The Signalling Channel of Negative Interest Rates by de Groot and Haas

Discussion by
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UNCLOGGING THE CREDIT CHANNEL

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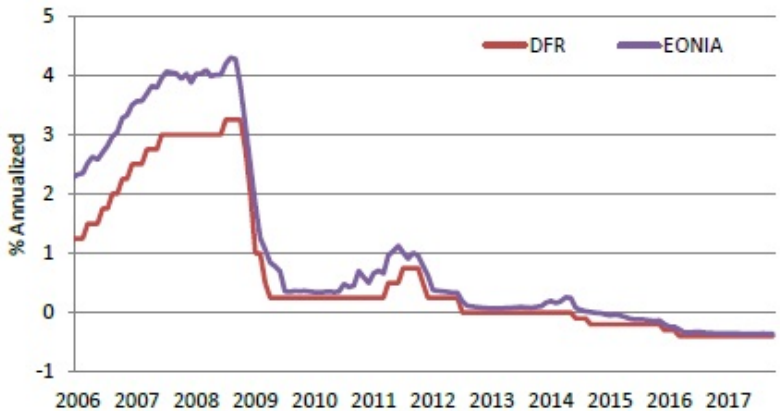
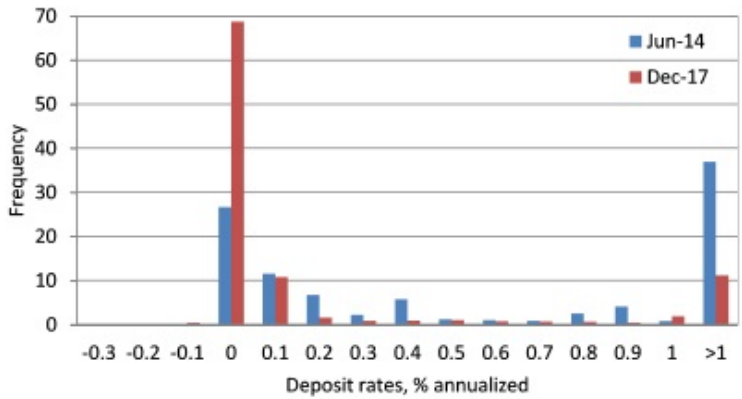
Background

- The ECB (and other central banks) decided to put the deposit rate into negative territory
- Negative interest rates passed through market rates: EONIA, government bonds, etc..
- but there is evidence of a ZLB on deposits.

(a) DFR & EONIA



(b) Household deposit rates



The Questions

- What are the effects of negative interest rates on the economy?
- Is the monetary policy transmission channel different?
- Under what conditions should negative interest rates be in the toolkit of a central bank

The recent and growing literature focused on the trade off:

- Low profitability for private banks decreases their ability to lend
- The *bank-lending channel* and the *risk-tacking channel* increase lending

This paper focuses on a novel expansionary channel of negative interest rates: the **signalling channel**

The Signalling Channel

- A cut of the policy rate into negative territory gives the signal that the deposit rates will remain at zero for longer
- Demand for goods increases today due to the standard inter-temporal substitution effect
- Positive effects from expectations of lower interest rates in the future (similar to forward guidance)

The Paper

Three contributions:

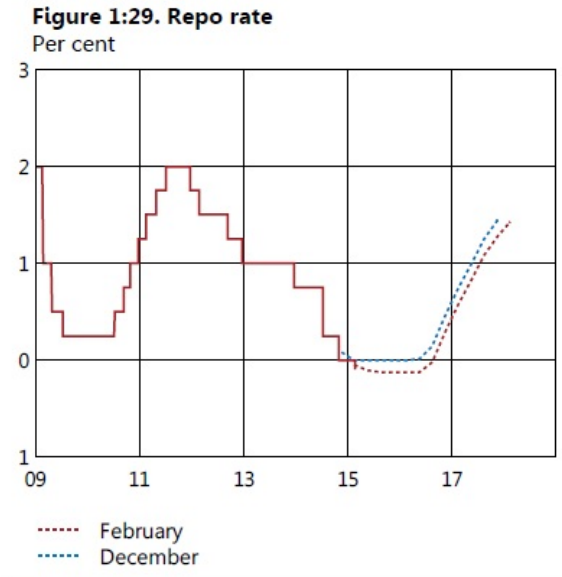
1) Highlights the presence of a signalling channel of NIR

