

Mortgage Lock-In, Mobility, and Labor Reallocation

by Fonseca and Liu

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NBER SI Real Estate

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One-slide Summary

- Narrative: People with sweet mortgage rates can't bear to give them up, turn down opportunities to move to better jobs.
- Causal question: Do interest rate increases decrease moving elasticities?
- Strategy: Credit bureau data for migration and imputed interest rates. Instrument for rate gap assuming month of origination is exogenous within quarter. Instrument for wage gap with Bartik shocks.
- Findings: Interest rate lock-in decreases moving elasticity by 64%
- Robustness: IV, quarter of origination FEs, effect kink not in any selection story

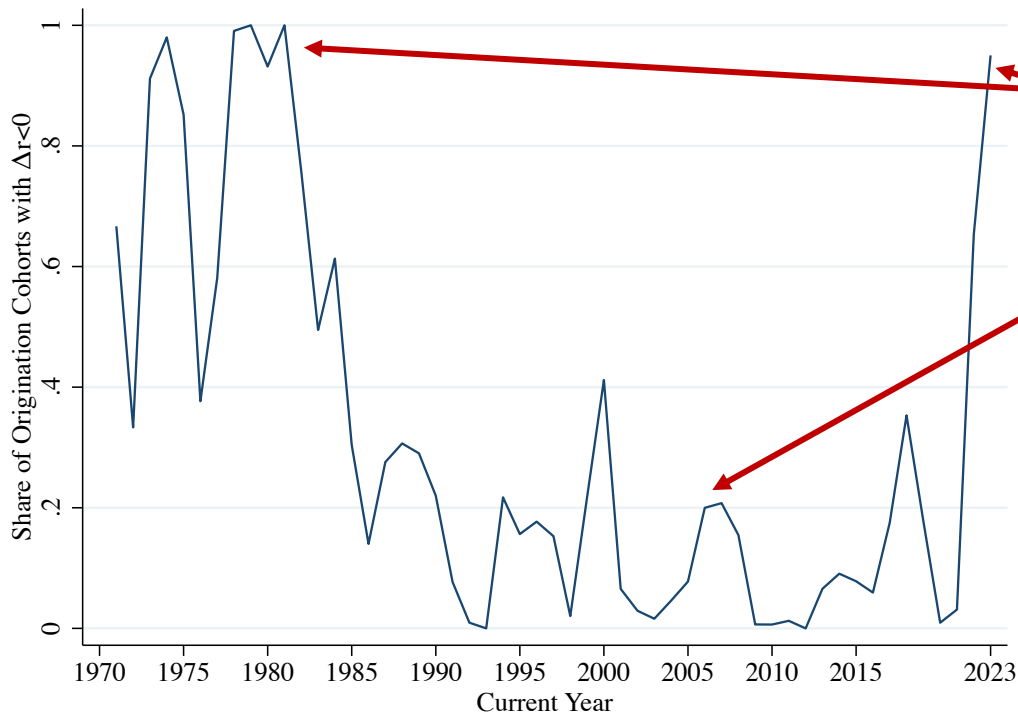
Outline

1. How frequent are lock-in conditions historically?
2. What do we learn about mortgage lock-in?
3. Covariance of interest-rate lock-in with negative equity?

1. How frequent are lock-in conditions historically?

- Use Freddie Mac average interest rate series (ignore points...)
- For each current quarter, calculate Δr for every possible origination quarter in prior 20 years
- For each year, calculate average share of origination quarters
- If origination were uniformly distributed, this would be share with
current $r >$ origination r

$r_o < r_t$ is frequent enough to command attention ✓



1. High inflation \Rightarrow lots of people with $r_o < r_t$

2. Even outside big inflation, not uncommon to have 20%+ origination months with $r_o < r_t$

2. Don't we already know this?

- Most common question asked about the paper
- Premise true by introspection
- Premise true by ubiquitous anecdotes
- Ferreira, Gyourko, and Tracy (2010) “Housing busts and household mobility,” *Journal of Urban Economics*.
- Quigley (1987) “Interest Rate Variations, Mortgage Prepayments and Household Mobility,” *ReStat*.
- Contribution: address endogeneity (*and noise!*) with IV + document implications for labor and housing markets
- Still, useful to discuss FGT and Quigley much more & highlight what OLS gets wrong + why

