The Spillover Effects of Real Estate

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Quick Summary

- Key questions:
  - How large is the spillover effect of the real estate to the rest of the economy (during the downturns)?
  - Other important channels besides the collateral effect?
  - How to deal with the potential endogeneity problems?
- Research strategy:
  - Policy shock: the Three Red Lines (TRL) policy issued by China's central government on August 20, 2020, which strictly constrained the liability of real estate developers.
  - Exposure measure: non-real estate firms' pre-shock stock return correlation with the real estate developers, weighted by the number of lines violated by real estate firms.
  - DID estimation: comparing non-real estate firms with higher and lower exposures to TRL.

Quick Summary

- Major findings:
  - Stock return and bond spread both respond more for non-real estate firms with a higher exposure measure.
  - Non-real estate firms with a higher exposure measure also experience decrease in investment, sales, and net profit, and increase in leverage, whose magnitude is huge in aggregate.
  - Sectors closer to the real estate in the production network or more relying on external financing are more severely affected.

- Key contributions:
  - New empirical evidence on the spillover effect of real estate based on a brilliant identification strategy.
  - One of the first studies focusing on the production network channel.
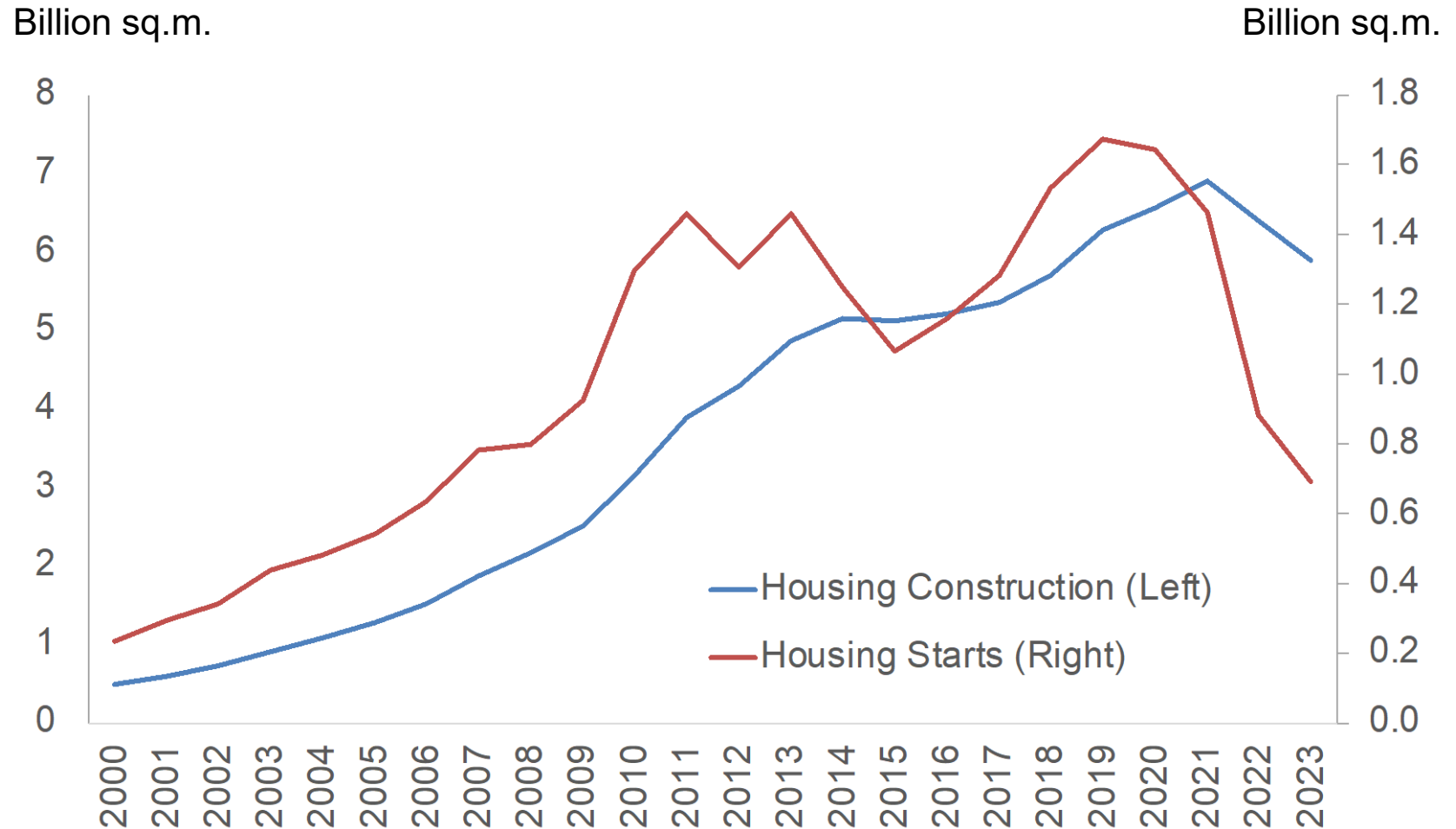
Comment 1 – Elasticity Estimate

