

DISCUSSION

The Effects of Monetary Policy on Asset Prices
Bubbles: Some Evidence by Gali and Gambetti

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LBS, CEPR and now-casting economics

Lessons from the Financial Crisis for Monetary Policy

NBER

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GG paper (1)

Ask clean empirical question:

What is the effect of a change in interest rate on stock prices and what does this reveal about the effectiveness of “leaning against the wind” monetary policy?

Key to the design of the analysis: distinguish between bubble and fundamental component of stock prices and samples in which bubbles are thought to prevail and “other periods”

Companion theory paper by Gali predicts that monetary policy tightening must have negative effect on fundamental component and positive of bubble component. This motivates the empirical exercise here:

Use PV relation to compute fundamental component of SP and study effect of monetary policy on fundamental and bubble components

GG paper (2)

Implication for the response of observed changes in SP to monetary policy action:

- if no bubbles, observed changes in SP should react negatively to both monetary policy shock and systematic monetary policy
- If bubbles dominate, observed changes should react positively

Time varying does the trick!!

This is a macho exercise!

- Addresses a key policy question with an empirical model whose results are interpreted through the lenses of a model which is very simple:
 - model of rational bubbles only
 - no risk aversion, no risk premia
 - no financial intermediation

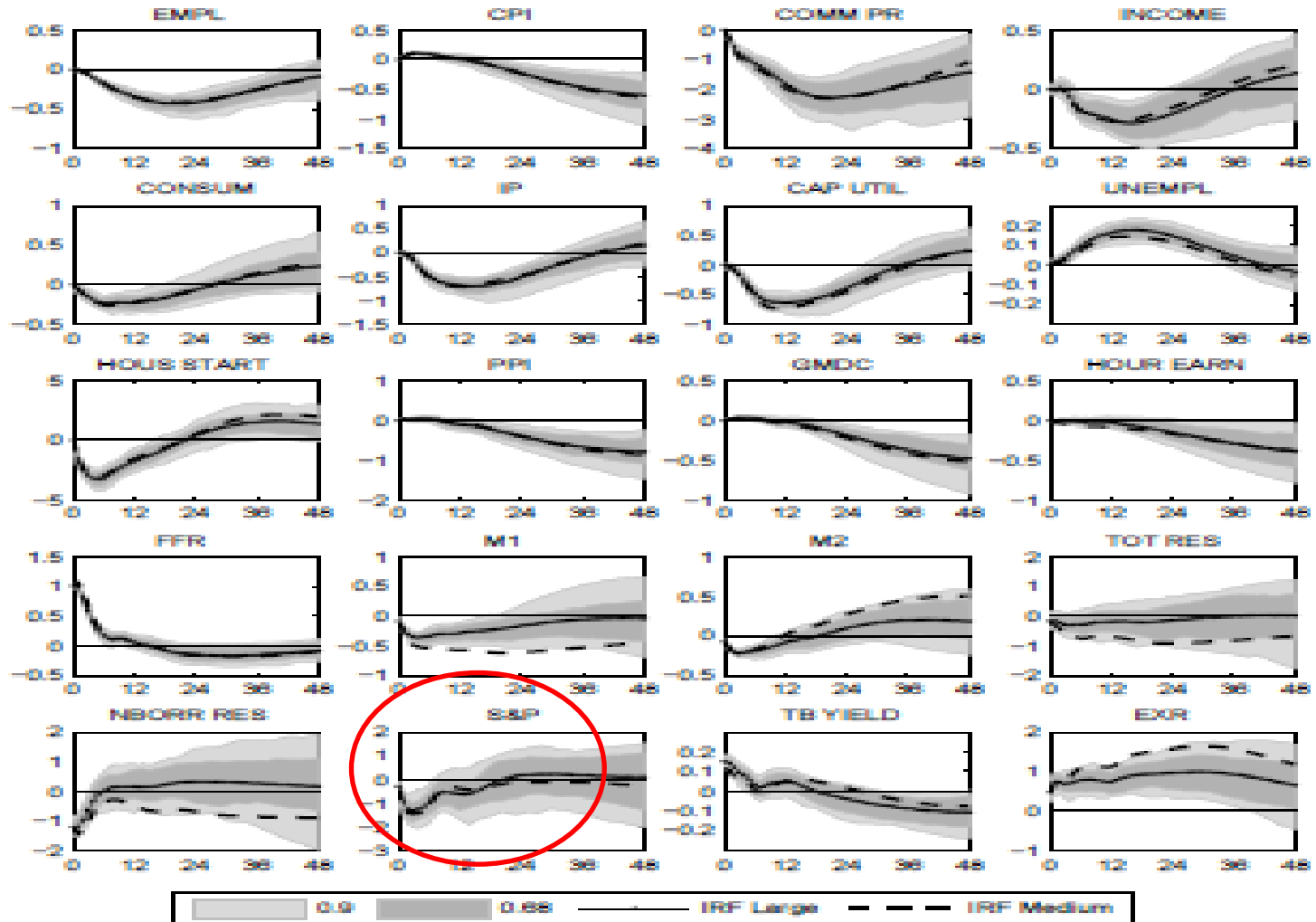
Many of the popular stories about the recent financial crisis are absent (leverage cycle, size of financial sector, balance sheet effects ...)