The Home Buyer's Quandary: Nobody's Selling

Many are ready to move but don't want to lose the low-rate mortgages they locked in a few years ago, crimping the supply of homes and keeping prices high

By [Nicole Friedman](#) [Follow](#)

Updated May 10, 2023 at 1:04 pm ET



WSJ

U.S. ECONOMY

After Years of Low Mortgage Rates, Home Sellers Are Scarce

Homeowners wearing the 'golden handcuffs' of low mortgage costs are reluctant to sell their homes now that rates are much higher

By [Nicole Friedman](#) [Follow](#)

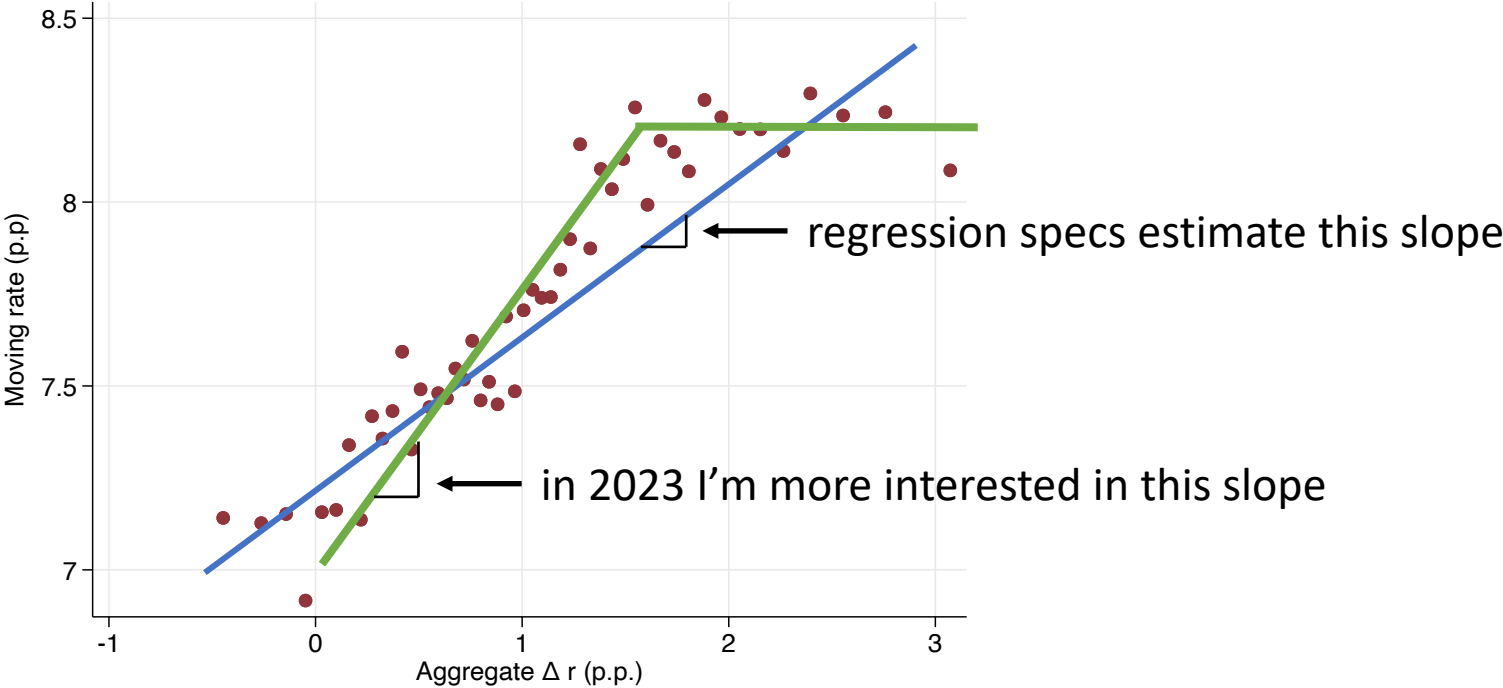
Updated Sept. 22, 2022 at 3:12 pm ET

Importance of OLS vs. IV Magnitudes

- OLS > IV if private info on long E(tenure) leads people to get low rate.
⇒ OLS spuriously finds lock-in when it's selection (e.g., Stanton Wallace, 1998)
