

Taylor Rules? The Question of Discretion

Mark David Witte

Associate Prof. of Economics

College of Charleston

Who is Taylor and what are his rules?

- John Taylor
 - Stanford
- **“Discretion versus policy rules in practice”**
 - Empirically tests a hypothetical but representative policy rule (1987-1992)
 - Hypothetical policy rule closely follows Federal Reserve actions
 - Concludes that Fed actions are not “discretionary”

Rule #1

$$r = p + .5y + .5(p - 2) + 2 \quad (1)$$

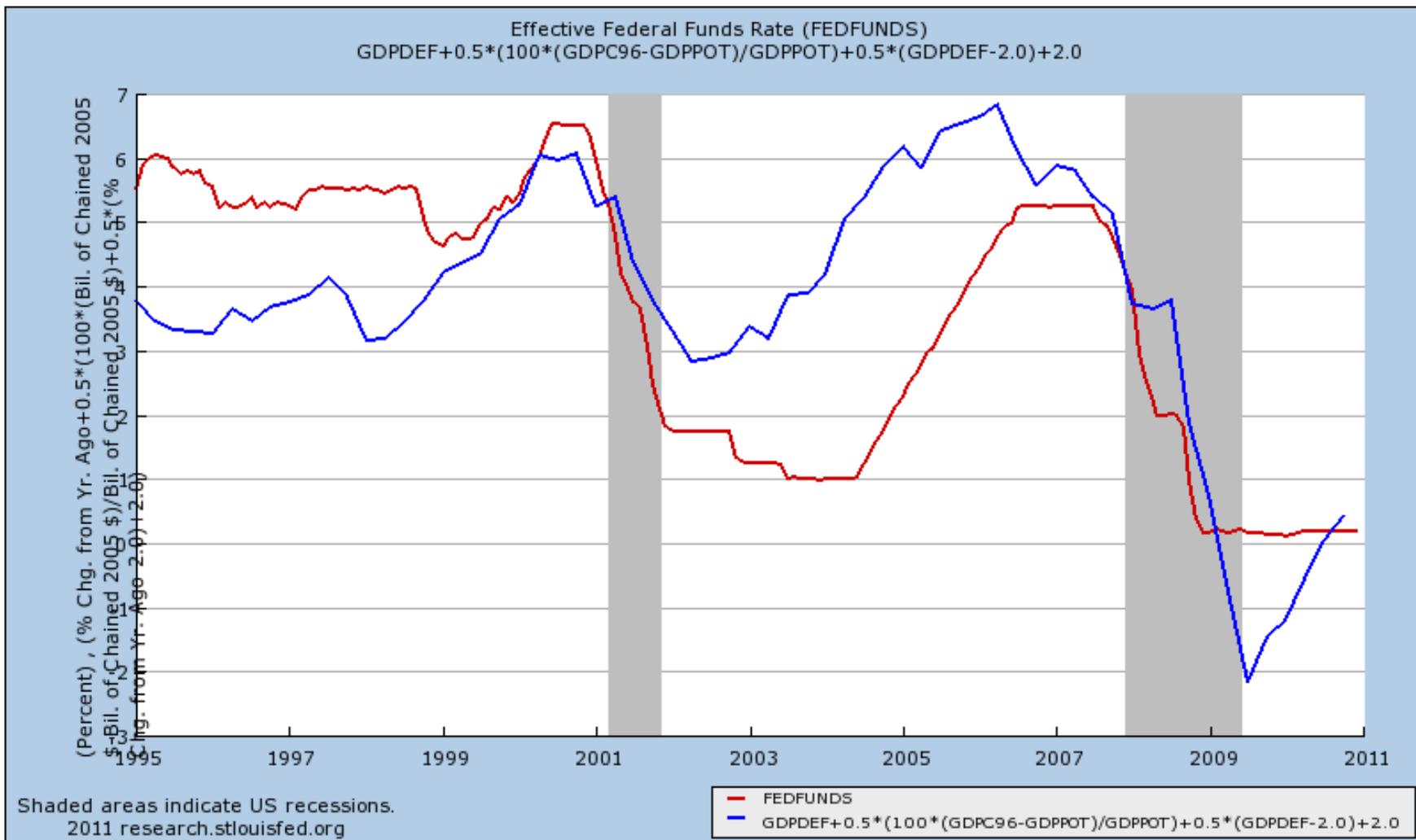
where

- r is the federal funds rate,
- p is the rate of inflation over the previous four quarters
- y is the percent deviation of real GDP from a target.

