

APOLLO

US Housing Outlook: Higher mortgage rates slowing demand. But housing supply remains very low.

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Apollo Global Management

September 2023

Unless otherwise noted, information as of September 2023.

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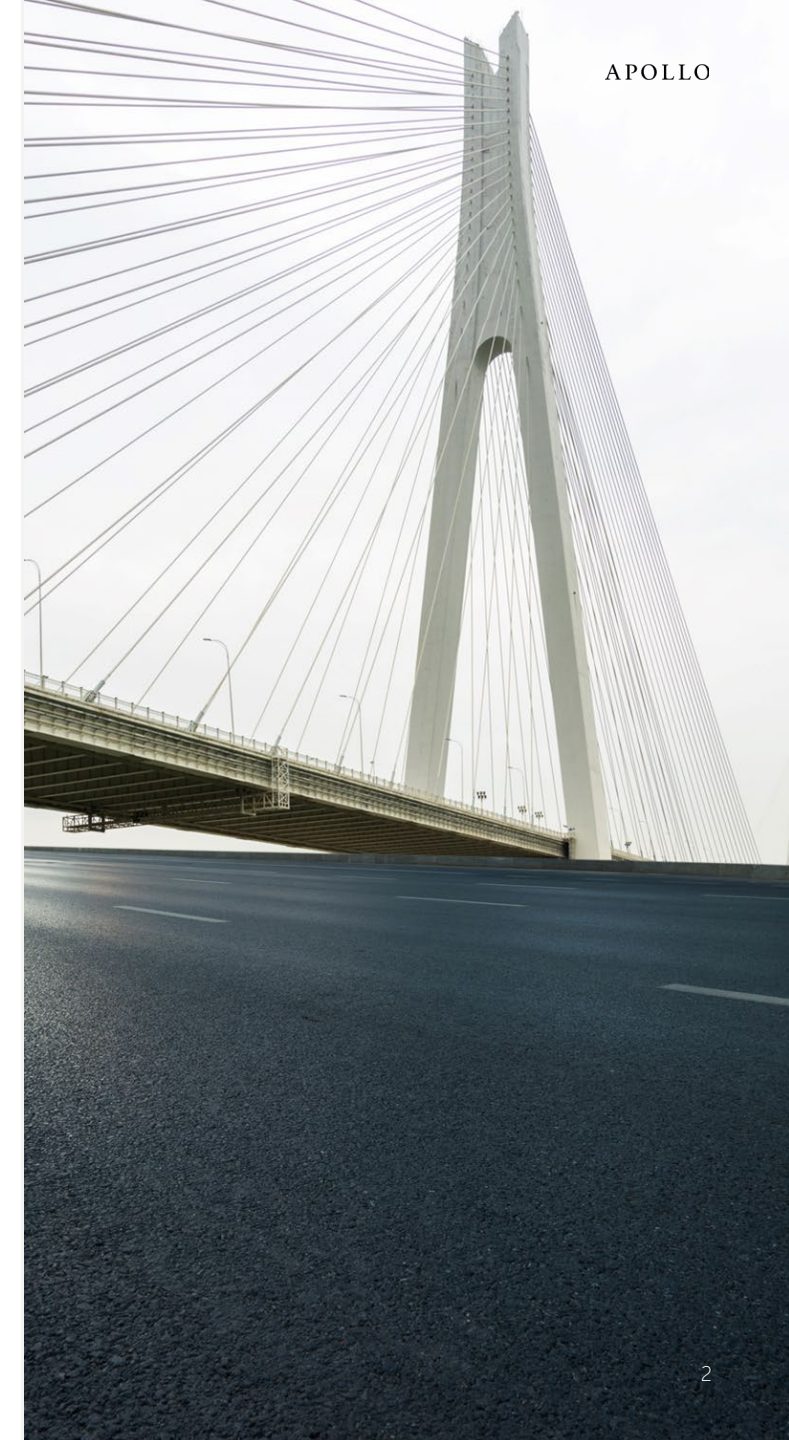
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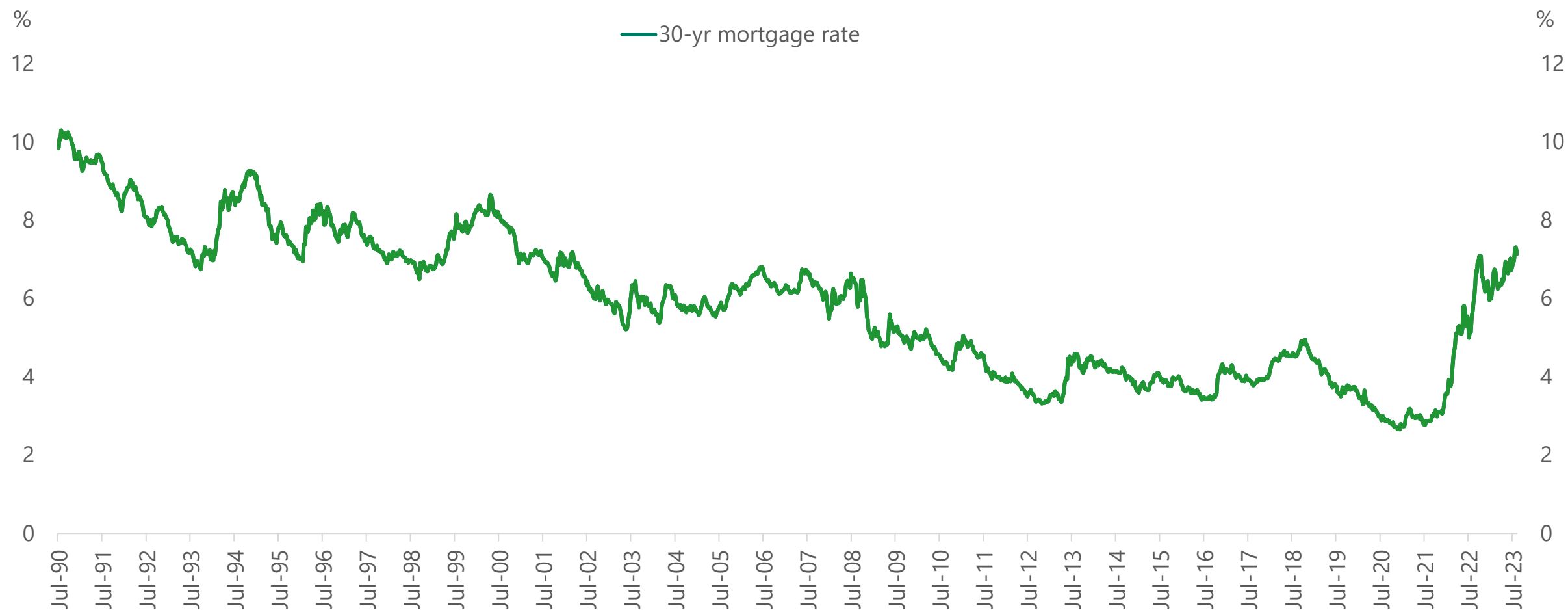


Why is housing still doing well despite higher mortgage rates?

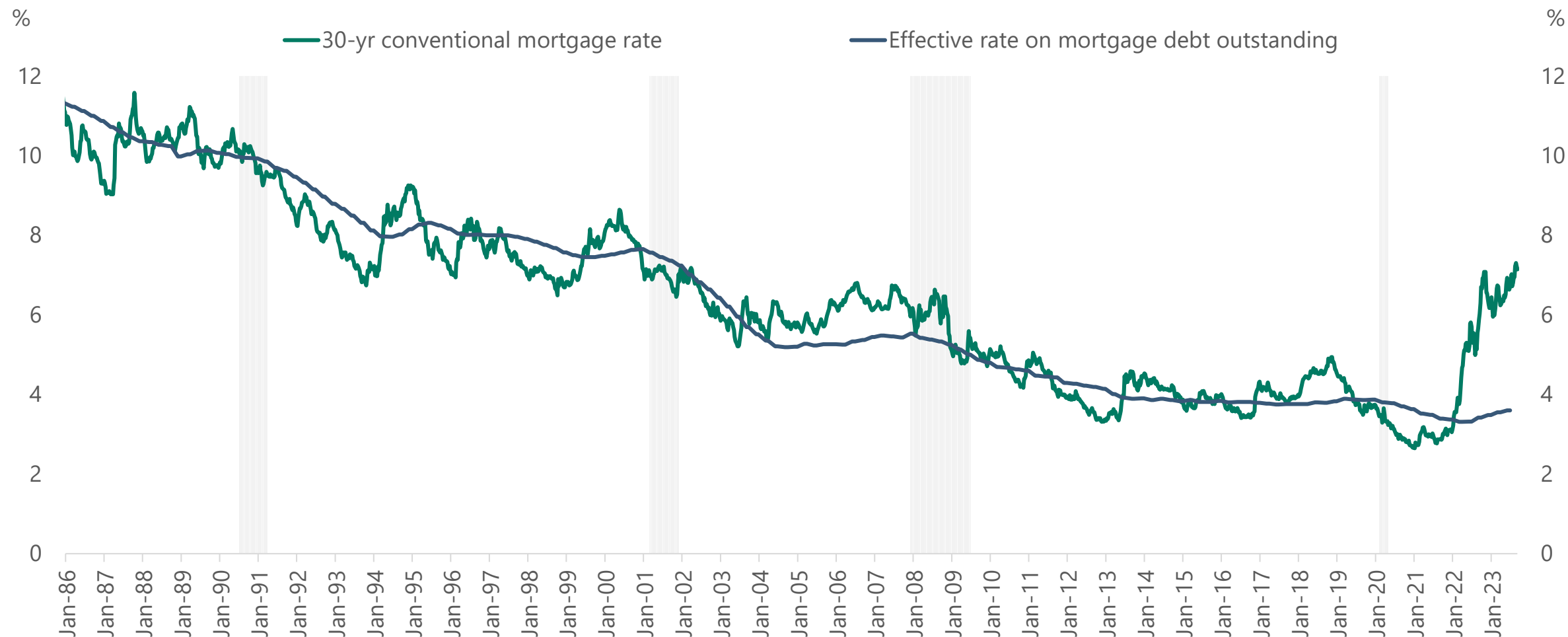
1. Low housing supply
2. Decent job growth
3. Robust wage growth
4. Still some excess savings left

Leading indicators of the housing market

30-year mortgage rates now at 7.5%

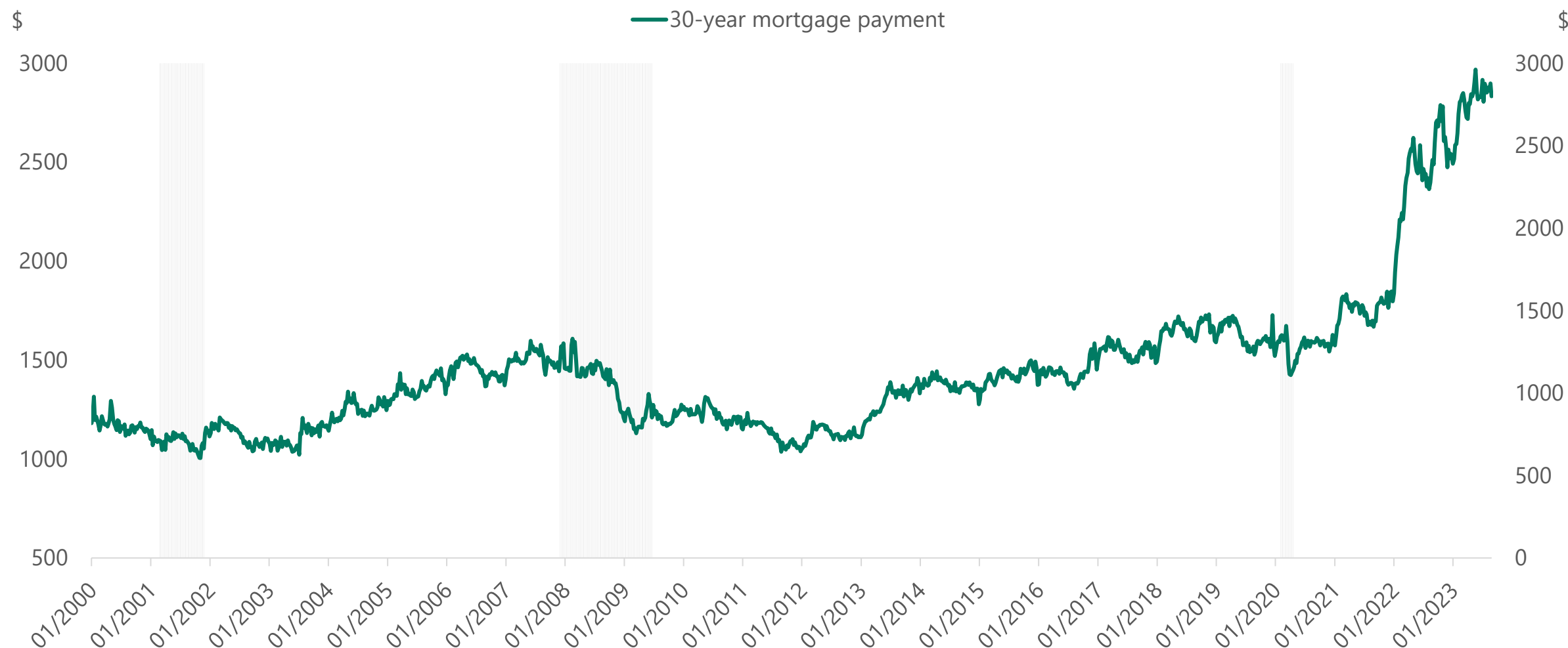


Effective outstanding mortgage rate around 3.5%

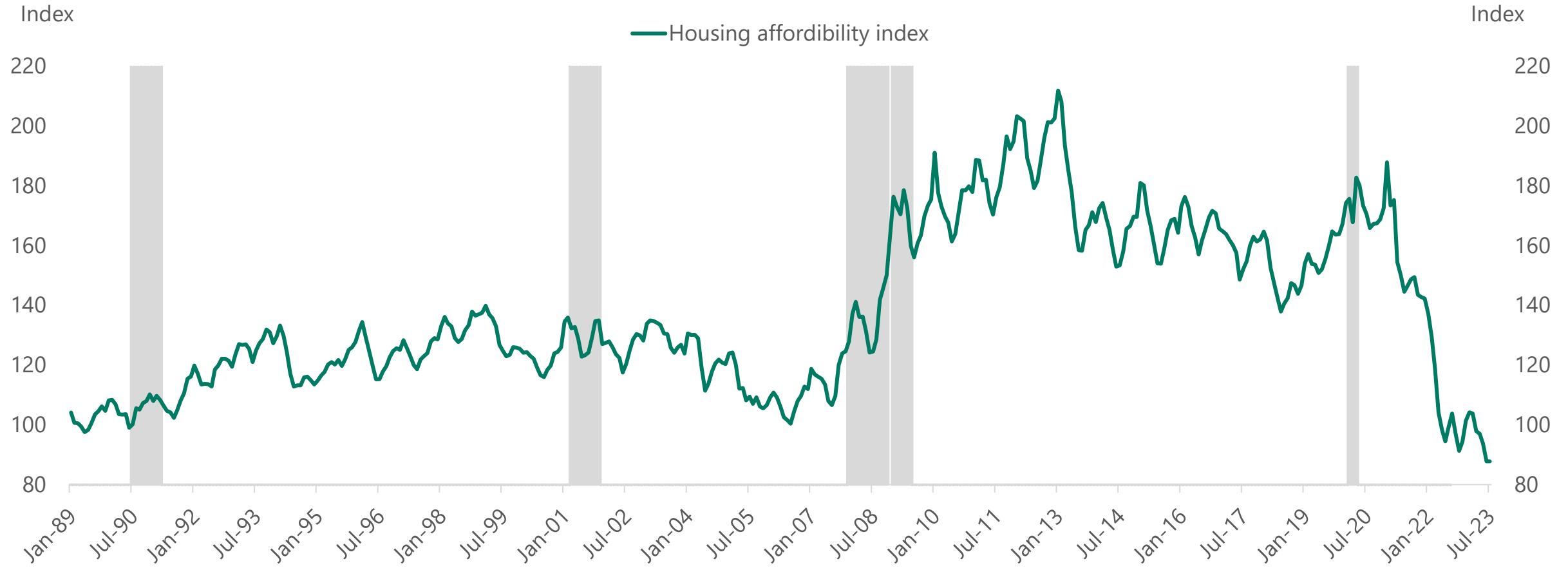


Source: Freddie Mac, BEA, Bloomberg, Apollo Chief Economist. The effective interest rate (%) reflects the amortization of initial fees and charges over a 10-year period, which is the historical assumption of the average life of a mortgage loan.