 - OLS < IV if some people are just generally elastic: push hard for best rates and move for best wages. Townies do neither.
 - This paper: OLS = 0.18 vs. IV = 0.68-1.14.
1. Do more with imbalance of observables under OLS/FEs to explain this bias
 2. Emphasize aggregate explanatory power difference more: value proposition
% moving decline explained = $(2018-22 \Delta r \text{ increase}) \times \hat{\beta} \div (2018-22 \Delta \text{ moving})$
 - (2018-22 Δr increase seems to be 2 pp, not 0.36 pp)
 - Using OLS: lock-in explains 23% of moving decline. Using IV: explains 87-146%.
 3. Contrast to most comparable estimate in FGT and Quigley.

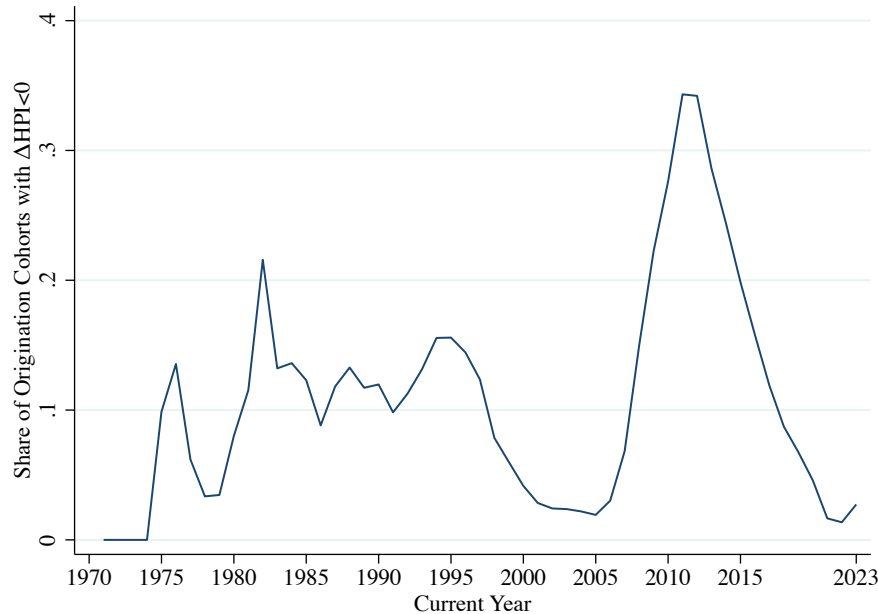
Suggest integrating kink into *all* specifications

