Discussion

“An Equilibrium Asset Pricing Model with Labor Market Search”
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An Eq’m Asset Pricing Model with Labor Market Search

- Paper combines two well-known models
  - Production-based asset pricing model (RBC + Epstein-Zin preferences)
  - Search model of the labor market (Diamond-Mortensen-Pissarides-Merz)
- Predictions for labor markets do not change much
  - Tallarini (2000)
    - My intuition: discount factor dominated by separation rate
- Predictions for asset prices improve substantially
- Contributions
  - Methodological: non-linear solution is key
  - Substantive: asset pricing
- Very interesting (and much discussed) paper!
Results

- Asset pricing model with labor market search delivers
  - “a coherent account of asset prices”
  - “endogenous rare disasters”

- Non-linearity makes *deep* recessions *even deeper*
  - Endogenous rare disasters
  - High equity premium
  - Time-varying equity premium (predictable from labor market conditions)
  - Stock market volatility
  - Time-varying volatility (uncertainty ‘shocks’)
  - Highly volatile profits, procyclical dividends (profits minus investment)

- All of these results bring the model closer to the data
  - Wide range of statistics for asset prices
  - Probability and size of disasters (Barro-Ursúa)
Non-linearity and rare disasters

Skewness in unemployment:

2.5 percentile  median  97.5 percentile
5.9%           7.3%          19.3%
Non-linearity and rare disasters: mechanism

- Sources of the non-linearity
  - Costs of posting vacancies increases in recessions
    
    Cost per hire \( \kappa_t = \frac{\kappa_0}{q(\theta)} + \kappa_1, \quad q'(\theta) < 0, \quad q''(\theta) > 0 \)

    - Diminishing returns in the matching function, \( q'' > 0 \)
    - Fixed costs of posting vacancies \( \kappa_1 \)

  - Wage rigidity increases in recessions
    
    \( W_t = \eta (X_t + \kappa_t \theta_t) + (1 - \eta) b \)

- Volatile labor market makes this relevant
  - Countercyclical hiring costs
  - Small profits (small surplus calibration)
  - Wage rigidity

- Why need a relatively high separation rate?
  - My intuition: otherwise (convex) hiring costs too small (?)
How realistic is this mechanism?

- Intuitively, something is not right
  - Rare disasters are just recessions with particularly low job creation
  - Was the financial crisis so severe because hiring costs were particularly high?
  - Is Greece in so much trouble because wages have become (even) more rigid?

- A peace offering
  - I will buy into the mechanism, ...
  - if this is *one out of many* types of disasters

- But then, why is the model fit so good?
  - In the model, $\theta$ predicts excess returns much better than in the data
  - Yet, the model matches the average level of the equity premium

- Possible explanation:
  - Full participation $\Rightarrow$ skewness unemployment spills over to employment
  - With participation margin, skewness employment will be less
Minor comments

- Compare results to model with competitive labor market
  - Current comparative statics stop short of removing search frictions
  - Need to model endogenous participation, to avoid full employment

- Distinguish between wage rigidity and small surplus
  - Conceptually different
  - Close link comes from Nash bargaining assumption, not realistic

- Use timing consistent with job finding rate between 0 and 1
  - Steady state unemployment rate $\bar{u} = \frac{s}{s+f(\theta_t)} \rightarrow 0$ as $f(\theta_t) \rightarrow 1$
  - Alternative timing assumption (Blanchard-Galí)
    
    $$ u_{t+1} = (1 - f(\theta_t)) [u_t + s (1 - u_t)] \Rightarrow \bar{u} = \frac{(1 - f(\theta_t)) s}{(1 - f(\theta_t)) s + f(\theta_t)} $$

- Calibration of $b$ matters for other model predictions (Costain-Reiter)