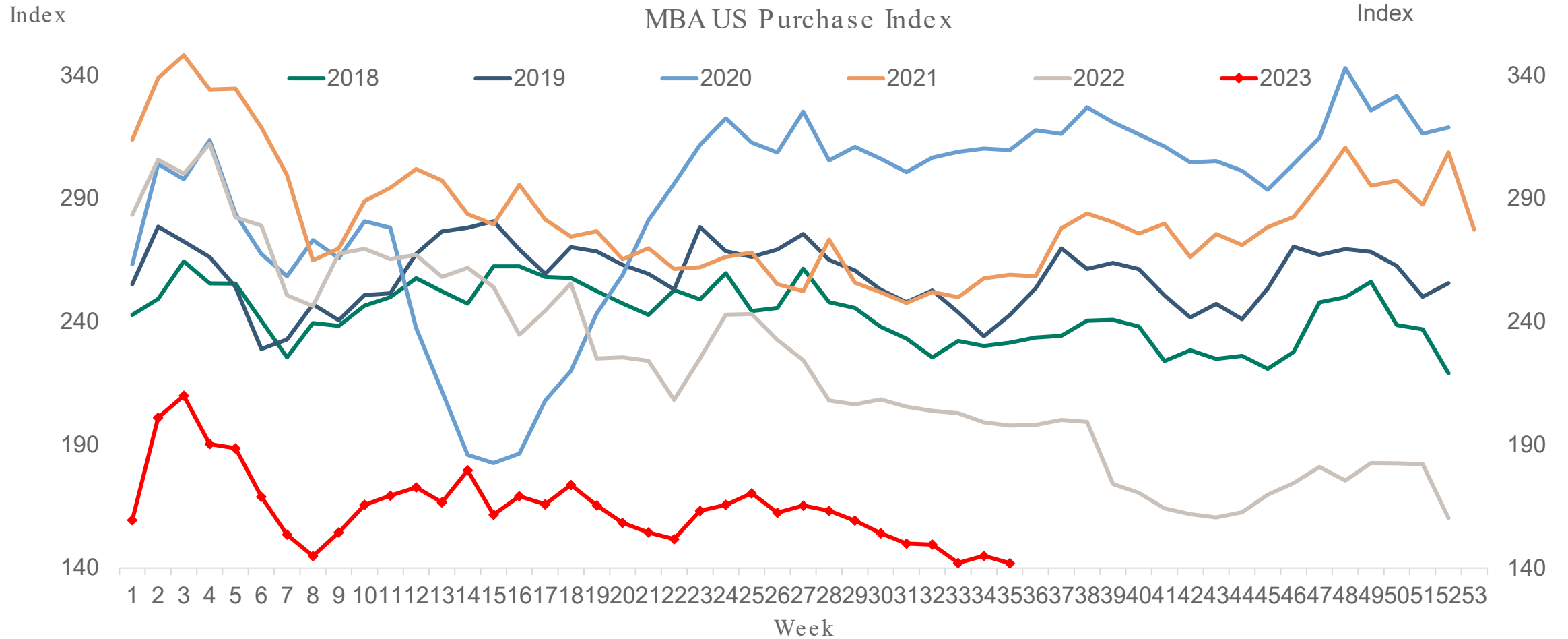
Monthly mortgage payment on a new mortgage



