

Advanced Topics in Macroeconomics

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Models

- Policy analysis involves exploration of counterfactuals:
 - What happens if we adopt a fixed exchange rate policy?
 - What happens if policy responds to interest rate spreads, the stock market, etc?
 - What if we impose countercyclical capital requirements on banks?
- How to answer questions like these?
 - Experiment with an actual economy (too costly!)
 - Do experiments in artificial economy (i.e., model).

DSGE Model

- Artificial model economy which:
 - Has property that economic outcomes are clearly related to private agent objectives and constraints (not always followed in practice!)
- To be useful
 - must generate artificial data that resembles macro economic data of actual economies. This is the subject of econometrics.
 - Contributes input into discussions about key policy questions.

History of DSGE Models

- Pre-2000's: foundations laid by Hansen-Sargent, Prescott, Lucas, many others....
- 2000-2007: transition from academic 'toys' to serious candidates for actual policy evaluation.
 - Evidence that models are available that can quantitatively address the age-old puzzle about monetary economics: **“why do prices take so long to react to a monetary disturbance, while real variables react right away?”**
 - SW demonstration that DSGE models rival a-theoretical methods in out-of-sample forecasting.
 - Played an important role in placing structure on policy discussions
 - Taylor principle, inflation targeting, interaction between monetary policy and asset volatility
- 2008-?: renewed urgency for additional models development
 - Introduction of financial frictions.
 - Serious treatment of labor markets.