# Mortgage Market Structure and Monetary Policy

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# The Importance of Mortgages

- Mortgages are the largest household liability in the US and most other developed countries.
- Mortgage rates are the main direct channel through which monetary policy affects household consumption.
- Mortgage rates also have a strong impact on house prices and hence the construction industry.
- Problems with mortgage lending were at the heart of the global financial crisis in 2008-09, and affected US regional banks in 2023.

# Two Specific Topics

1. FRMs vs ARMs, amortization, and monetary policy
2. Monetary tightening and the lock-in effect

# FRMs vs ARMs, Amortization, and Monetary Policy

# The Mortgage Channel of Monetary Transmission

- The mortgage channel is not about intertemporal substitution, but about **redistribution** across agents (Auclert 2019).
- The mortgage rate affects monthly payments by borrowers but also payments received by lenders. There is an aggregate effect if borrowers change their spending more than lenders do.
  1. Borrowers are domestic residents, while some lenders are foreigners with a higher propensity to spend on foreign rather than domestic goods.
  2. Borrowers have a high marginal propensity to consume (MPC) because they are borrowing-constrained, while lenders have a low MPC because they are unconstrained permanent income consumers.
- The second argument works only if mortgage payment changes are **temporary**. If they are permanent, lenders adjust their consumption one-for-one, perfectly offsetting the effect on borrowers.

# FRMs, ARMs, and the Mortgage Channel

The mortgage channel is **stronger for ARMs than for FRMs** (Di Maggio et al 2017).

1. ARM payments are linked to the short rate but FRM payments are linked to the long-term mortgage rate which typically moves less.
2. ARM payments change for all borrowers, but FRM payments change only for new borrowers and (on the downside) refinancers.
    - And refinancing may be limited by credit restrictions and borrower inertia.
3. The change in ARM payments is temporary while the change in FRM payments is long-lasting, so FRM lenders will adjust their consumption more, offsetting the effect on borrowers.

# Why Do We Care?

- The central bank may not care about the strength of monetary transmission if it can adjust the interest rate freely to achieve the desired effect on the economy.
- But it may care if
    1. It wants to control the relative impact of monetary policy on households (consumption) and businesses (investment). The mortgage channel primarily affects households.
    2. There are regional differences in the strength of the mortgage channel (as in the US where the ARM share varies regionally – Beraja et al 2019).
    3. The central bank is pegging the exchange rate to a foreign currency (DKK or SEK to EUR?) whose interest rates are calibrated to a different mortgage system.

# Can We Do Better than ARMs?

- In some circumstances the central bank may want an even stronger mortgage channel than ARMs offer.
  - For example, when the short rate is close to the zero lower bound.
- One approach is to build forbearance provisions (contingent **zero or negative amortization**) into mortgage contracts ex ante.
  - As opposed to the ex post approach used in the Covid-19 pandemic (An et al 2022, Cherry et al 2021).
- Campbell, Clara, and Cocco (*JF* 2021) uses a structural model to demonstrate welfare gains from allowing zero amortization in a recession.
  - Importantly, the model looks at implications for default as well as consumption.

# Monetary Tightening and the Lock-In Effect

# What About Monetary Tightening?

- The discussion so far has been symmetrical for easing vs tightening, but there is another mechanism by which long fixation periods may specifically weaken the effects of a monetary tightening.
- If FRM refinancing is disadvantageous when rates rise, then FRM borrowers become reluctant to move (**lock-in**).
- A decline in homes for sale can prop up house prices, reducing the contractionary impact of higher interest rates.
- Lock-in can also reduce the efficiency of the labor market by making people unwilling to move to better new jobs.

