Discussion of: "The Dire Effects of the Lack of Monetary and Fiscal Coordination" by Francesco Bianchi and Leonardo Melosi

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Conference on: Are Rules Made to be Broken?
Boston Federal Reserve Bank, Oct. 13-14, 2017

Leeper Policy Rule Matrix

Eric Leeper catagorized rules for monetary and fiscal policy

active/passive Taylor rule/Ricardian f.p. anchor: monetary policy	active/active Taylor rule/non-Ricardian f.p. explosive
passive/passive *i* rate peg/Ricardian f.p indeterminacy	passive/active *i* rate peg/non-Ricardian f.p. anchor: fiscal policy

I'm not a fan of Eric's terminology.

The diagonal boxes $\rightarrow$ unique stable solutions;
off diagonal boxes do not.

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- Taylor rule: provides an initial condition for π.
- Ricardian f.p.: surplus policy automatically balances the government PVBC.
- Most popular case for analysis of monetary and fiscal policy.

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- This is the standard FTPL case.
- Interest rate policy is discretionary:
  - does not have to be pegged (as in the zero lower bound).
  - but *does not* automatically respond to π in way that provides a nominal anchor (or an initial π).
- Non-Ricardian f.p.: surplus policy *does not* automatically balance the government PVBC.

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- Authors focus on this explosive case.
- First discussed by Loyo, "Tight Money Paradox on the Loose: a fiscalist hyperinflation," Harvard working paper, 1999.

Bianchi & Melosi, 1

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- How could this case arise?
  - Congress legislates the Taylor Rule; Congress remains dysfunctional.
  - The Fed itself "normalizes" interest rate policy; Congress remains dysfunctional.

Bianchi & Melosi, 1

Example: Consider first a flexible price endowment economy.

$$\begin{aligned} \beta^{-1} &= \text{real interest rate} \\ s_t &= \delta b_{t-1} \quad \text{where } \delta < \beta^{-1} \\ R_t &= \theta \pi_t \quad \text{where } \theta > \beta^{-1} \\ b_t + s_t &= \beta^{-1} b_{t-1} + b_* R_t - b_* \beta^{-1} \pi_t \end{aligned}$$

- $R \uparrow$ increases payments, and $\pi \uparrow$ lowers real value of debt

$$b_t = \left(\beta^{-1} - \delta\right) b_{t-1} + b_* \left(\theta - \beta^{-1}\right) \pi_t$$

- story is: discount rate shock $\rightarrow \pi \uparrow$, would inflate away debt, but Taylor rule $\rightarrow$ real rate $\uparrow$, $\rightarrow b \uparrow \rightarrow \pi \uparrow$ .....

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Lessons for Congress

- If Congress imposes a Taylor Rule on the Fed, and if Congress remains dysfunctional, then we may get this explosive result.
- If Congress imposes a Taylor Rule on the Fed, it must impose a Ricardian fiscal policy rule on itself.
  - the rule can be quite loose (see Canzoneri et al (AER, 2001))
  - but it must be credible
  - a tradeoff here?
- If Congress remains dysfunctional, the Fed should retain the discretion delay implementation of the Taylor Rule until Congress disciplines itself.

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Restoring Stability: Bianchi & Melosi, 2

Stable equilibria can occur if public expects policy makers to revert to a diagonal box.

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- Authors outline a much richer model.
- Provide a sophisticated analysis with (possibly) stochastic policy switching.

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- Outcomes are not good:
  - active/active → active/passive: "The economy experiences a discrete and persistent drop in inflation during the low-demand period, and a large stock of debt, as well as a persistently higher-than-target inflation after the recession."
  - active/active → passive/active: "... a vicious spiral of low output, high inflation, and high debt will arise during the conflict period, which exacerbates the economic crisis and raises inflation during the recession."

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- Outcomes are not good.
- A strong case for monetary and fiscal policy rules to avoid the active/active case.

Restoring Stability: other papers

Most other papers discuss passive/passive → active/passive:

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- examples include: Erceg and Linde (2014), Del Negro et al (2015), Carlstrom et al (2015), McKay et al (2016), Gabaix (2016), Farhi and Werning (2016) and Canzoneri et al (2017).

- A better description of today's situation?
- A temporary interest rate peg, resolving itself back to the normal case. No need for a coordinated policy shift.

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- No initial condition for π
  - have to impose terminal condition to anchor π expectations.
  - usually the promise of a Taylor Rule at some later date.
  - a unique equilibrium results.

