PhD Introduction

Dan Greenwald

About me

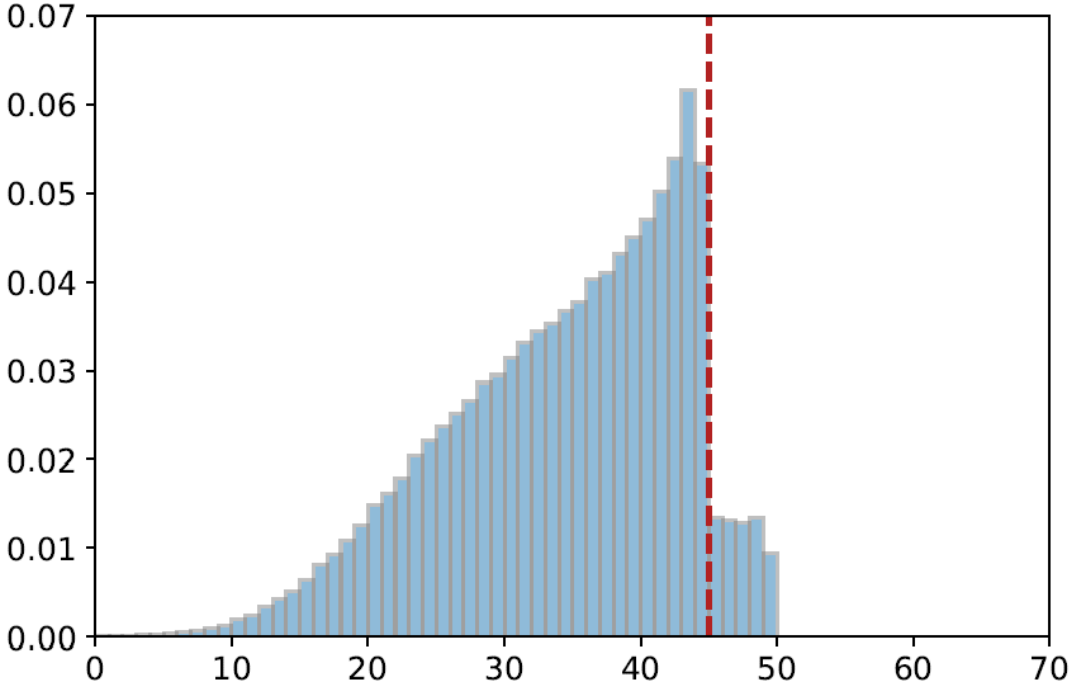
- 2016 PhD from NYU Economics
- MIT Sloan 2016 – 2022, NYU Stern 2022 – Present
- Research at the intersection of **finance** and **macroeconomics**
- Approach: structural GE models + data
- Topic 1: **debt markets**
  - Mortgage debt
  - Corporate debt
- Topic 2: links between **finance** and **inequality**

The Mortgage Credit Channel

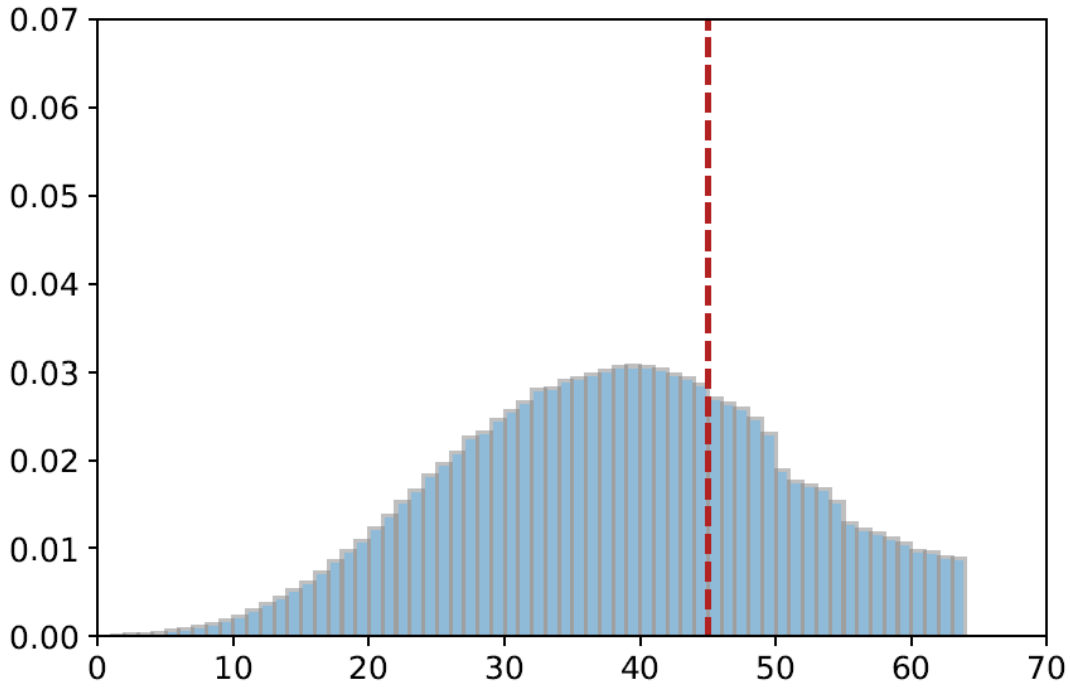
- Several mortgage constraints out there – which matters most for macro dynamics and the 2000s boom bust?
  - Conventional view: loan-to-value limits
  - This paper: **payment-to-income limits** are central!
- Amplify interest rate transmission
  - Decline in rates loosens PTI limits, causing borrowers to switch to becoming LTV constrained
- Most important change in credit standards driving 2000s boom
  - Clear evidence in data, LTV not supported by data or theory