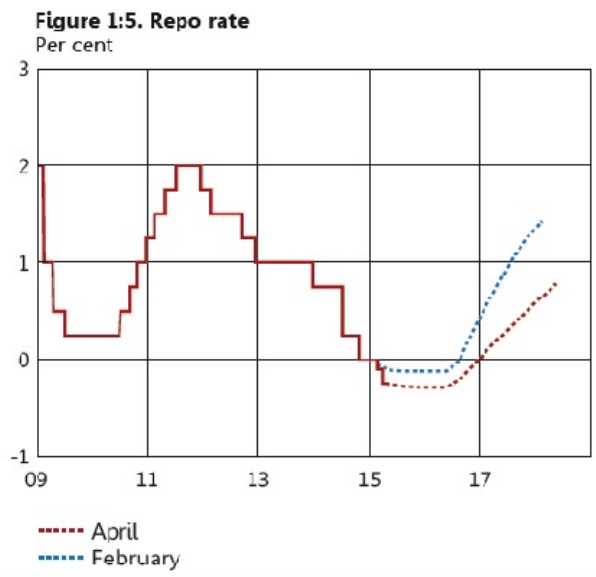
2) Quantifies its positive effects and shows these are grater than the costs:
   - NK model with financial frictions
   - Private banks hold interest bearing reserves
   - NIR reduces private banks net worth $=>$ negative effects through financial accelerator mechanism

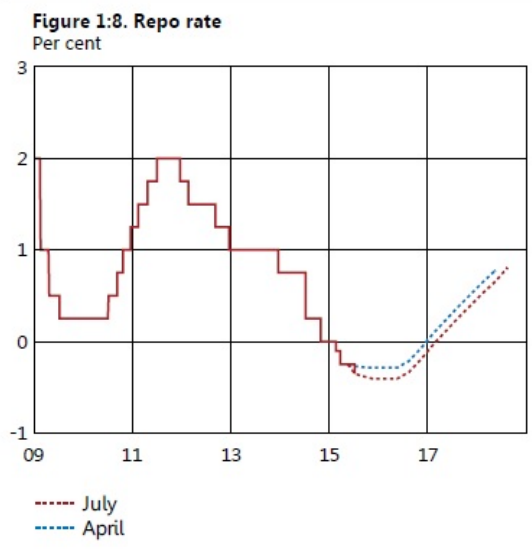
3) Monetary policy implications:
   - If the CB can commit, then forward guidance: signalling channel without the costs of NIR
   - If the CB is not able to commit: NIR can be used as a "commitment device" (optimal MP)

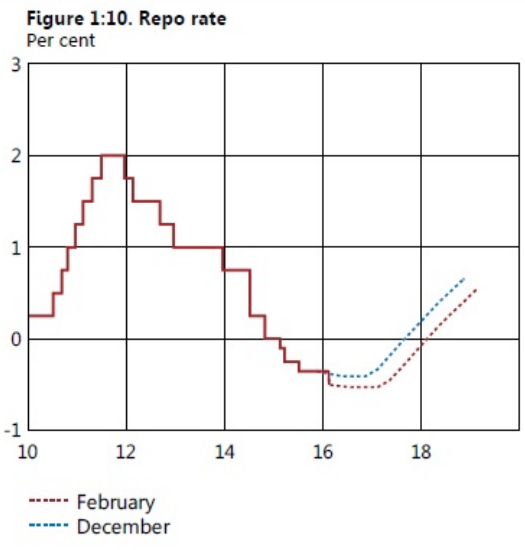
1. Evidence of the Signalling Channel

The Swedish experience:



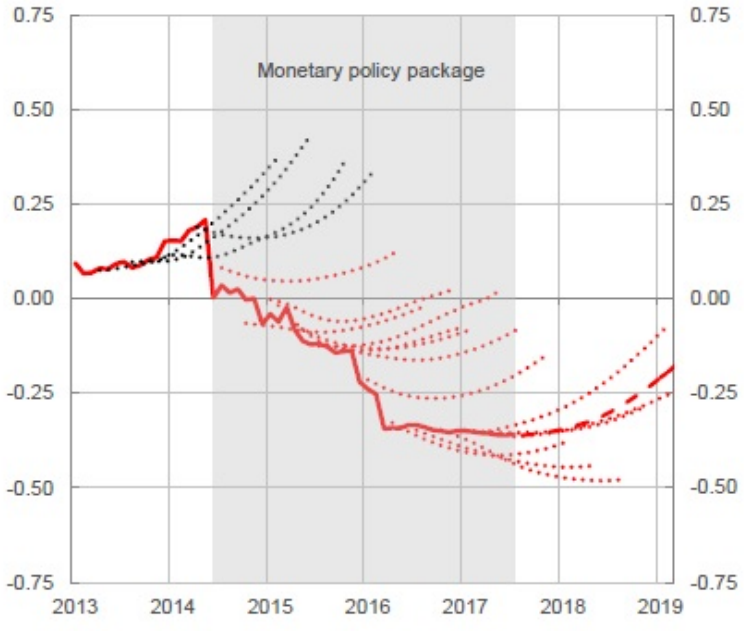


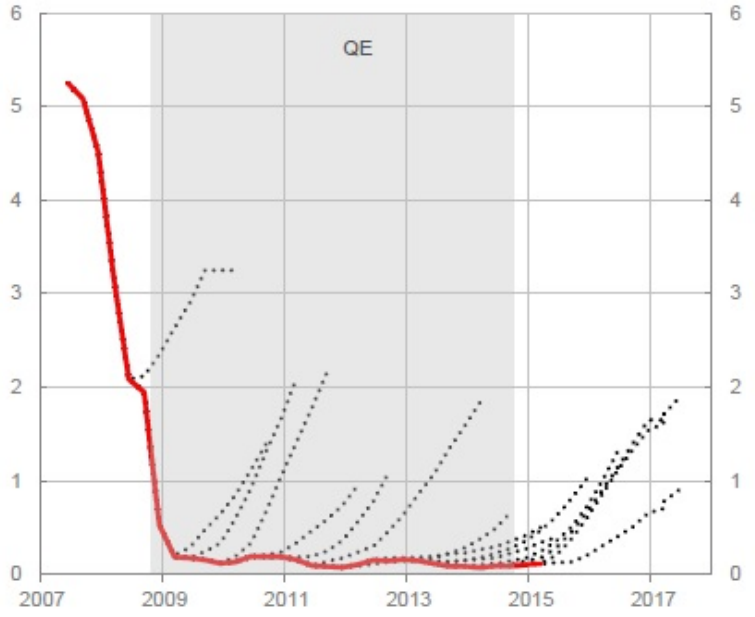




1. Evidence of the Signalling Channel

Forward curves in EA and US, from Eisenschmidt and Smets (2018):





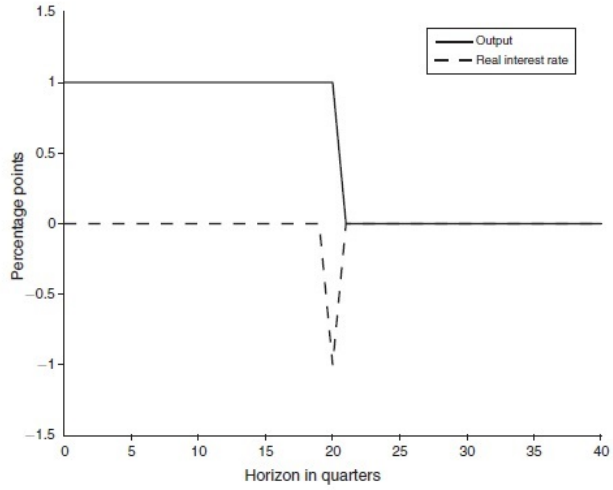
- Suggestive evidence in favour of the signalling channel
- I think some empirical evidence would help convincing the reader: survey on households?

2. The Effects of the Signalling Channel

DSGE models tend to overestimate the effects of expected future deviations of interest rates: FG puzzle (e.g. McKay et al., 2016)