- A growing literature asks: Do these models give credible policy advice?
  - forward monetary guidance puzzle
  - forward fiscal guidance puzzle

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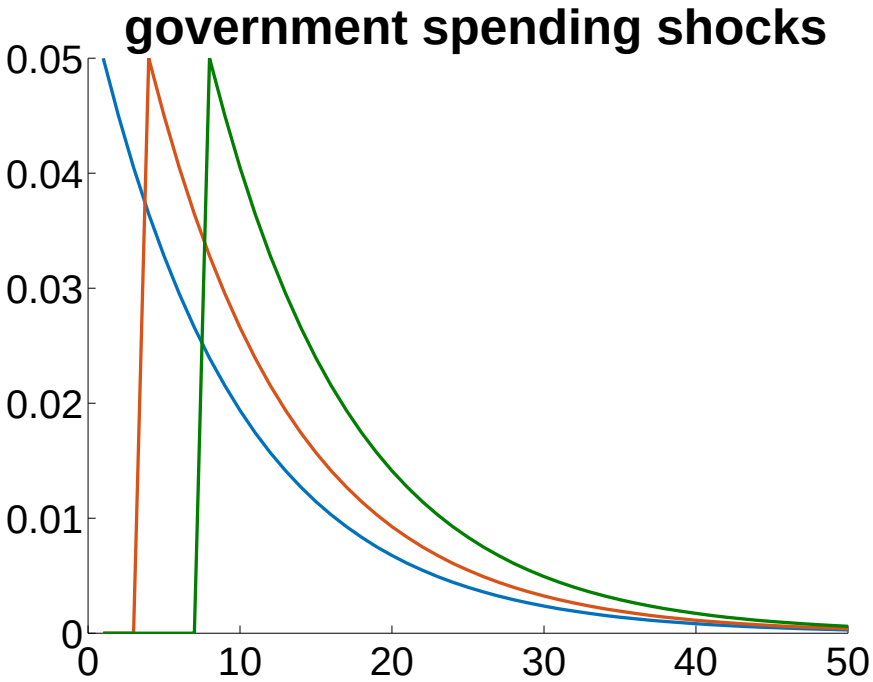
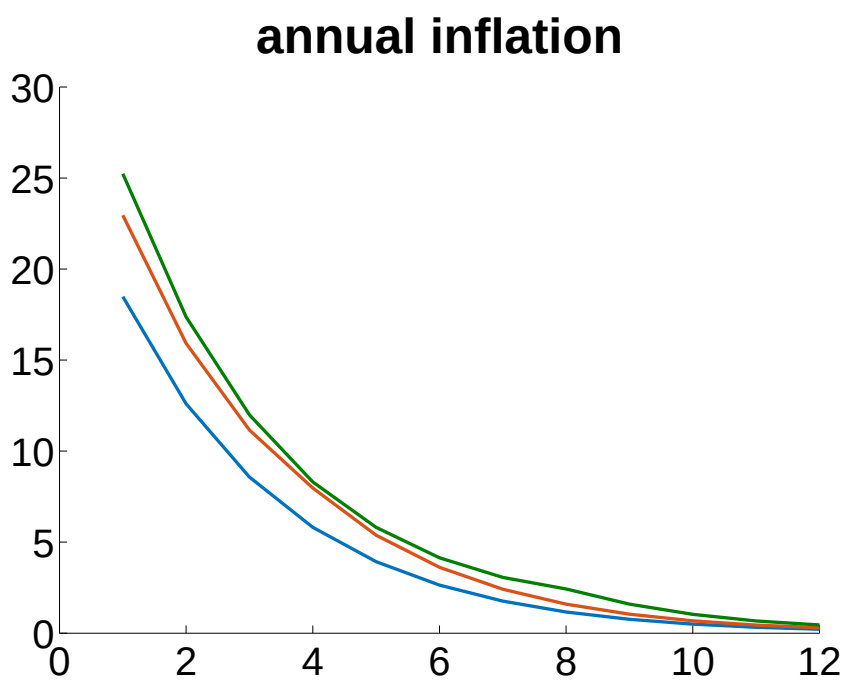
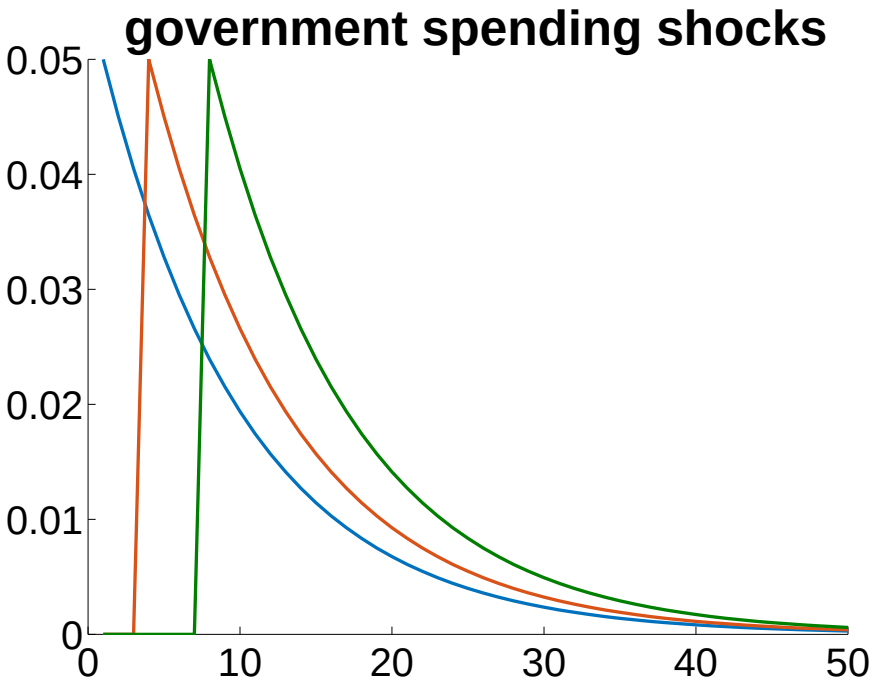
Forward Fiscal Guidance Puzzle