PTI limits over time

Fannie Mae PTI Ratios: 2017



Fannie Mae PTI Ratios: 2006

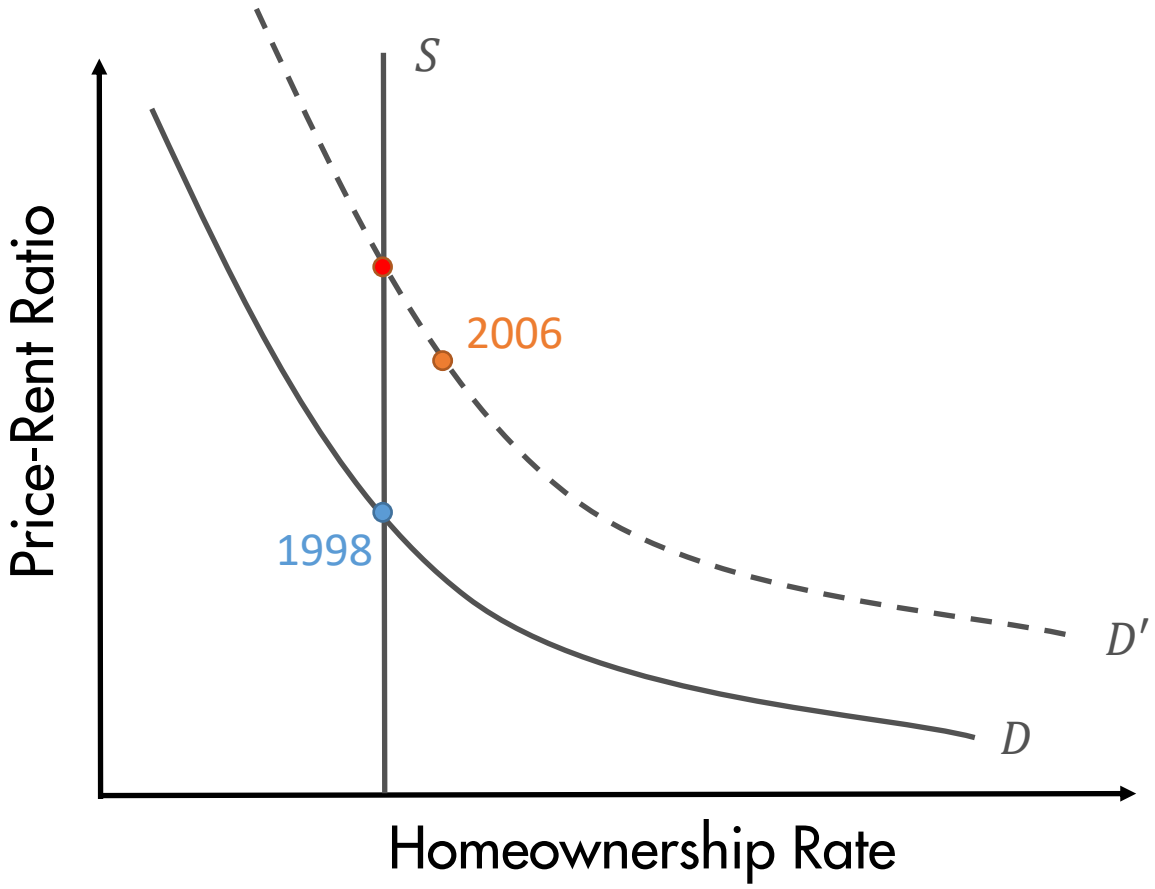


Do Credit Conditions Move House Prices?

