The Impacts of Macroprudential Housing Finance Tools in Canada: 2005-2010

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Macroprudential Policies: An Awakening

- The last decade has witnessed "the greatest housing bubble" and a global financial crisis.

- Macroprudential policies (MPPs) aim to create a buffer in a boom to ensure that "shocks from the housing sector do not spill over and threaten economic and financial stability." (IMF, 2014)

- Are MPPs the way forward?

- Urgent need for systematic evidence on the effectiveness of the MPPs.

House Price Indices for the U.S. and Canada
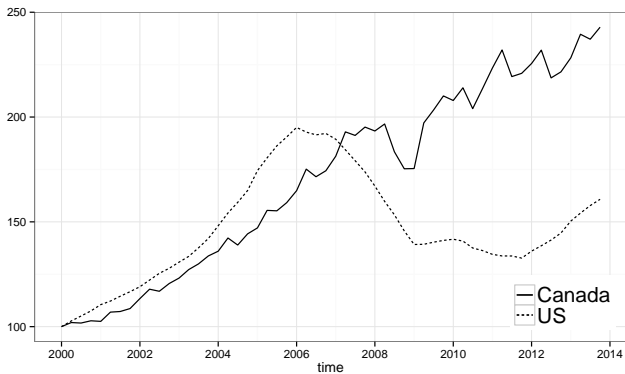
Four Rounds of Macroprudential Regulation in Canada (July 2008 — July 2012)

- Increasing the minimum down payment for a mortgage (2008, 2010)

- Reducing the maximum amortization period for new home loans (2008, 2010, 2012)

- Reducing the maximum amount that can be borrowed during a refinancing (2010, 2011);

- Increasing homeowner credit standards (2010, 2012);

- Limiting government-backed mortgage insurance (MI) to homes with a purchase price of less than $1M (June 2012).

This Paper's Contributions

- Rich data in an important market for an important episode:
  - Loan-level data and household-level survey: 2005 – 2010
  - Lending rules: Loosening + Tightening
  - Housing market: Boom + Bust + Rebound

- Two complementary approaches:
  - A data-driven approach:
    - Novel and rich evidence about the impact of MPP
  - A structure-driven approach:
    - Innovative and insightful microsimulation model of mortgage demand

- Key findings:
  - Wealth constraints (e.g. minimum downpayment) are more effective than income constraints (e.g. maximum amortization period).
  - Income constraints have a larger impact on high-wealth home buyers.

Suggestion 1: Exploit Data Further

- The policies are used in combination with macroeconomic policies and direct interventions.

- Substantial variations in housing demand over time and across markets.

- It is challenging to attribute observed outcomes to a specific policy.

- Suggestions:
    - May look at the number of FTHBs before/after these policies
    - May add more controls, such as interest rate, house price growth, income change, FSA×year× month, etc.
    - May compare the left tail distribution of FTHB's income or wealth over time.
    - May explore heterogeneity in consumer response by including "tight" × income, "tight" × wealth.
    - Maybe restrict the event window to focus on a particular policy

Suggestion 2: Microsimulation Model

- A very insightful model of mortgage demand that captures individuals' optimal behaviour

- But not exactly clear how housing demand is modelled

- "Renters become owners if they have enough income and wealth."

- This captures constraints but misses optimality. For housing demand,
    - Preference matters.
    - Rents matter.
    - Returns on housing and other financial assets matter.

- Suggestions:
    - Clarify necessary modelling assumptions.
    - More details on the calibration exercise (key parameters, moment equations, functional form, etc.)

Suggestion 3: Other Parts of the Market

- The paper focuses on borrowers' response to the policies.

- What about other sides of the market?
  - Tightening could reduce the risk of the borrowers (e.g., increased FICO scores), leading to a reduced mortgage rate.

  - Loosening could increase housing demand and hence house price, which affects mortgage demand.

- What's the fraction of repeated home buyers?
  - Annenberg and Bayer (2013): "internal movement - selling one home and buying another - by existing homeowners within a metropolitan housing market is especially volatile and the main driver of fluctuations in transaction volume over the housing market cycle."

- Suggestion: Discuss how these unmodelled factors could affect the interpretation of the results particularly policy implications.

- Documents unrecognized mortgage demand dynamics under the recent macroprudential policies in Canada

- Provides a first fine-grained look at borrower behaviour before and after a set of loosening and tightening lending regulations.

- Presents a structural approach to quantify the impact of the macroprudential tools on mortgage demand

- The findings are novel, thought-provoking, and have important policy implications.

A Complementary Work

- Han, Lutz, and Sand (2016) examines how MPP affects home sales.

- Use the transaction level data in the Greater Toronto Area from 2011-2013

- Focus on sales price, list price, and time on the market.

- Exploit a natural experiment arising from the 2012 law change that limits Mortgage Insurance (MI) to homes with a purchase price of less than $1 million.

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- Increase homeowner credit standards (2010, 2012);

- Limit government-backed mortgage insurance (MI) to homes with a purchase price of less than $1M (June 2012).
  - Announced on June 21 and went into effect on July 9, 2012
  - MI is required on any loan with a LTV higher than 80 percent.

Our Findings

- The MI policy caused a 1.25 percentage point decline in the growth of homes listed above $1M and a 0.29 percentage point decline the growth of homes sold above $1M.

- Significant spillover in the segment listed right below $1M:
  - a spike in houses listed right below $1M.
  - a higher fraction of the sales over asking price
  - a shorter seller time on the market,

- MI policy $\implies$ sellers price million dollar homes below the $1M
  $\implies$ the under-listing ignites the bidding wars
  $\implies$ speed up sales and push sales price above listing.
  $\implies$ little changes in sales volume around $1M.

- "Ottawa's new rules creating 'red hot' market for homes under $999,999$." – Financial Post. July 3, 2013.