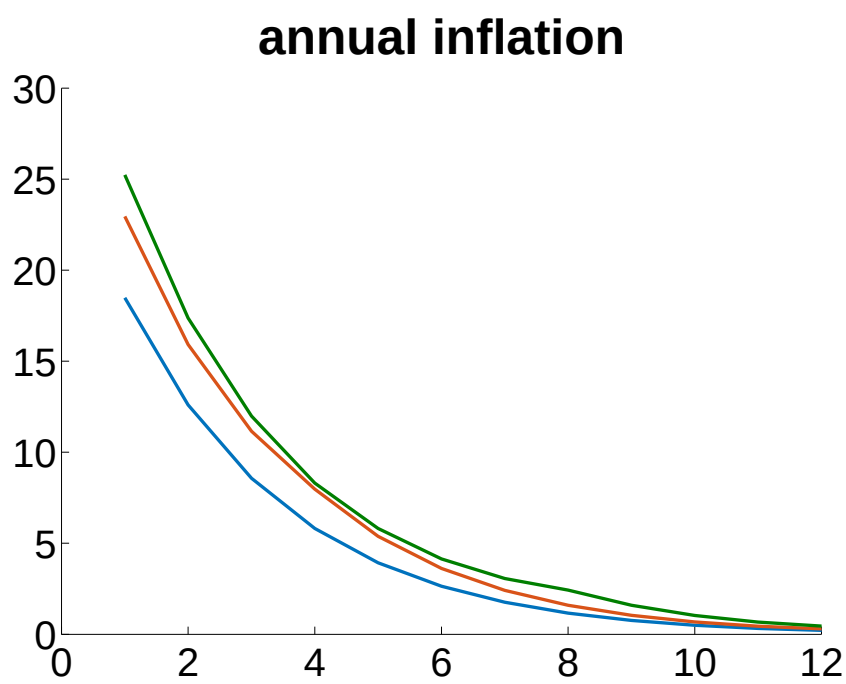




- The *forward fiscal guidance puzzle* (similar to the forward monetary guidance puzzle).
- Date dependent normalization: interest rate pegged for 12 quarters, then central bank switchs back to a Taylor Rule.
- G shocks that are 1% of GDP, autoregressive parameter = .9, present and expected future shocks

