Mortgage borrowing caps - leverage, default and welfare

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Overview

Research question

What are the effects of implementing LTV and PTI limits on mortgage borrowing?

Strategy

- Admin data to measure precisely distribution of LtV and PtI in new originations
  - → Focus on policy change in Portugal implementing 90% LtV and 50% PtI limits (free(?) before)
- Rich quantitative model to predict impact on household debt and default rates and welfare effects
  - → GE open economy, rich housing sector, endog. mortgage rates
  - → Replicate policy in model environment

Overview

Main results

- Empirical:
  - → Policy leads to substantial bunching at the 90% LTV limit
  - → PTI limit not binding for most borrowers
- Model predictions for policy effects:
  - → Steady-state: zero defaults and mortgage debt stock $\downarrow$ $48\% \rightarrow 33\%$ of GDP
    - ⇸ Also in event of house price crash
  - → PTI implemented alone actually *increases* leverage (due to "pre-emptive borrowing")

This discussion

- Thinking about "pre-emptive borrowing" and the effects of PTI
- Suggestion to make model exercise more focused on explaining the cool data

“Pre-emptive borrowing”

Described in experiment where:

- LtV cap stays at 120%
- PtI only restricted at 50%

Model results:

- Increases in outstanding debt (48% to 50% GDP)
- Virtually no impact on defaults and interest rates
- Increase in home ownership rate

Bold claim!

“Pre-emptive borrowing”

Described in experiment where:

- LtV cap stays at 120%
- PtI ~only restricted at 50%~ **further restricted to 30% (~US level)**

Model results:

- Increases in outstanding debt (48% to 50% GDP)
- ~~Virtually no impact on defaults and interest rates~~ **Big drop in defaults**
- ~~Increase~~ **Decrease** in home ownership rate

Bold claim! **Especially since deeper restrictions lead to some different results**

“Pre-emptive borrowing”

The mechanism

Tightening PTI constraint makes HHs borrow more for precautionary reasons:

- PTI cap only required at origination
- Adverse income shocks may make PtI constraint bind in the future
- Idea: borrowing more today expands consumption possibilities tomorrow

Complex tie-in with housing choice

- Borrow “earlier”
  - → → buy earlier? Could also mean move up earlier?
- With “lower down payment”
  - → What if already LtV constrained?
  - → (What about buying larger?)

“Pre-emptive borrowing”

In isolation, mechanism obviously makes sense. Additional borrowing constraint.

When should we see behavior?

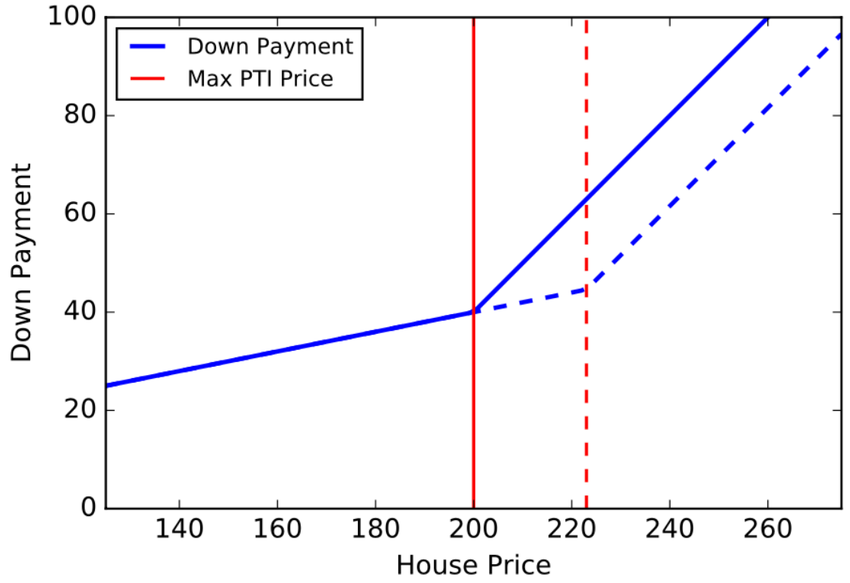
- Benefit of expanding consumption possibilities (in low income states) should outweigh costs:
  - → More interest payments
  - → More **committed** income to mortgage payments (mandatory repayment)
- Further, these costs should be smaller than the alternative of simply consuming less in present
- Presence of mechanism issue of measuring, quantitatively
  - → Would be good to see numbers, maybe simple example

“Pre-emptive borrowing”

When should we see behavior?

Also helpful to think of constrained agents *ex ante*:

- Those who are already PtI constrained at 120%
  - → Also, isn’t there a natural PtI constraint?
- Borrowers who are LtV constrained probably have no interest in borrowing more:



Greenwald (2018)

“Pre-emptive borrowing”

In who should we see behavior?

- Rich model with life cycle, income risk
- Might see “pre-emptive borrowing” in some parts of the distribution:
  - → Age; income; initial wealth/transfer
- Needed to quantify relevance of mechanism

Rich granular data

Distribution of PtI and LtV at origination

- As it stands data limited by lack of borrower characteristics, but still very cool

The paper now:

- Predict several effects of policy in a very rich environment, data only to compare/validate calibrtion

What it could be:

- Explain shift in PtI and LtV distribution as a result of policy
  - → Establish causality, though probably easy empirically (bunching estimator?)
  - → Decomposition of drivers, measure distributional effects
  - → **Empirically validate** “pre-emptive borrowing”

Rich granular data

Focus on income risk:

- Proposed mechanism relies on link between income risk and borrowing constraints
- It does raise interesting questions e.g.:
  - → Potentially, PtI at origination is a bad test because initial income poor predictor of borrowing capacity
- Would require more detail and focus on properties of income process
  - → But could drop some other complications
  - → E.g. endogenous pricing of mortgage rate and relative price (production)

Smaller comments

- Would be nice to see raw data rather than only kernel density estimates
- In welfare terms households do not “benefit from lower rents” as landlords suffer
  - → Paper says 92% of housing stock is owned by resident hhs
- Drop Section 2 and give more details on constraints pre-policy
- In exercise on Portugal interest rate risk important as almost all loans ARM
- What is lifetime leverage and LTV?

Thank you