Discussion of "Forward Guidance, Quantitative Easing, or Both?"

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Introduction

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- Need cost-benefit analysis
  - ▸ This paper addresses preliminary question of FG and QE effectiveness
    - ★ FG as effective as in existing literature
    - ★ QE much more effective than in existing literature

Outline of Discussion

1. Big picture: An unsurprising answer

2. Fiscal policy: Treasury actions

3. FG and QE: A common puzzle
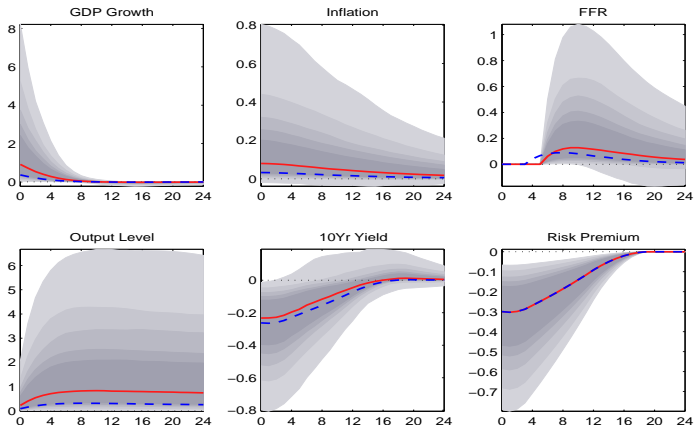
1. Big Picture

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- Key differences between this paper and CCF
    1. No segmentation but relative quantities matter for both short and long rates
    2. Specification of fiscal block
    3. Short and long-term debt both observables

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- Hard to deviate from this conclusion in standard NK DSGEs with role for QE

- Would be necessary (and interesting) to add other considerations
  - ▸ Risks to financial stability
  - ▸ Distributional aspects

- In this sense, this paper is really about large effects of QE

2. Fiscal Policy

Key Ingredients

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- New specification of Treasury actions to pin down composition of debt

Government Budget Constraint and Tax Rule

- Government budget constraint

$$b_t^S + p_{Lt}b_t^L = \frac{r_{t-1}^S}{\pi_t}b_{t-1}^S + \frac{r_{t-1}^L}{\pi_t}p_{Lt}b_{t-1}^L + G_t - T_t$$

- Tax rule

$$T_t = \Theta \left(\frac{b_{t-1}^S + p_{Lt-1}b_{t-1}^L}{b^S + p^L b^L} \right)^\theta \varepsilon_t^{TD}$$

- Government spending

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- Questions:

  1. Does tax rule matter only for determinacy?

  2. Does endogenous component of government spending play any role?

Composition of Debt

- Benchmark rule to pin down composition of debt (long vs. short-term)

$$\frac{b_t^L}{b_t^S} = \tilde{\zeta} \varepsilon_t^{MAT} (\varepsilon_t^{TD})^{\nu}$$

  ▸ Constant maturity composition (equal to $\tilde{\zeta}$) absent shocks

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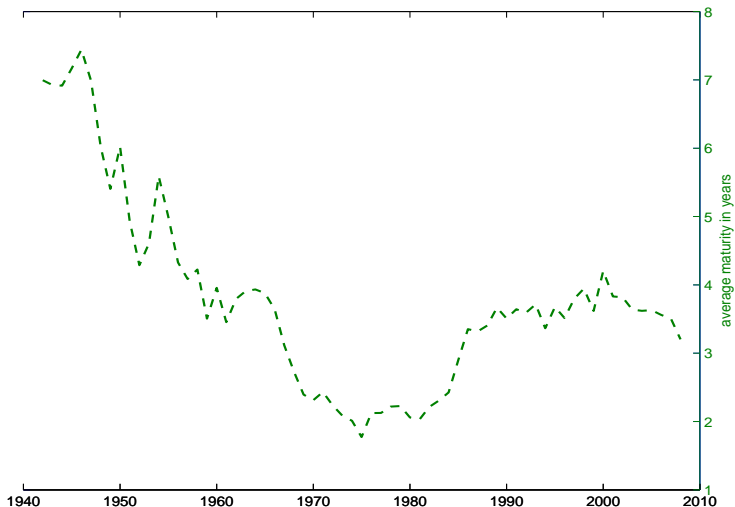$$\frac{b_t^L}{b_t^S} = \tilde{\zeta}\varepsilon_t^{MAT}(\varepsilon_t^{TD})^\nu$$

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- How does maturity composition look in practice?
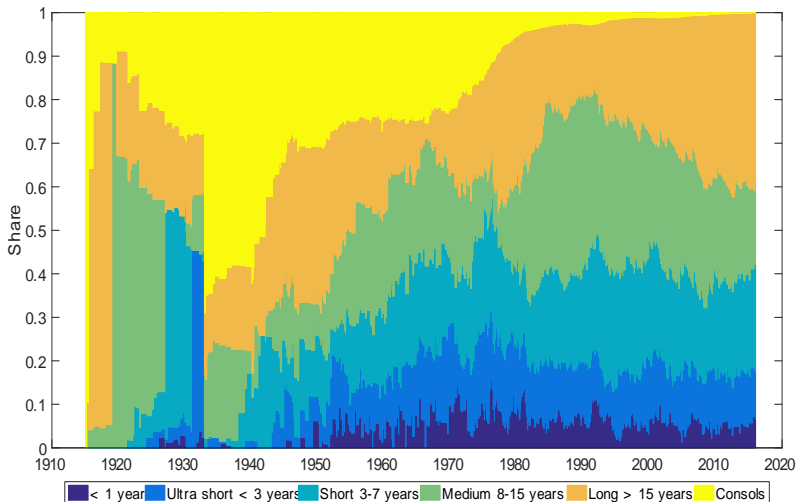 ▸ Evidence for US and UK

Evidence on Composition of Debt

- US average maturity dynamics (Hall and Sargent, 2011)

Evidence on Composition of Debt

- UK full maturity dynamics (Ellison and Scott, 2016)

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  - ▸ Estimated persistence of AR(1) process from CCF

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5%	Median	95%	5%	Median	95%
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- Is key difference with CCF observing both short and long-term debt?

3. Puzzles

FG and QE Puzzles

- FG puzzle: Implausibly powerful in NK DSGEs (Del Negro et al., 2012)
  - Several ways of tempering response of consumption to interest rates
    - ★ Bring "perpetual youth" in NK DSGEs (Del Negro et al., 2012)
    - ★ Heterogeneous agents and borrowing constraints (McKay et al., 2015)
    - ★ Rich "hand-to-mouth" (Kaplan et al., 2015)
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  - ▸ This paper "solves" Bernanke's puzzle
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- Need to reassess effects of QE in framework that addresses FG puzzle

Conclusions

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- In NK DSGEs, uncontroversial that FG and QE should be used together

- Fiscal policy modeling crucial, especially interaction with Treasury actions

- Revisit effects of QE in a framework to address challenges of FG puzzle