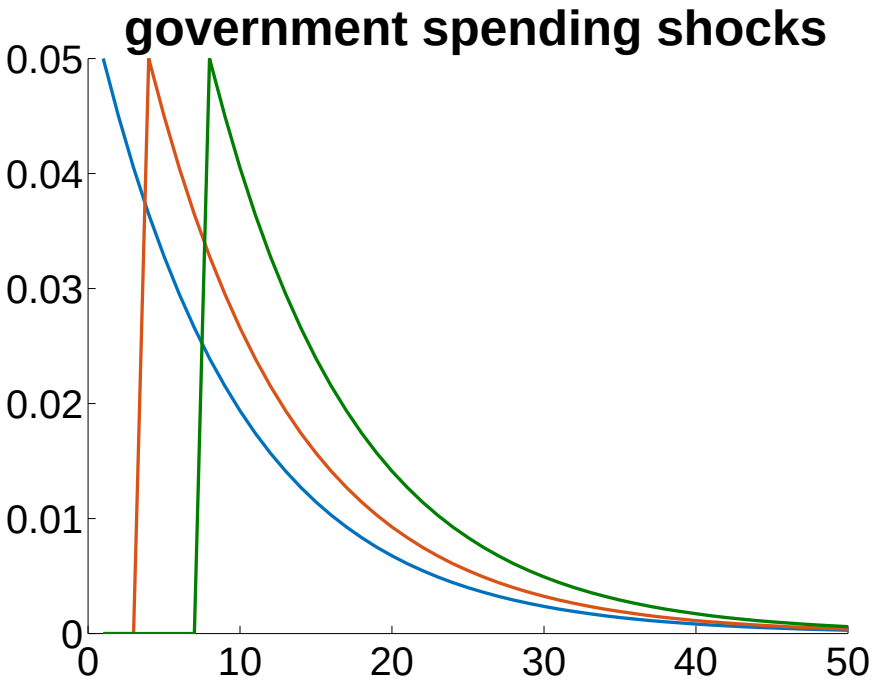
Forward Fiscal Guidance Puzzle

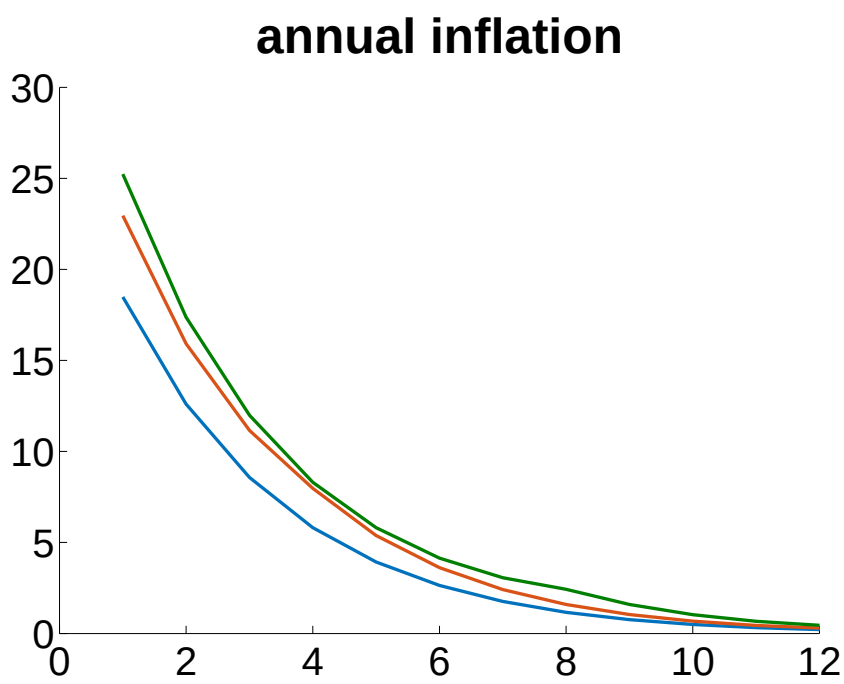




- The *forward fiscal guidance puzzle* (similar to the forward monetary guidance puzzle).
- Puzzle: Size of effect on inflation & effect grows as shock is pushed into future.
- This model does not give a credible analysis of expected future fiscal shocks.