Whatever the model, the result is intriguing

- Stories of leverage and relation between asset prices and collateral point to an amplification of monetary policy effect on asset prices, not a reversal of sign
- Key result in GG: the sign of response of asset prices to the monetary policy shock is positive during bubbling periods and negative in “normal” times
- It challenges a large body of empirical research

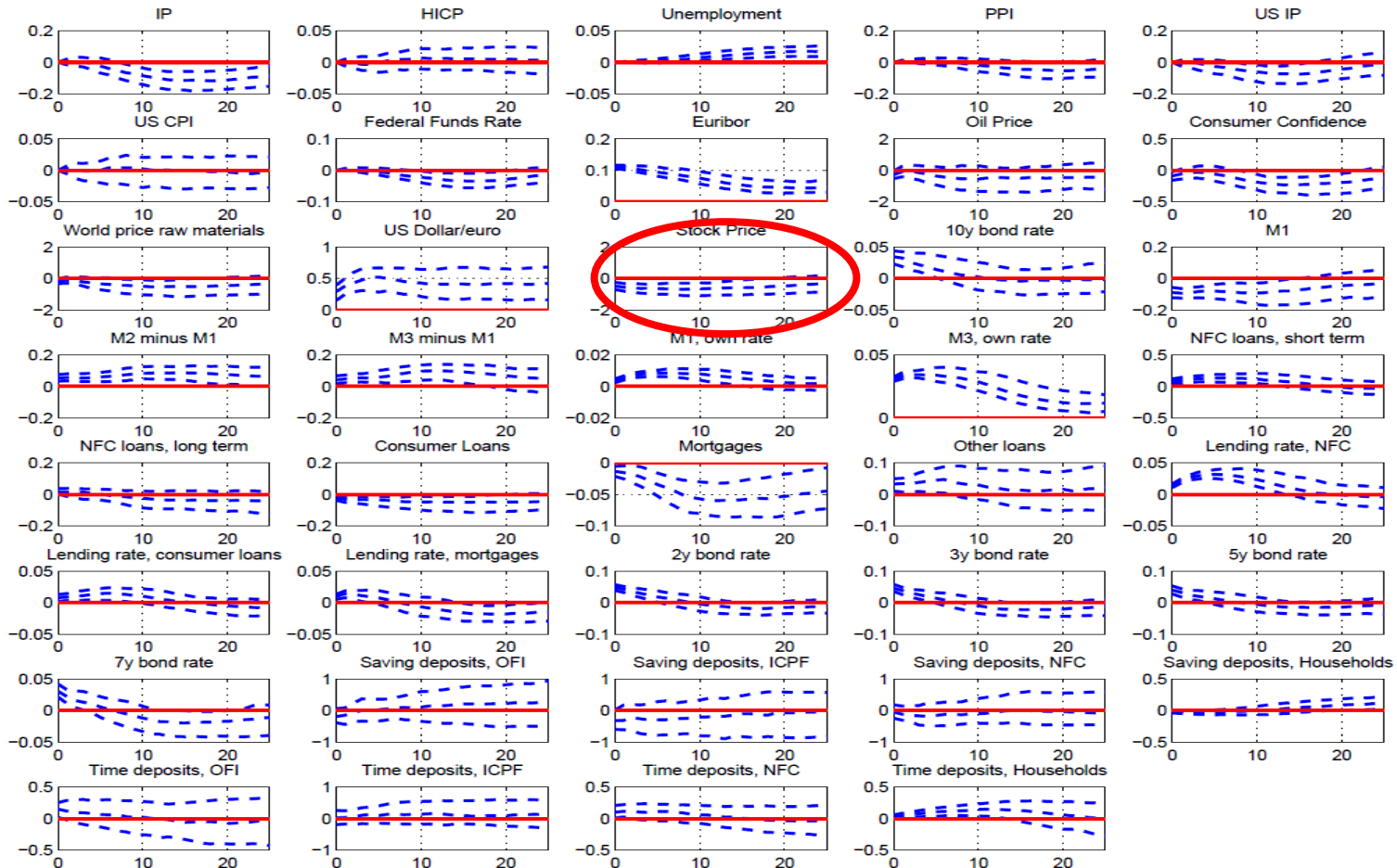
Banbura, Giannone and Reichlin JAE 2010

US monthly 1959-2003



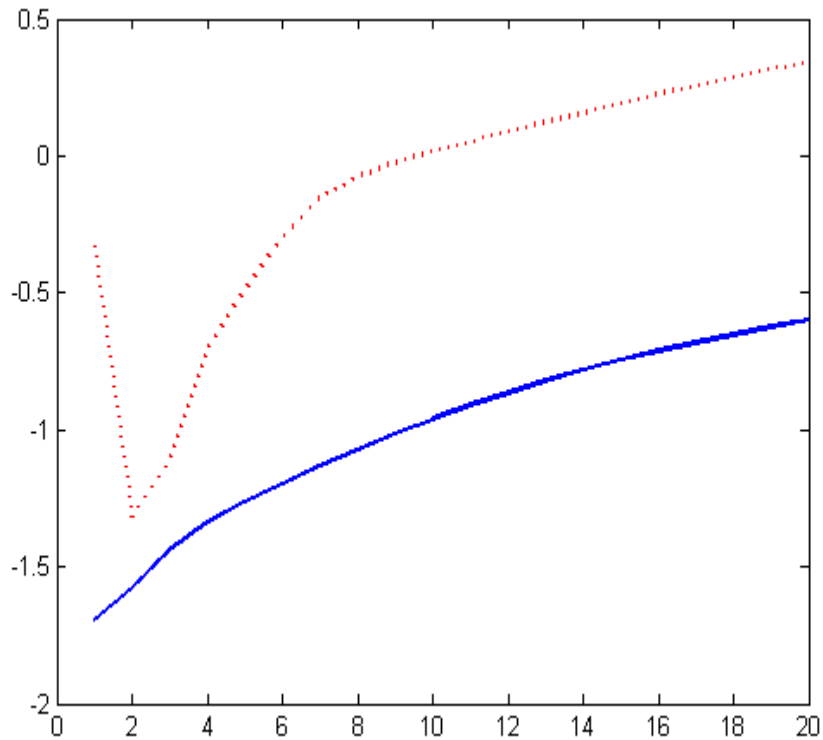
Giannone, Lenza and Reichlin, 2012

monthly euro area 1993-2011

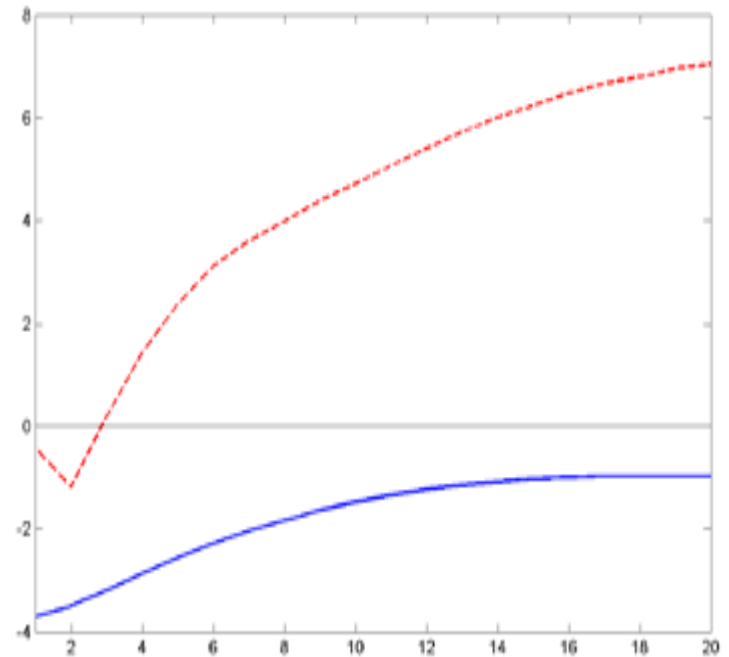


GG VARs

GG whole sample quarterly
Very similar to BGR monthly

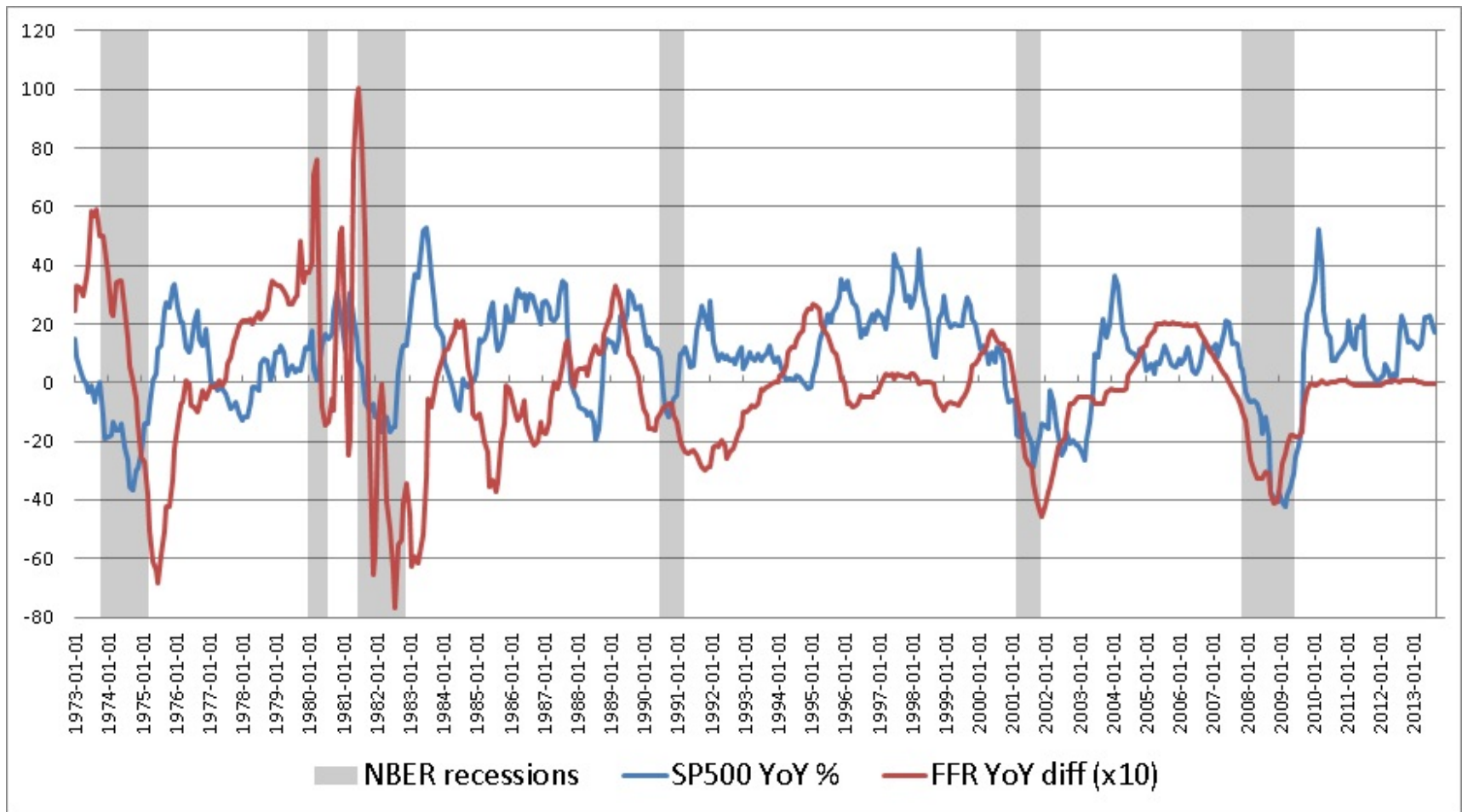


GG 1997-1999
Positive after 1-2 quarters



A look at the data:

unstable relation especially 1984-87 and the nineties



Evaluate robustness of results and identification issues

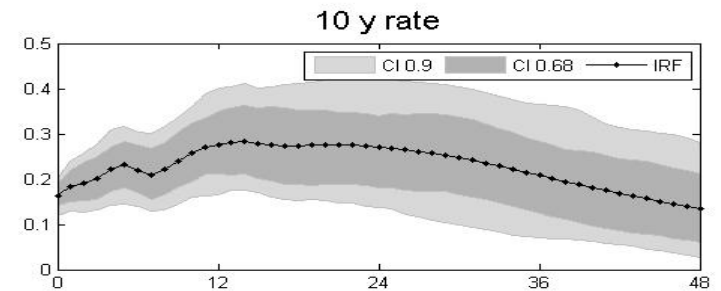
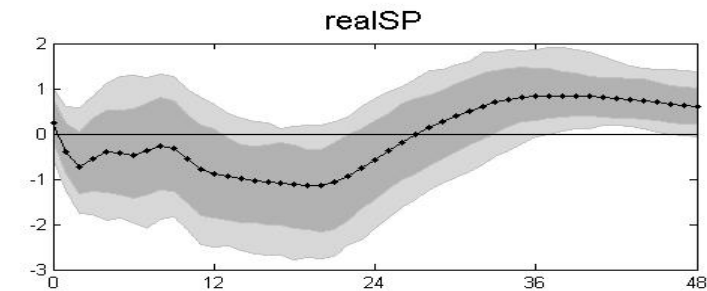
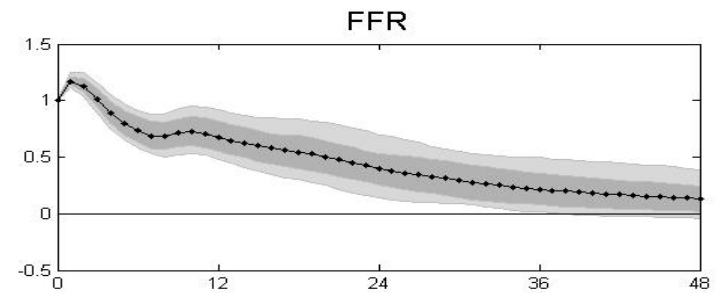
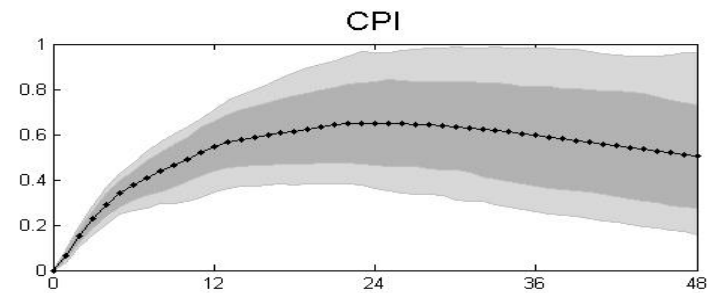
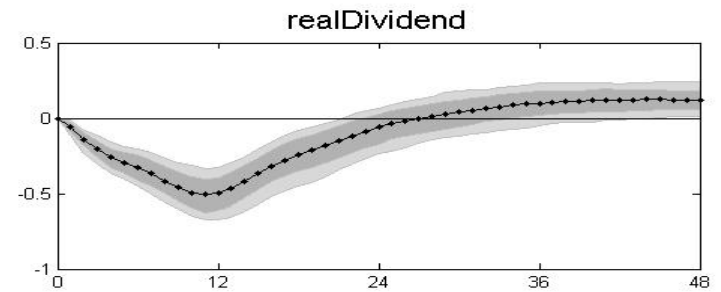
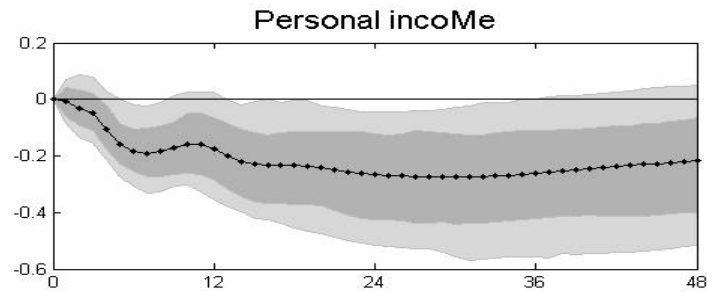
My exercise

- Run a monthly VAR similar to GG but including the 10 year bond rate 1973-2012 and show all response functions
- Consider two bubbles sub-samples:
1994-1999
2001-2007

Response to long-rate should help evaluate whether monetary policy shock is correctly identified

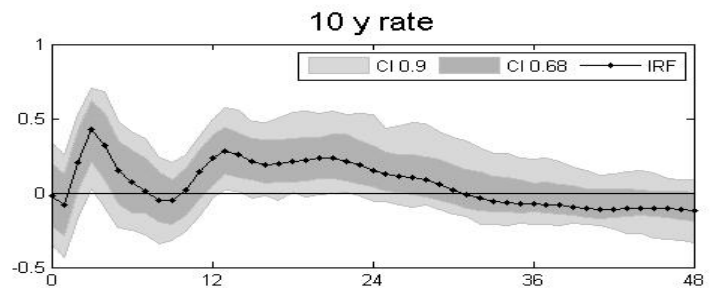
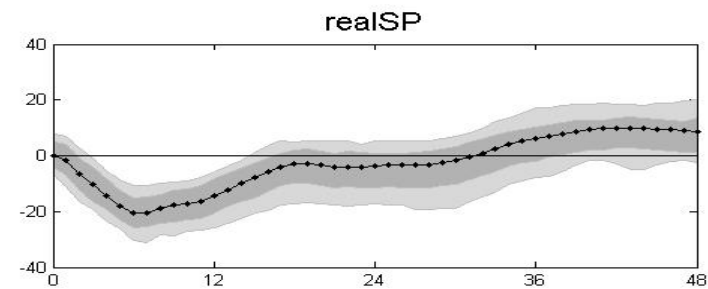
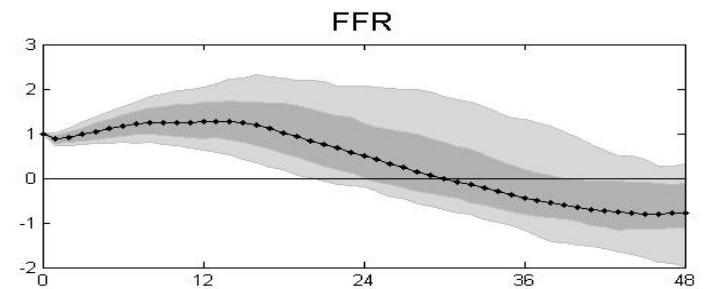
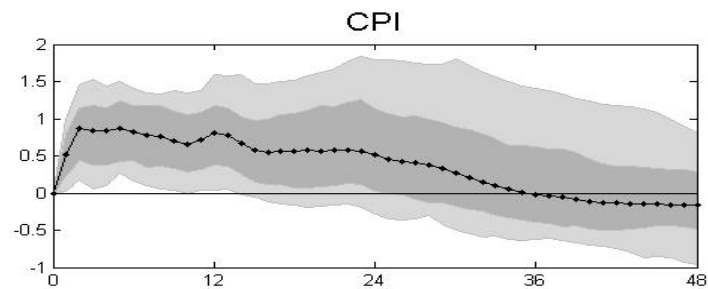
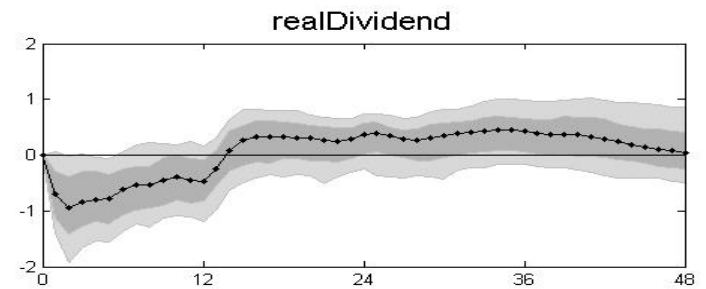
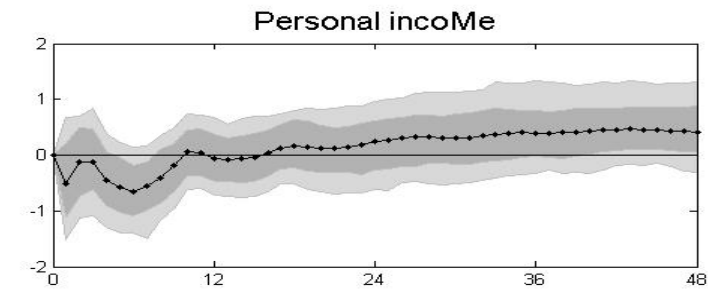
The whole sample: 1973-2012