Figure 2: Moving Rates and Aggregate Mortgage Rate Deltas

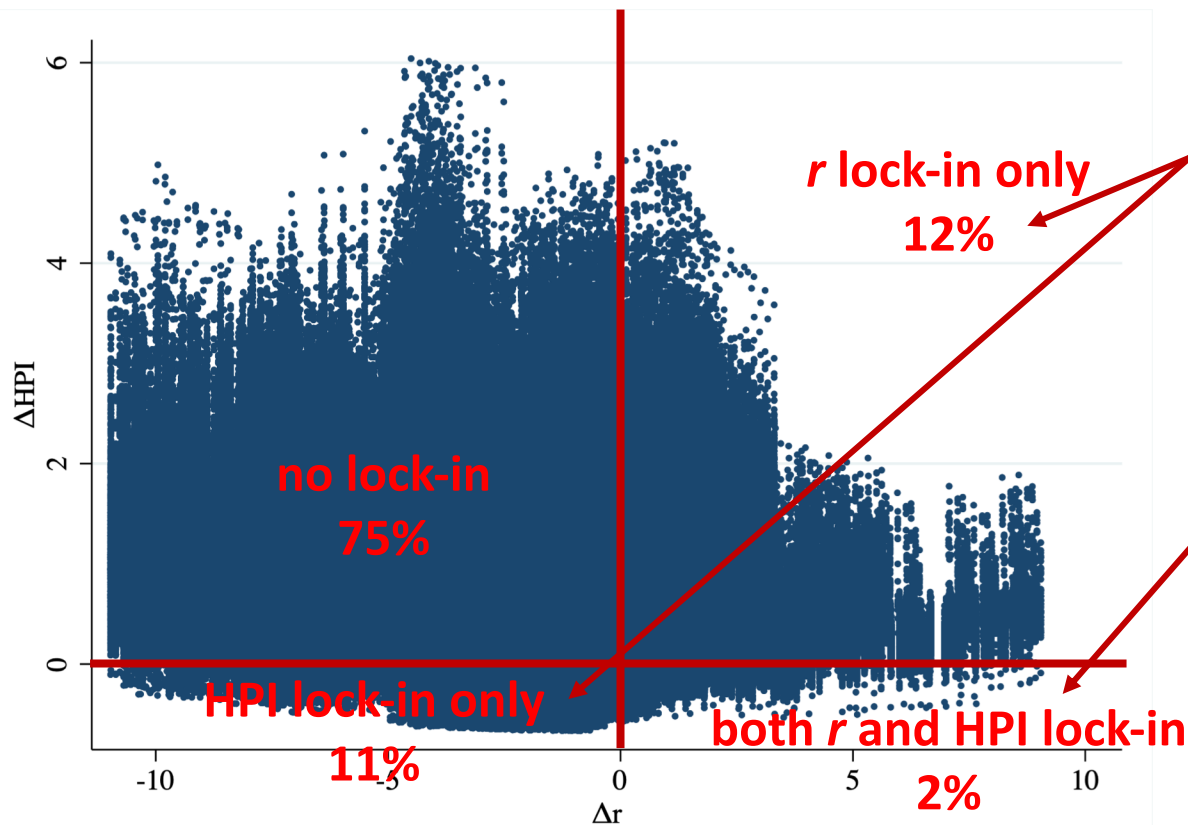


3. Covariance with negative equity?

- Use FHFA MSA HPIs to calculate cohort x tenure groups' Δ HPI



Neg. equity and interest rate lock-in prevalence



1. Having $r_o < r_t$ is roughly as common as negative equity. ✓

2. The two don't co-occur nearly as much as you might think. ✓

Conclusion

- Super topical paper finds ample causal evidence to confirm ubiquitous intuition that rate hikes reduce mobility
- Historical data suggests this is important + also not the same phenomenon as negative equity lock-in
- Suggest hammering home contribution point by nailing OLS vs. IV magnitude interpretation, finding an endogeneity smoking gun, and using kink all over

Other things

- I would flip the definition of Δr so that an increase in Δr corresponds to an increase in lock-in. Also then the change = future – past. Both more intuitive.
- Need much more evidence GCCP is great for measuring migration, not just a cite to a WP. Equifax has too much bouncing between 2 zip codes; does GCCP? If I move and keep my old house to rent out, does GCCP get that right?
- Want to see kink evidence throughout instead of above/below median splits, etc.
- Use ΔHPI as a control instead of current HPI
- Can do county-level estimates using RF (county-level variation in mortgage timing) to satisfy concerns this analysis is OLS and not robust
- Popular coping mechanism: rent out house with good r + move and rent the next house. Ideas on why this isn't prevalent enough to undo the lock-in effect?
- For economic efficiency and incidence, is there a paper you can cite that estimates what groups' mobility matters most for their own wages / economic growth?