- Policy makers and academic researchers would already have consensus on the *existence* of the spillover effects of real estate.

- The key question and challenge for empirical analyses is the *magnitude* (or *elasticity*) of the spillover effects, which is important for policy makers.

  - That is also why we need a clean identification strategy.

  - Gan (*JFE*, 2007): For every 10% decrease in land value, the investment rate is reduced by 0.8 percentage point.

  - Chaney, Sraer, and Thesmar (*AER*, 2012): Over the 1993-2007 period, the representative US corporation invests $0.06 out of each $1 of collateral.

Comment 1 – Elasticity Estimate

- The beauty of the paper mainly comes from the identification strategy, but the current estimate on spillover effect magnitude is not easy to interpret.

  - "We find that our estimation accounts for 42.31% of the total investment decline during 2020Q4-2022Q3."

  - The change in real estate value or output is not clear, and thus cannot support the elasticity estimate.

- A two-stage estimate?

  - First stage: adopt the policy shock (i.e., number of lines violated) to estimate the change in real estate firms' outputs

  - Second stage: investigate how the (estimated) changes in real estate firms' outputs (weighted by correlations) affect non-real estate firms performances

Comment 2 – External Validity

- Unique Feature 1: Massive volume of over-building before the policy

Billion sq.m. (left axis), Billion sq.m. (right axis)

Housing Construction (Left)
Housing Starts (Right)

Comment 2 – External Validity

- Unique Feature 1: Massive volume of over-building before the policy

    - China's new urban housing supply exceeded the new urban housing demand by over 23% during 2011-2020, most of which occurred after 2016 (Deng, Gyourko, and Wu, ongoing work)

    - 1.76 billion sq.m. of housing sold between 2001 and 2018 were left vacant by the end of 2020, most of which were sold after 2014 (Zheng, Zhang, Yin, and Wu, 2023)

    - Last Friday, China's central bank issued 300 billion RMB loans to encourage local governments to purchase developers' unsold housing stocks

- An abnormally larger correction after an abnormal housing oversupply?

Comment 2 – External Validity

- Unique Feature 2: Massive default, or even bankruptcy, of leading developers

  - For the top 100 housing developers released in June 2020, 43 had defaulted by the end of 2023

  - Country Garden (#1), Evergrande (#2), Sunac (#4)…

- Unique Feature 3: Wide usage of trade credit before the shock

  - Developers typically held accounts payable to contractors/suppliers for a long period

  - During the crisis, developers failed to repay these non-real estate firms that had close linkage in the production network

- The huge shock was highly imbedded in the unique arrangements in China's housing development industry

Comment 3 – Potential Bias

- The exposure measure may still reflect other information.

    - Leading developers' diversification strategies before the shock.

    - Common shareholders for real estate and non-real estate firms.

    - I believe they would not dominate the results, but more robustness checks would be helpful.

- Potential sample selection bias

    - Most private housing developers were listed in Hong Kong, instead of Shanghai or Shenzhen; they were more likely to violate TRL and, thus, badly affected after the policy.

    - The current exposure measure does not take these H-share developers into consideration.

Summary

- A very important topic, a brilliant idea on the identification strategy, rich empirical analyses, and convincing results.

- New insights on the spillover effects of the real estate from the production network perspective.

- More efforts to make larger and more direct contributions to this important field (elasticity, external validity).

- More clarifications and robustness checks on the exposure measure are also helpful.