same result as GG and response of 10yr rate is positive as in most empirical work



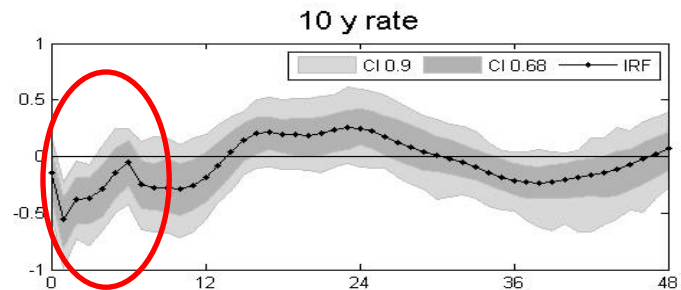
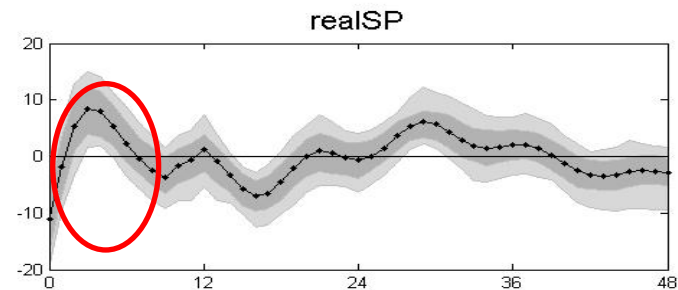
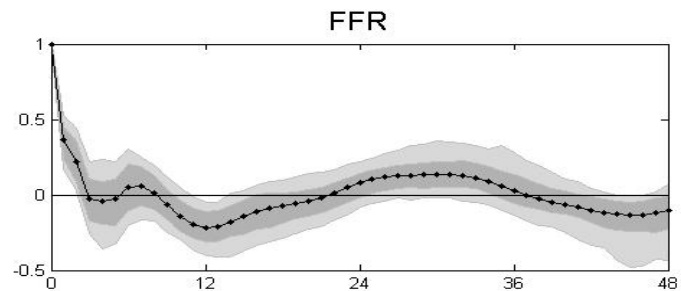
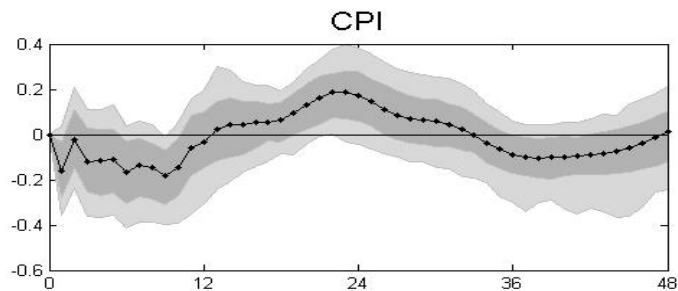
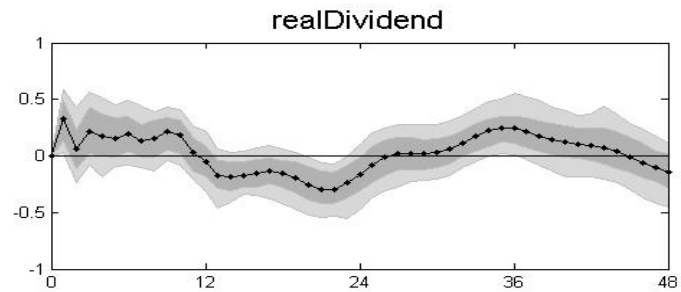
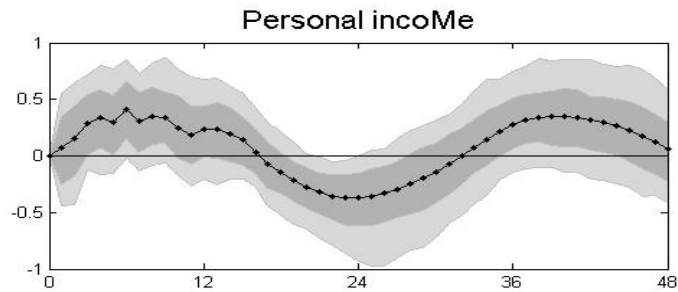
2001-2007

10 yr rate responds positively to short rate as in whole sample and response of SP is standard



1994-1999

Long rate responds negatively and SP positively as in GG!!



What have we learned from the VARs?

