

Discussion of

A Quantitative Model of Too Big to Fail, House Prices, and the Financial Crisis?

by Ömer T. Açikgöz and James A. Kahn

Vadim Elenev

NYU Stern

NYC Real Estate Conference — May 2017

Big Picture

- Can a theory consistent with rational expectations explain the 1998-2008 boom-bust dynamics in house prices?

Big Picture

- Can a theory consistent with rational expectations explain the 1998-2008 boom-bust dynamics in house prices?
- Existing literature: overbuilding, relaxation of credit constraints

Big Picture

- Can a theory consistent with rational expectations explain the 1998-2008 boom-bust dynamics in house prices?
- Existing literature: overbuilding, relaxation of credit constraints
- This paper: increase in the availability of government subsidies

Main Experiment

- Hold fixed
 - ▶ housing supply
 - ▶ credit constraints ($\leq 100\%$)

Main Experiment

- Hold fixed
 - ▶ housing supply
 - ▶ credit constraints ($\leq 100\%$)
 - ▶ 15% government guarantee of mortgage losses on conforming loans (free)
 - ▶ government promise to make the guarantee essentially full (99%) if losses are bad enough i.e. “crisis” occurs (free)

Main Experiment

- Hold fixed
 - ▶ housing supply
 - ▶ credit constraints ($\leq 100\%$)
 - ▶ 15% government guarantee of mortgage losses on conforming loans (free)
 - ▶ government promise to make the guarantee essentially full (99%) if losses are bad enough i.e. “crisis” occurs (free)
- Increase the conforming loans limit (CLL) from 80% to 100% – high-LTV mortgages now eligible for the same partial guarantee of losses as low-LTV mortgages

Main Experiment

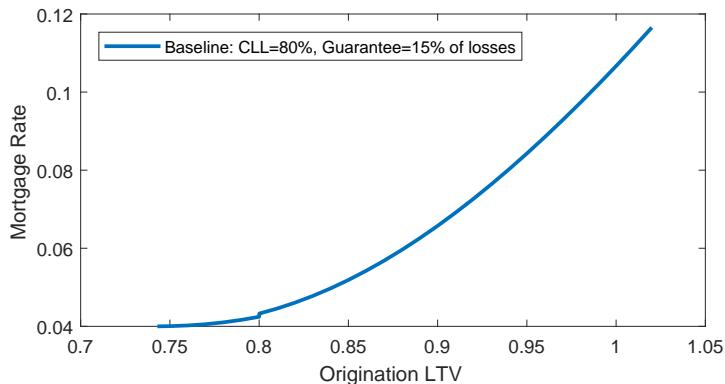
- Hold fixed
 - ▶ housing supply
 - ▶ credit constraints ($\leq 100\%$)
 - ▶ 15% government guarantee of mortgage losses on conforming loans (free)
 - ▶ government promise to make the guarantee essentially full (99%) if losses are bad enough i.e. “crisis” occurs (free)
- Increase the conforming loans limit (CLL) from 80% to 100% – high-LTV mortgages now eligible for the same partial guarantee of losses as low-LTV mortgages
- Keep CLL elevated until “crisis” occurs, lower back to 80% after

Main Experiment

- Hold fixed
 - ▶ housing supply
 - ▶ credit constraints ($\leq 100\%$)
 - ▶ 15% government guarantee of mortgage losses on conforming loans (free)
 - ▶ government promise to make the guarantee essentially full (99%) if losses are bad enough i.e. “crisis” occurs (free)
- Increase the conforming loans limit (CLL) from 80% to 100% – high-LTV mortgages now eligible for the same partial guarantee of losses as low-LTV mortgages
- Keep CLL elevated until “crisis” occurs, lower back to 80% after
- **Result: House prices, mortgage debt, leverage, defaults, and foreclosure costs all go up**

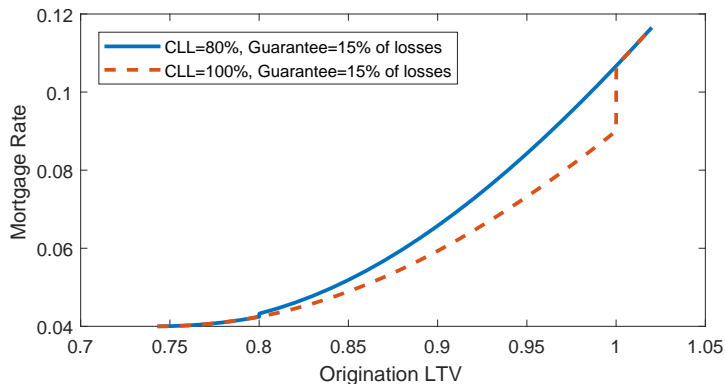
Steady-State Mortgage Menu: Baseline

$$\text{Mortgage Rate} = \text{Risk-Free Rate} + (1 - \text{Subsidy}) \times \text{Expected Loss}$$