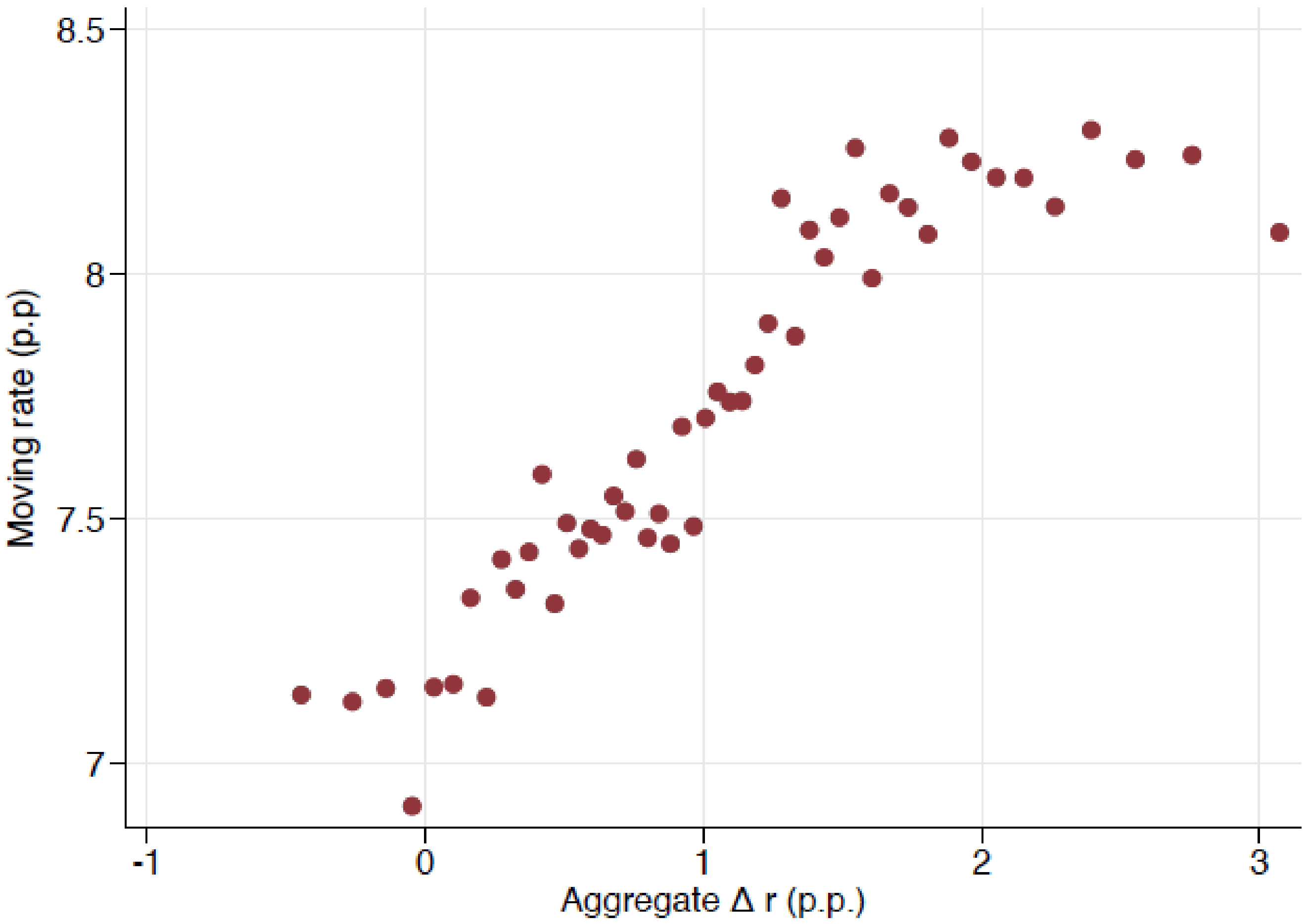
# US Evidence of Lock-In

Moving rate plotted against "mortgage delta", the difference between the household's old mortgage rate and the currently available mortgage rate.

People to the right of 1.8% are sluggish refinancers who should have refinanced without moving. People to the left of 0% are in a rising-rate environment.