- The GG effect on stock prices confirmed for the nineties only
- **In that sub-sample we also have that tightening negatively affect the long-rate**
- Other interesting features: temporary positive effect on output and no price puzzle

What story can explain these results?

Identification?

Alternative explanation of instability

- SP should respond to the long rate
- The response of the long rate to the monetary policy shock is ambiguous

-- expectation hypothesis:

short rate \uparrow \rightarrow long rate \uparrow

-- but also:

short rate \uparrow \rightarrow inflation exp \downarrow \rightarrow long rate \downarrow

Empirically: most studies find positive response although in some occasion response is found to be negative

The link between short and long rate

- Romer and Romer

If monetary policy responds to new and possibly private knowledge about the economy short and long rate move in the same direction, otherwise the short and long interest rates should move in opposite direction

- Tore Ellingsen Ulf Soderstrom 2003 formalize this point and study the problem in a simple model

- In general response of long rate to short rate depends on what the market infers about shocks or CB preferences:
- If markets interpret a tightening as a shift towards a more aggressive anti-inflationary rule, long rates will respond in the opposite direction since they will expect inflation to decline on average

When a positive shock realizes, the yield curve shifts up in anticipation of the central bank's response. If the central bank acts as expected, market interest rates will not move at all when the central bank rate is adjusted. If, however, the central bank sets a higher interest rate than was expected, the public realizes that the bank has become more inflation averse: short term rise and long term falls

A possible story for the nineties

Sequence of positive shock in output driven by TFP while markets believe that it is demand

yield shift in anticipation of a tightening but the CB eases rates: short term rate falls, long term rises

This is consistent with

- (i) uncertainty about CB's preference;
- (ii) markets believing that GDP is driven by demand shocks

..... Some evidence based on professional forecasters

Professional forecasters under-estimate GDP growth in 1995-99 and show large errors

(giannone, reichlin and sala MA 2004)

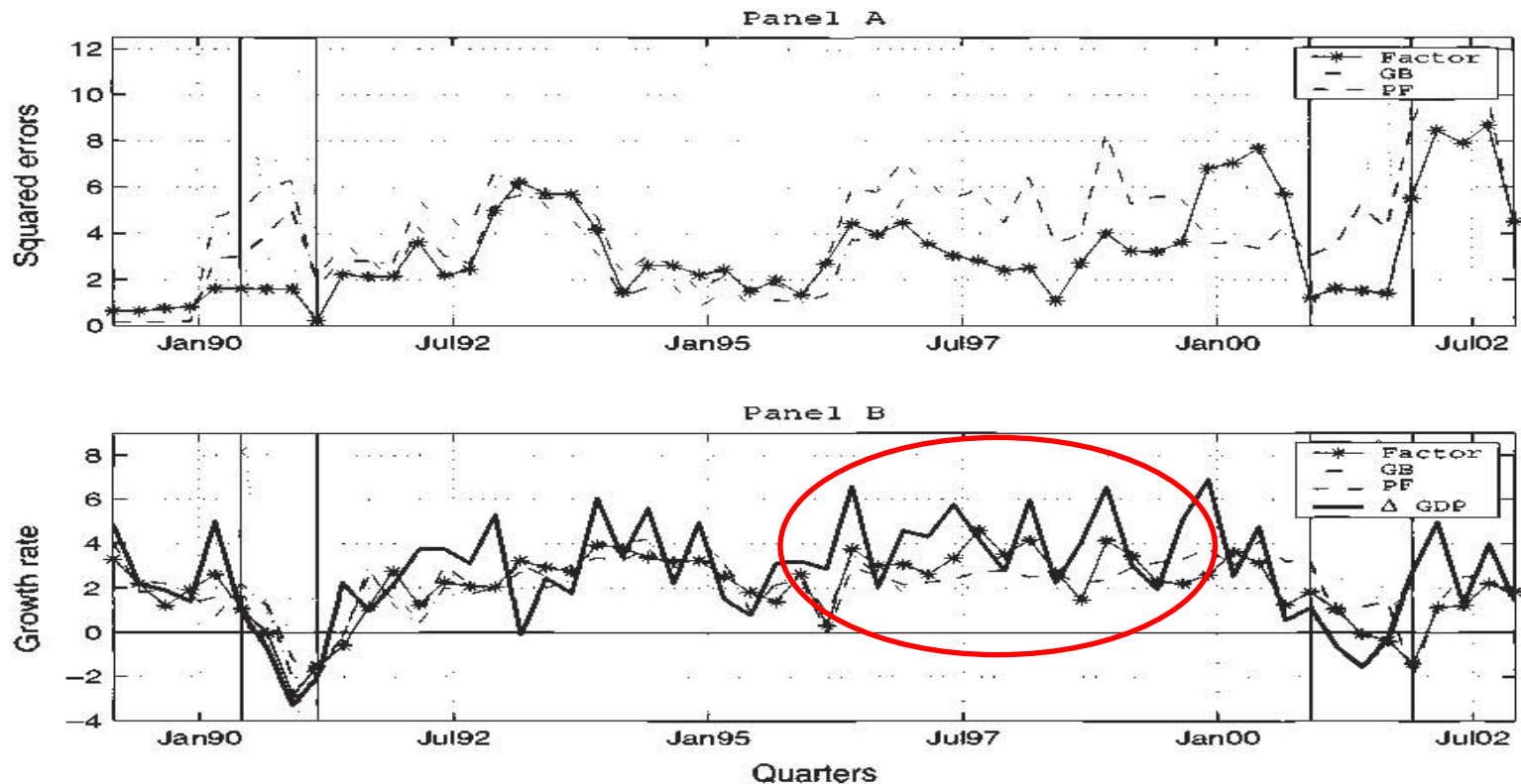
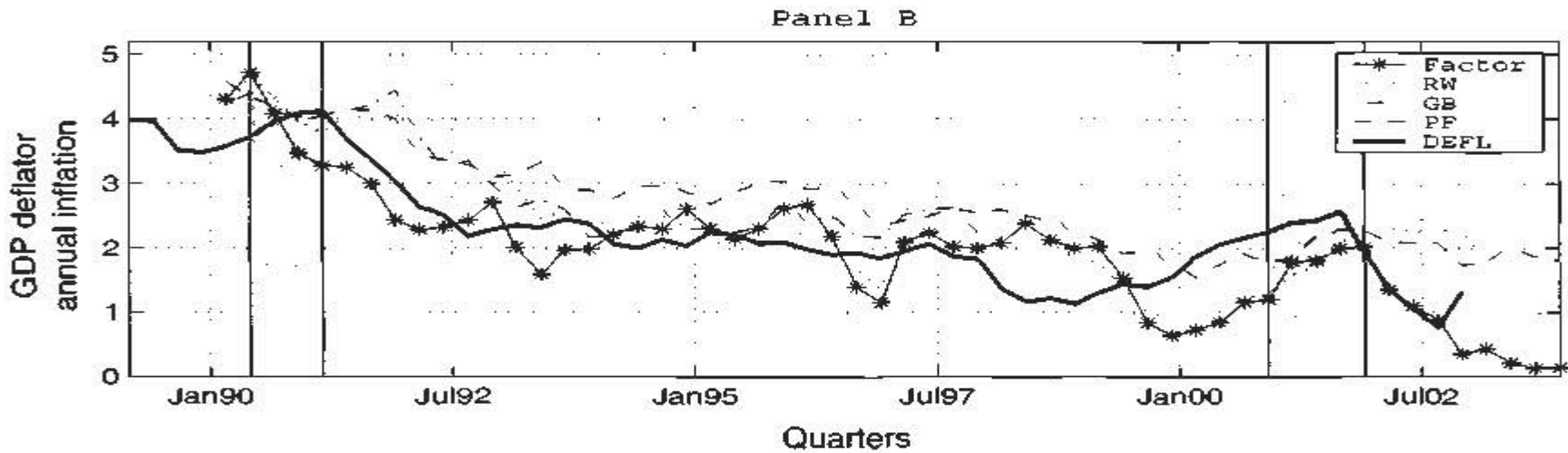
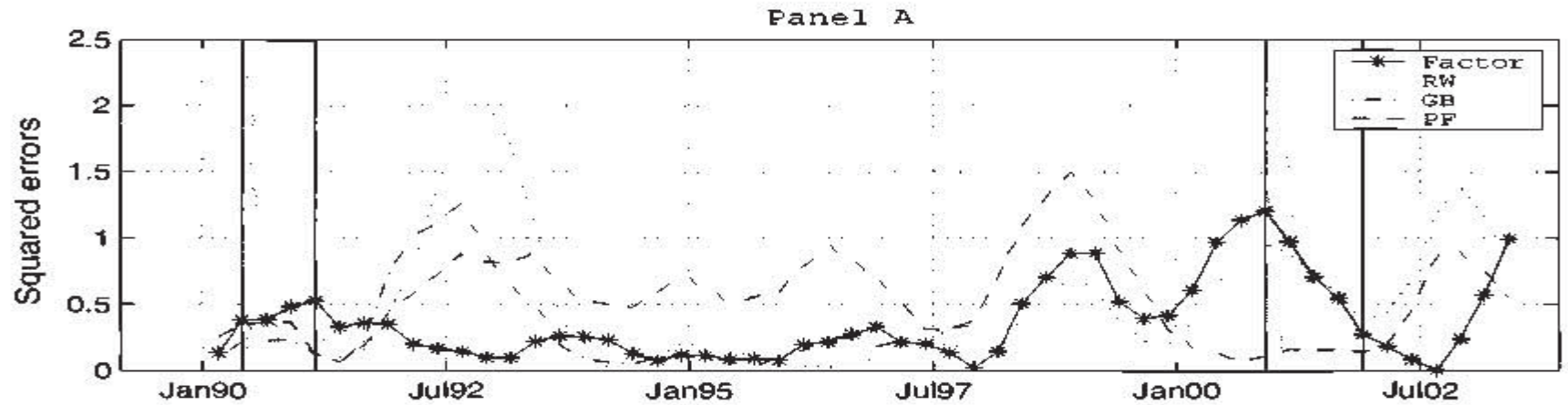