- Big debate in the literature about whether impact of credit on house prices, particularly over 2000s boom
  - Favilukis, Ludvigson, Van Nieuwerburgh: explains most of rise in house prices in 2000s boom
  - Kaplan, Mitman, Violante: explains none of rise in house prices in 2000s boom
- This paper: try to understand source of variation and reconcile
- Approach: combine new empirical estimates + structural model

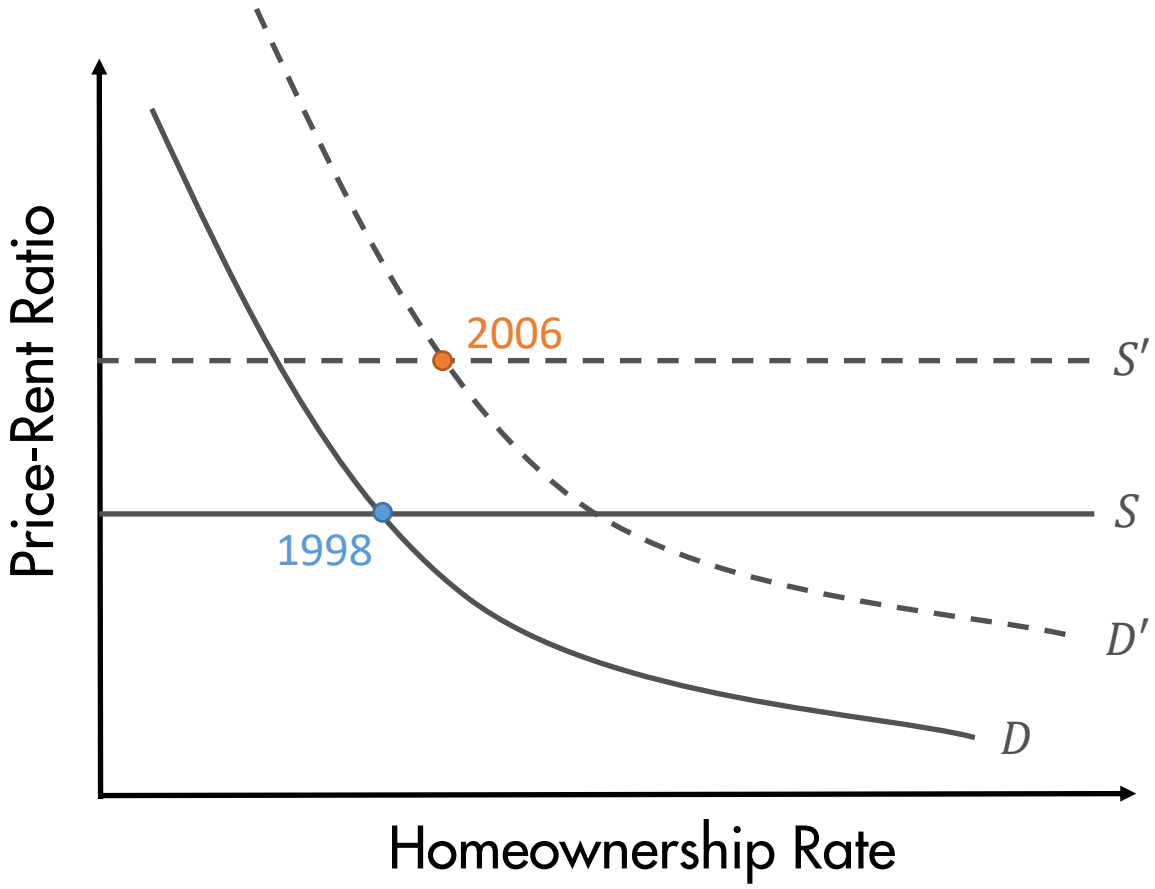
Do Credit Conditions Move House Prices?

