COMMENTS ON DISENTANGLING THE CHANNELS OF THE 2007-2009 RECESSION DSGE MODEL-BASED FORECASTING

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DSGE Model-Based Forecasting

- Showcases a variety of interesting calculations
- Compares the predictive performance of the DSGE model to other competing models
- Assesses performance through the financial crisis
SHOCK ACCOUNTING

- Two important shocks prior to financial crisis
  1. Equity premium
  2. Marginal efficiency of investment

- Wedges or financial shocks to financing constraints
  1. Reinterpret shocks as exogenous shifts in the impact of financing constraints and introduce a net worth state variable
  2. Example: Christiano-Motto-Rostagno - mean-preserving spread in the cross-sectional dispersion of “ability across entrepreneurs”. Is this what we want to think of as an important trigger for the financial crisis?
Questions

- Microeconomic motivation without using microeconomic evidence?
- What are the “shocks” connected to financing frictions and why are they uncorrelated with other shocks?
- Stochastic discount factor dynamics?
  1. Which shock exposures command the biggest prices?
  2. How do these change over investment horizons?
- How do frictions operate?
  1. Difference between marginal and average investors - stochastic discount factor determined by marginal investors
  2. Wedge between “prices of internal financing and external financing” - multiple stochastic discount factors in play
  3. Economy-wide constraints bind sometimes but not always - source of nonlinearity
Two physical returns not one because second-order adjustment costs make investment act as a second capital stock.

How new capital is financed (debt or equity) matters when we connect the return predictions from the model to data.
Approach

1. Apply linear dimensionality reduction methods to collapse large cross sections of macro and financial time series into a smaller number of macroeconomic factors
2. Employ “structural” VAR methods to identify interpretable shocks

Two findings

1. Larger shocks with essentially the same transmission mechanism
2. Important shocks were “financial disruptions” and “heightened uncertainty”
Larger shocks with essentially the same transmission mechanism

- Perhaps difficult to reject the null hypothesis - weak evidence?
- Alternative hypothesis is that of a simple break point - more interesting alternatives?
Uncertainty shocks

Identified by regressing the reduced-form innovations onto measured indictors - VIX, Bloom and Baker, Bloom and Davis

- The uncertainty shocks should be related explicitly to the direct macroeconomic evidence for “larger versions of shocks”
- The economic mechanisms by which increases in uncertainty influence behavior are hard to connect with linear time series models
Identified by regressing the reduced-innovations onto measured indictors of the type discussed by Gilchrist

- Reinforce Gilchrist’s findings and the same issues about shocks and mechanisms apply here.