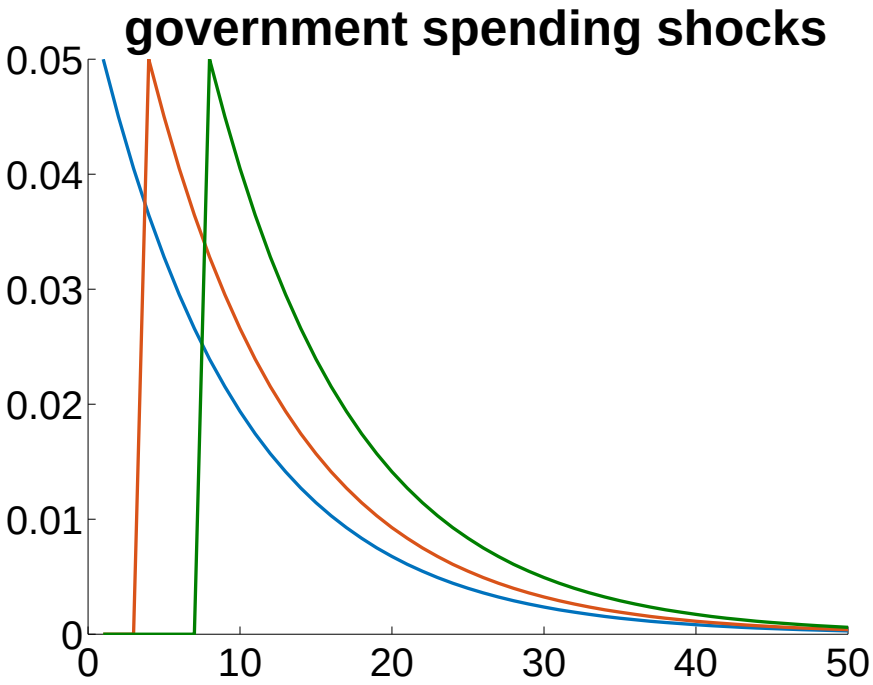
Forward Fiscal Guidance Puzzle

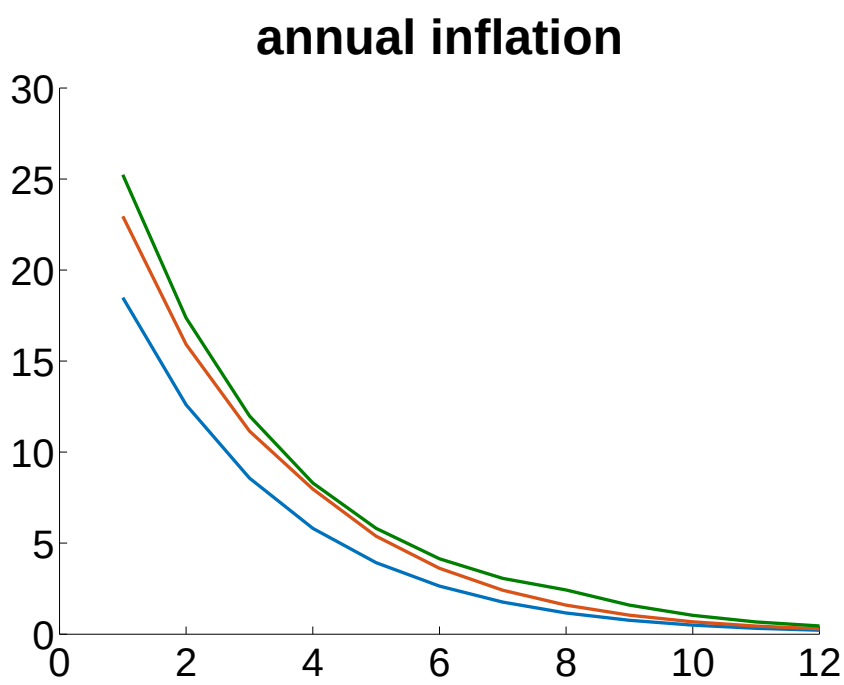




- Puzzle: Size of effect on inflation & effects grow as shock is pushed into future.
- In Canzoneri et al (2017) we use Blue Chip Forecasts to argue effects π expectations should be quite small.