- One class of models is using a perfectly vertical price schedule of landlords
  - Homeownership rate fixed
- Find that changes in credit conditions cause large increase in price-rent ratios



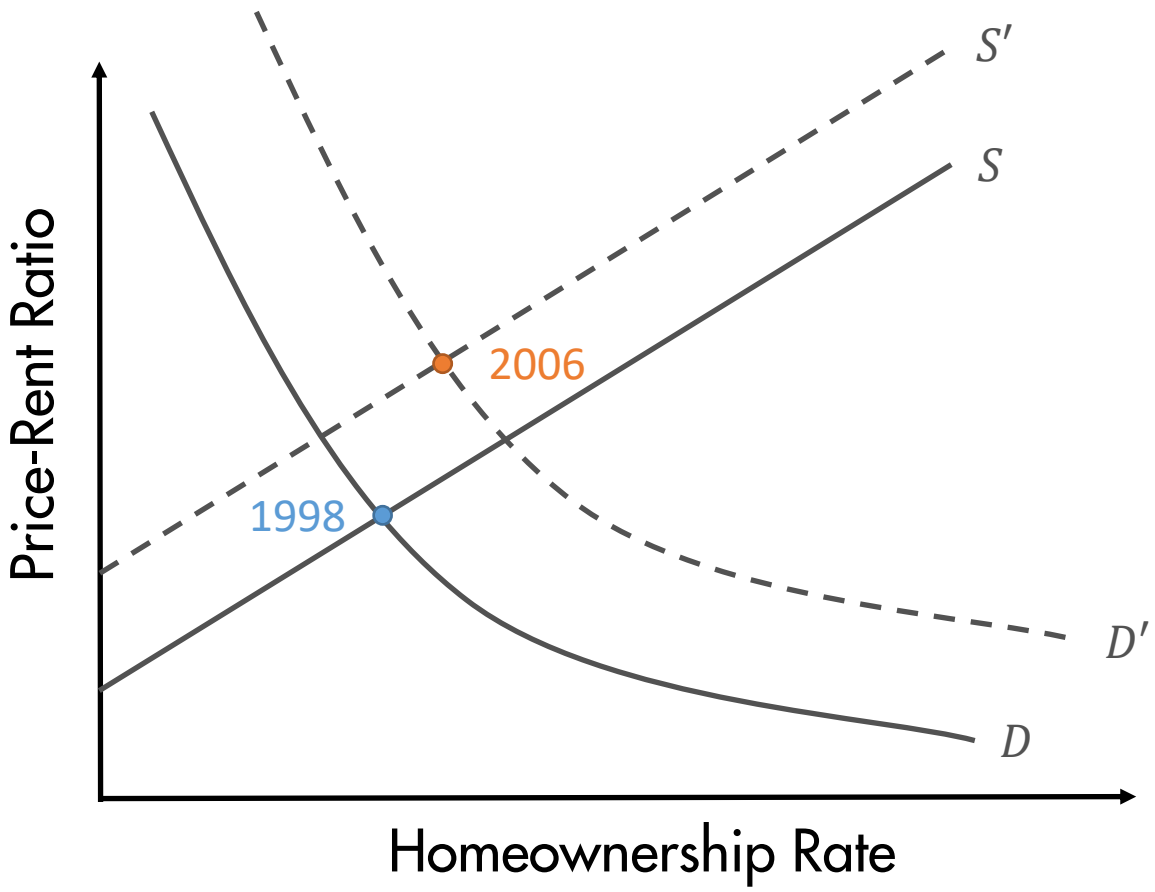
Do Credit Conditions Move House Prices?

- Other class uses a perfectly horizontal price schedule of landlords
  - Price pinned to landlord reservation price
- Find that changes in credit conditions cause large increase in homeownership, no change in price-rent ratios



Do Credit Conditions Move House Prices?

- We consider intermediate models with upward sloping price schedules
- Measure slope using demand instruments, calibrate model to fit estimates
- Find that frictions very strong, close to complete segmentation, large impact of credit on prices during boom