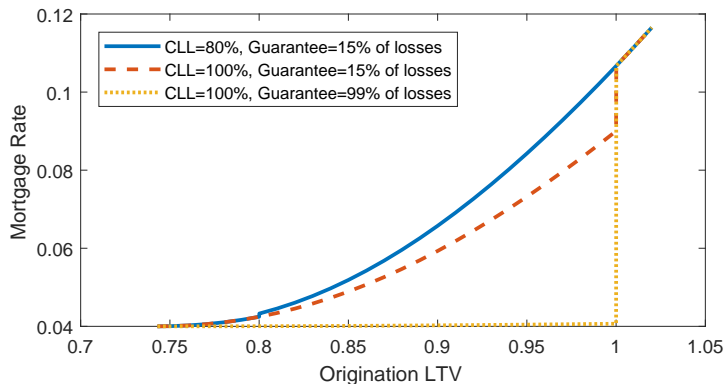
Steady-State Mortgage Menu: Boom

$$\text{Mortgage Rate} = \text{Risk-Free Rate} + (1 - \text{Subsidy}) \times \text{Expected Loss}$$



Steady-State Mortgage Menu: Boom (w/ Exp Bailout)

Mortgage Rate = Risk-Free Rate + (1 - Subsidy) × Expected Loss



Household Choice

- LTV choice trade-off: expected DWL from foreclosure vs. government subsidy

Household Choice

- LTV choice trade-off: expected DWL from foreclosure vs. government subsidy
- Calibration: government subsidy $>$ expected DWL
- Households always lever up to CLL
- Increase in CLL is effectively making the mortgage guarantee more underpriced, high leverage more attractive

Household Choice

- LTV choice trade-off: expected DWL from foreclosure vs. government subsidy
- Calibration: government subsidy $>$ expected DWL
- Households always lever up to CLL
- Increase in CLL is effectively making the mortgage guarantee more underpriced, high leverage more attractive
- Frictionless moving
 - ▶ High CLL \implies immediate jump in house prices, aggregate defaults
 - ▶ Losses cross bailout threshold, guarantee jumps to 99% (as banks expected)
 - ▶ Future house prices back to baseline steady-state level

Household Choice

- LTV choice trade-off: expected DWL from foreclosure vs. government subsidy
- Calibration: government subsidy $>$ expected DWL
- Households always lever up to CLL
- Increase in CLL is effectively making the mortgage guarantee more underpriced, high leverage more attractive
- Frictionless moving
- Calvo moving friction
 - ▶ Movers take out high-LTV loans, drive up value of housing collateral for everyone, so everyone borrows more
 - ▶ When enough have moved, LTVs become high enough to trigger bailout threshold, denouement same as above

Major Comments

- Nice paper!
- Rich and surprisingly tractable model of housing and mortgage choice with many closed-form expressions
- Contribution: **interaction** between coordination in the financial sector, government bailouts, and lax macroprudential policy necessary for policy-generated boom

Major Comments

- Nice paper!
- Rich and surprisingly tractable model of housing and mortgage choice with many closed-form expressions
- Contribution: **interaction** between coordination in the financial sector, government bailouts, and lax macroprudential policy necessary for policy-generated boom
- How novel is the main result?
 - ▶ Elenev, Landoigt, and Van Nieuwerburgh (JME 2016): underpriced mortgage guarantees + commitment to bail out financial sector debt-holders increase house prices, defaults
 - ★ Model with both aggregate and idiosyncratic risk, long-term mortgages, levered and risk-averse financial intermediaries w/ bankruptcy option, government fiscal policy
 - ★ Also find: increase financial sector leverage, fiscal uncertainty, disrupt allocation of aggregate risk, and reduce welfare

Major Comments

- Nice paper!
- Rich and surprisingly tractable model of housing and mortgage choice with many closed-form expressions
- Contribution: **interaction** between coordination in the financial sector, government bailouts, and lax macroprudential policy necessary for policy-generated boom
- How novel is the main result?
 - ▶ Elenev, Landvoigt, and Van Nieuwerburgh (JME 2016): underpriced mortgage guarantees + commitment to bail out financial sector debt-holders increase house prices, defaults
- Main novel feature: role of moving frictions in propagating debt build-up, gradual ramp-up in prices and crisis risk
 - ▶ If microfounded, would these frictions vary with aggregate losses, price dynamics?

Other Comments

- Why can't refinancers (type f) take advantage of CLL increase?
Cash-out refis defining feature of the boom

Other Comments

- Why can't refinancers (type f) take advantage of CLL increase?
Cash-out refis defining feature of the boom
- Balanced budget: large bailouts \implies large taxes
 - ▶ Doesn't matter with quasi-linear preferences because EIS is infinite
 - ▶ With CRRA, simultaneous taxation reduces potential consumption smoothing benefit of bailouts

Other Comments

- Why can't refinancers (type f) take advantage of CLL increase?
Cash-out refis defining feature of the boom
- Balanced budget: large bailouts \implies large taxes
 - ▶ Doesn't matter with quasi-linear preferences because EIS is infinite
 - ▶ With CRRA, simultaneous taxation reduces potential consumption smoothing benefit of bailouts
- Condition for households to choose $z = \zeta$ (leverage = CLL)
 $(1 - \eta)m\gamma zg(z) < \eta G(z)$ is sensitive to parameters and distribution.
 - ▶ E.g. sign flips from baseline calibration if moving probability $m = 1$
 - ▶ Intuition: foreclosure inevitable with default, expected DWL much higher, subsidy no longer wins out

Conclusion

- Important question: were government macro-prudential policies partly responsible for the housing boom/bust? Which policies and what are the channels?
- Model produces many analytical results, could be used for interesting comparative statics
- Encourage authors to think more about the contribution – focus on the model's ability to generate persistence (a struggle for many others)