

Ten thoughts on forecasting for policy

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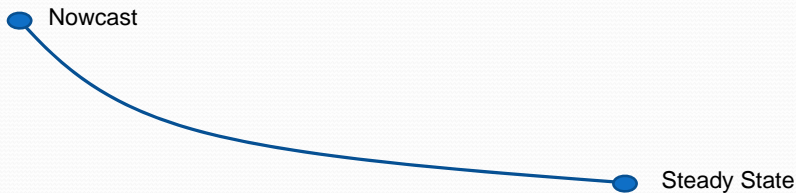
Workshop on Forecasting Issues in Developing Economies

April 26, 2017

1. Ridiculously simple forecasts (RSFs) are hard to beat beyond very short term

- Exchange rates as a random walk
- GDP growth is about iid
- Interest rates as a random walk
- Stock prices as unforecastable (in conditional mean)

A simple inflation forecast



Caveats

- Not saying that other information (e.g. slack) is entirely useless.

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- Not a law of physics, but an equilibrium outcome with an effective central bank.

1. Ridiculously simple forecasts (RSFs) are hard to beat beyond very short term

- Disappointing for forecasting
- Reality that has powerful implications

2. Survey/Institutional forecasts do well

- But still only about as well as RSFs
- Strength is especially in nowcasting
- Might be partly automated, but judgmental element is key

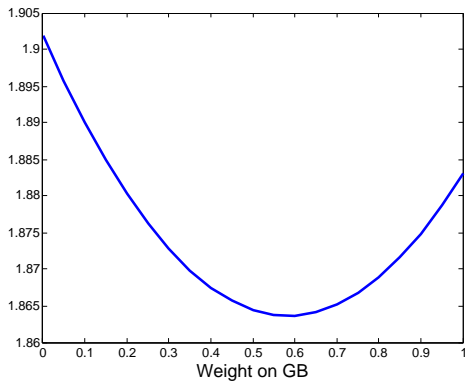
Four-quarter-ahead PCE inflation forecast RMSE

Benchmark	1.90
Greenbook	1.88

Source: Faust and Wright (2013)

Four-quarter-ahead PCE inflation forecast

RMSE: Combination Forecast



3. Out of sample forecasts give limited protection against overfitting

- Out-of-sample methodology would be magic bullet if you did it just once
- But researchers data mine, and so it is a limited protection again overfitting

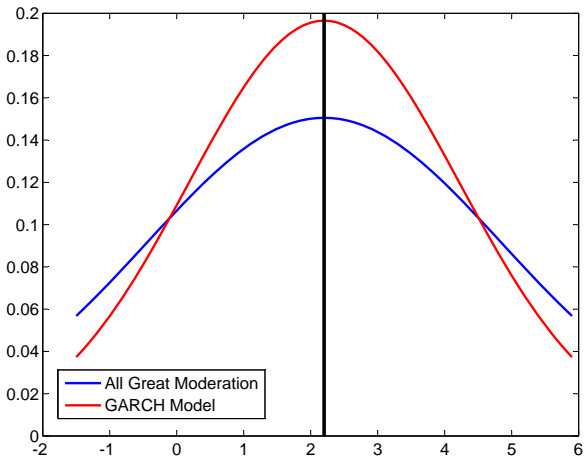
4. Some apparent *ex-post* forecast inefficiency is not worrisome

- Forecasters are bound to be slow in learning about trend breaks
- Data mining problem
- At the same time shouldn't be a limitless license for inefficiency

5. Great Moderation is alive and well

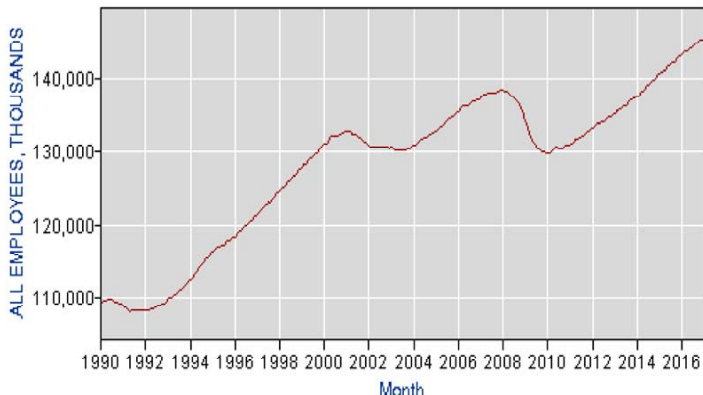
- Most effort goes into point forecasts
- Yet density forecasts are important
- Can add on historical standard deviations of forecast errors
- An alternative is to fit GARCH model to forecast errors