That is,

- y = $100(Y - Y^*)/Y^*$ where
- Y is real GDP, and
- Y* is trend real GDP (equals 2.2 percent per year from 1984.1 through 1992.3).

Avoid housing boom?



The controversy

- Should policy try to be rule based?
 - Discretion can be good in strange times
- Implementation?
 - Real time data vs revised data, measurement errors
- What about the many tools of conducting monetary policy?
 - Open market operations, reserve requirements etc...
- What should be included in the rule?
 - Asset prices? Yield curve?

Should policy try to be rule based?

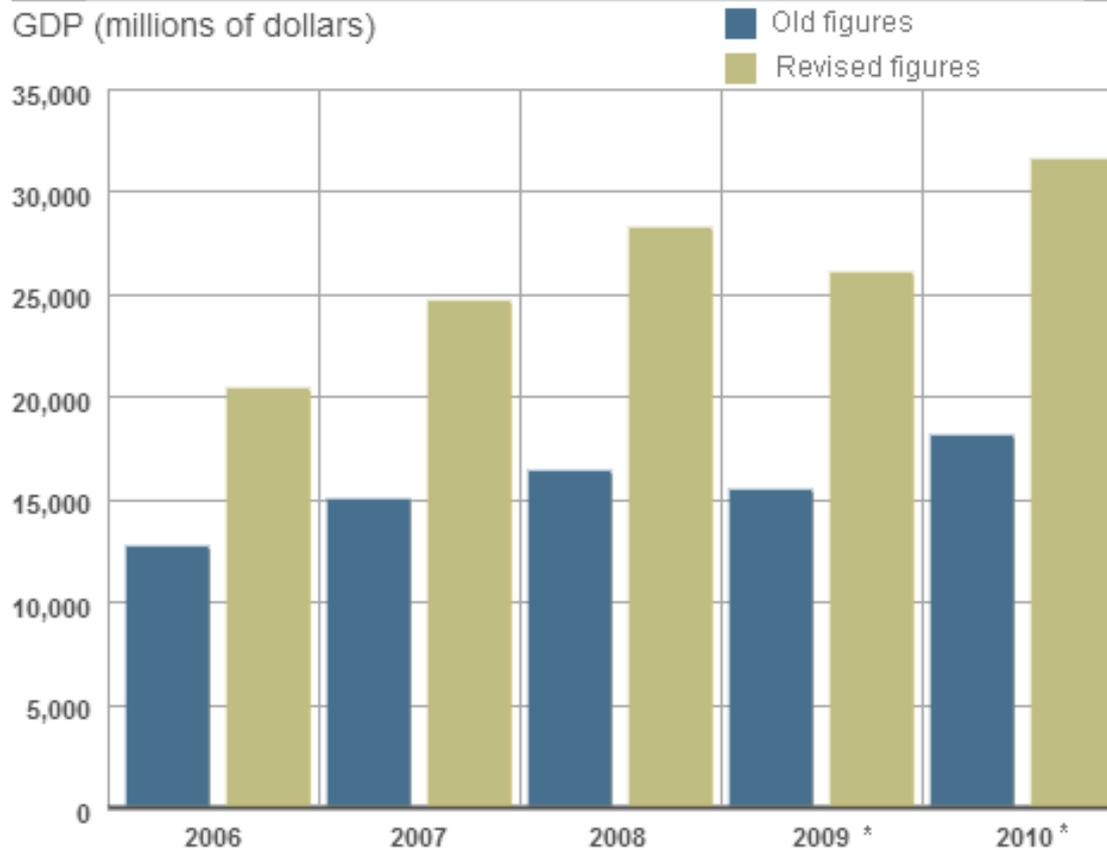
- If there is a good measurement of prices and a good tool for impacting monetary policy...
 - ...then rules are visible reminders of commitment to price stability.
- If a central bank has multiple mandates (price stability, financial stability, employment)...
 - ...then explanation of a discretion-based policy can detail how policy is consistent with price stability.

