Discussion of "Monetary policy in the presence of an occasionally binding borrowing constraint"

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The views expressed in this paper are those of the authors. No responsibility should be attributed to the Bank of Canada.
DSGE model with saver/borrower HHs, housing and banks
- small open-economy (foreign K-flows through banks)
- capital requirement on banks (slow-moving but binding)
- collateral constraint on borrower HHs (occasionally-binding)

Bayesian estimation using NZ data
- constraint on HHs assumed to be slack

Main results: with occasionally-binding constraint on HHs
- asymmetric responses of model variables to MP and LVR
- lower volatility (relative to always-binding constraint)
- optimal Taylor rule slightly favors borrowers (relative to estimated TR)
Regulatory policy (speed-limit vs. LVR)

- Regulation implemented in model different than actual policy
  - actual: "speed-limit" on high-LVR mortgages (10% of new loans)
  - model: regulatory cap on LVR on all outstanding mortgages

- A possible suggestion to bring model closer to actual:
  - bank offers 2-types of loans (high-LVR and low-LVR) with different interest rates
  - borrowers carry both types; imperfect substitution across loans
  - occ.-binding constraint: 10% cap on the share of high LVR loans
Long-term mortgages

- Model features 1-period loans and, therefore, does not differentiate btw. new and existing debt
  - full pass-through from policy rate to lending rate (adj.-rate mortgages)
  - effects of LVR policy exaggerated when applied to all outstanding debt

- Several options to incorporate long-term loans:
  - slow-moving LVR constraint similar to the cap. req. (Iacoviello, 2014)
  - differentiate between new and existing debt (Garriga et al., 2013)
  - tradable long-term debt (can write recursively; Woodford, 2001)
Debt accumulation:

\[ D_t = (1 - \kappa) D_{t-1} + L_t \]

Average borrowing rate on outstanding mortgages, \( R^M_t \):

\[ D_t R^M_t = (1 - \Phi) (D_t - L_t) R^M_{t-1} + [L_t + \Phi (D_t - L_t)] R^F_t, \]

where \( \Phi \) : share of existing loans refinanced at current fixed rate, \( R^F_t \)

New borrowing:

\[ L_t = \phi P_t q_{h,t} i_{hl,t} + \gamma [P_t q_{h,t} (1 - \delta_h) h_{l,t-1} - (1 - \kappa) D_{t-1}] + \epsilon_{l,t} \]

If \( \kappa = 1 \) and \( \gamma = \phi \), then constraint becomes similar to Iacoviello (2005)

\[ D_t = \phi P_t q_{h,t} h_{l,t} \]
Smoother transition paths for HH debt-to-GDP ratio

Baseline

- Monetary policy
- Property tax
- Mortgage int. deduction
- Regulatory LTV
Role of banks in the model

- Clarifying the role of banks/bank capital in the model
  - what if we get rid of banks and revert to Iacoviello (2005) type model?
    - not much? 2 bp ↑ in lending spread when policy rate ↑ by 60 bp
  - interaction of bank capital with exchange rate movements

- In data, res. mortgages make up less than half of banking assets
  - substitution to other types of loans

- In data, a small number of banks dominate the market
  - 4 banks make up 90% of total banking assets and 95% of mortgage lending
  - subsidiaries of foreign banks
  - imperfect competition (Gerali et al., 2010)
Comments on estimation/calibration

- Estimation does not take into account occ.-binding constraint
  - no regulatory LVR cap during the estimation period?

- HH debt and lending spread data matched by measurement error
  - maybe add "structural" shocks

- Existence of equilibrium in estimated model despite
  - banks discount future more than borrowers, $\beta_b < \beta'$ (typo?)
  - no borrowing constraint on HHs (due to bank capital channel?)

- Also include:
  - bank capital or RER data in estimation for identification
  - habits to reduce consumption volatility
Optimal policy

- Optimal LVR ratio? probably higher than 0.9
  - what’s the financial stability concern?
    - pecuniary externality: house price affects all borrowing constraints
    - small probability/high impact event (crisis)

- Why include output growth, but not output gap, in Taylor rule?
  - optimal MP to growth is pro-cyclical

- Optimal policy with occ.-binding vs. perpetually-binding constraint
  - borrowers would gain with occ.-binding, but lose with perp.-binding
  - constraint is more severe, so shouldn’t MP help borrower more?
    - create inflation to reduce debt burden (and relax constraint)