Housing affordability below 2007 levels



Mortgage purchase applications very weak because of high mortgage rates

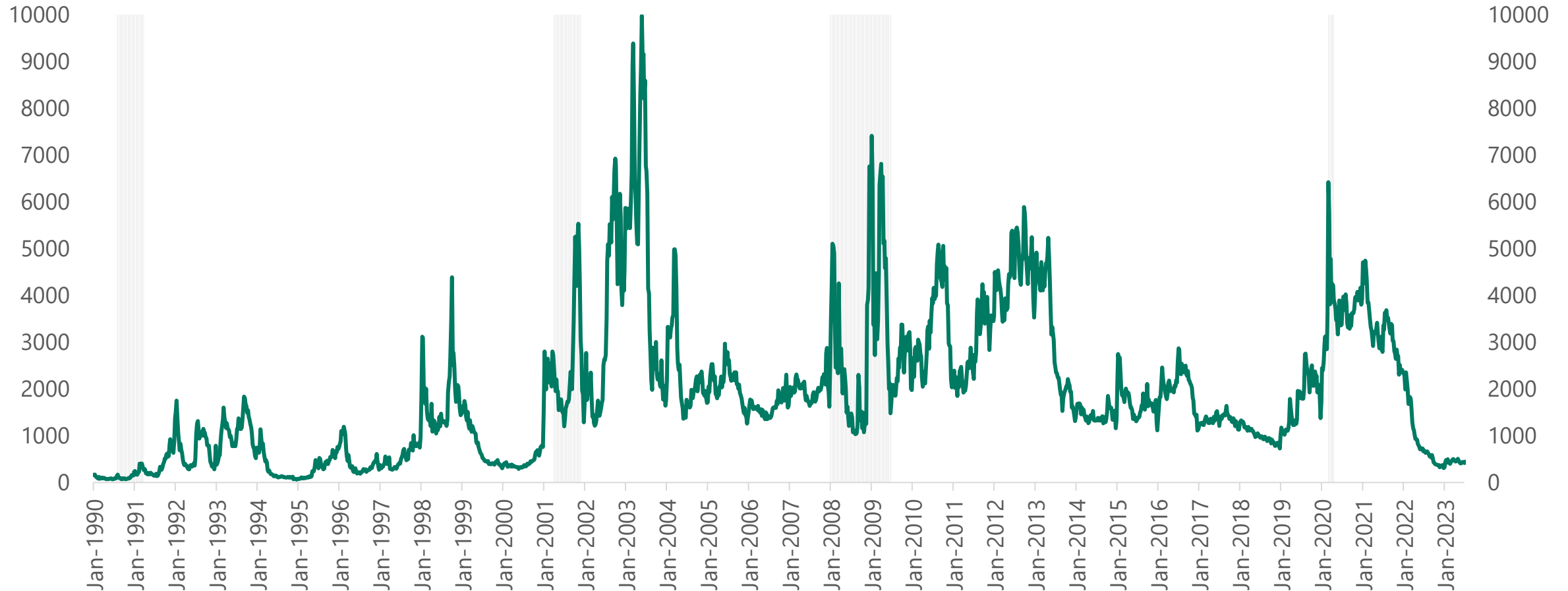


Record-low number of homeowners are refinancing their mortgage at the moment

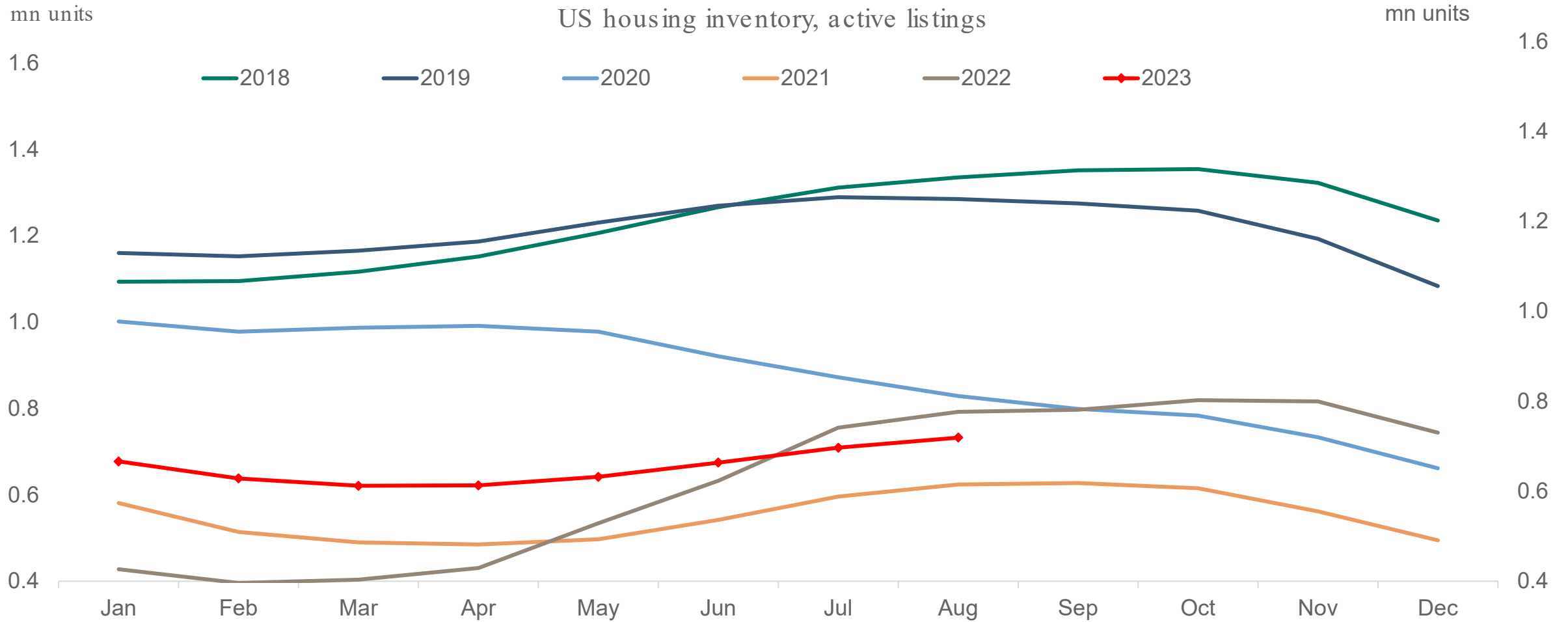
Index, Mar 1990 = 100

— Mortgage loan applications for refinancing

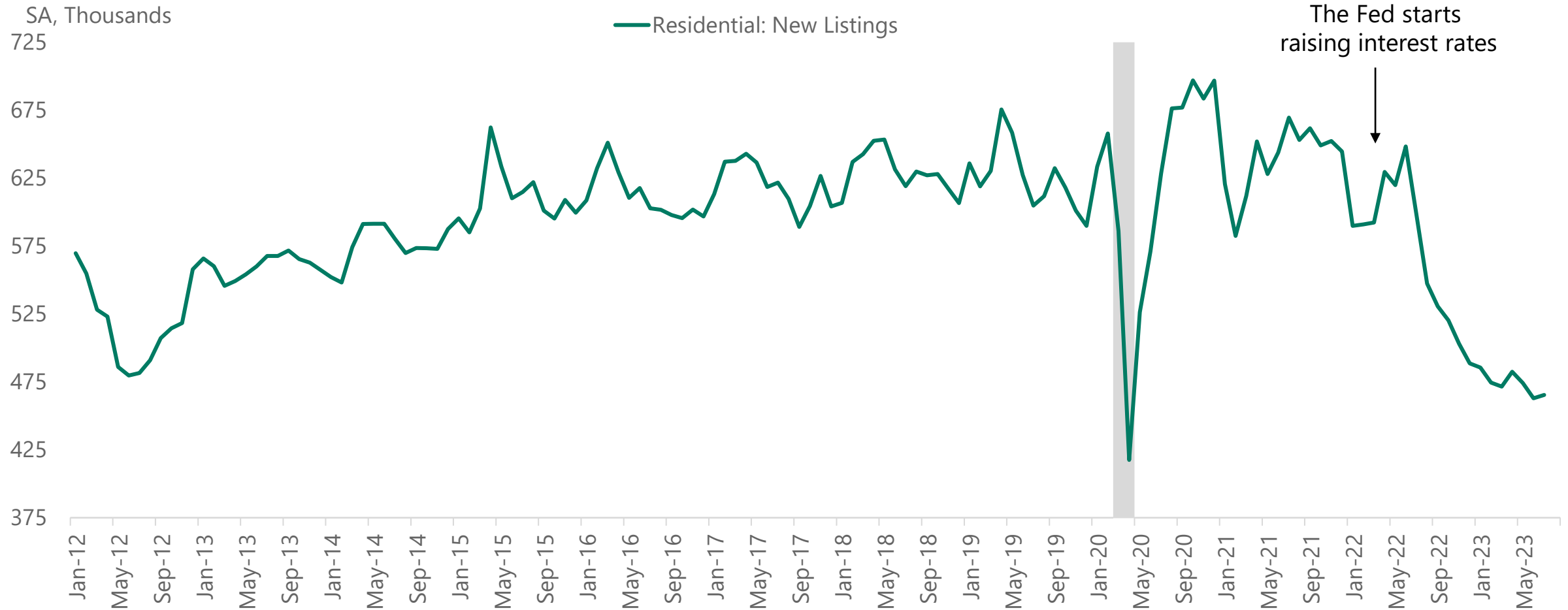
Index, Mar 1990 = 100



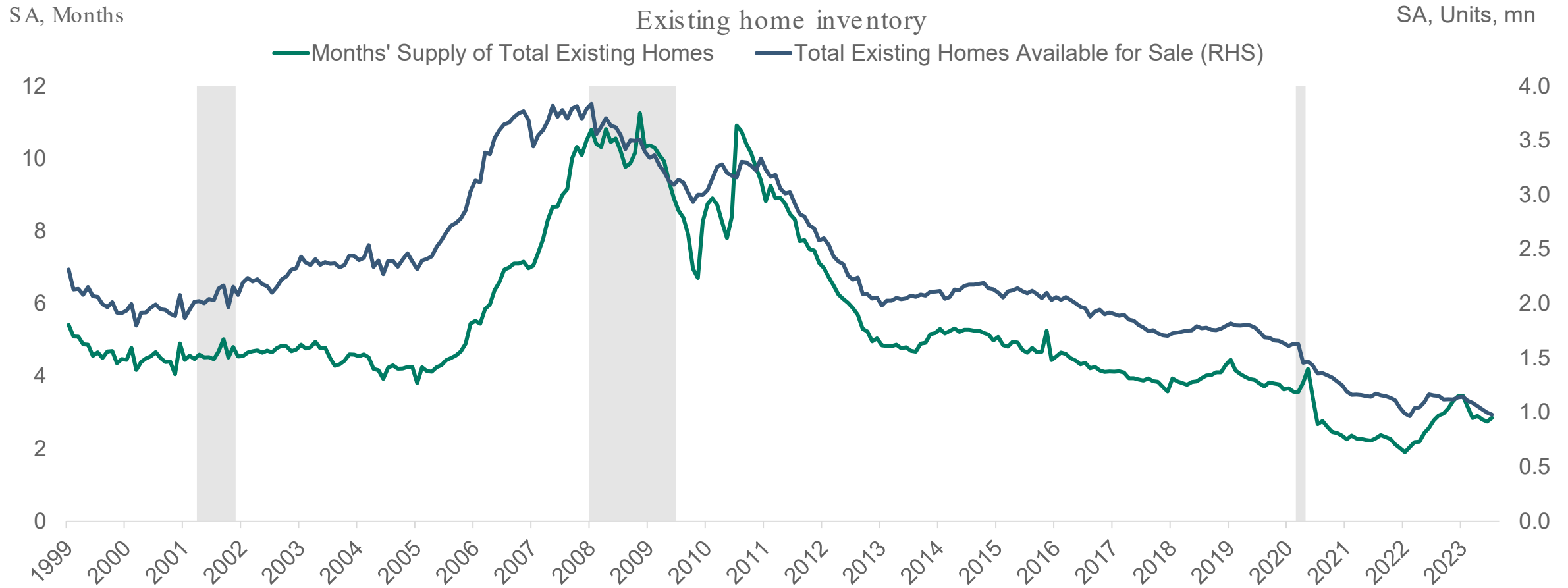
Very low inventory of homes for sale



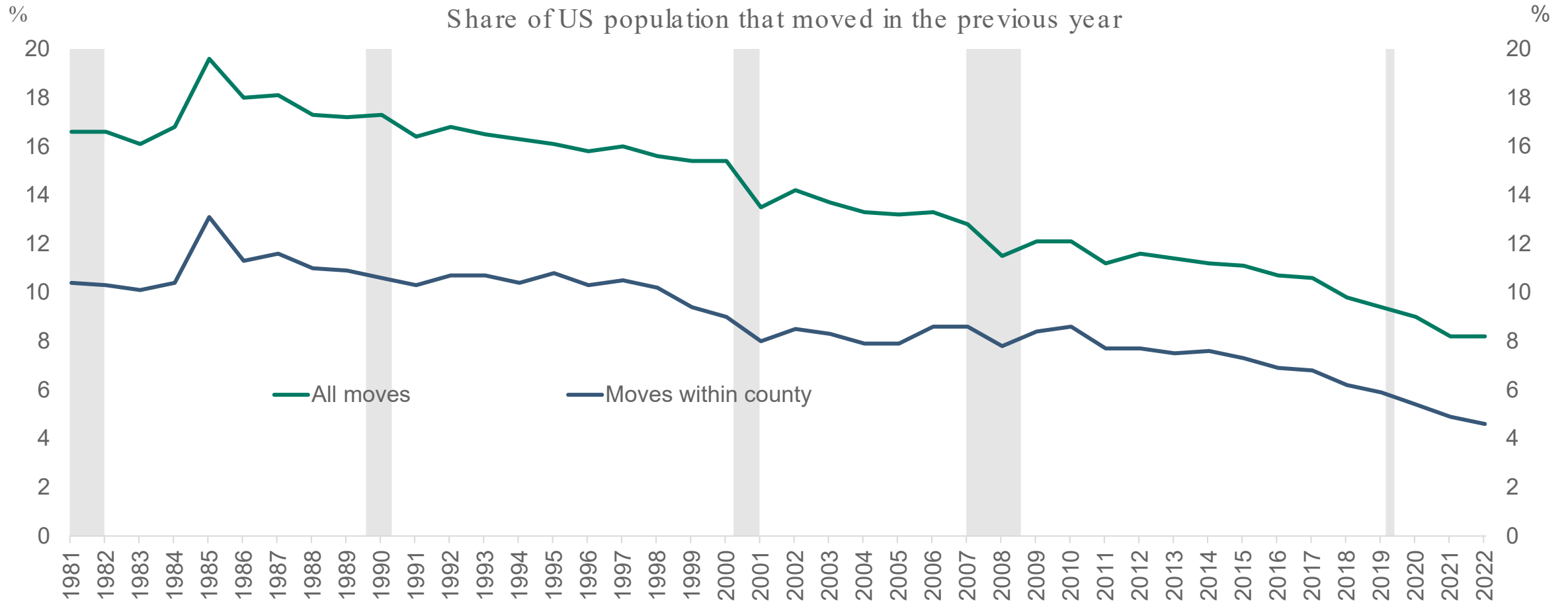
Fewer people listing their home for sale at the moment



Homesellers don't want to sell their house at a discount: The stock of total existing homes for sale moving down



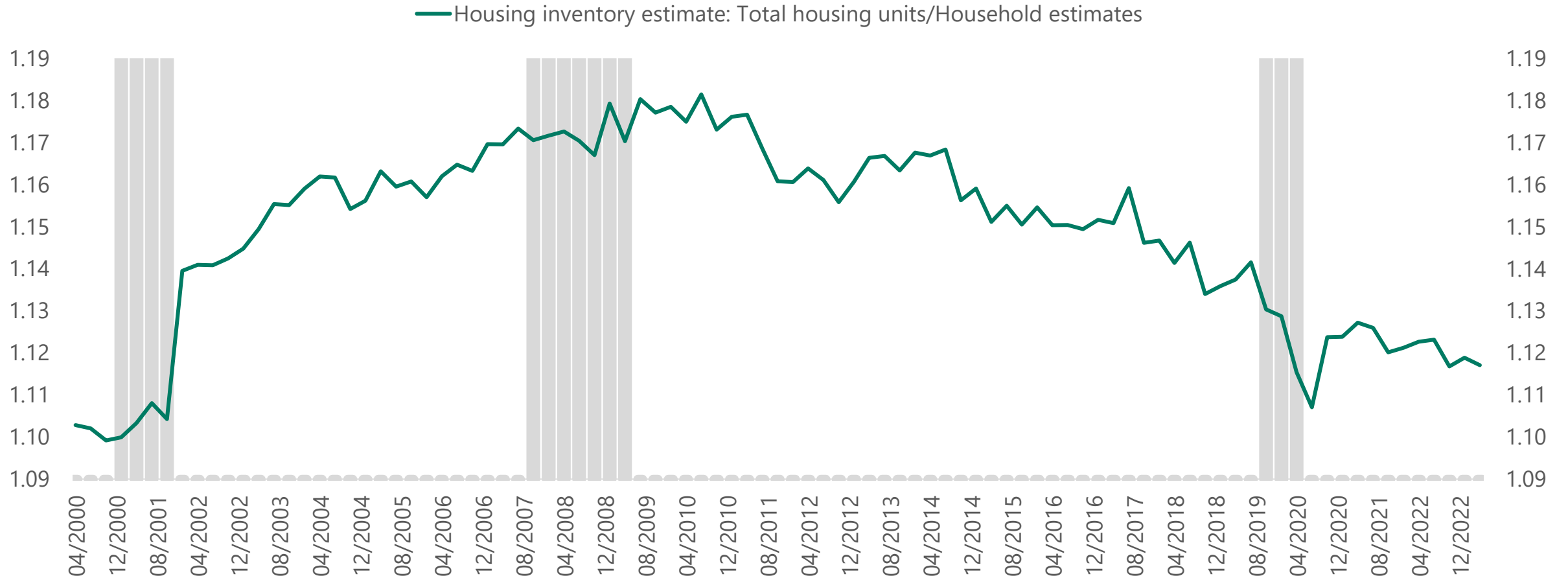
Structural decline in the share of the US population moving to a new address



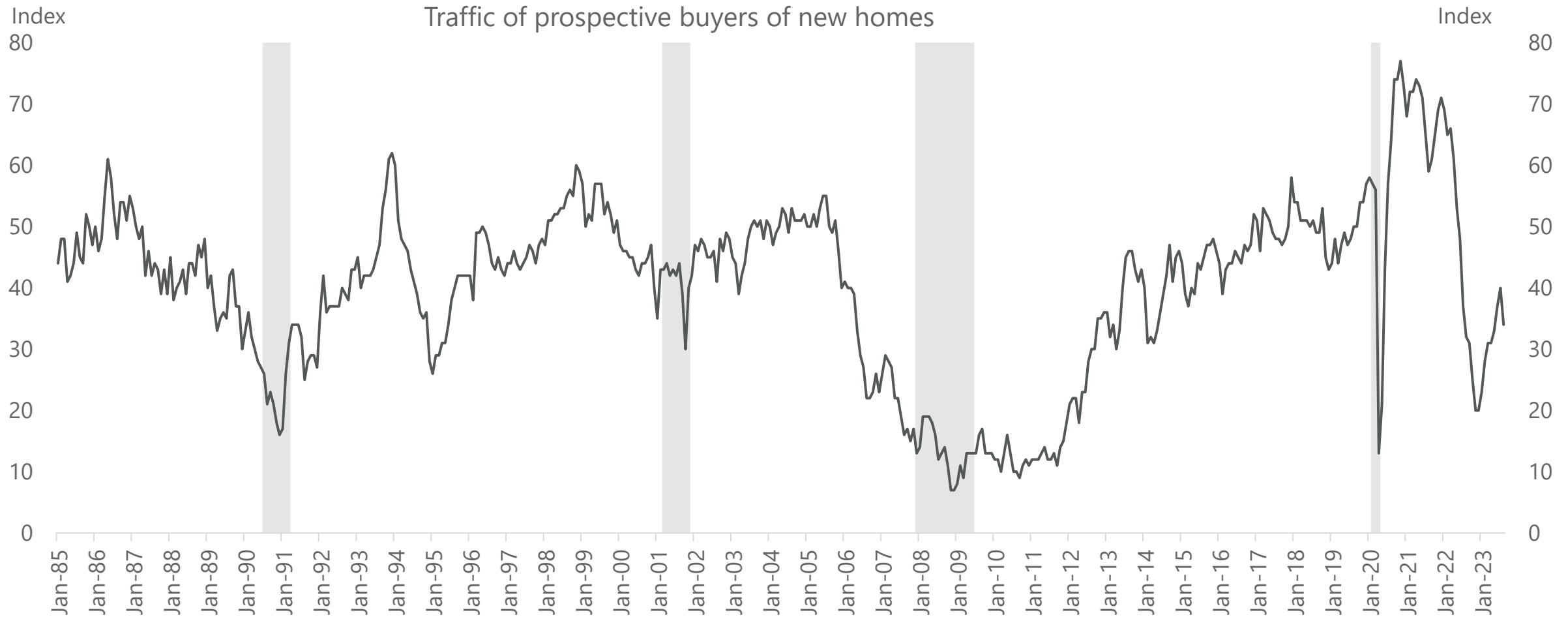
The total housing inventory per person continues to decline

Units per person

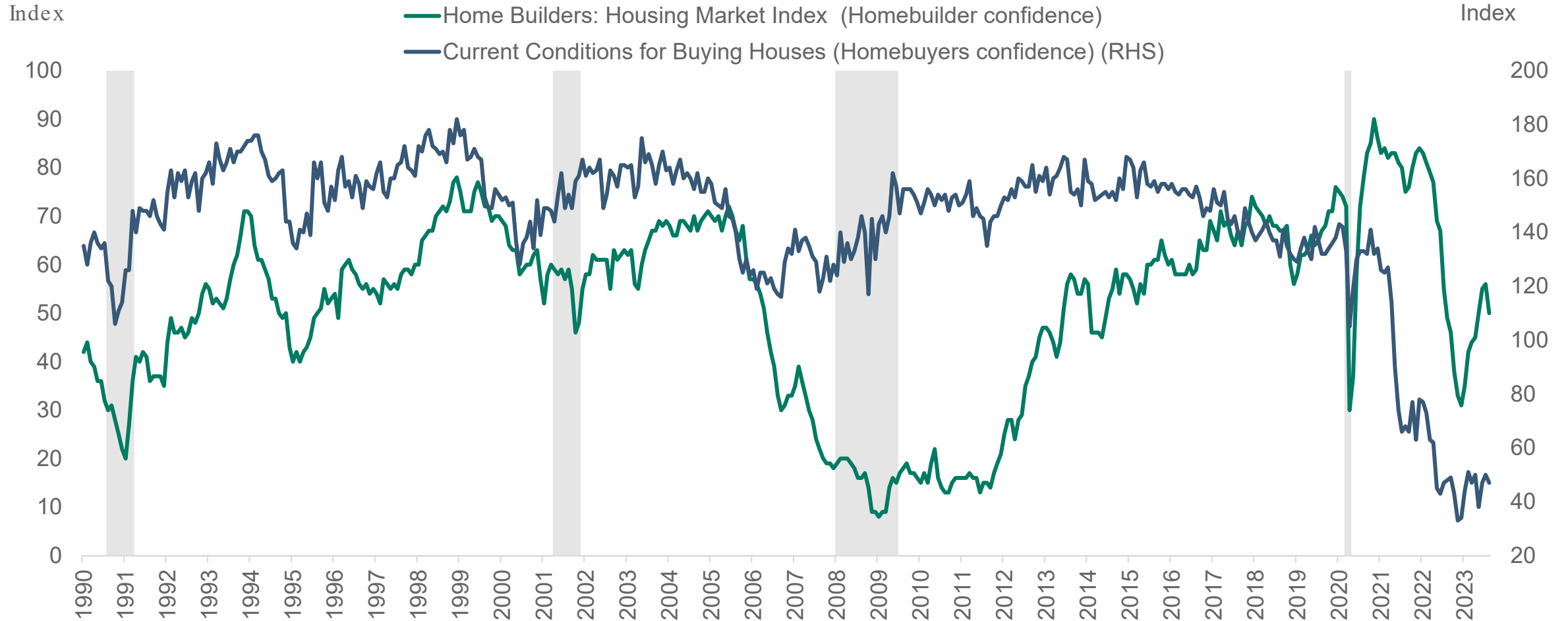
Units per person



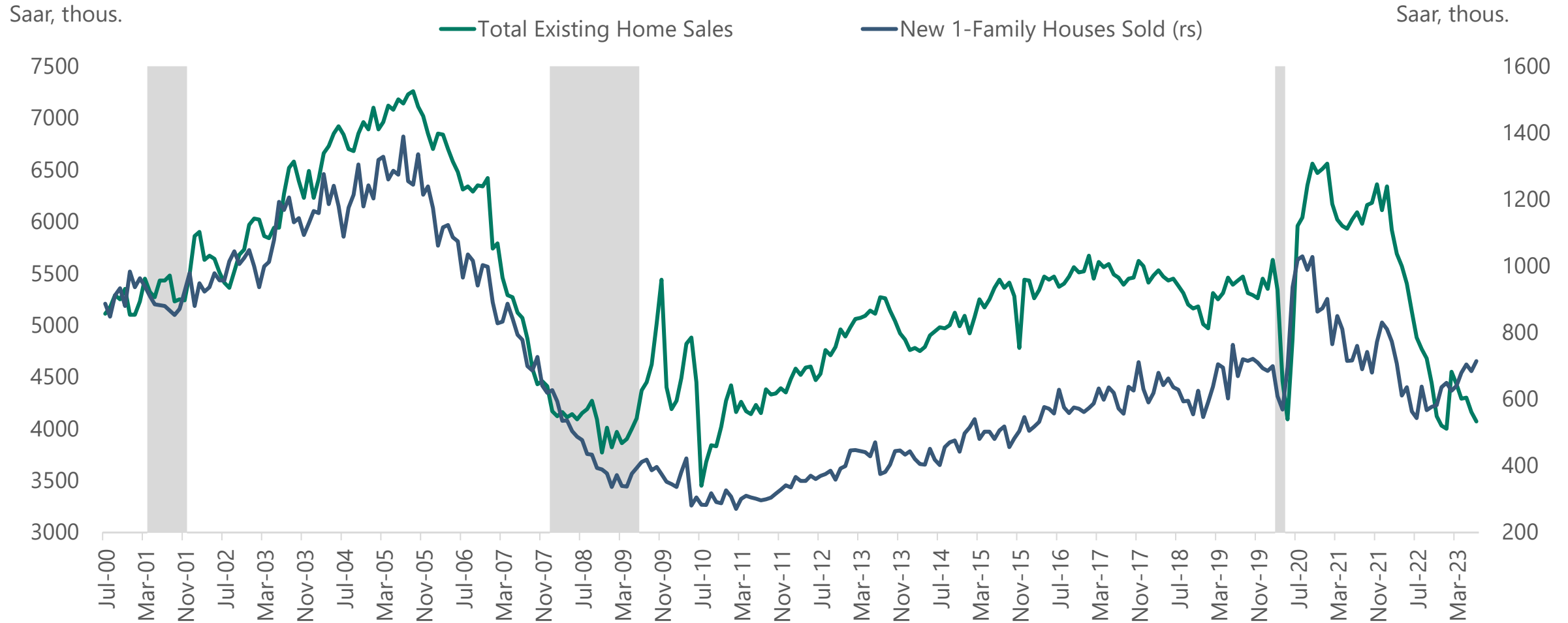
Traffic of prospective homebuyers negatively impacted by higher mortgage rates