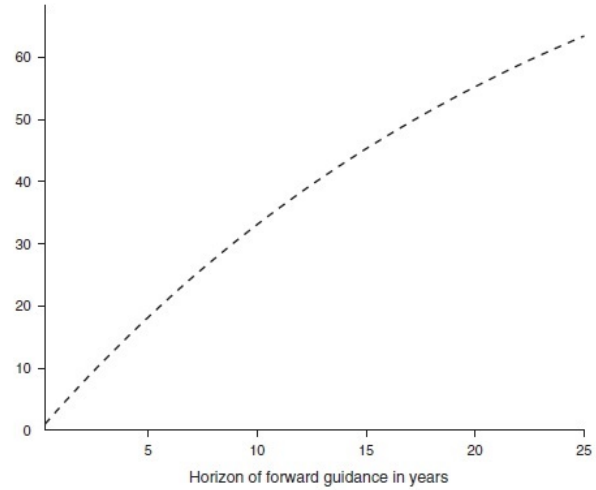
$$x_t = E_t x_{t+1} - \sigma r_t$$

$$x_t = -\sum_{j=0}^{\infty} E_t r_{t+j}$$



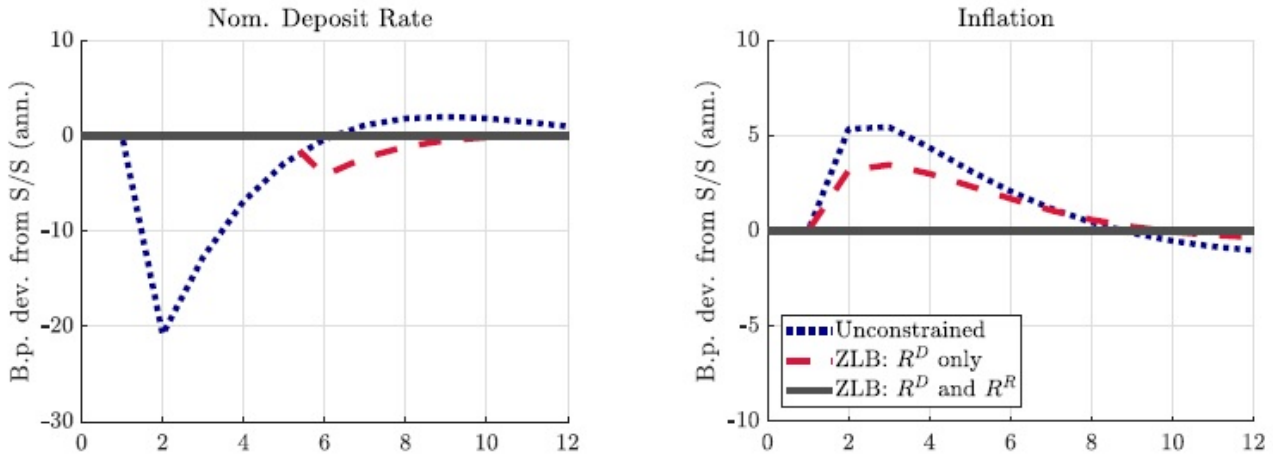
$$\pi_t = \beta E_t \pi_{t+1} + \kappa x_t$$

$$\pi_t = \kappa \sum_{j=0}^{\infty} \beta^j E_t x_{t+j}$$



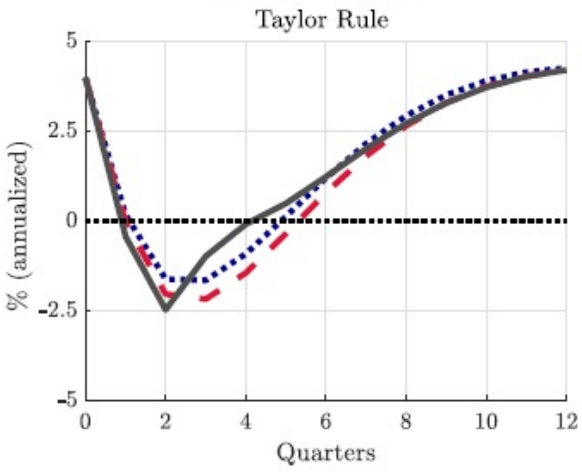
2. The Effects of the Signalling Channel

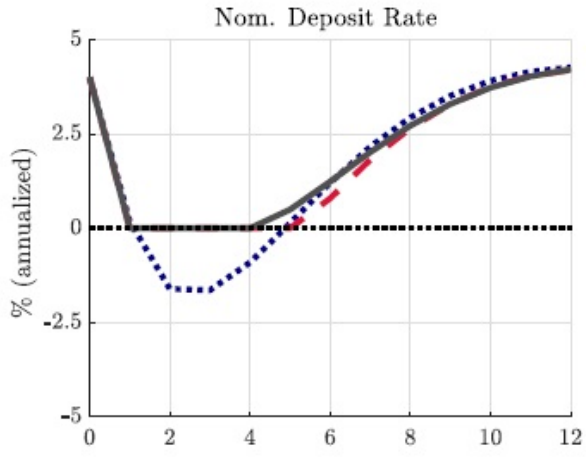
Is there a Signalling Channel Puzzle?



- Include extra discounting in Euler equation
- Several ways proposed in the literature (see Christoffel, de Groot, Mazelis and Montes-Galdon, 2018)

3. Quantifying the Effects





- The Taylor rue implies a faster increase in the fully constrained case (black line):

$$r_{T,t} = \left(r \left(\frac{\pi_t}{\pi} \right)^{\phi}_{\pi} \left(\frac{x_t}{x} \right)^{\phi}_{x} \right)^{1-\rho} r^{\rho}_{h,t-1} exp(\sigma_m \epsilon_{m,1})$$

- Important hypothesis for the quantification: more justification

Conclusions

Very interesting paper:

- Highlights the presence of a signalling channel of NIR
- Quantifies its positive effects
- New insights for monetary policy

My comments:

- Some empirical evidence would support the arguments
- Quantifying the effects through a DSGE model has some problematic aspects