Macro Shocks and Housing Markets

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August 2023

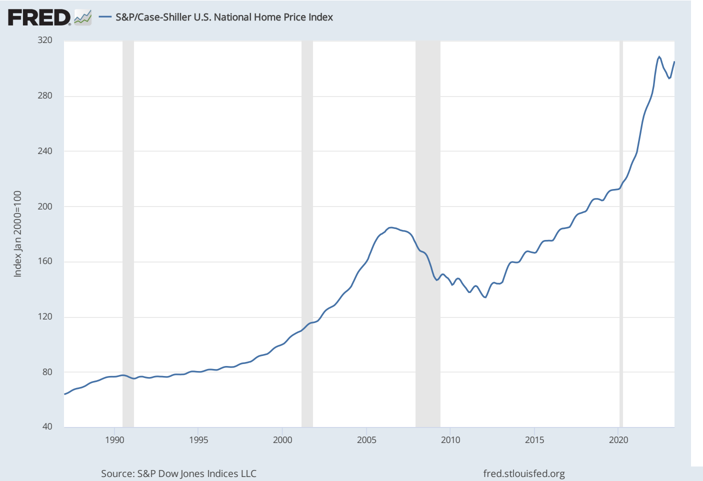
What is Real Estate about? Where does its value come from?

- Real estate assets are valuable because they provide space
  - Space that individuals, businesses, etc would like to use
  - Rents as measure of the value of using the space
  - They are willing and able to pay for their use (household income, financing costs, monetary policy, fiscal policy, etc)
- Real estate asset markets
  - Cash-flows from the assets
  - Discount rates, and interest rates in particular (monetary policy)
- Reaction of supply
  - In the very short-run the supply of real estate is largely fixed
  - But in the longer term there will be a reaction: construction, depreciation, repositioning

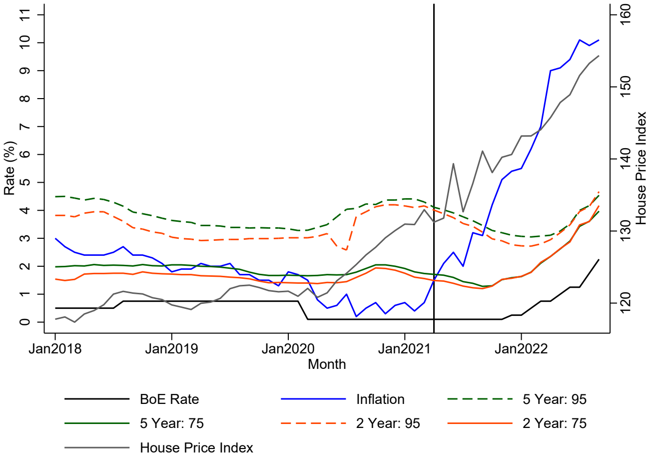
The question in the paper and first reaction

- Broadly similar monetary and fiscal policy responses during the GFC and the COVID-19 Pandemic
  - But very different housing market outcomes. Why?
- Why haven't house prices declined more in the recent period of rising interest rates?
  - Implications for affordability.
- My first reaction:
  - Very ambitious paper!
  - Differences in the nature of monetary and policy responses? Speed of the response.
  - The model analysis focuses almost exclusively on the COVID-19 period. Still very ambitious paper!

Evidence from the United States



Evidence from the United Kingdom



The model

- To what extent income, interest rates, preferences, supply contributed to the patterns observed in the data: Stimulus and Tightening phases.
- Very rich model along many dimensions: two household types with different incomes, deposits and mortgages, LTV constraints, housing market equilibrium, etc.
- Simplify the analysis along others: Mostly comparison of steady states with constant housing prices (but also a short section on model dynamics); No DTI constraints in the mortgage market (mortgage affordability); No rental market (?); No construction sector
- One of the main model contributions: Identify and quantify the importance of the preference shock for the observed price changes during the stimulus phase.

How should we think about the preference shock for housing?

- Persistent or temporary?
  - Will it be reversed in the future?
  - Persistent changes in the way households make use of their houses?
  - Persistent changes in the way we work (remote working) and/or ability to work remotely?
- The analysis assumes that the change is permanent
  - Conservative, in the sense that a decrease would lead to a smaller (larger) model predicted increase (decline) during the stimulus (tightening) phase
  - But how should we think of model quantities if the preference shock is temporary?
- Can rental markets and price to rent ratios help us think about the persistence of the preference shock?

Mortgage lock-in effects

- FRM mortgage with low rate relative to the current market rate:
  - If sell house and move, pay back the loan at face value and loose money.
  - Lock in effects not as important in ARM countries
  - Nor in Denmark: long-term FRM, but pay back the loan at market value
- Lock in effect reduces likelihood of a house sale and move:
  - Labor market implications: Less likely to take up a job in a different location. How important is this in a world of remote working?
  - Misallocation of housing resources: less likely to sell and buy a house better suited to preferences/circumstances.
  - Lower number of transactions

Mortgage lock-in effects: House price effects less clear

- Less likely to sell (lower housing supply) but also less likely to buy (lower housing demand).
- Housing market clearing condition, demand equals supply (1 is FTBs, and 2 existing homeowners, N is the size of the groups):
  $N_1 h_1 + (\rho_1 - \rho_2) N_2 h_2 = \rho_1 N_2 h_2 + \Delta H$
  ρ_1: share of existing homeowners who sell
  ρ_2: share of existing homeowners who exit
- Where do existing homeowners who exit go? Rental market? Effect on rental prices?
- But reservation price of potential sellers is higher, the market thinner, effects on equilibrium housing prices? If mortgage lock-in effects are quantitatively important for house prices, maybe it is worthwhile trying to be more explicit in the modeling.

A few thoughts on housing supply

- The (supply) of available space is largely fixed in the short-term, but:
  - Investor purchases (including foreign investors): decrease in the supply of available space if and only if the property is kept vacant.
  - Purchase of second homes: same household, two homes. Some space will be vacant some of the time. Decrease in the supply of available space.
  - How important are these effects quantitatively?
  - Can we improve on the calibration of ΔH in the model?
- What limits the reaction of construction?
  - Land availability, permits, other regulatory constraints.
  - Construction costs: materials, energy costs, labor, financing costs.
  - Supply chain disruptions following the pandemic.
  - Real options exercised by land owners.
- Supply of what types of houses
  - Luxury flats versus affordable homes.
  - Two types of houses in the model? Starter homes and other.

Conclusion

- Very nice and ambitious paper.
- Preference shock quantitatively important for understanding the evolution of housing markets during the pandemic.
- Should less support have been provided for housing markets? Monetary or fiscal?
- Mortgage lock-in effects and effective transmission of monetary policy.
- Housing supply and affordability. What role (if any) should monetary policy have?
- THANK YOU!