

# On the effectiveness of loan-to-value regulation in a multiconstraint framework

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The views expressed do not necessarily reflect those of the Bank of Italy or of the Eurosystem.

## THE PAPER IN A NUTSHELL

- ▶ Provides **micro-data evidence from Sweden** of:
  - ▶ slackness (or lack thereof) of LTV and DSTI constraints,
  - ▶ partition of constrained borrowers between classes: LTV-only, DSTI-only, LTV & DSTI.
- ▶ **Crucial claim:**

with DSTI constraints, lower LTV limit may not imply lower debt-to-GDP ratio (and may even increase house prices).
- ▶ **Model-based assessment:**
  - ▶ simple and full model with long-term debt (calibrated to Sweden);
  - ▶ steady-state comparison with different levels of constraints;
  - ▶ deterministic simulations with occasionally binding constraints.

## THE PAPER IN A NUTSHELL

- ▶ Interesting topic.
- ▶ Intriguing micro evidence.
- ▶ A step in the right direction in terms of assessment method.

## FOUR COMMENTS

1. Effectiveness, global solutions, and policy objectives.
2. Empirics and inframarginal effects of changes in DSTI.
3. Modelling endogenous heterogeneity.
4. Quantitative discipline with the Swedish case.

## SIMULATIONS: GAUGING POLICY EFFECTIVENESS

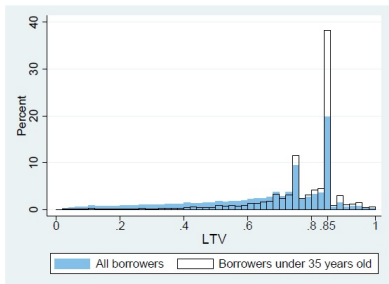
- ▶ How to compare relative size of different shocks?  
Is 5% change in max LTV the same as 5% change in DSTI?
- ▶ Given asymmetric responses to shocks, key aspect is to assess macroprud **policy effectiveness in response to different shocks**.  
  
→ Do conclusions follow through if macroprud instruments are activated in response to shocks and not from SS?
- ▶ Effectiveness of **macroprud rules** (and related indeterminacies) rather than discretionary policies.

## GLOBAL SOLUTIONS AND POLICY OBJECTIVES

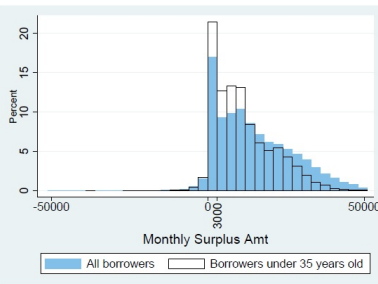
- ▶ To really assess macroprud effectiveness, need for occasionally binding constraints globally (and not just locally).
- ▶ Global solution may inform better about state-dependence (asymmetry) of responses to policy.
- ▶ Plus (and especially): Treat effects of uncertainty properly, with **precautionary motives**.
- ▶ Characterize key **tension between macroprud objectives**:
  - ▶ active dynamic stabilization or
  - ▶ creation of buffers to reduce financial vulnerability.

## TAKING EMPIRICS ONE STEP FURTHER

- ▶ Shape of the histograms and degree of bindingness of constraints (and of **precautionary behavior?**).
- ▶ Key empirical challenge: How much of the higher effectiveness of the DSTI limit (found in other studies, too) happens at the limit and how much is inframarginal?
- ▶ (Distribution of LTVs: heads vs. amounts.)
- ▶ (KALP vs. DSTI and transfers, interaction with fiscal policy.)
- ▶ (LTVs with only collateralized debt in model.)



(a) The distribution of LTV 2011-2015



(b) The distribution of KALP 2011-2015

Figure 1: Distributions of constraints for new borrowers in Sweden, 2011-2015



# MODELLING ENDOGENOUS HETEROGENEITY

- ▶ Data: Household heterogeneity in debt, wealth, income.
- ▶ Partition of households in four classes is reminiscent of:
  - ▶ savers,
  - ▶ standard borrowers (LTV-only),
  - ▶ poor hand-to-month (LTV & DSTI),
  - ▶ **wealthy hand-to-mouth** (DSTI-only).

—→ HANK-style implications with heterogeneity in MPCs dominating intertemporal substitution effects?

- ▶ **Endogenous distribution responds to policy** (and history).

## MODELLING CHOICES FOR SWEDEN

- ▶ Small open economies and international capital flows:  
→ stricter LTV ratios may have sudden stop-like implications (especially with proper fire-sale externality induced by *expected* house prices).
- ▶ LTV-dependent amortization requirement for mortgages (1% for LTV between 50% and 70%, 2% for  $LTV > 70\%$ ); perhaps even DTI-dependent (another 1% if debt  $> 4.5 I$ ).
- ▶ (Role for FRMs vs ARMs, vintage structure of LT debt.)
- ▶ (Heterogeneous housing preferences quite consequential.)
- ▶ (In the 'Swedish economy,' LTV changes seem a good option: reduce indebtedness, contain house prices better, and even increase output.)