

Discussion of "The Reanchoring Channel of QE" (Andrade, Breckenfelder, De Fiore, Karadi, Tristani)

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¹The views expressed herein are not necessarily those of the Chicago Fed or the Federal Reserve System. 

Summary

This study develops and calibrates a DSGE model in the spirit of Gertler and Karadi (2011), but augmented with policy rule that explicitly account for ZLB and with learning about the inflation target.

- Main mechanism very similar to Erceg and Levin (2003): private sector must use signal extraction to make inference about the CB's inflation target based on observing the policy rate;
- The main difference is that signal extraction here depends not only on the policy rate but also on asset purchases;
- Still same basic intuition holds: agents disentangle transitory and persistent (inflation target) shifts in the monetary policy rule, the latter are very powerful as they generate persistent responses in inflation and output;
- Other channels of asset purchases are not necessarily as powerful because most likely less persistent.

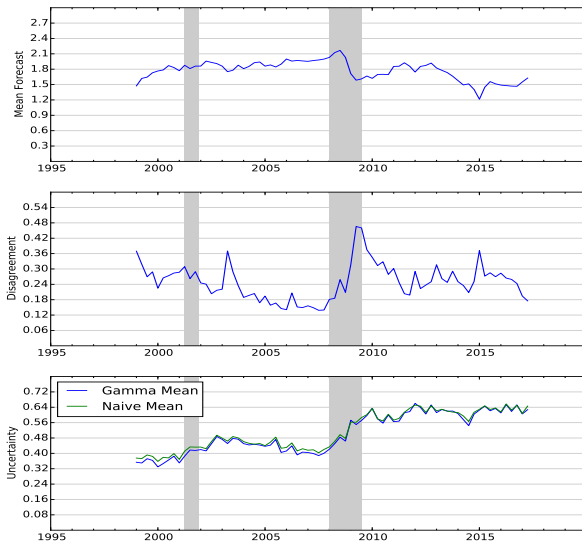
- Interesting and relevant new channel of CB's asset purchase programs. But
 - Some additional evidence on inflation expectations suggest that re-anchoring might not be anchored and therefore persistent
- Most of my comments/confusions are about the QE channels that in this model do NOT work through the expectation component
 - Some model assumptions/calibrations are bit hard to swallow
 - Some results are hard to evaluate as it is complex to distinguish the relative contribution of the many moving parts
 - Some confusion about the link between results and event-study evidence

Evidence on reanchored inflation expectations

- In the literature, the anchoring hypothesis not only makes predictions about the reaction of point forecasts to news, but also about the perceived uncertainty around long-run inflation rates:
 - ① Insensitivity of inflation expectations to macro news, including inflation surprises (used in this study to calibrate ξ)
 - ② Confidence in the willingness and ability of the CB to keep inflation close to target
- A high degree of perceived uncertainty about expected inflation is difficult to reconcile with the view that inflation expectations are anchored/reanchored.
- Let's take a look at the one- and two-year horizon perceived inflation uncertainty from the subjective PDFs in the SPF (D'Amico and Orphanides, 2008).

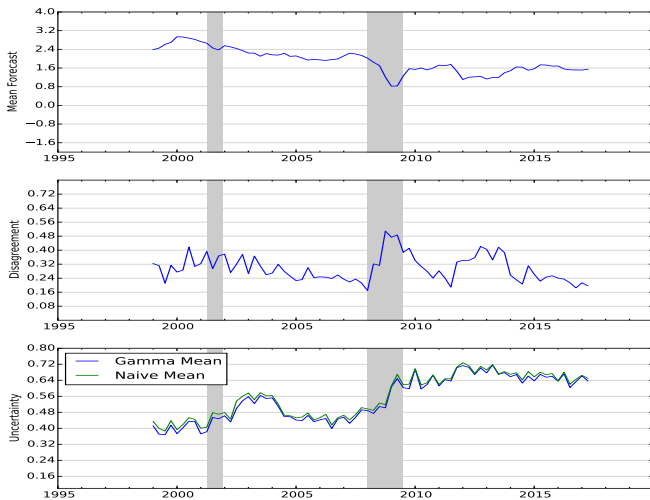
Moments from 2-year SPF Inflation Subjective PDFs

ECB Inflation Forecasts - 2 Year



Moments from 2-year SPF GDP Subjective PDFs

ECB GDP Forecasts - 2 Year



Term structure of inflation uncertainty is informative

It is possible that inflation expectations are anchored in the sense of (1) but still exhibit substantial uncertainty about long-run target. For illustration, a simple example (Nagel, 2015):

$$\pi_{t+1} = \pi_t^{*e} + \sigma \epsilon_{t+1}$$

$$\pi_t^{*e} = \pi_{t-1}^{*e} + \zeta s_t$$

- Even if ϵ_t and s_t are uncorrelated, when $\zeta > 0$ there can be considerable uncertainty about the target and thus about long-run inflation.
- The term structure of inflation uncertainty should be informative about the relative importance of ϵ_t and s_t :
 - when $\zeta = 0$ and $\sigma = 0.01$, uncertainty decays as horizon increases
 - when $\zeta > 0$ and $\sigma = 0.01$, higher uncertainty over longer horizons
- This information can be used to better calibrate ζ in the model.

