

Discussion of "Fiscal Foundations of Inflation: Imperfect Knowledge" by S. Eusepi and B. Preston

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The Model

- ▶ Small scale New Keynesian model with an extended set of fiscal instruments:
- ▶ distortionary (labor income) and lump sum taxation
- ▶ one period nominal bonds and nominal bonds that pay a declining amount over time - the former is in zero net supply
- ▶ 'standard' assumption on fiscal and monetary policy: fiscal policy is passive and monetary policy is active

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- ▶ 'standard' assumption on fiscal and monetary policy: fiscal policy is passive and monetary policy is active
- ▶ Does it matter which of the bonds is in zero net supply?

Learning

- ▶ Under RE, the log-linearized solution has the following form:
$$Z_t = \Omega_0^{RE} + \Omega_Z^{RE} Z_{t-1} + \Omega_S^{RE} S_{t-1} + e_t$$
- ▶ Stefano and Bruce instead assume that the private agents in the economy have to learn about the structure of the economy - the agents act as econometricians
- ▶ agents are uncertain about the steady state of the economy only
- ▶ when making decisions, agents believe that the economy evolves according to $Z_t = \Omega_0^t + \Omega_Z^{RE} Z_{t-1} + \Omega_S^{RE} S_{t-1} + e_t$
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- ▶ Ω_0^t is estimated each period according to a constant gain algorithm - agents assume that the intercepts drift over time
- ▶ How did agents get to know Ω_Z^{RE} and Ω_S^{RE} ? Is learning about these coefficients faster?
- ▶ Having the agents learn about the feedback coefficients could have a big impact on the short-run dynamics and thus on some of the exercises in this paper

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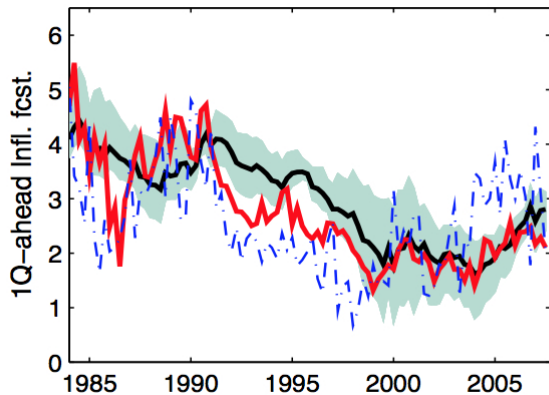
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- ▶ calibrates the model and asks under what condition on fiscal and monetary policy the economy ultimately converges to a neighborhood of the RE equilibrium ('E-stability')
- ▶ result: higher debt to GDP ratios in steady state require more aggressive monetary policy to achieve convergence (everything else equal)
- ▶ for a given debt to GDP ratio in steady state, there is a non-monotonic relationship between the average maturity of debt and the response coefficients in the monetary policy rule required to achieve E-stability

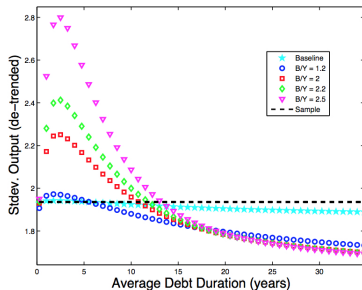
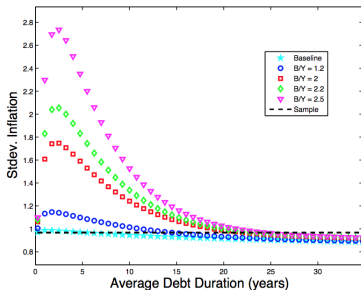
What this paper does:

- ▶ estimates the exogenous shock processes using US data from 1984:Q1 to 2007:Q2 to analyze the effect of learning and fiscal policy on the Great Moderation
- ▶ ML estimation
- ▶ shocks follow a VAR process - why not univariate AR processes instead?
- ▶ observables are demeaned - strictly speaking, this renders invalid the prediction error decomposition used to calculate the likelihood via the Kalman Filter
- ▶ it would be nice to see the path of estimated coefficients - how far are the agents' beliefs from RE?

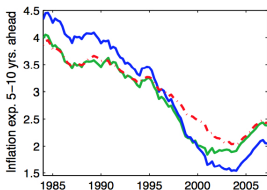
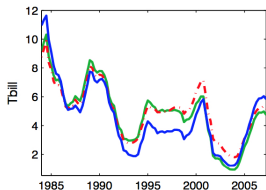
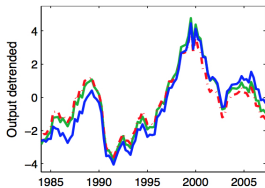
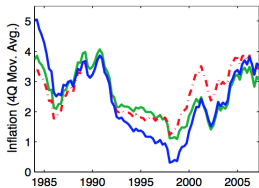
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Impact of Different Fiscal Policies



What to take away from this paper

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- ▶ **Very interesting read - learnt a lot from reading this paper**
- ▶ policies that work well under RE can have very different consequences under learning
- ▶ big increases in volatilities would require substantial increase in debt to gdp ratios
- ▶ longer debt maturities could reduce volatility