Figure 1
Forecasting GDP growth rate

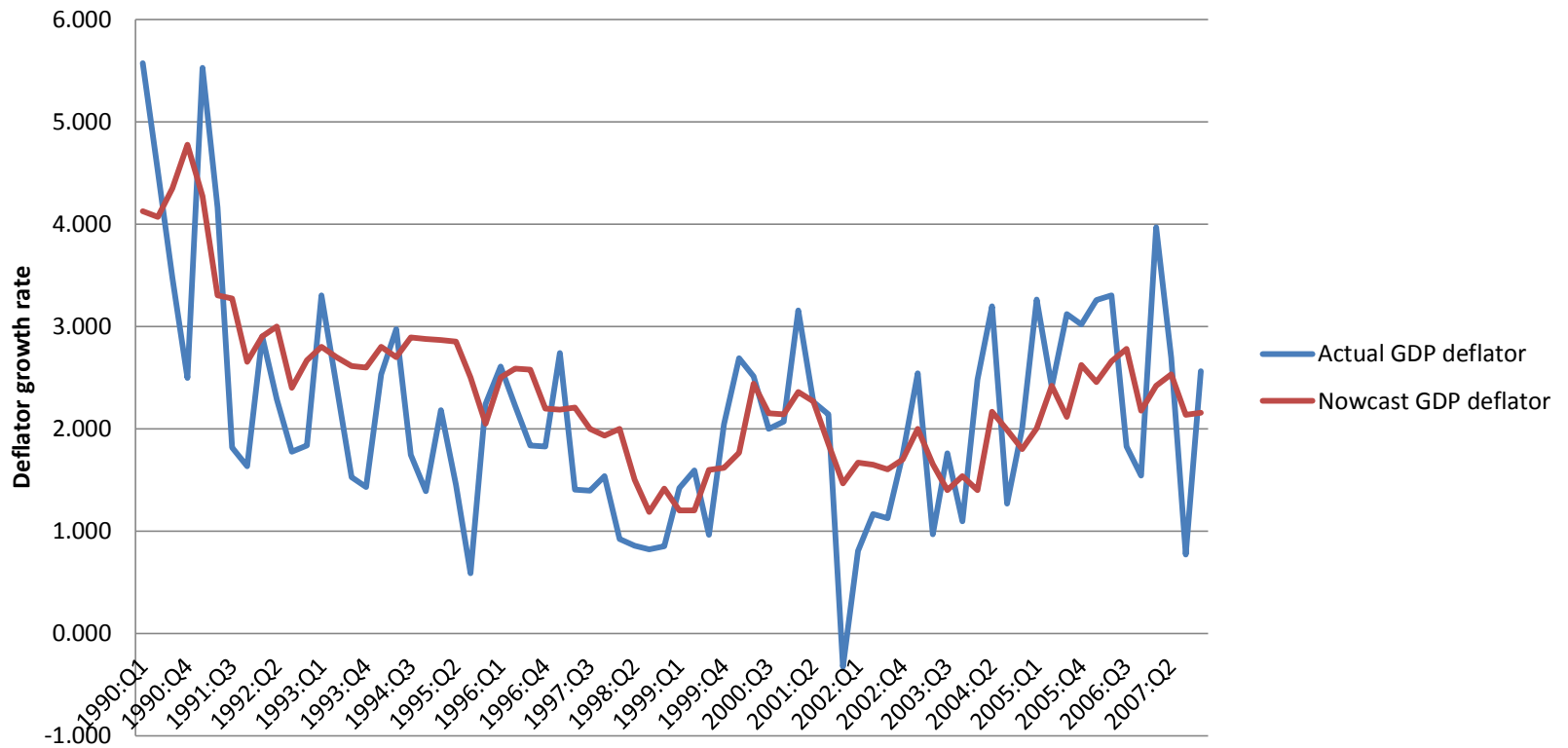
And they over-estimate inflation



SPF forecast – deflator

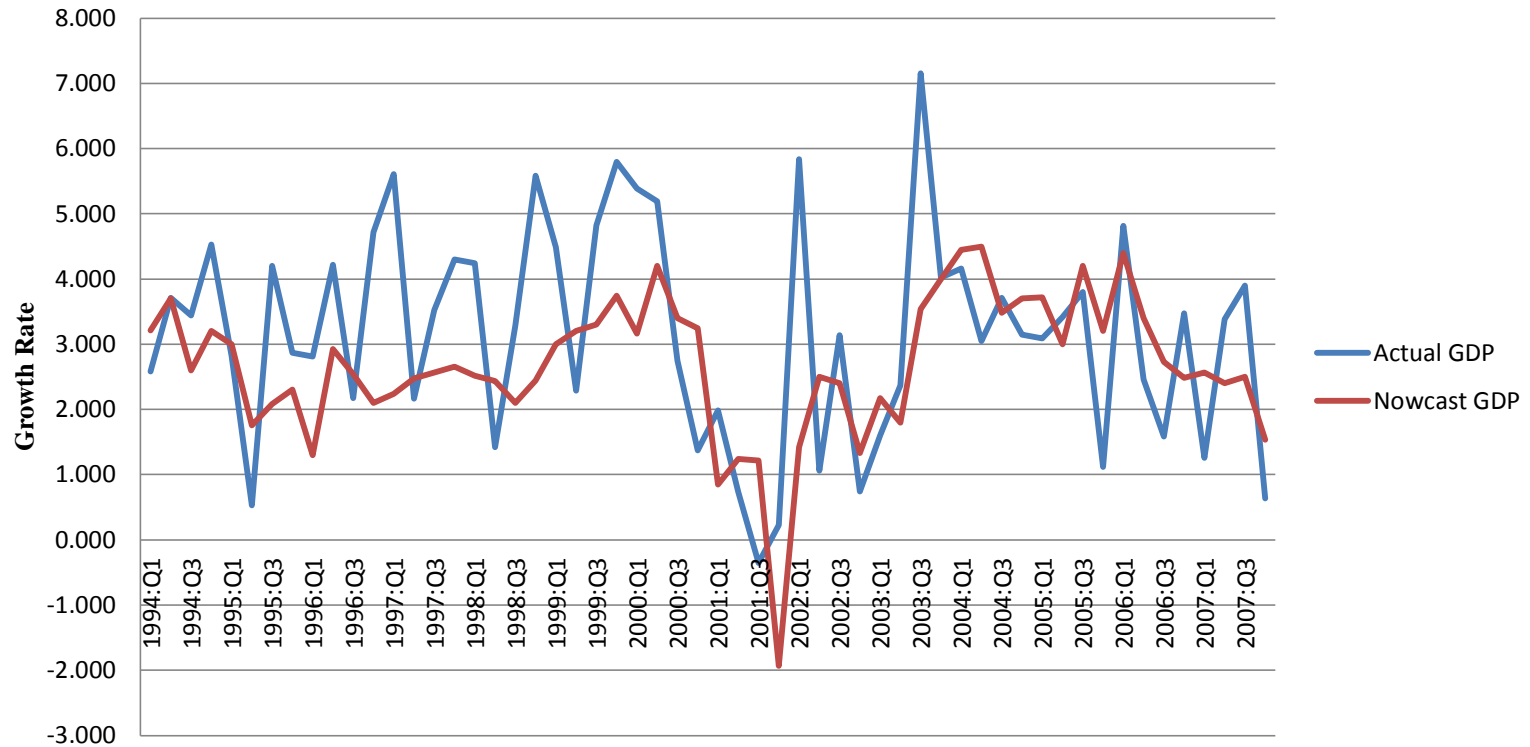
Inflation is over-estimated

Survey for Professional Forecasters Errors



SPF – GDP forecast output is underestimated

Survey for Professional Forecasters GDP Growth



Another implication of these forecast facts

- Large forecast errors of SPF could alternatively suggest large volatility of fundamental component not captured in GG's model

Conclusion

- Result interesting but
 - difficult to interpret on the basis of a stylized model
 - identification issues in empirical model
- I suggested one interpretation:
Response of SP to short rates depend on informational problems (miss-perception of nature of shocks and Fed's behavior)
These are reflected in the response of long rates to short rates