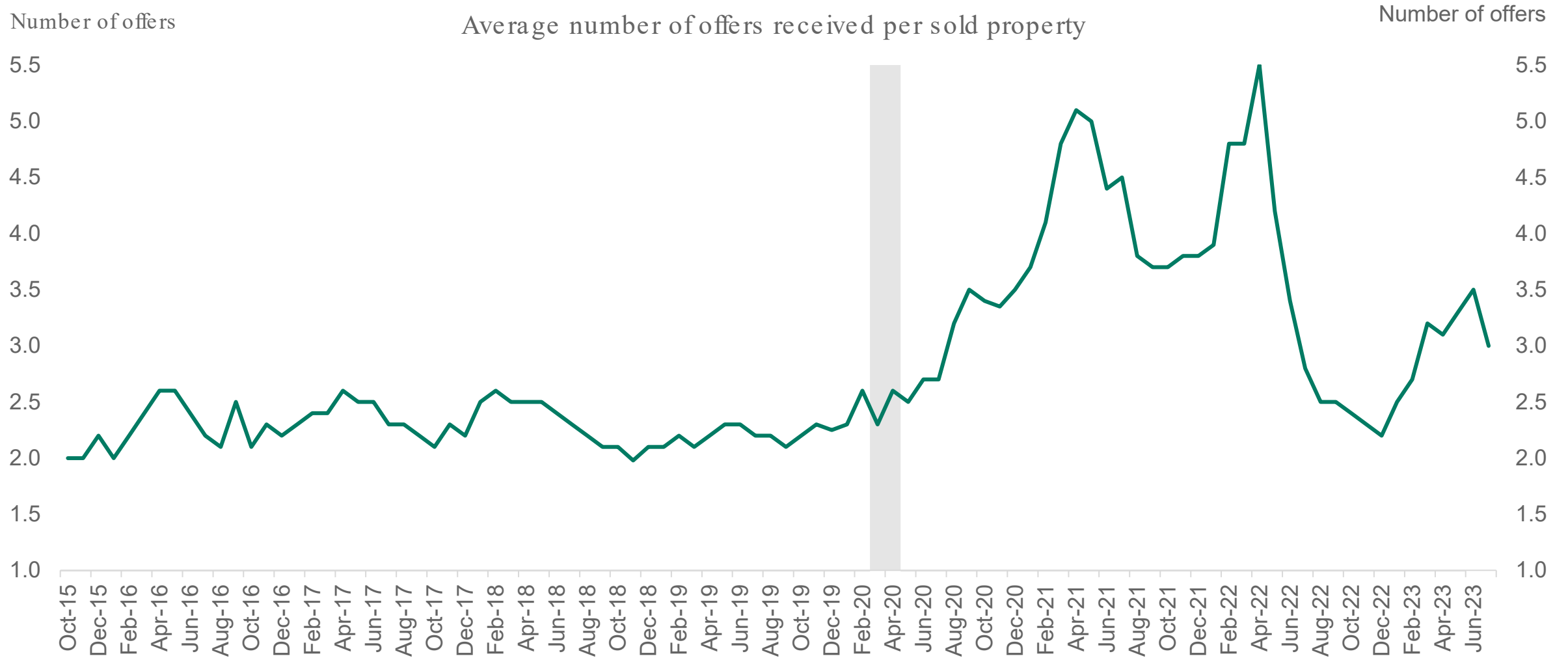
Higher mortgage rates also having a negative impact on homebuyer and homebuilder confidence



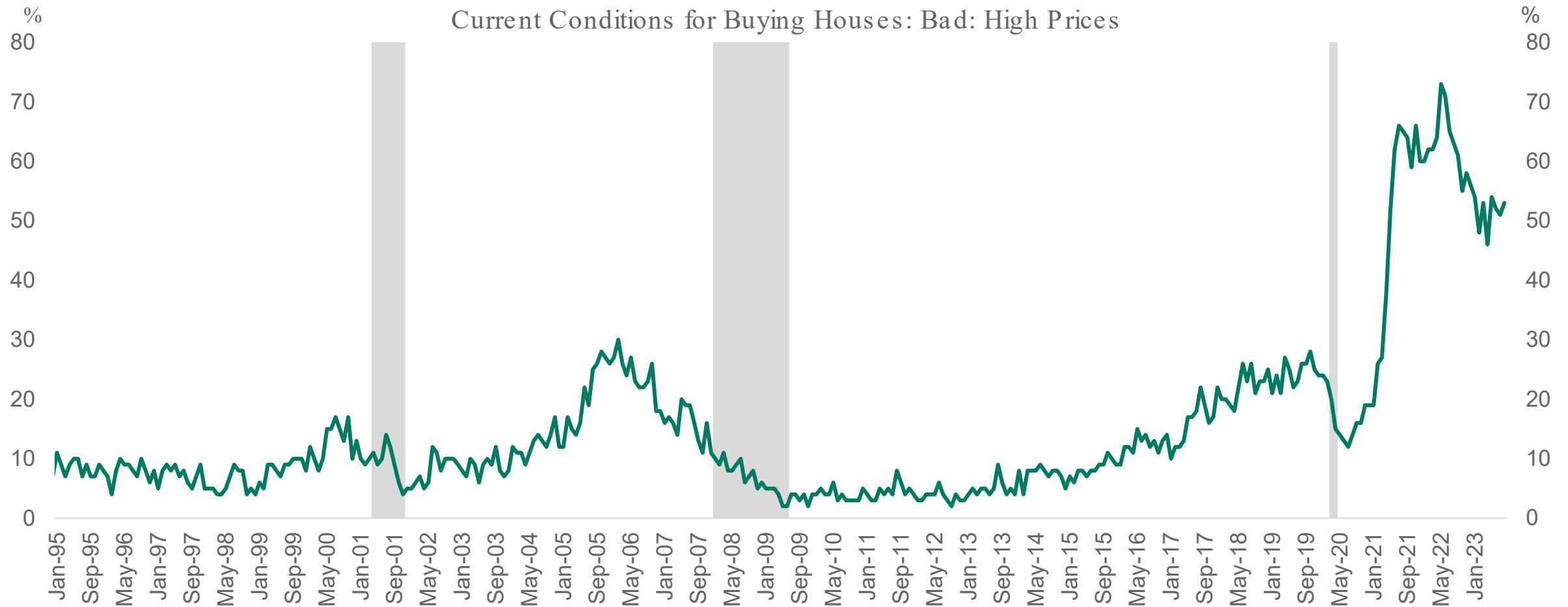
Existing home sales negatively impacted by higher mortgage rates



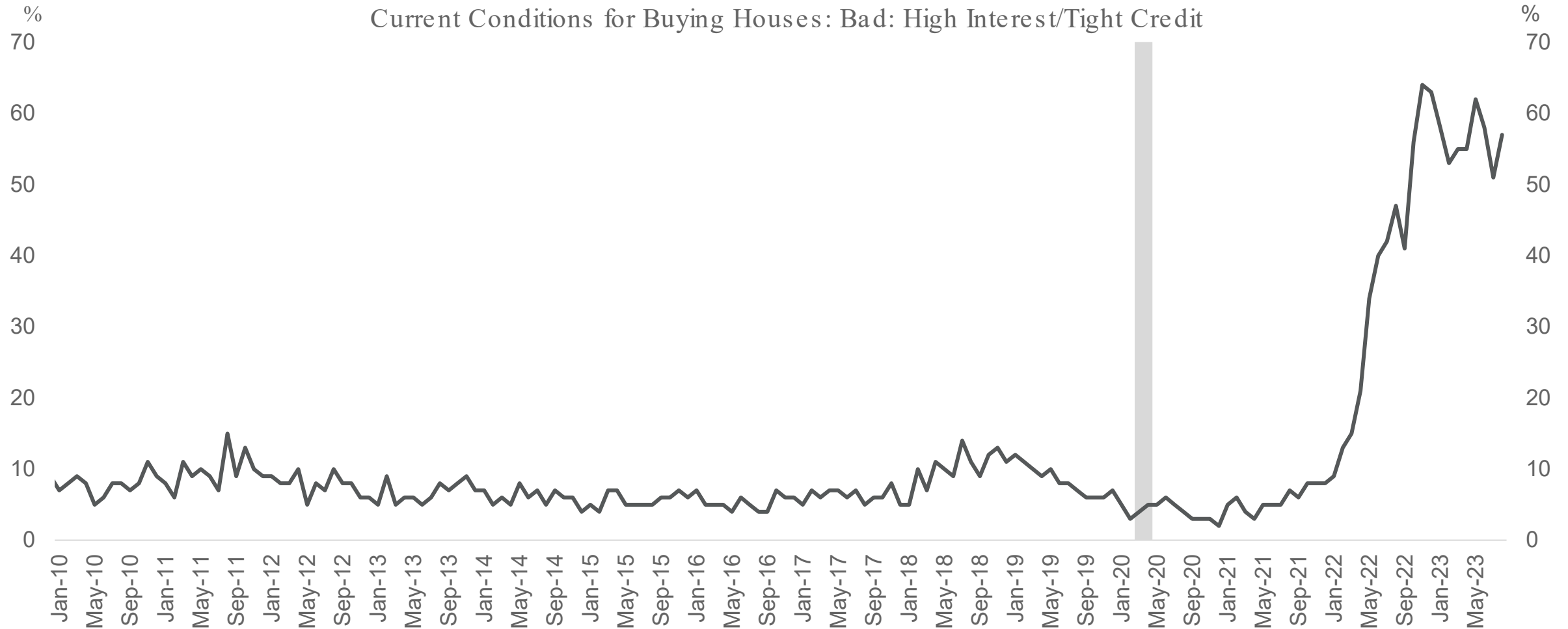
Fewer bidding wars recently because of higher mortgage rates



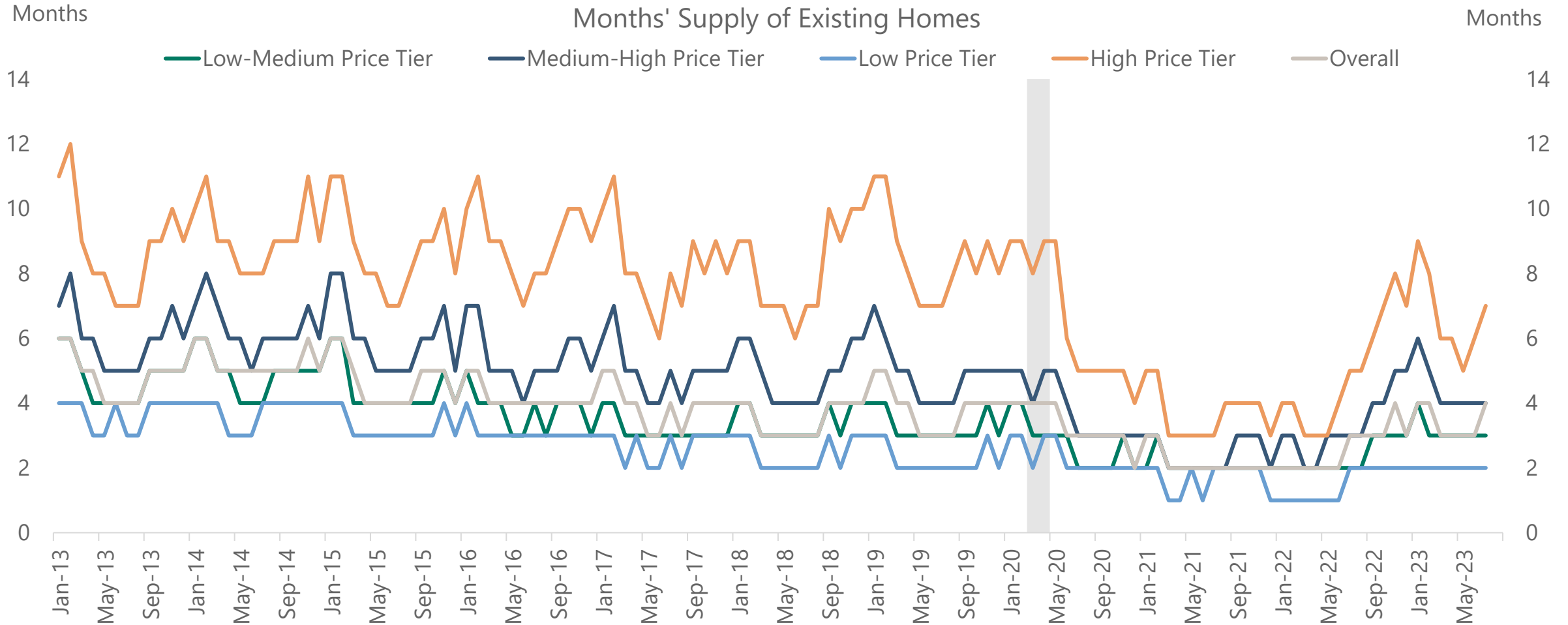
Despite high prices, homebuyer sentiment stabilizing



