Comments: Modern DSGE Models

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Much Progress over 40 Years

• Ad-hoc IS-LM models

• Replaced by DSGEs with
  ◦ Optimizing households and firms
  ◦ Forward-looking agents
  ◦ Market-clearing prices

⇒ Designed to analyze policy
Two Progress Reports

• Eichenbaum:
  ○ DSGEs are used by *and* useful for central bankers

• Uhlig:
  ○ DSGEs are not yet useful for central bankers
DSGE: Achievement

- DSGEs are now empirically plausible
DSGE: Achievement

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  - Early RBC models
    - No money
    - Frictionless markets
    - Missed key properties of data
  - Early NK models
    - More qualitative than quantitative
DSGE: Challenge

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  - Empirical fit due to
    - Non-micro-founded frictions
    - Non-structural shocks
  ⇒ Effectively have wedges in focs
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  ○ Are these models useful for policy analysis?
Quantitatively Important Shocks

- Exogenous shocks to
  - Wage markups
  - Risk premia

- Account for most variation in real activity
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... Next, consider evidence for key labor market variables
Unemployment (Gali, Smets, Wouters)
Hours (Gust, Herbst, Lopez-Salido, Smith)

One shock at a time
TFP
Investment efficiency
Risk premium
All shocks on

% Deviation

2008 2009 2010 2011 2012 2013 2014
Shocks or Wedges?

- Invariant to monetary policy?
  - Wage markups:
    - Preference shocks?
    - Monopoly power shocks?
  - Risk premia:
    - Flight-to-quality shocks?
    - External financing cost shocks?
    - Capital quality shocks?

- Without structure, summarizes extent of our ignorance
A Way Forward

- To do policy analysis, need to:
  - Identify which wedges most important
  - Use findings to identify promising DSGE models with
    - Micro-founded frictions
    - Primitive, interpretable shocks
  - Discipline analyses with micro evidence

- So far, have only done step 1
A Better Way Forward

- More emphasis on designing rules and institutions

- Lots of examples from the Minneapolis Fed, eg,
  - Wallace, “A Modigliani-Miller Theorem for O-M Ops” ⇒ Relevant for Quantitative Easing
  - Sargent-Wallace, “Unpleasant Monetartist Arithmetic” ⇒ Relevant for current Euro crisis
  - Kareken-Wallace, “Deposit Insurance and Bank Reg” ⇒ Relevant for Too Big to Fail

- Which were seeds of later quantitative DSGE analyses