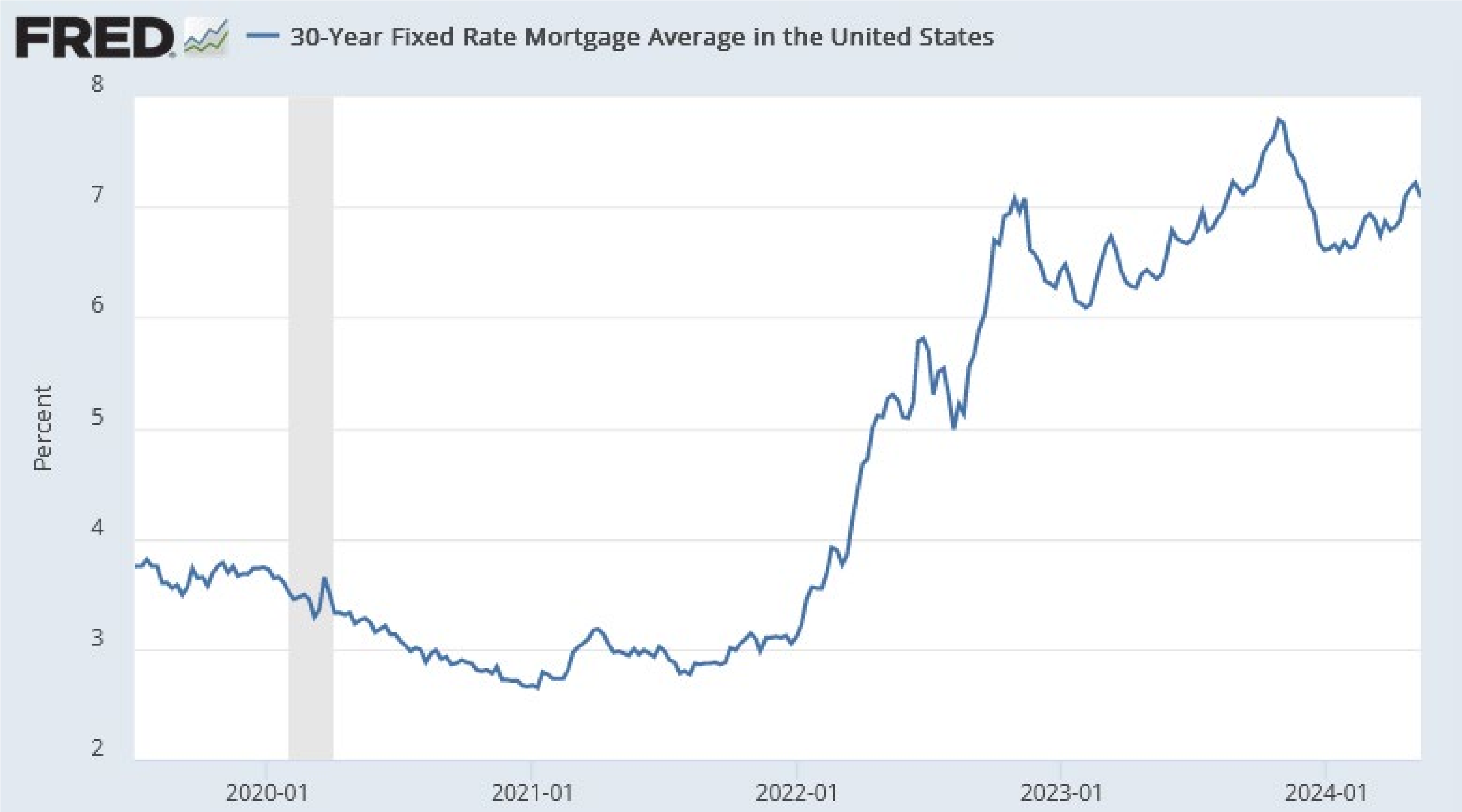
Lock-in (a positive slope) occurs not only to the left of 0%, but also between 0% and 1.8%.

Source: Fonseca and Liu (2023).