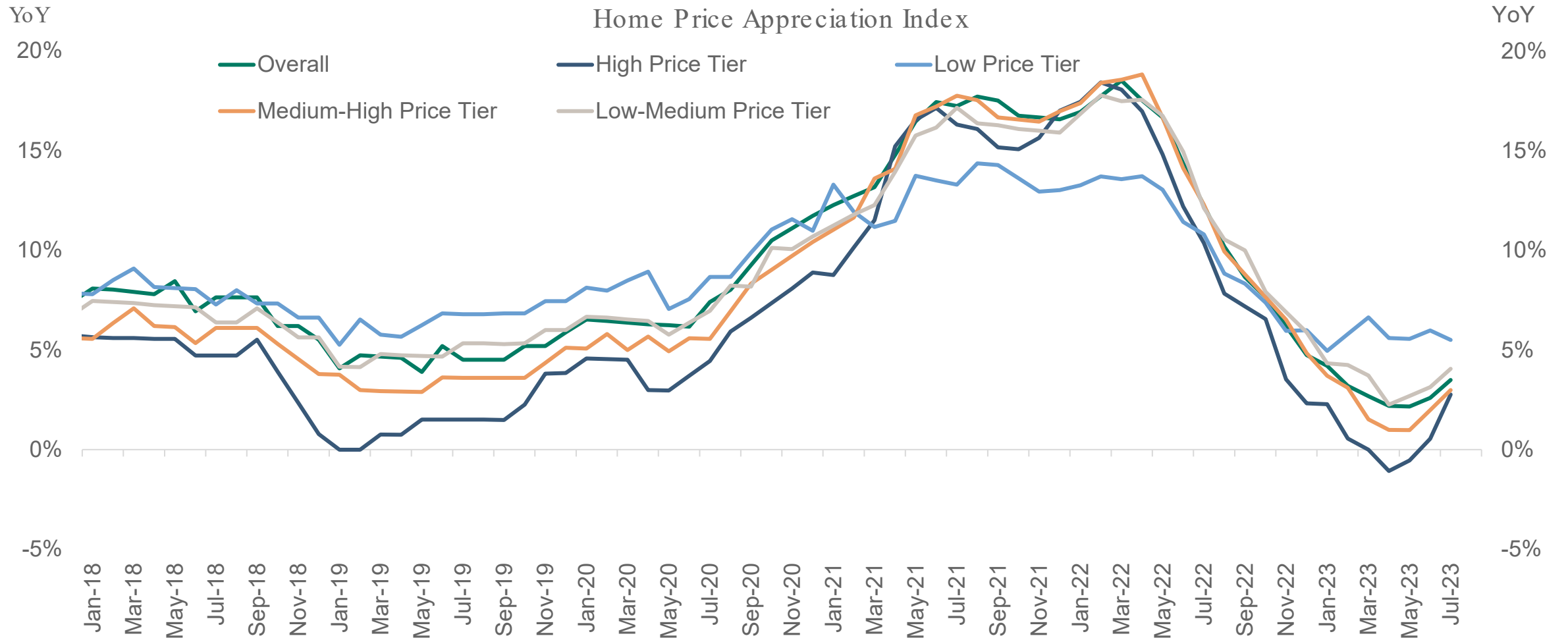
More than 50% of consumers are saying that this is a bad time to buy a house because of high mortgage rates and tight credit



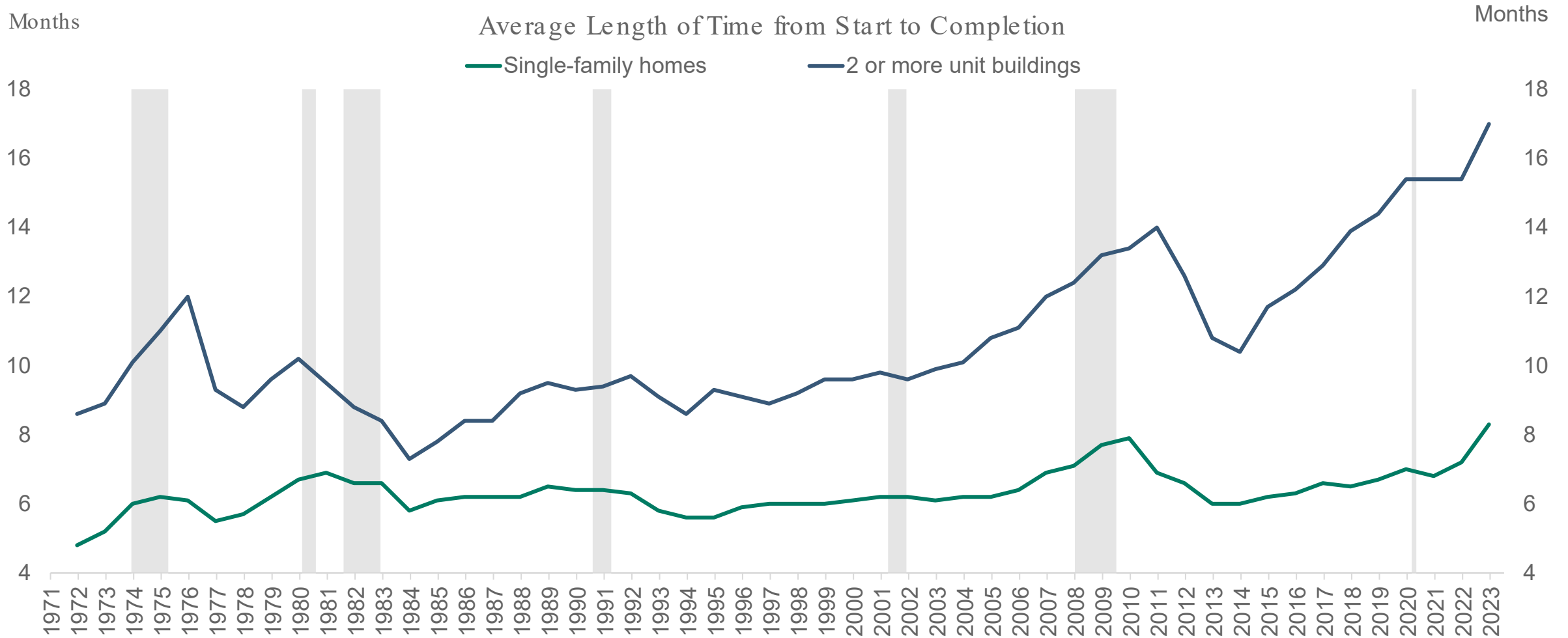
Inventory of expensive homes rising in recent months



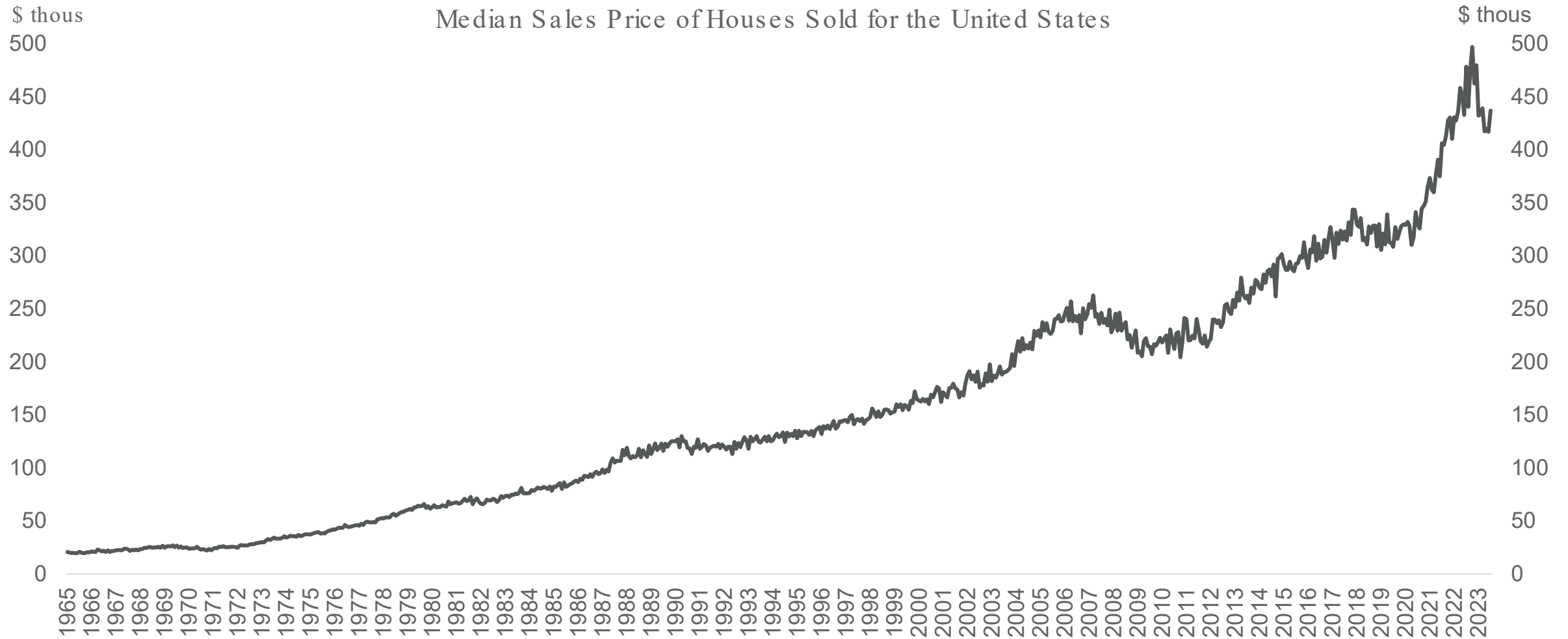
Home price inflation stabilizing



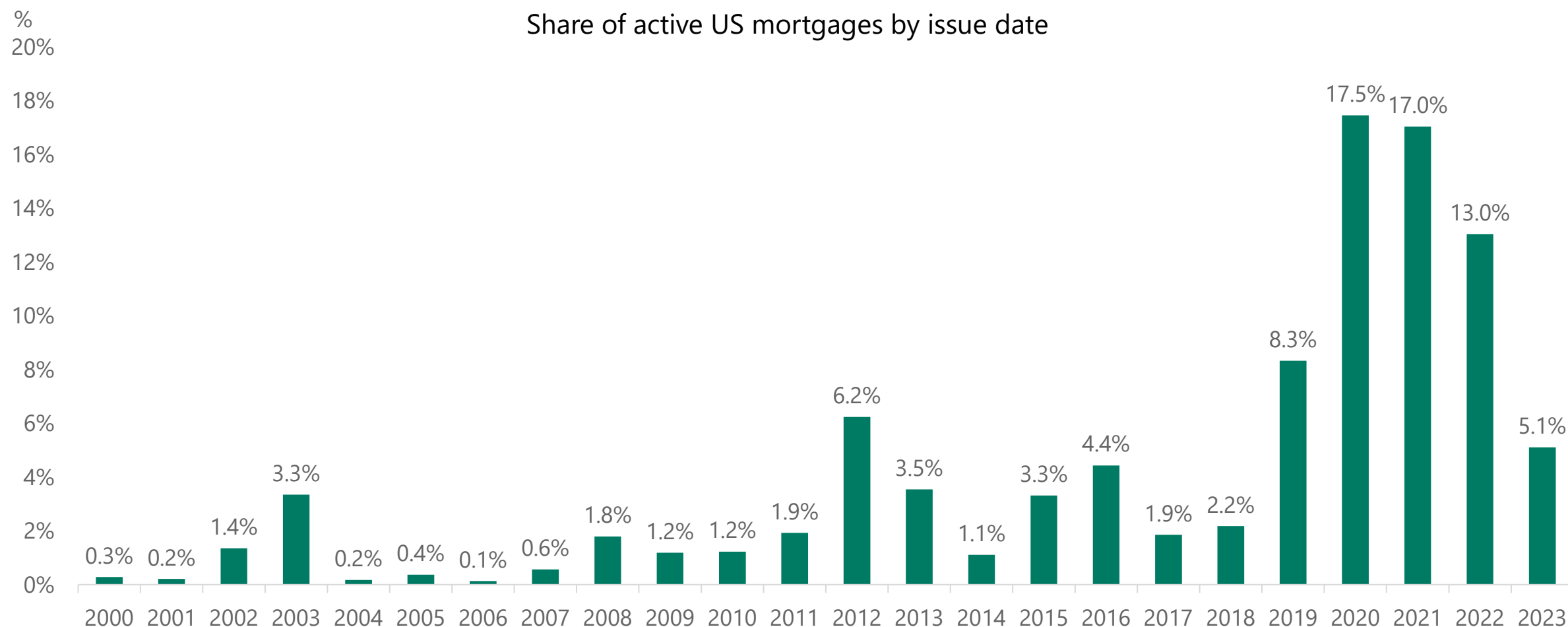
It currently takes 8 months on average to build a single-family house



