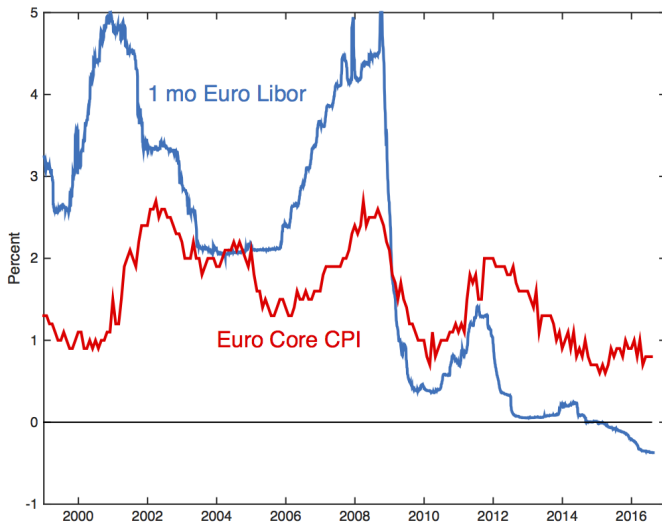


# Japan



- ▶ 20+ years at  $i \approx 0$  with no spiral.
- ▶ And even lower rates, even lower inflation

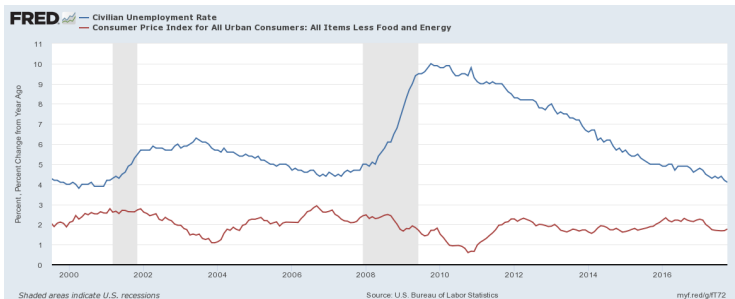
# Europe



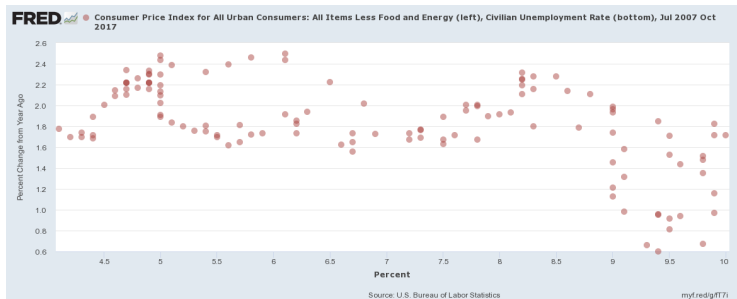
► Lower rates  $\leftarrow$  or  $\rightarrow$  lower inflation?

# Heresy 7: The Phillips curve

- ▶ Conventional wisdom (Fed): “Tight labor markets” cause inflation.
- ▶ (Sometimes: more inflation tightens labor markets.)
- ▶ Heresy 7: Inflation and unemployment have little relation.



# Heresy 7: The Phillips curve



- ▶ Data: Small movement together in the recession, nothing since.
- ▶ Theory: tight labor markets should raise wages *relative* to prices. No relation to overall price and wage rise.
- ▶ Phillips curve needs to fool people or other second-order effect.

# Heresy 8: Inflation Dangers

## Federal Debt Held By the Public

Percentage of GDP



- ▶ Conventional Wisdom: The danger of inflation comes if the Fed does not raise rates quickly enough. Then we have a positive spiral.
- ▶ Heresy 8: The inflation danger comes from *fiscal* policy. A Greek unwind. As past low-rates and pegs evaporated due to fiscal problems. And then Fed will be powerless to stop it.