Forward Fiscal Guidance Puzzle

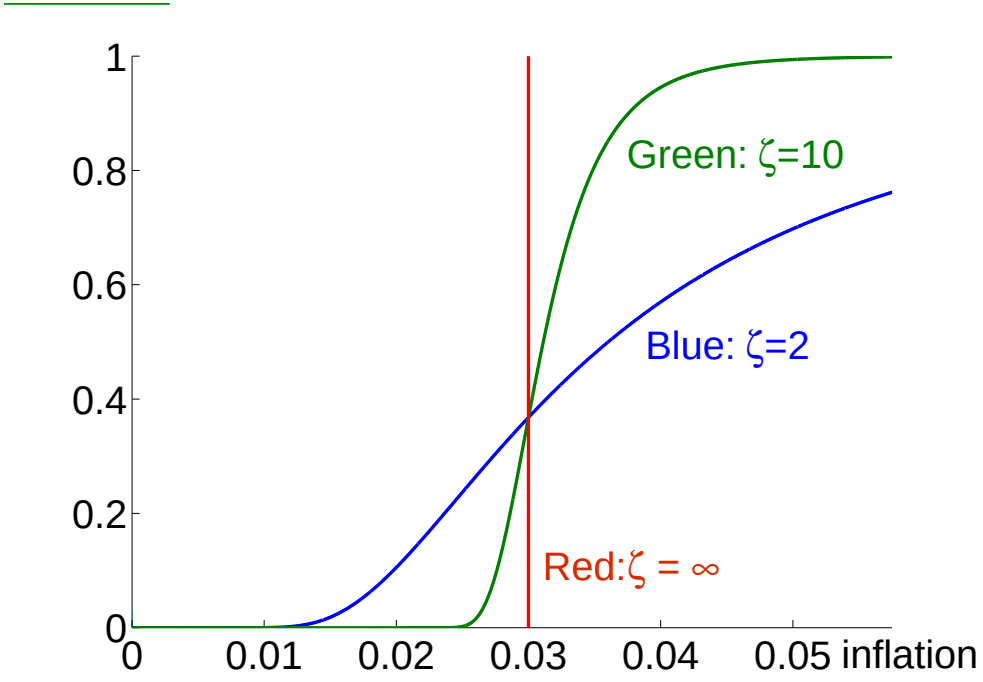


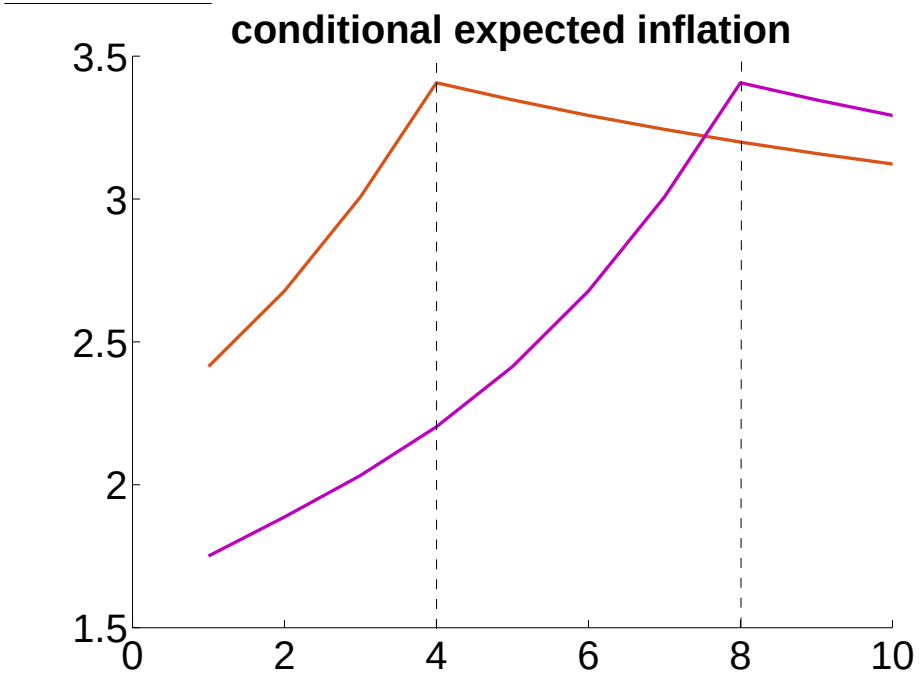


- Puzzle has become kind of a litmus test for policy switching models.
- A cottage industry is now pumping out resolutions.
- Would the Bianchi - Melosi model pass this test? Would it need to be modified.

Canzoneri et al (2017) Resolution

- Canzoneri et al: "The Forward Fiscal Guidance Puzzle and a Resolution," October, 2017.
- State Dependent Normalization. A resolution to the puzzle.
- $Pr(\text{return to Taylor Rule}|\pi_t) = \exp\left[-\left(\pi_t/.03\right)^{-\zeta}\right]; \zeta = 2.$





Conclusions from this Literature for Legislated Policy Rules

- Congressional Legislation of a Taylor Rule:
  - Don't legislate a Taylor Rule without legislating a Ricardian Regime.
  - If can't legislate a Ricardian Regime, leave the Fed discretion to deviate from Taylor Rule.
- When should the Taylor Rule start:
  - Waiting for r* to rise, or a protracted inflation target debate, or a credible Ricardian fiscal policy.
  - Must anchor inflation expectations with promise of a future Taylor Rule.
    - Is forward guidance sufficient?
    - Legislate a lag in implementing the Taylor Rule.
  - Fed should retain discretion in the implementation phase.

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