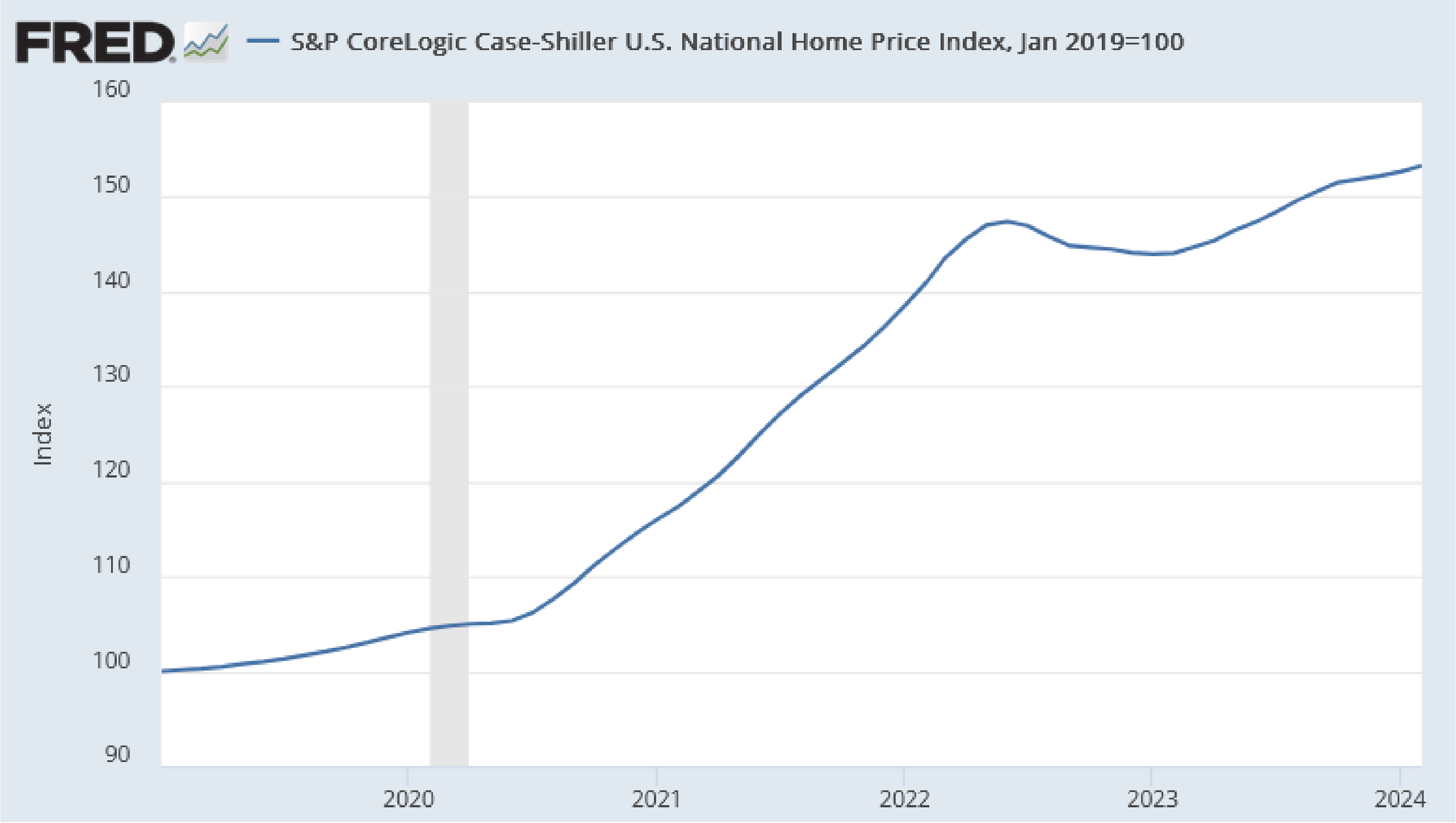
# Rising US Mortgage Rates

- Sharp increase in 30-year FRM rate in 2022 with some further increase in 2023.
- Rate was below 3% in 2021, over 7% now.