Implementation

- Real time data and revised data
 - October 1992 Fed meet: recession or 3.3% growth
 - January 2009 U.S.: -3.8% or -6.2%
 - Biggest revisions at worst times
 - Australia 3 measures of GDP (pic)
- Measurement errors
 - Ghana 2010 (pic)
 - Italy 1987

Ghana 2010

Ghana's revised GDP figures



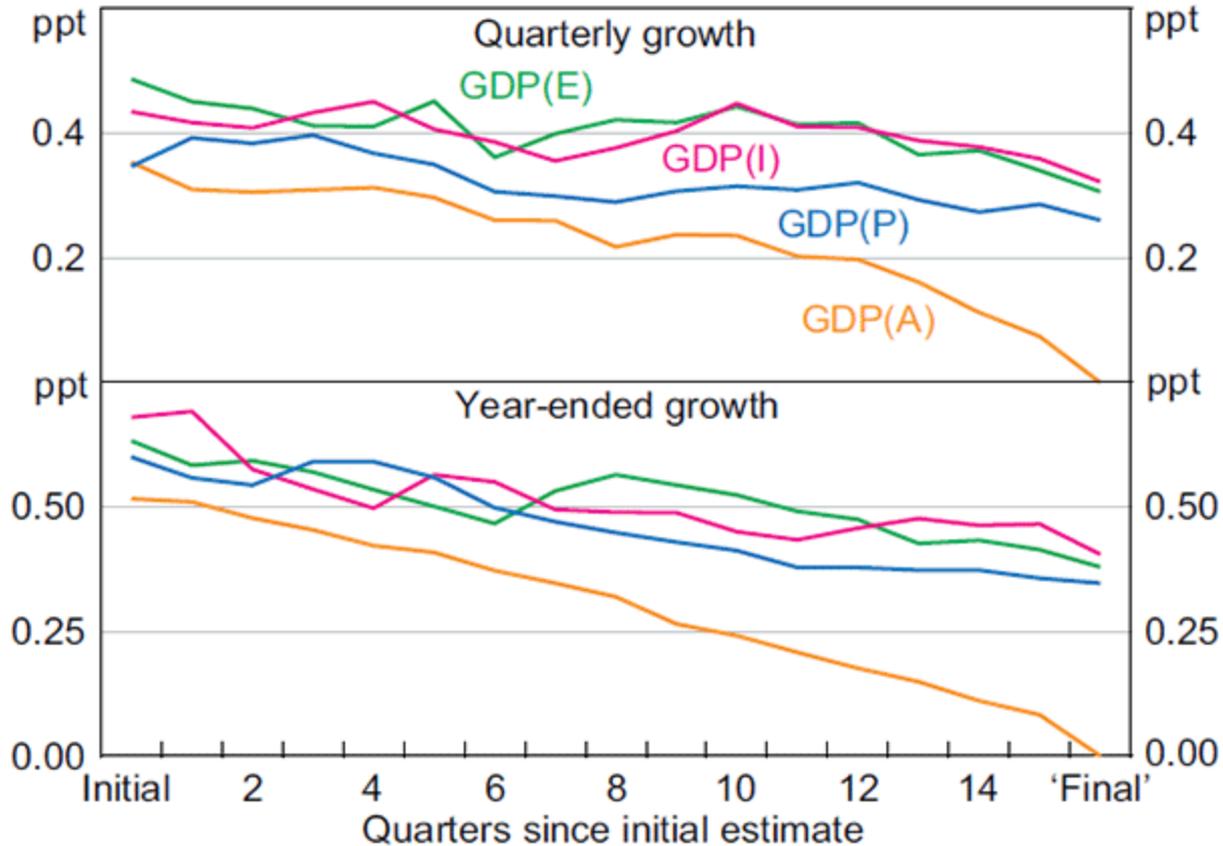
Source: Ghana Statistical Service

*Provisional figures

Australia

Error Relative to 'Final' GDP(A)*

Mean absolute error



* Mean absolute difference between growth estimate for GDP(A) after 16 quarters and growth estimate at given horizon

