

Discussion of “The Limits of Forward Guidance” by Jeffrey R. Campbell, Filippo Ferroni, Jonas D. M. Fisher and Leonardo Melosi

Christina Patterson

Bank of Finland and CEPR Conference

October 12, 2019

The Forward Guidance Puzzle

- *The puzzle: the effects of a commitment to maintain an interest rate peg for an additional period increases without bound with the horizon of the peg*

The Forward Guidance Puzzle

- *The puzzle: the effects of a commitment to maintain an interest rate peg for an additional period increases without bound with the horizon of the peg*
- 3 broad categories of solutions
 - ① *Deviations from representative agent*
 - Del Negro, Giannoni and Patterson (2015), McKay, Nakamura and Steinsson (2015), Werning (2015), Bilbiie (2017), Hagerdon et al (2019)

The Forward Guidance Puzzle

- *The puzzle: the effects of a commitment to maintain an interest rate peg for an additional period increases without bound with the horizon of the peg*
- 3 broad categories of solutions
 - 1 *Deviations from representative agent*
 - Del Negro, Giannoni and Patterson (2015), McKay, Nakamura and Steinsson (2015), Werning (2015), Bilbiie (2017), Hagerdon et al (2019)
 - 2 *Deviations from rational expectations*
 - Gabaix (2016), Garcia-Schmidt, Woodford (2015), Angeletos and Lian (2018)

The Forward Guidance Puzzle

- *The puzzle: the effects of a commitment to maintain an interest rate peg for an additional period increases without bound with the horizon of the peg*
- 3 broad categories of solutions
 - 1 *Deviations from representative agent*
 - Del Negro, Giannoni and Patterson (2015), McKay, Nakamura and Steinsson (2015), Werning (2015), Bilbiie (2017), Hagerdon et al (2019)
 - 2 *Deviations from rational expectations*
 - Gabaix (2016), Garcia-Schmidt, Woodford (2015), Angeletos and Lian (2018)
 - 3 *Structural factors*
 - *Multiple interest rates:* Campbell et al (2017), Piazzesi, Rogers and Schnieder (2019)
 - *Limited communication:* Woodford (2003), This paper

Summary of this paper

- It's a simple and intuitive point – work is in quantification

Summary of this paper

- It's a simple and intuitive point – work is in quantification
- Framework: add imperfect communication to a medium-scale NK model.

Summary of this paper

- It's a simple and intuitive point – work is in quantification
- Framework: add imperfect communication to a medium-scale NK model.
- This builds closely on Campbell et al (2017), who estimate NK model using information on interest rate expectations

Summary of this paper

- It's a simple and intuitive point – work is in quantification
- Framework: add imperfect communication to a medium-scale NK model.
- This builds closely on Campbell et al (2017), who estimate NK model using information on interest rate expectations
- In their model, the Fed's ability to affect expectations far in the future is limited

Summary of this paper

- It's a simple and intuitive point – work is in quantification
- Framework: add imperfect communication to a medium-scale NK model.
- This builds closely on Campbell et al (2017), who estimate NK model using information on interest rate expectations
- In their model, the Fed's ability to affect expectations far in the future is limited
- They show that imperfect communication delays and amplifies the response to monetary shocks (Baker, Bloom and Davis (2016))

Comment 1: Identification of Limited Communication

- **Identification of noise:** degree to which households anticipate the future deviation from the monetary rule
 - The data on interest rate expectations gives you the degree to which agents anticipate the change in the interest rate

$$R_t^{h,obs} = R^* + E_t[\hat{R}_{t+h}]$$

Comment 1: Identification of Limited Communication

- **Identification of noise:** degree to which households anticipate the future deviation from the monetary rule
 - The data on interest rate expectations gives you the degree to which agents anticipate the change in the interest rate

$$R_t^{h,obs} = R^* + E_t[\hat{R}_{t+h}]$$

- But news (ϵ) is about θ not R – model estimation

Comment 1: Identification of Limited Communication

- **Identification of noise:** degree to which households anticipate the future deviation from the monetary rule
 - The data on interest rate expectations gives you the degree to which agents anticipate the change in the interest rate

$$R_t^{h,obs} = R^* + E_t[\hat{R}_{t+h}]$$

- But news (ϵ) is about θ not R – model estimation
- The structure of the news shocks and model of communication identify the noise

Comment 1: Identification of Limited Communication

- **Identification of noise:** degree to which households anticipate the future deviation from the monetary rule
 - The data on interest rate expectations gives you the degree to which agents anticipate the change in the interest rate

$$R_t^{h,obs} = R^* + E_t[\hat{R}_{t+h}]$$

- But news (ϵ) is about θ not R – model estimation
- The structure of the news shocks and model of communication identify the noise
- This is not identified off of particular forward guidance incidents
 - Question 1: What about all the periods in which there is no signal?

Comment 1: Identification of Limited Communication

- **Identification of noise:** degree to which households anticipate the future deviation from the monetary rule
 - The data on interest rate expectations gives you the degree to which agents anticipate the change in the interest rate

$$R_t^{h,obs} = R^* + E_t[\hat{R}_{t+h}]$$

- But news (ϵ) is about θ not R – model estimation
- The structure of the news shocks and model of communication identify the noise
- This is not identified off of particular forward guidance incidents
 - Question 1: What about all the periods in which there is no signal?
 - Question 2: How does this relate to estimation based on particular episodes?