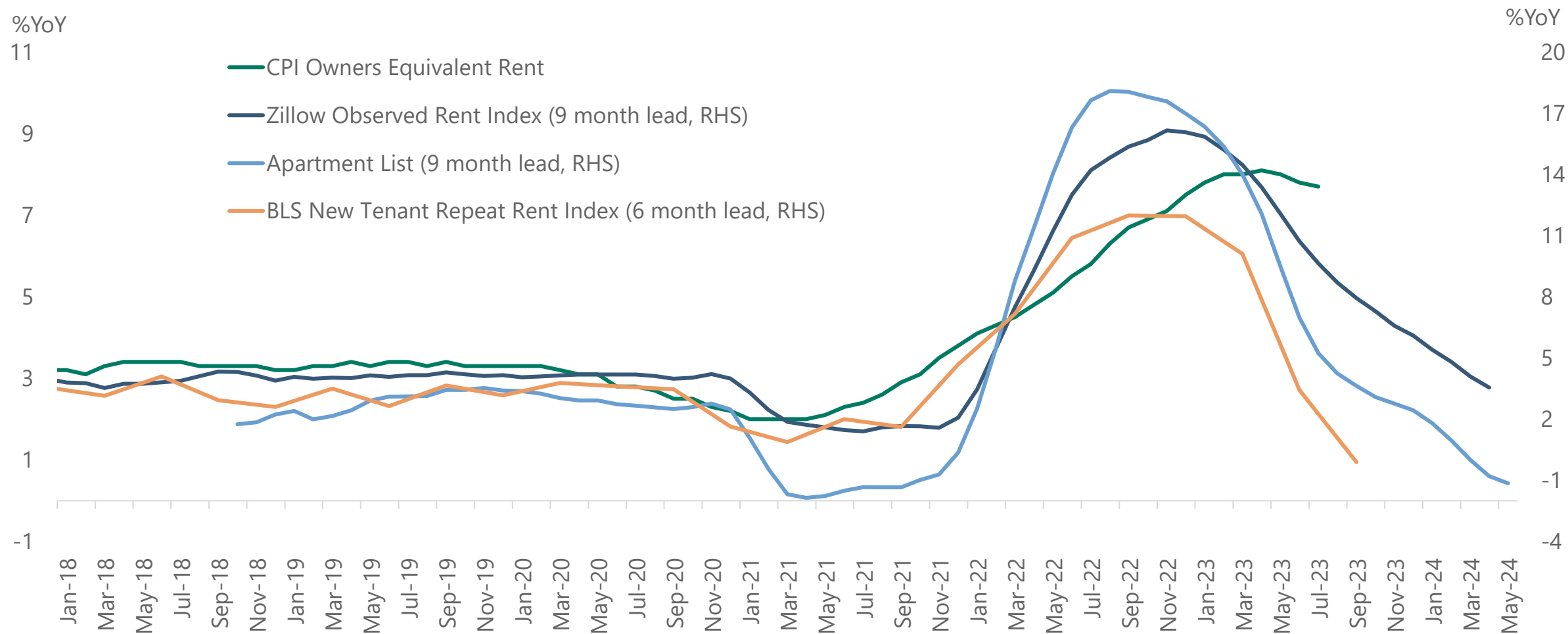
Median home sales price now \$437K



63% of all mortgages outstanding were issued after 2018

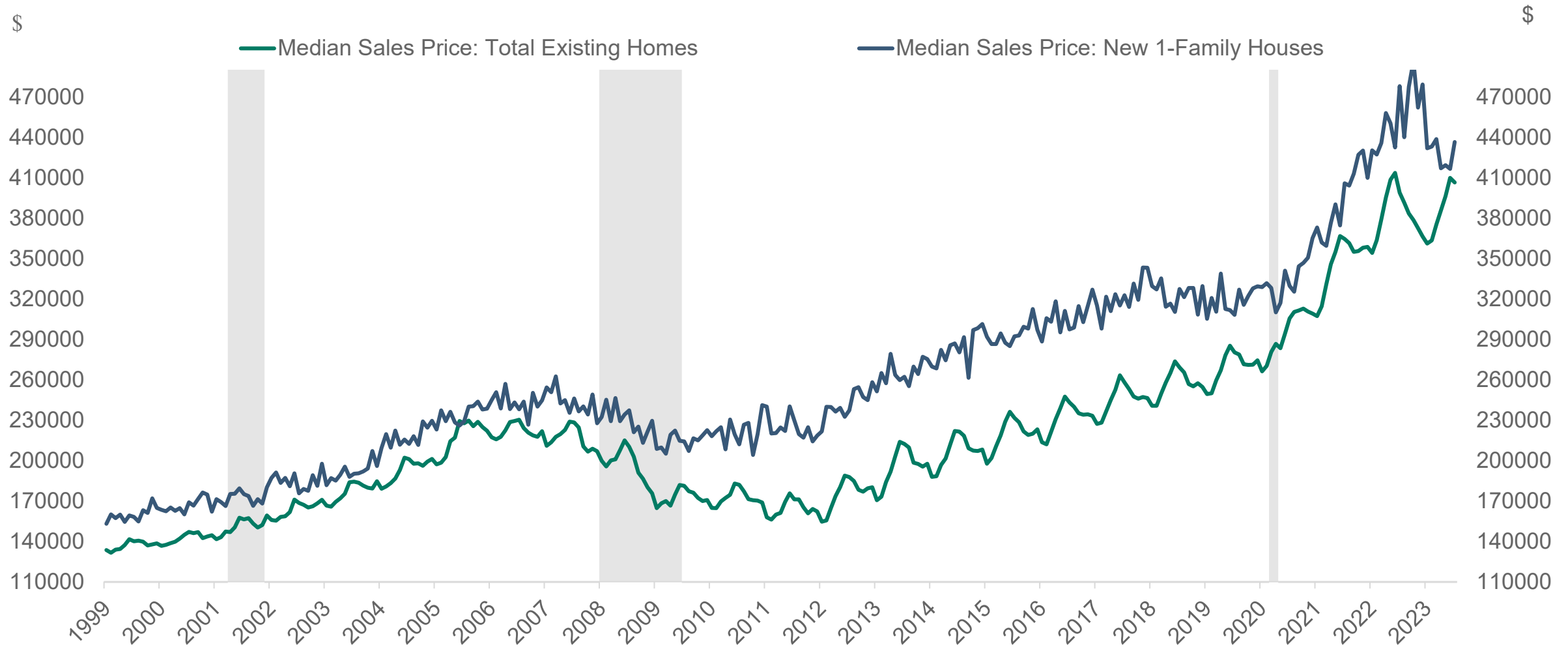


With the housing market recovering, housing inflation will be more sticky

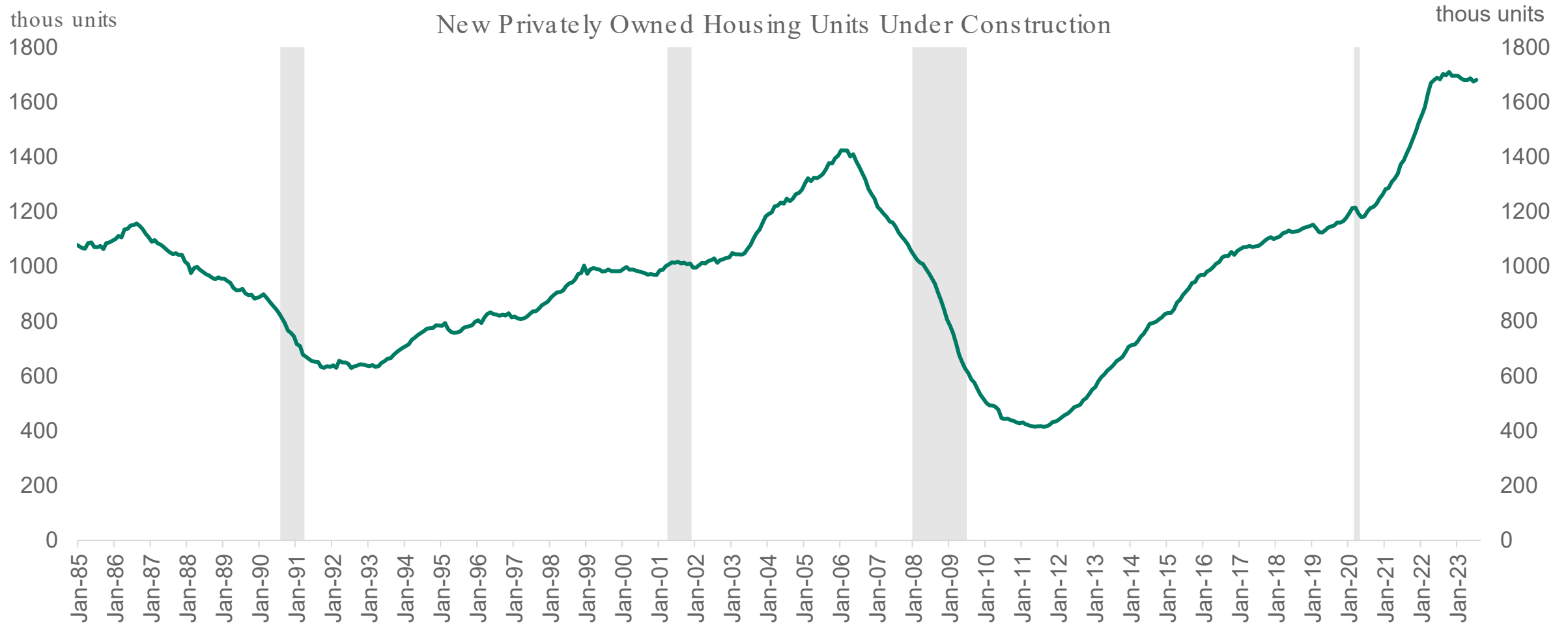


New versus existing homes

House prices are down a bit for new homes but up for existing homes

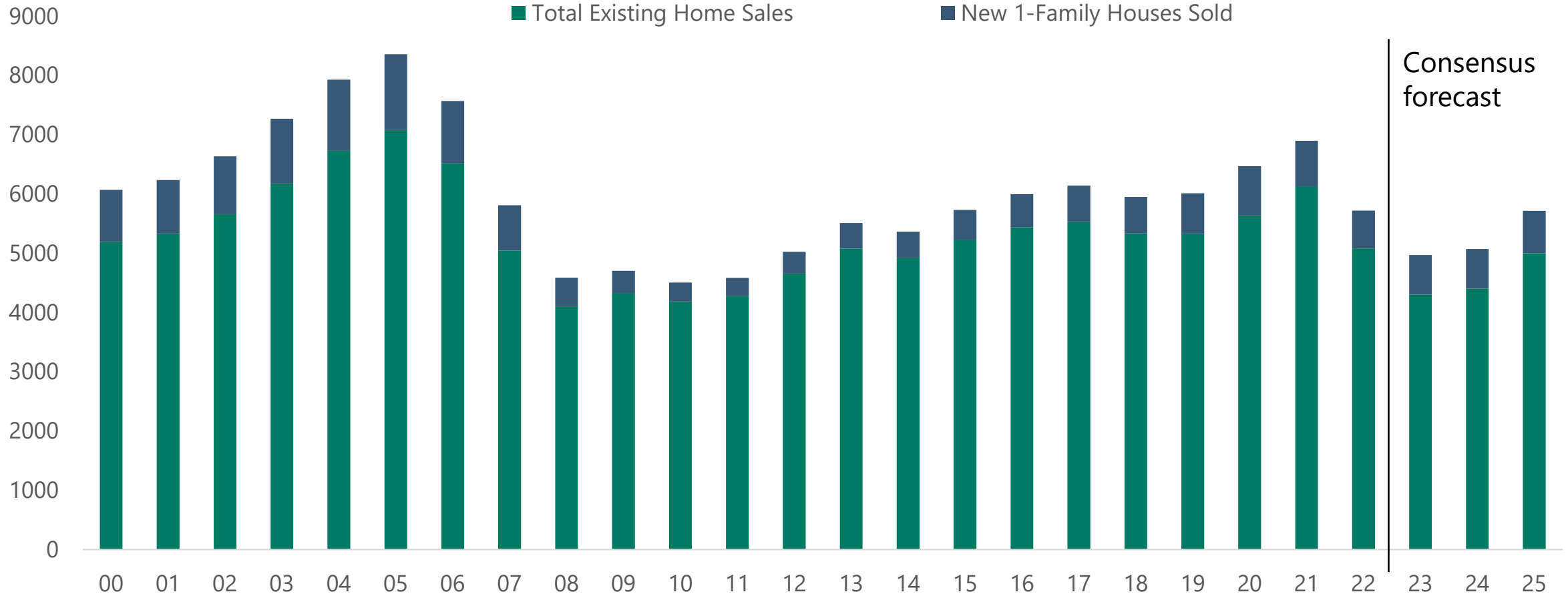


New privately owned housing units under construction starting to peak



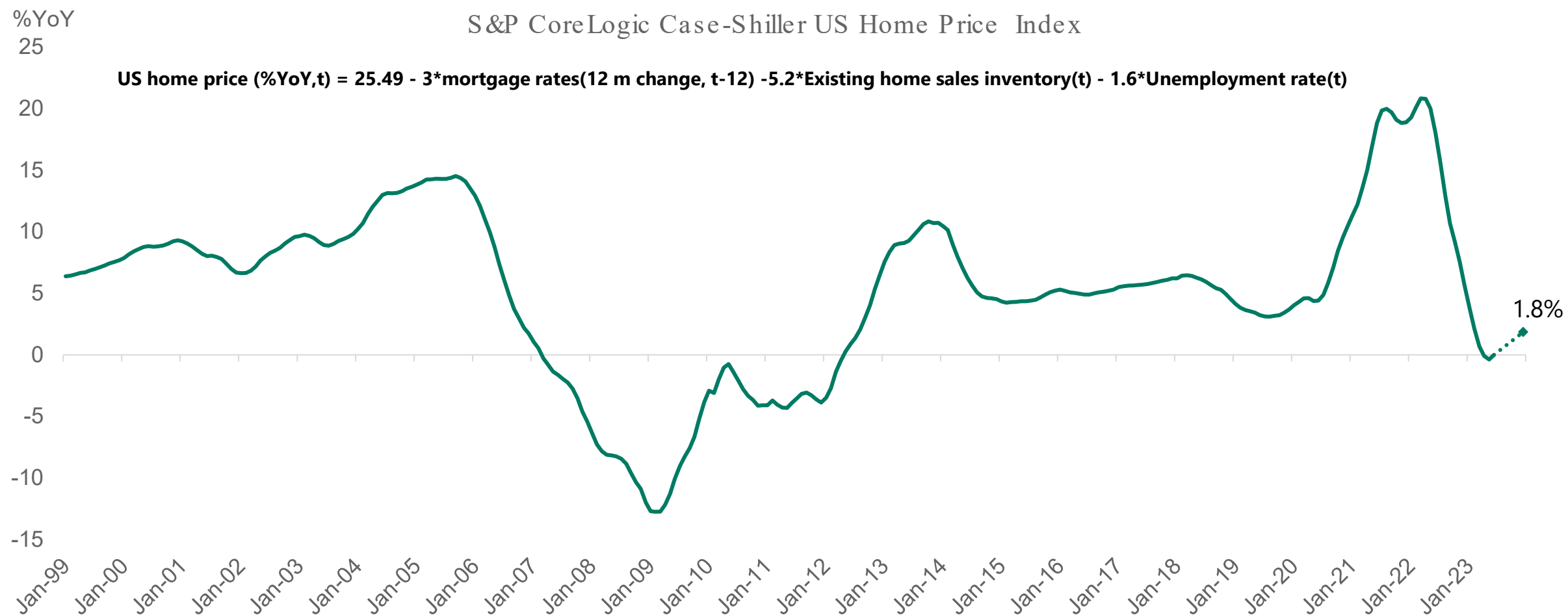
Consensus is forecasting a rebound in home sales

SAAR, thous.