Sources: ABS; RBA

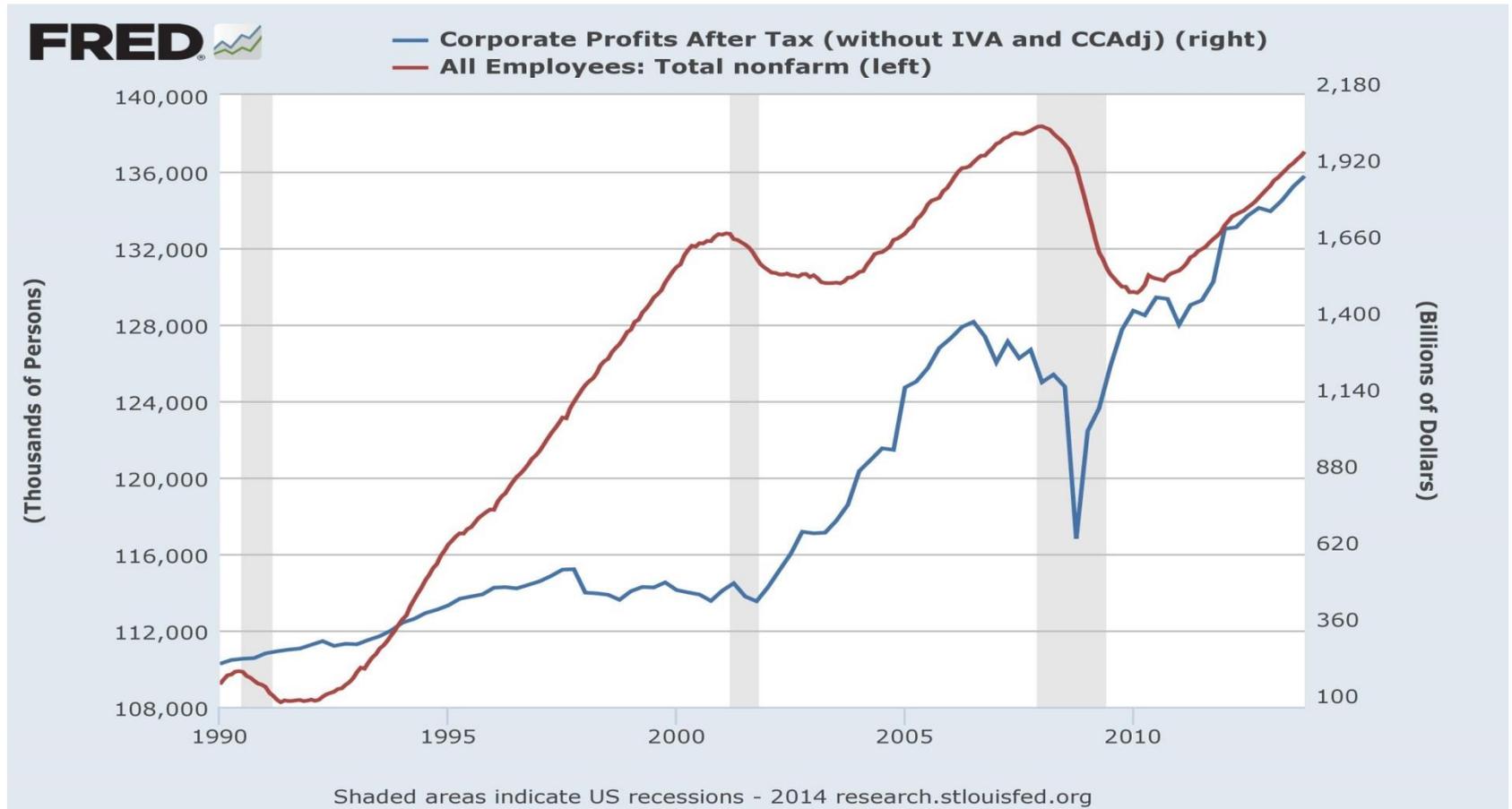
Tools of monetary policy?

- Taylor rule (and many rule-based systems) focus on setting the interbank lending rate and discount rate
 - Open market operations
 - Reserve requirements
 - Financial regulation
 - Exchange rate policy

What's in the rule?

- According to Taylor... only inflation and GDP gap
 - Unemployment?
 - Asset prices?
 - Current interest rates or yield curve?
 - Exchange rate?
 - Corporate profits? (pic)
- Maybe rule could be “tailored” to different economy?

Profits vs Employment



1990 = \$2922

2001=\$3172

2013=\$14014

A sidenote on the ECB...

- Empirical research suggests that the ECB's "rules" are very similar to the Bundesbank
- EMU population (est.) = 333,114,254
 - Croatia pop. (est.) = 4,262,140 (1.3%)
- EMU GDP (est.) = 9,250 Billion Euro (PPP)
 - Croatia GDP (est.) = 67 Billion Euro (PPP) – (0.7%)
- Croatia would be a small part of the decision

Conclusion

- I'm sorry – my bias is showing...
- Rules may work very well in certain economies
 - Low political independence
 - Simple goals
 - Good measurements

Questions?