Uncertainty around 4-Quarter SPF Real Growth Forecast



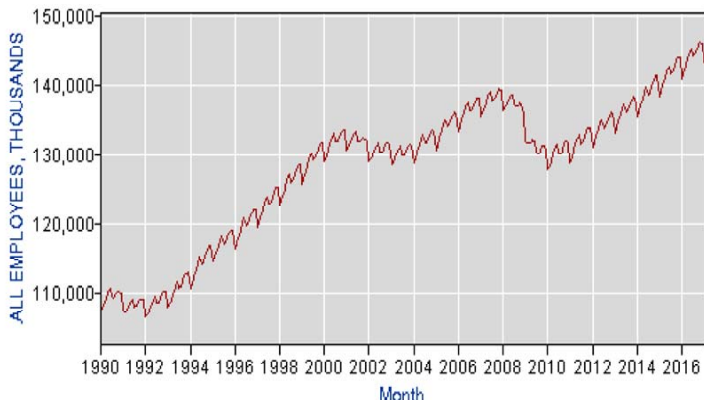
6. Seasonal Adjustment is important

Nonfarm Payrolls: SA

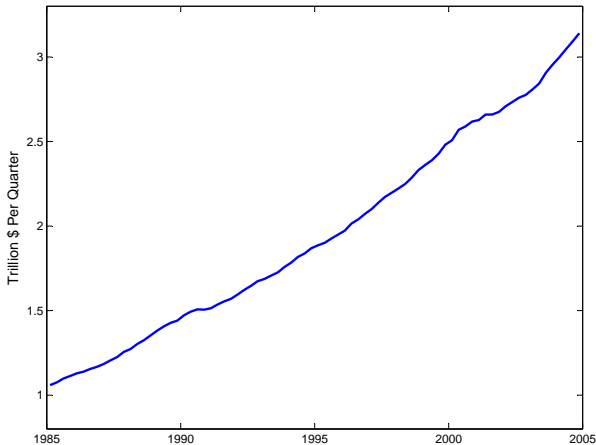


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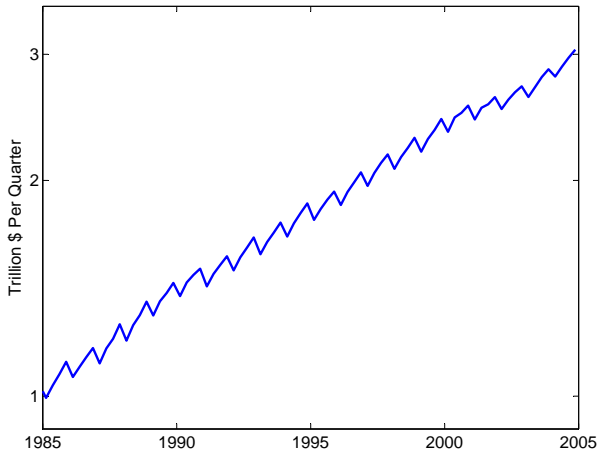
Nonfarm Payrolls: NSA



6. Seasonal Adjustment is important GDP: SA



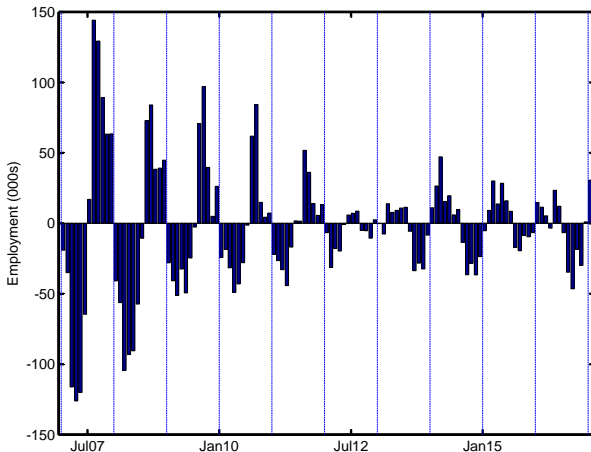
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- US uses X-13 which is a moving average
- EU estimates a parametric model (TRAMO/SEATS)