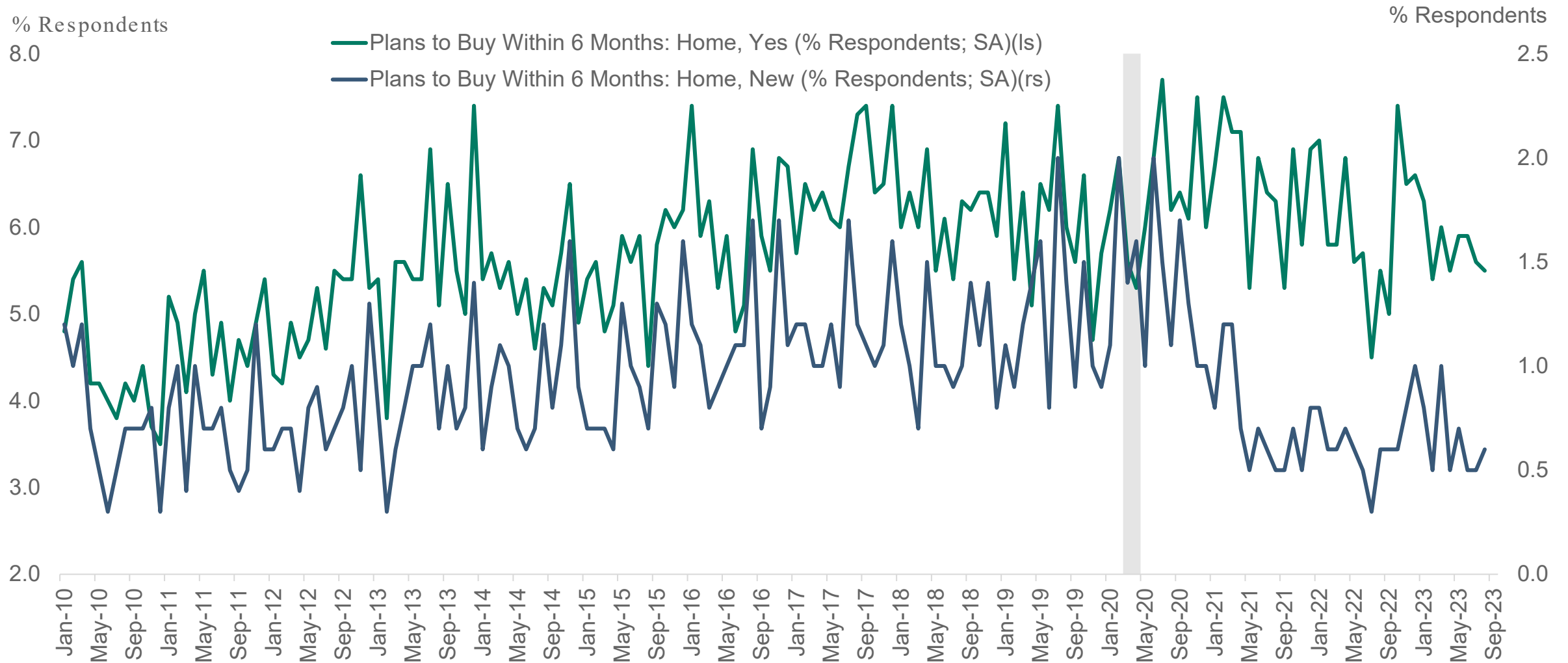
Our US house price model

US house price model

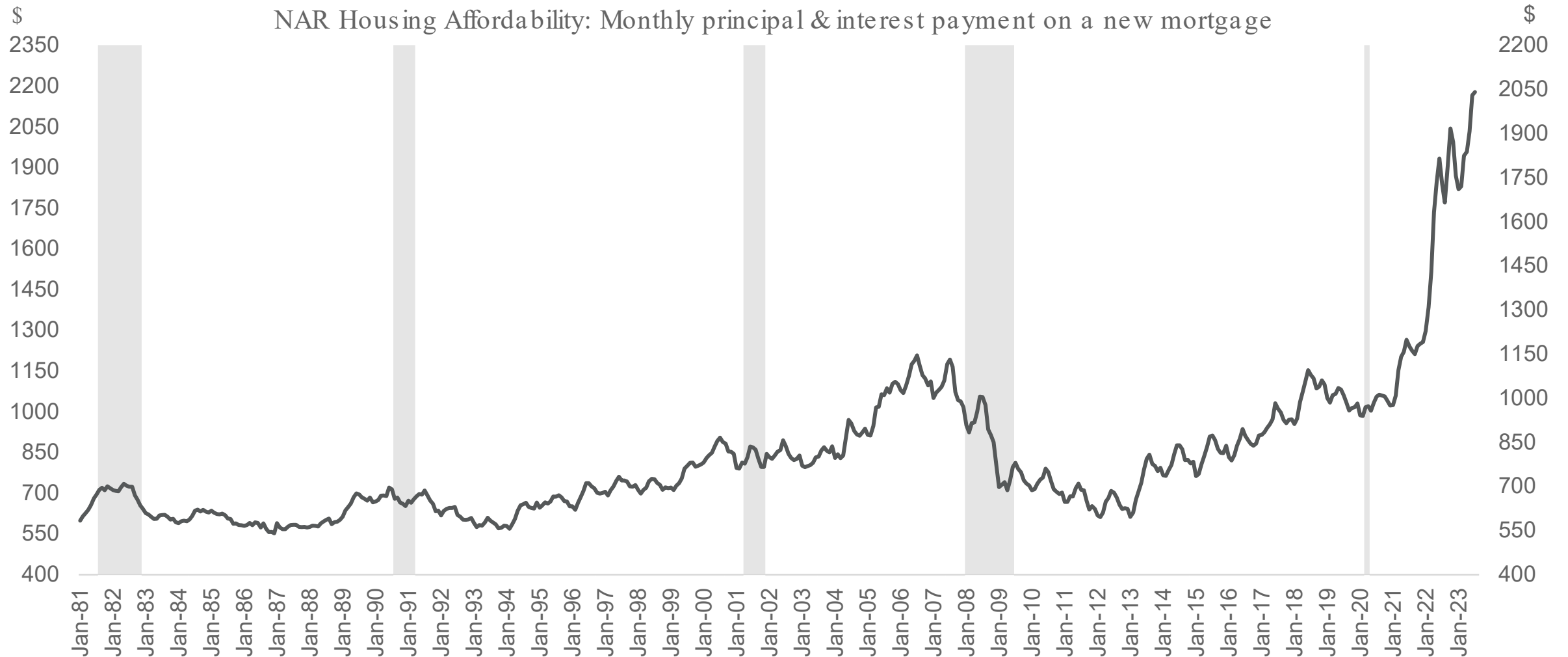


1) Housing Demand: Higher mortgage rates and high home prices slowing demand

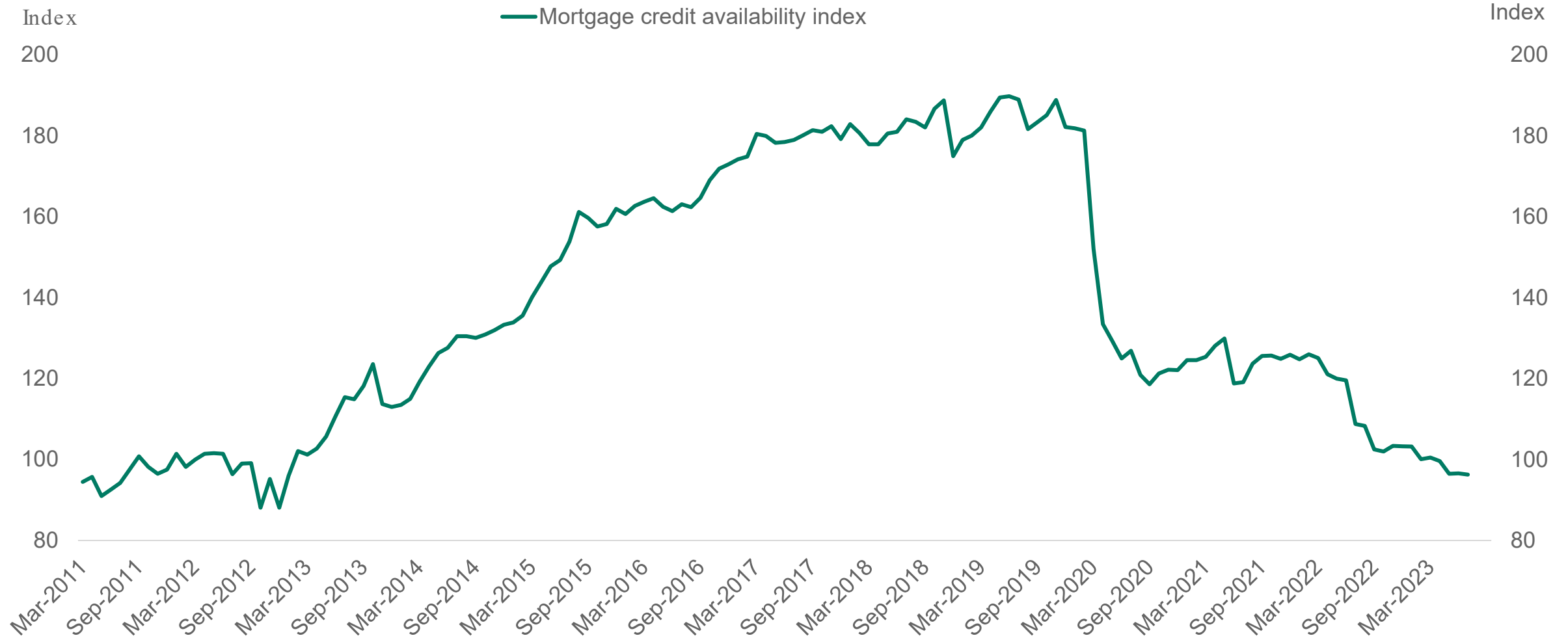
Home buying plans stable despite high mortgage rates



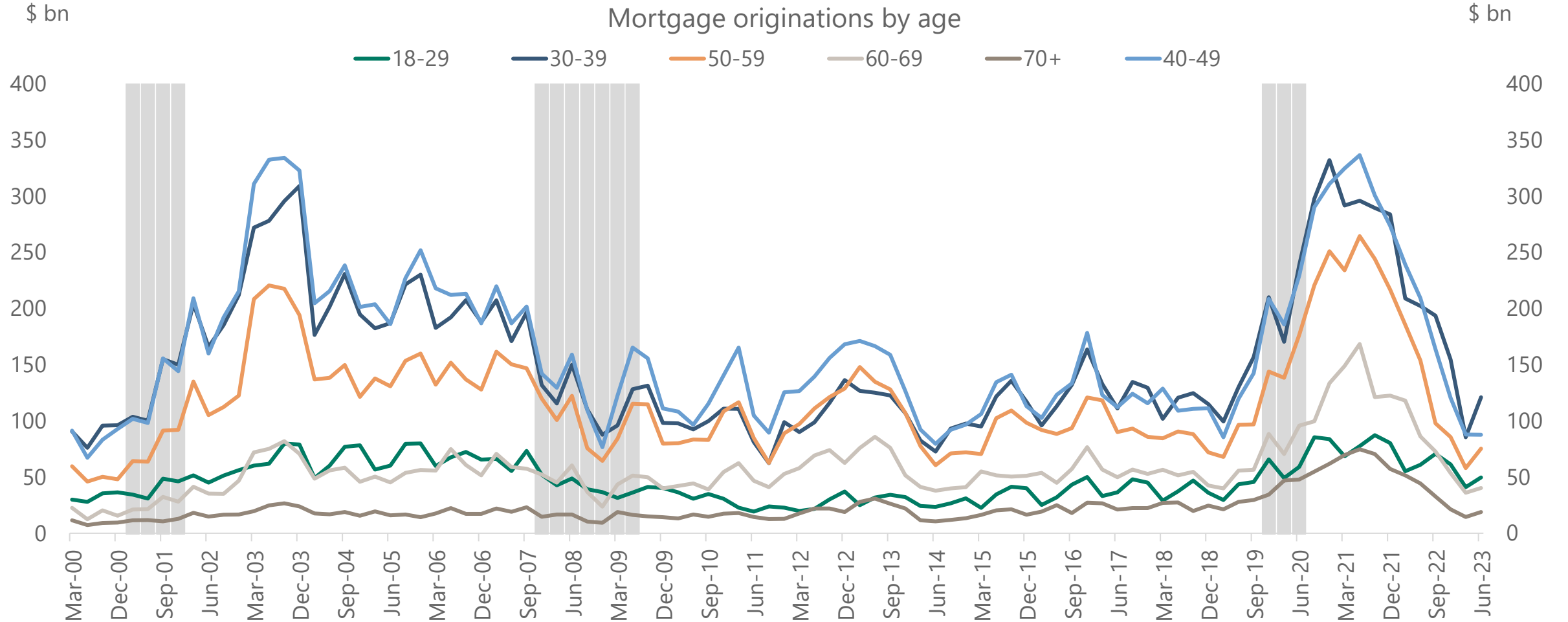
Monthly mortgage payments on new mortgages still very high



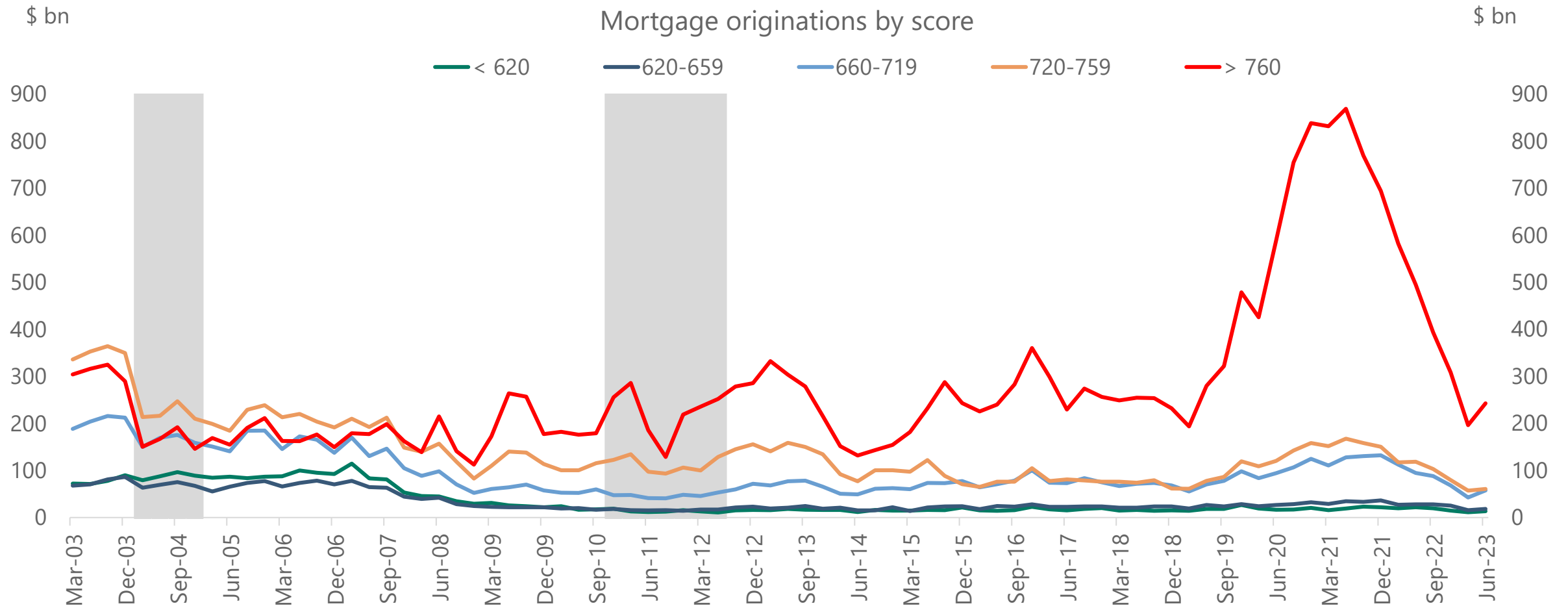
Availability of mortgage credit continues to tighten