Example from Nagel (2015), red=no target rate uncertainty

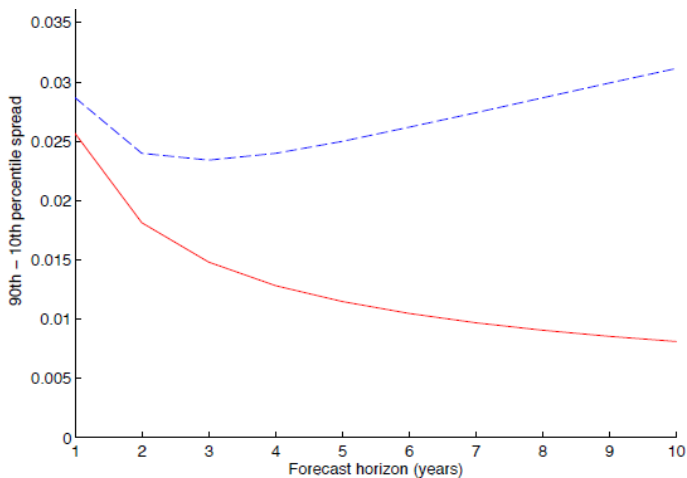


FIGURE 2

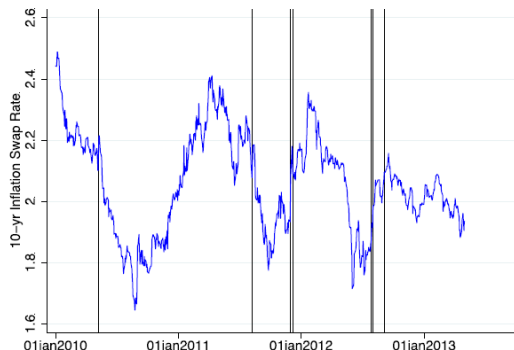
Long-run inflation uncertainty with and without uncertainty about target

Other comments on evidence on reanchoring

Not sure why the analysis of inflation expectations start in 2013

- for example, OMT announcements could have been used to increase sample size, since with 14 observations is very hard to judge significance
- see 10-year ISWAP reaction in Nagel et al. (2015), which suggest that surveys could have behaved similarly

Figure 7. 10-Year inflation swap rate (European CPI, ex-Tobacco).



Model Assumptions and QE channels

- How does a model without explicit role for the maturity composition of government debt and without second moments (interest rate risk) know the difference between APP in par amount and 10-year equivalents?
- How can this model distinguish between the capital-relief and duration-risk channels?
- The result that "it matters which asset the CB acquires" is hardwired through the assumption $\Delta < 1$
 - if it is not assumed that for banks it is harder to divert funds from its holdings of government bonds rather than of private securities, purchase of government bonds and private securities would have same effects.

- In general, it is hard to understand why to calibrate parameters that determine the severity of limits to arbitrage (θ, Δ, κ) this literature uses variables such as term premia and credit risk premia, which are objects very well captured by arbitrage-free models.
- It is impossible to understand the role of τ , for various reasons:
 - Conceptually: Why would such efficiency cost be applied also to Government bonds and not just to the intermediation of private assets? CBs do OMO all the time, they know how to trade and evaluate Government bonds, although such cost seems plausible for private assets.
 - Practically: there is no information on its calibration and on the size of Φ in general, i.e., the cost of CB intermediation.

Relative Importance of Policy Tools

- Potential circularity issue about the determination of ζ : parameter measuring relative efficacy of APP and the policy rate and crucial for signaling extraction from APP.
- It seems to be determined by equating the macro effects of the APP and policy rate in the baseline model
 - both policies have to generate similar IRFs for output and inflation
- But these macro effects seem to include the re-anchoring channel impact (based on Fig 9)
- Which in turn should depend on ζ , but which value of ζ at this stage?
- Is the re-anchoring channel shut down when equating the effects of the two policy tools?
- If not, then which is the initial value of ζ ?

- In analyzing the total impact of APP (capital-relief+re-anchoring channels) in baseline model conditional to saving shock, it seems that most of the stimulative effects are coming from the price of capital and investments accumulation
- And it is hard to argue that the recovery took place through an improvement in investments
- But then, in analyzing the contribution of only the reanchoring channel (accounting for 1/3 of impact on inflation), it seems that some of the effect works through Consumption
- When comparing Figure 2 and 3, am I looking at the same experiment? Or is just a scale problem?
- Ideally within same figure would be nice to see no-policy, capital-relief only, reanchoring only.

- I am not sure about the added value of the event study for various reasons:
 - The model does not have any prediction about the reaction of securities with different durations to APP
 - Its design does not allow to distinguish between scarcity and duration effects: if most purchases are expected to take place in longer-maturity bonds you would observe same cross-sectional reaction (see Cahill, D'Amico, Li, and Sears, 2013).
- In terms of capital-relief channel maybe it would be more useful to look at evidence on bank lending similar to Acharya, Eisert, Eufinger, and Hirsch (2015).