US Employment Data: SA - SA

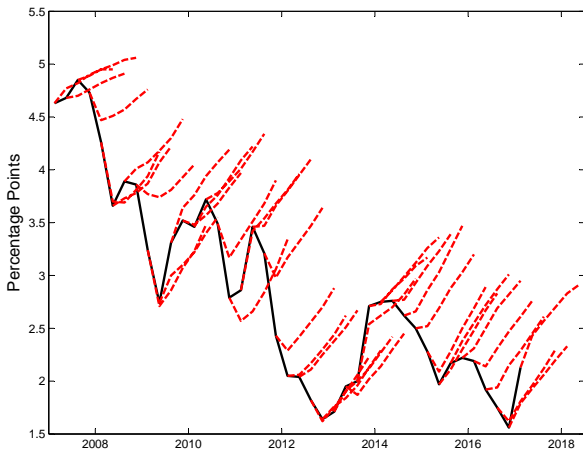


7. “Market” forecasts are dodgy

- Inflation breakevens were hoped to be a source of information on inflation expectations
- Too volatile and too correlated with oil prices to be credible
- Doesn't mean that they have no information content
- Danger of selective reference of market forecasts

8. Interest Rate forecasts

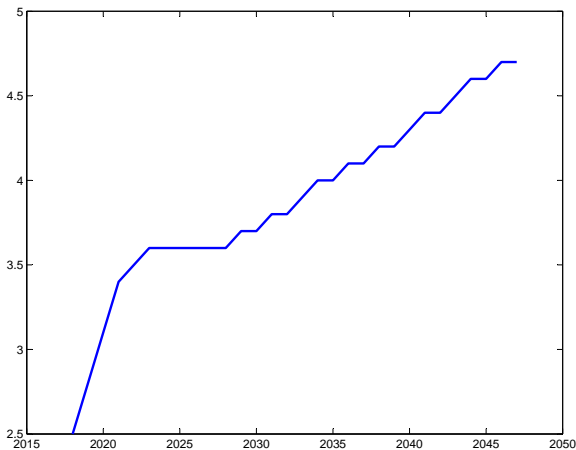
SPF Ten year yield forecasts



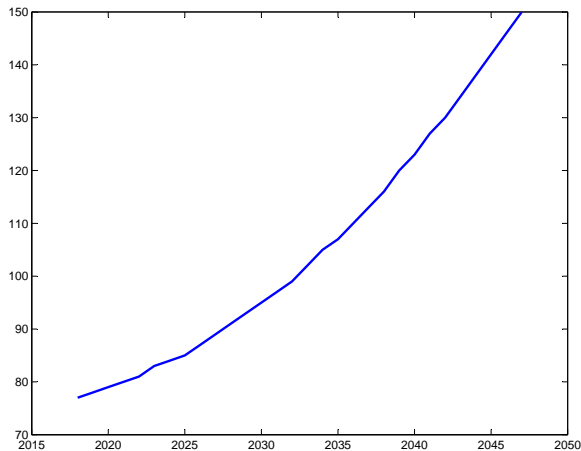
8. Interest Rate forecasts

	Growth	3 month yield	10 year yield
Actual			
1955-2005	3.4	1.8	3.2
10-year CBO forecast			
Feb 2014	2.0	1.5	2.7
Jan 2017	1.9	0.8	1.6

Odd long range CBO ten-year yield forecast



Implies unsustainable debt/GDP



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- Reasoning is that the debt/GDP ratio makes borrowing costs spiral up

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- Reasoning is that the debt/GDP ratio makes borrowing costs spiral up
- We're doomed because we're doomed
- “There is nothing either good or bad, but thinking makes it so.” (Hamlet)

9. A flat to inverted yield curve is quite likely within 2 years

- Plausible Fed tightening and low/negative term premium
- Conundrum is the new normal
 - ▶ Hanson, Lucca and Wright (2017)
- Inverted yield curves have an undeniable ability to predict recessions

10. Forecasters need to avoid overconfidence

- Unfortunately economists don't know answers to questions people want to know answers to
- Our ability to forecast is very limited
- Economists do themselves damage by pretending otherwise