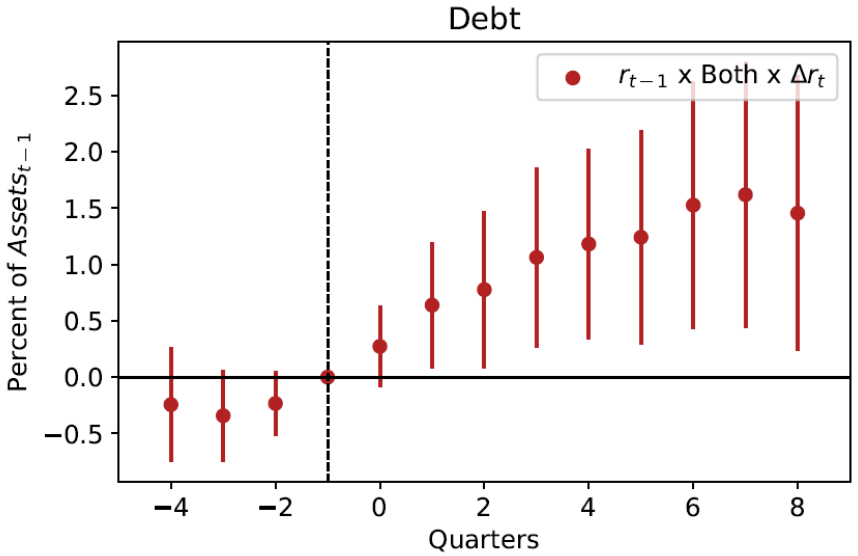


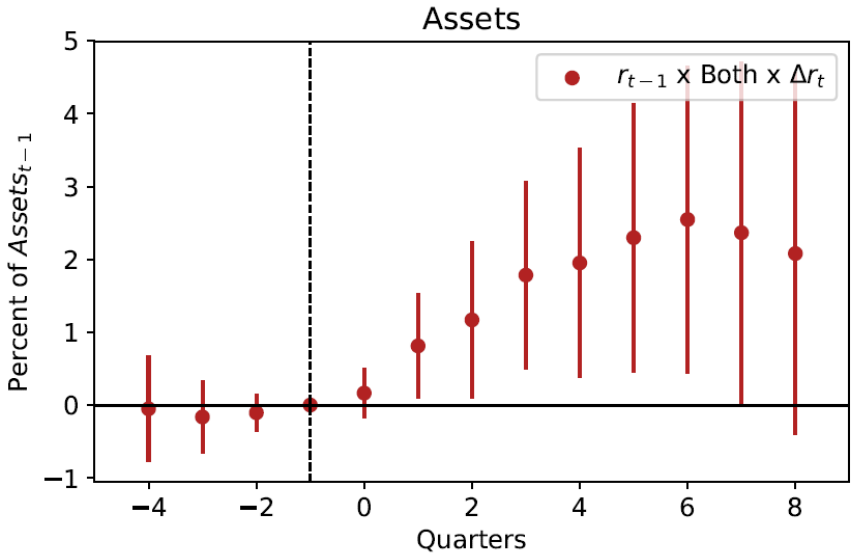
Debt Covenants and the Macroeconomy

- New literature arguing for the importance of earnings-based constraints (e.g., Lian + Ma (2021)).
  - But many constraints depend on more than earnings!
  - Most common covenant in Dealscan is **interest coverage**, which limits interest payments to earnings
  - Extremely sensitive to interest rates
- With model and data, I show that firms with interest coverage limits are more sensitive to changes in interest rates than firms with limits on the stock of debt to earnings

Debt Covenants and the Macroeconomy

- Typical firm with any covenants has both interest coverage and debt-earnings covenants
  - Combining the two leads to state dependence!
  - Large sensitivity when rate are high (interest coverage tight)
  - Low sensitivity when rates are low (interest coverage slack)





The Credit Line Channel

- Macrofinance is largely worried about a credit crunch
  - But firms with **credit lines** may be able to avoid it!
- Using administrative Y-14Q data, we show that firms have enormous undrawn credit line balances
  - More than 40% larger than all used bank-firm credit combined
  - But dominated by large, profitable firms
- Rise in bank-firm credit following Covid-19 outbreak is completely explained by draws on credit lines
  - Draws by big firms crowd out credit to small firms
  - Model: more credit flows to corporates, but investment is **lower**

My research: inequality

- Stock market grew much more rapidly post-1989
- While economic output grew much less.
- Corporate earnings go the right way, but how?
- Large, persistent movements in profit shares
  - Primary contributor to rise in stock values since 1989

Avg. Real Growth	1966 – 1988	1989 - 2017
Market Equity	1.6%	7.5%
Corporate Output	3.9%	2.6%
Corporate Earnings	1.8%	5.1%

My research: inequality

- Inequality has strong negative correlation with real rate
- How do portfolios vary across wealth distribution?
  - Duration higher for wealthy
- Real or paper effects?
  - Older households gain, younger households lose.