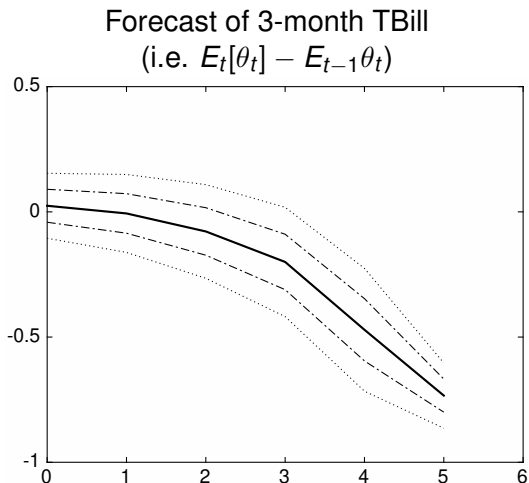
Comment 2: Reduced-Form Estimates of Expectations and Forward Guidance

- Data: Blue Chip Professional Forecasters from June 2008-February 2015 of variable y at horizon h

$$\Delta f(y, h)_{i,t} = \gamma_0 + \gamma_1'(\text{Macro news and Asset Price Changes}) + \beta(\text{FOMC Dummy}) + \epsilon_{i,t}$$

- Identification strategy:
 - 1 Control for all economic news released between forecasts
 - 2 FOMC Dummy: residual variation attributable to the FOMC announcement

Comment 2: Case study of August 2011 Announcement



Source: Del Negro, Giannoni and Patterson (2015), coefficient on dummy for August 2011. Data from 6/2008-2/2015.

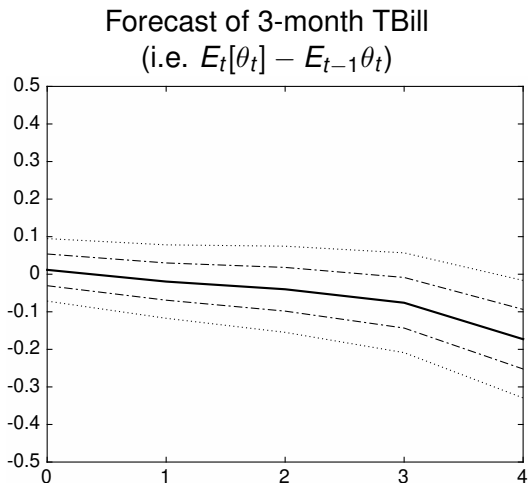
Comment 2: Controlling for news about fundamentals

- Data: Blue Chip Professional Forecasters from June 2008-February 2015 of variable y at horizon h

$$\Delta f(y, h)_{i,t} = \gamma_0 + \gamma_1'(\text{Macro news and Asset Price Changes}) + \beta(\text{FOMC description dummies}) + \epsilon_{i,t}$$

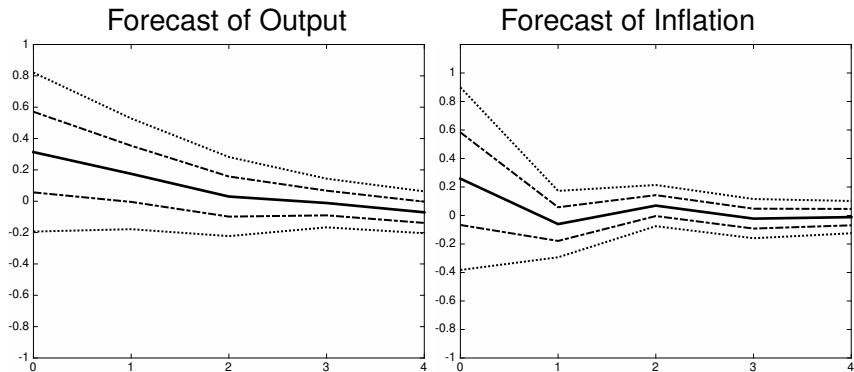
- Identification strategy:
 - 1 Control for all economic news released between forecasts
 - 2 **Dummies for tone of language, QE announcements, etc. → residual variation in the forecasts attributable to calendar-based forward guidance**

Comment 2: Calendar-based forward guidance affects interest rate expectations



Source: Del Negro, Giannoni and Patterson (2015), coefficient on calendar-based forward guidance. 6/2008-2/2015.

Comment 2: Calendar-based forward guidance affects GDP and inflation



Source: Del Negro, Giannoni and Patterson (2015), coefficient on calendar-based forward guidance. 6/2008-2/2015.

Comment 2: Would this model produce similar estimates?

- Do these interest rate expectations look like the model's news shocks for the calendar-based forward guidance episodes?
 - I suspect the model will produce similar results
- What happens to expectations if they implement an experiment like the extension of the peg in 2012Q3?

Comment 3: What does this mean for the puzzle?

- Does this solve the puzzle?
 - Can this be distinguished from other mechanisms affecting expectations? (e.g. rational inattention)
 - This mechanism implies that if the Fed could communicate perfectly, forward guidance would be very effective
 - Other solutions involving discounting in the Euler equation imply otherwise

Concluding Remarks

- Ambitious paper!
- It's an intuitive and plausible mechanism that they have gotten traction on
- Very policy relevant – important implications for central bank communications