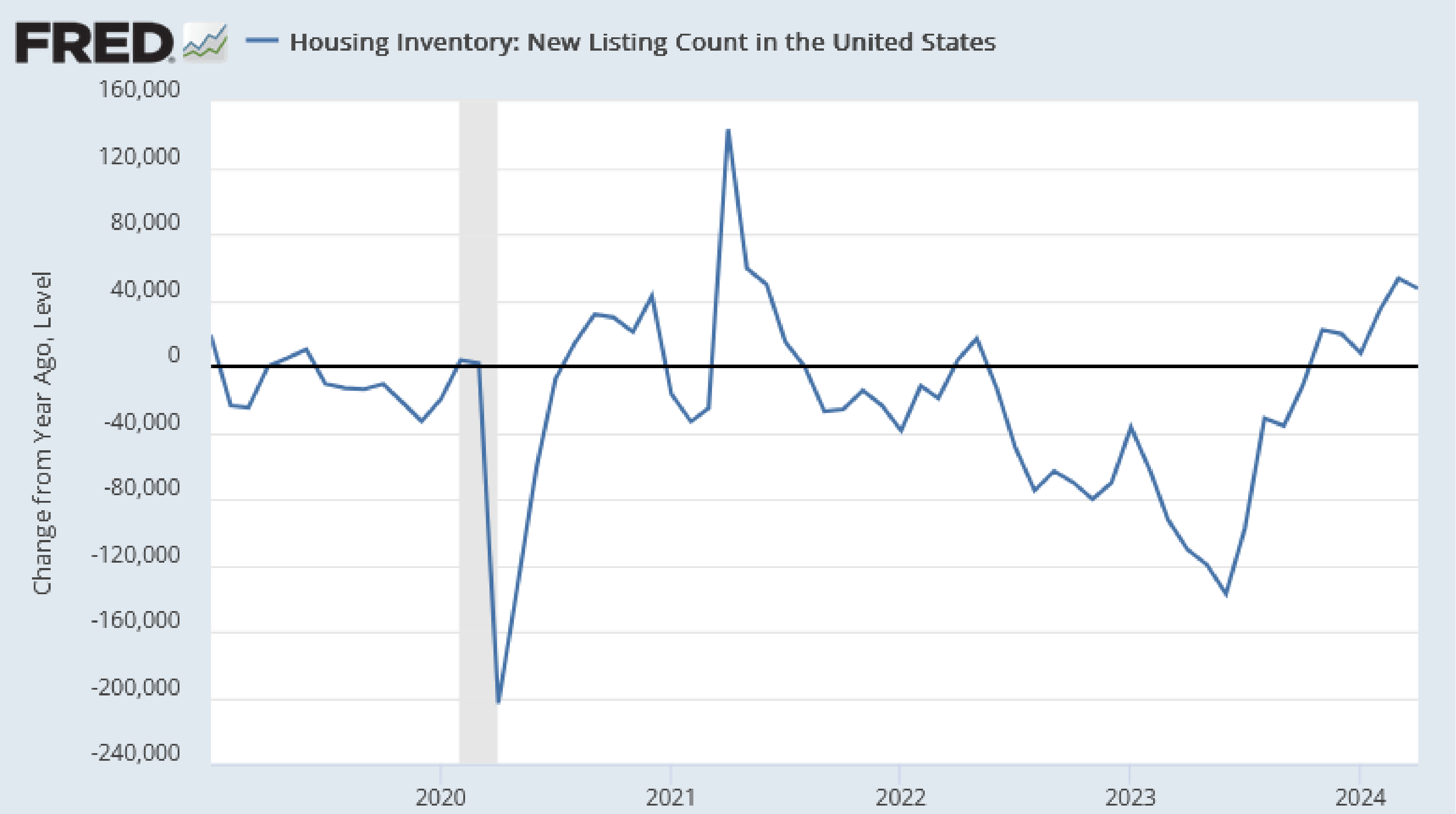
# Why Are US House Prices So High?

- US house prices have not declined as one might expect given the rise in mortgage rates.
- Case-Shiller index is up over 50% since January 2019, with only a small dip in 2022-23.



# Could It Be Lock-In?

- One possible explanation is lock-in: existing homeowners are reluctant to sell because they would give up their old cheap mortgages (Batzer et al 2024).



# How to Fix the Lock-In Problem

Other countries use various mechanisms to avoid lock-in:

- **Assumability** (mortgage can be transferred to new homebuyer – standard in Denmark – uncommon in the US)
- **Portability** (mortgage can be carried to a new home – common in Canada and the UK – unknown in the US)
- **Mortgage buyout at market value** (standard in Denmark – unknown elsewhere)
- And of course lock-in does not arise in an **ARM system**.

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