Discussion of "The Macroeconomic Effects of Housing Wealth, Housing Finance, and Limited Risk-Sharing in General Equilibrium" by Jack Favilukis, Sydney Ludvigson & Stijn van Nieuwerburgh

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This paper

- What explains the recent boom/bust episode in house prices?
- Proposed explanation:
  for a couple of years, fewer frictions in the housing market
- Ambitious exercise with serious quantitative model

- Two sector RBC model with housing
  (repres. agent: Davis and Heathcote 2003, Kahn 2009)
- heterogeneous agents and collateral constraints
  (exchange economy: Lustig and Van Nieuwerburgh 2005)
- Here: combine the two + transaction costs for housing

Frictions in the housing market

- two frictions: downpayment constraints, transaction costs
- in models with transaction costs,

$$\frac{\text{asset price}}{\text{dividend}} \approx \frac{1}{\text{real interest rate - growth rate of dividends}}$$

— discount for expected future transaction costs

(holds exactly e.g., with search as in <u>Piazzesi and Schneider 2009</u>)

- This paper: housing boom because of lower discount

Discussion

- What is a house?
- Evidence on main mechanism:
  how did frictions change during the early 2000s?
  magnitudes and timing

What is a house?

Households choose

bond = asset that pays 1 unit numeraire tomorrow
            (shorting bonds = mortgage)

equity = asset that pays aggregate dividend (numeraire)

house = share of a real estate investment trust
            that holds all structures (not land)
            in the United States
            pays housing dividends that are not tradable

What is a house?

- house = share of a real estate investment trust
  that holds all structures (not land) in U.S.
  pays housing dividends that are not tradable

|	returns on stocks			returns on housing		
	mean	volatility	Sharpe ratio	mean	volatility	Sharpe ratio
data	8%	19%	0.3	10%	5%	1.5
model	6%	11%	0.3	13%	6%	1.5

- A national real estate trust is a great deal!

- Evidence on idiosyncratic risk in houses
  Flavin & Yamashita 2002, Guerrieri, Hartley & Hurst 2010
  Landvoigt, Piazzesi and Schneider 2010

- Risk-return tradeoff matters for portfolio choice, pricing
  Piazzesi and Schneider 2008

What is a house?

- house = share of a real estate investment trust
             that holds all structures (not land) in U.S.
             pays housing dividends that are not tradable

- house has most attractive Sharpe ratio,
  is the only asset that can be used as collateral
- why do agents not buy as much as they can?
- can't rent out!
- Cobb-Douglas utility over housing and other consumption,
  only want so much housing

What is a house?

- house = share of a real estate investment trust
  that holds all structures (no land) in U.S.
  pays housing dividends that are not tradable

- in the data:
  Case-Shiller, Flow of Funds, etc. include land values

- land values are important
  bigger booms & busts in regions with bigger land components
  e.g., California, Florida, New York City
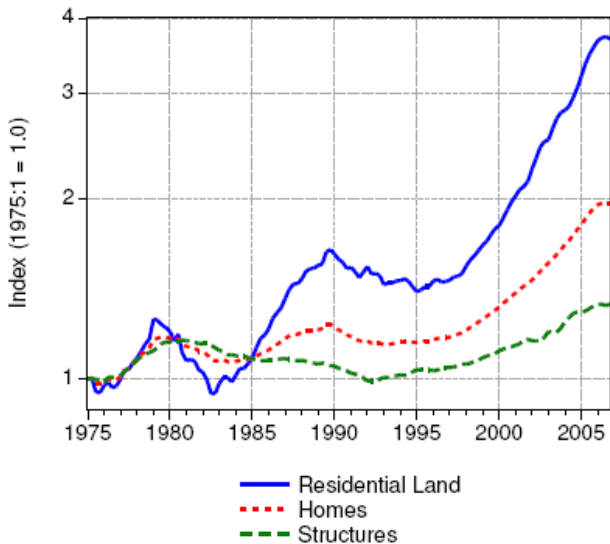
What is a house?

Suggestions:

- to make things comparable:
  either include land in the model or
  (easy route) exclude land from the data

- study sensitivity to depreciation rate in housing capital

Main mechanism

- Downpayment requirements were relaxed during the boom
  25% until 2000, 1% after 2000
- Direct evidence?
- How much does this matter for house prices by itself?
- Depends on price impact of agents affected by constraints
- How does price impact depend on details of the model?

1. calibration (model overpredicts housing portfolio share of young households, Table 4)

young households	data	model
1998	0.67	1.50

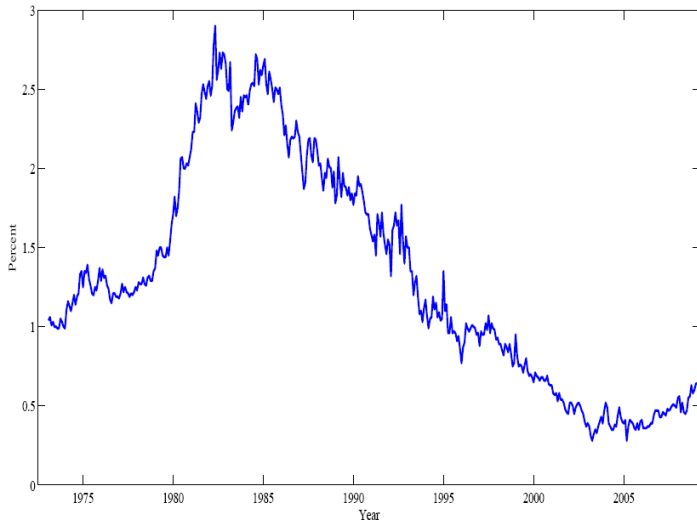2. no rental housing (all households affected by the change)

Main mechanism

- Changes in transaction costs:

	fixed cost (% average household consumption per year)	variable cost (% of house value)
before boom	3.5%	5.5%
during boom	2.5%	3.5%
after boom	3.5%	5.5%

- Direct evidence: graph of initial fees and charges

Main mechanism

Initial fees and charges

Main mechanism

- Timing?
- Approach?
  Paper compares stochastic steady states,
  (changes in frictions are both unexpected & permanent)
  approach typically used for regime changes e.g., social security
- Graph: slow changing process for transaction costs
  Households have seen the same data!
- Why not one stationary equilibrium?
  (agents discount house prices based on changing expectations about
  future transaction costs)

Conclusions

- Ambitious exercise with serious quantitative model
- Changes in transaction costs potentially interesting
- Given current modeling choices and reporting of results, quantitative importance is not yet clear