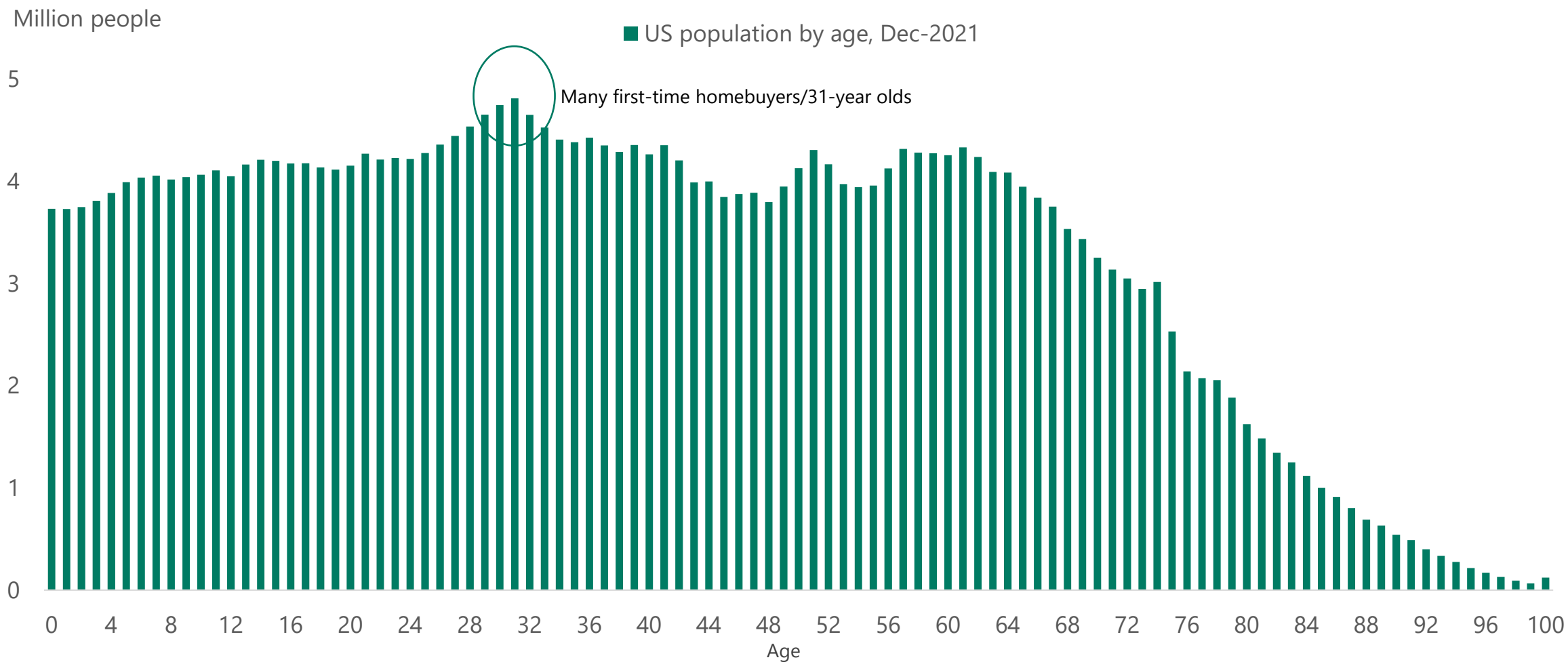
Mortgage originations back at pre-pandemic levels



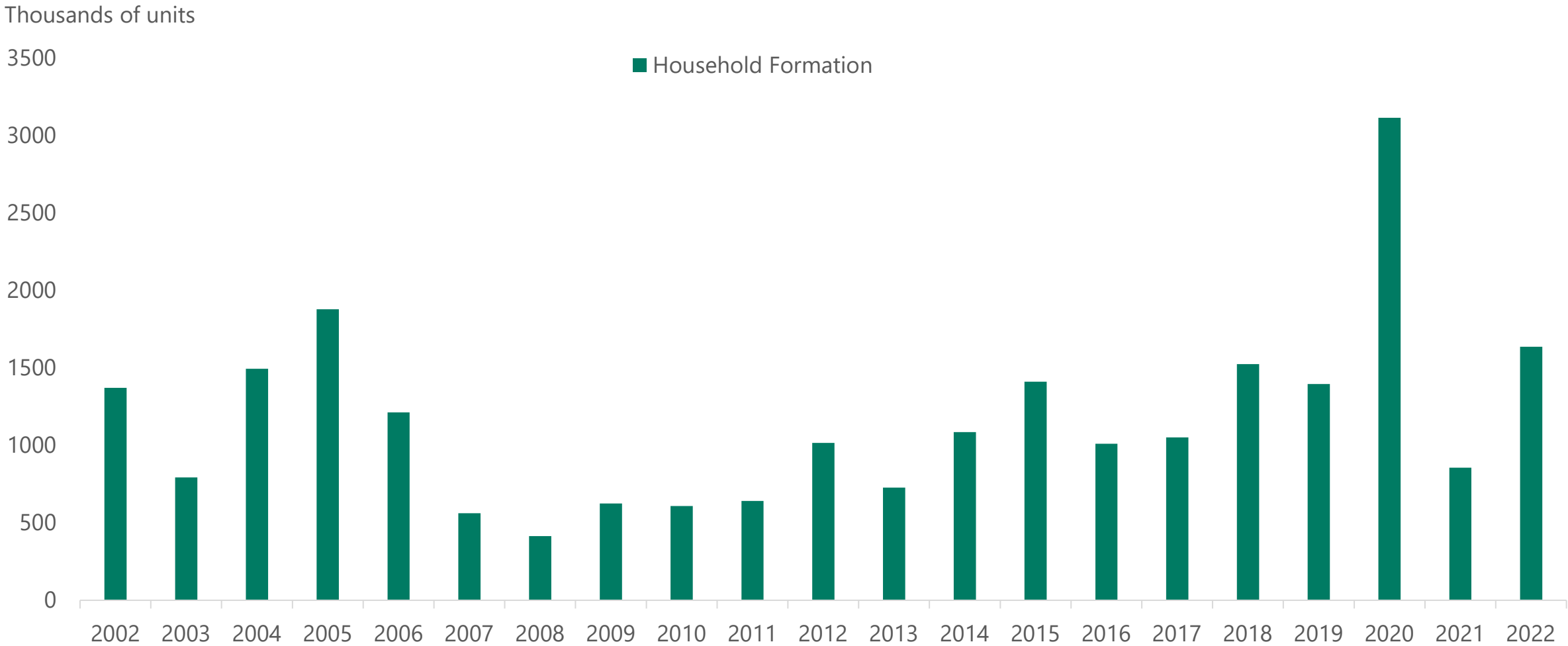
Mortgage originations normalizing for households with high credit scores



Demographics are a tailwind to housing demand

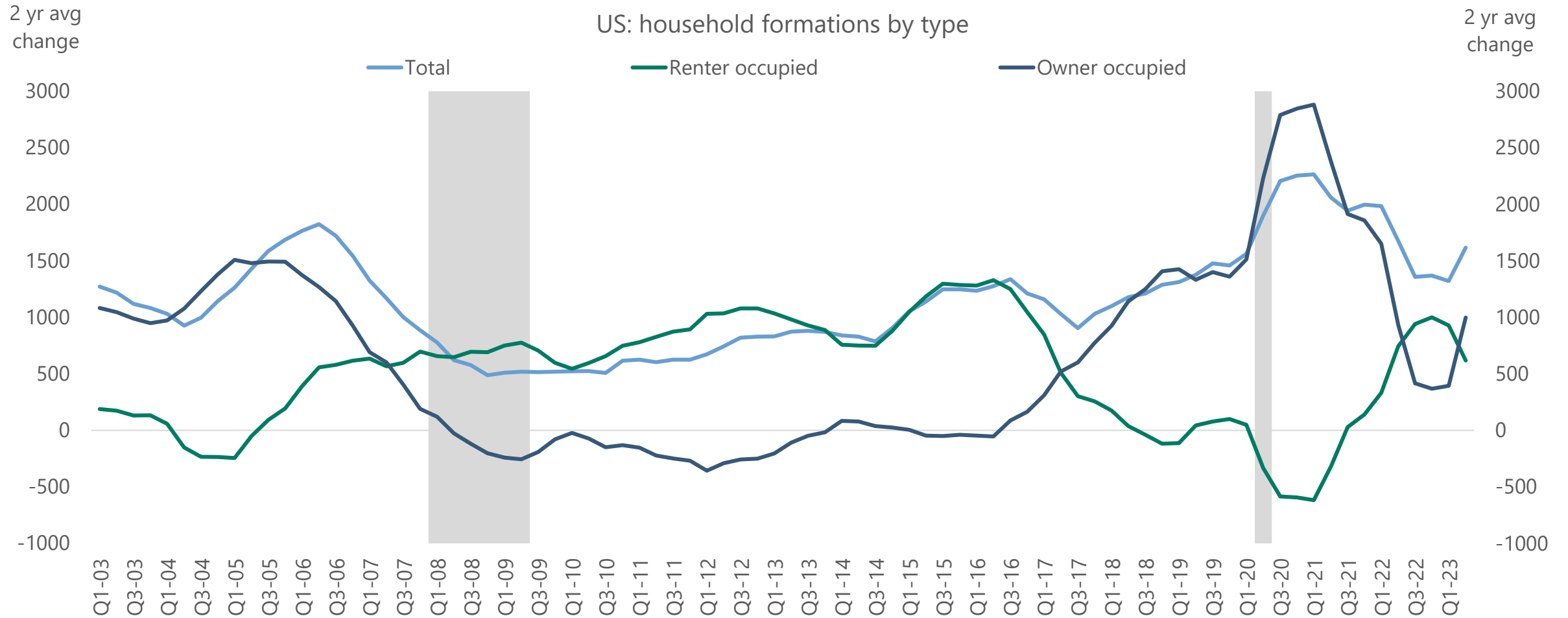


Household formation is also a tailwind to housing

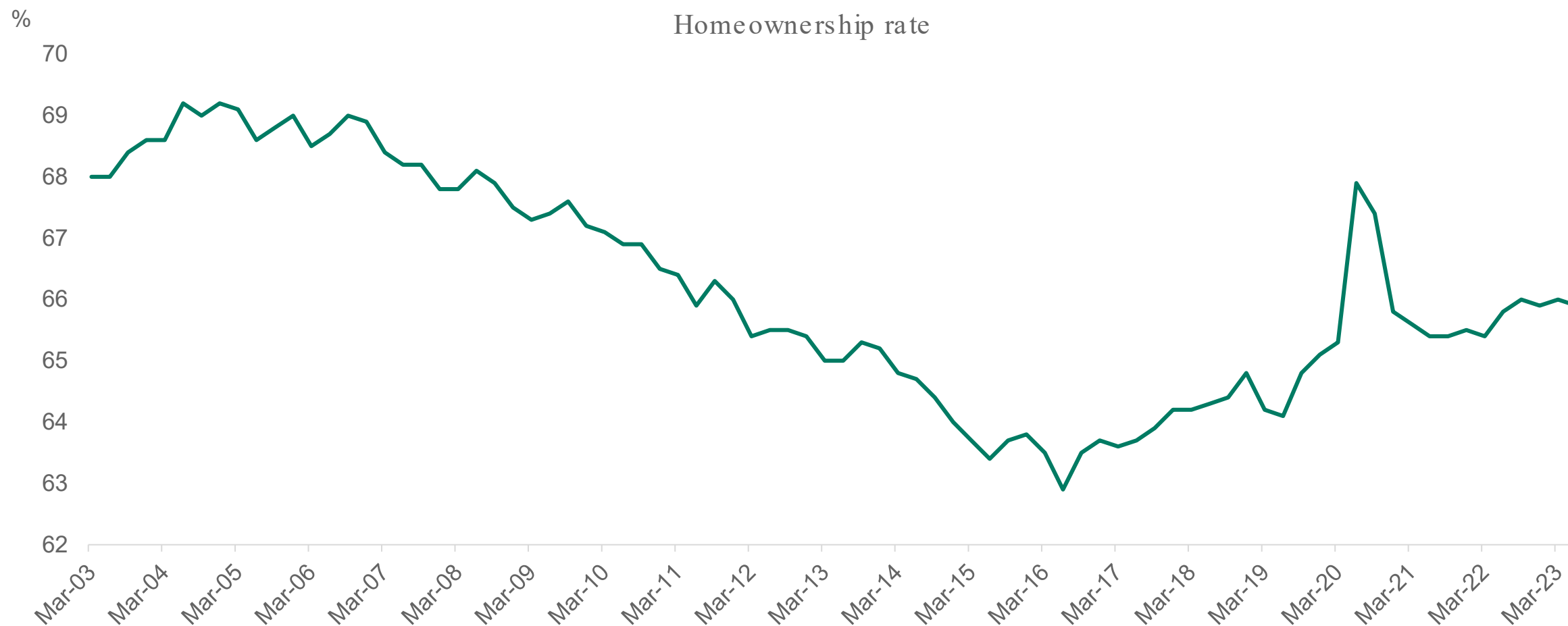


Source: Census Bureau, Haver, Apollo Chief Economist

A rise in the number of renters recently



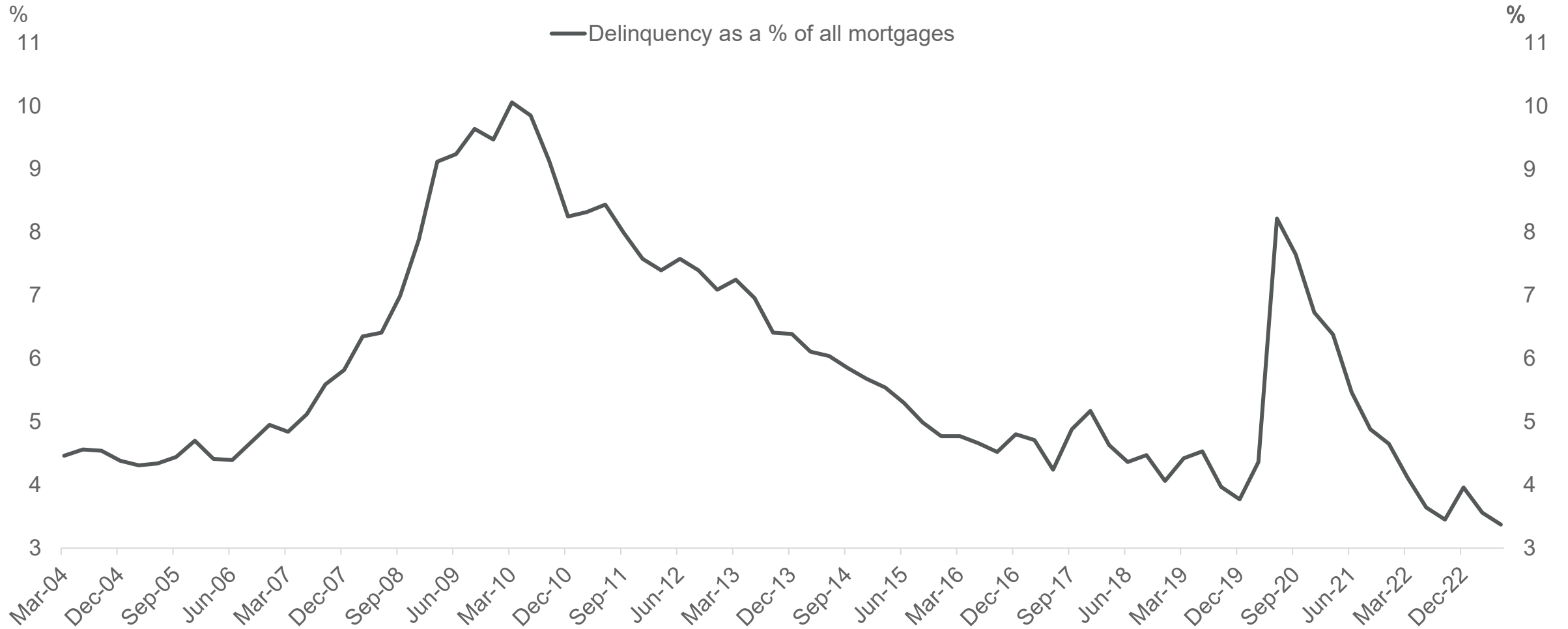
Homeownership rate moving sideways



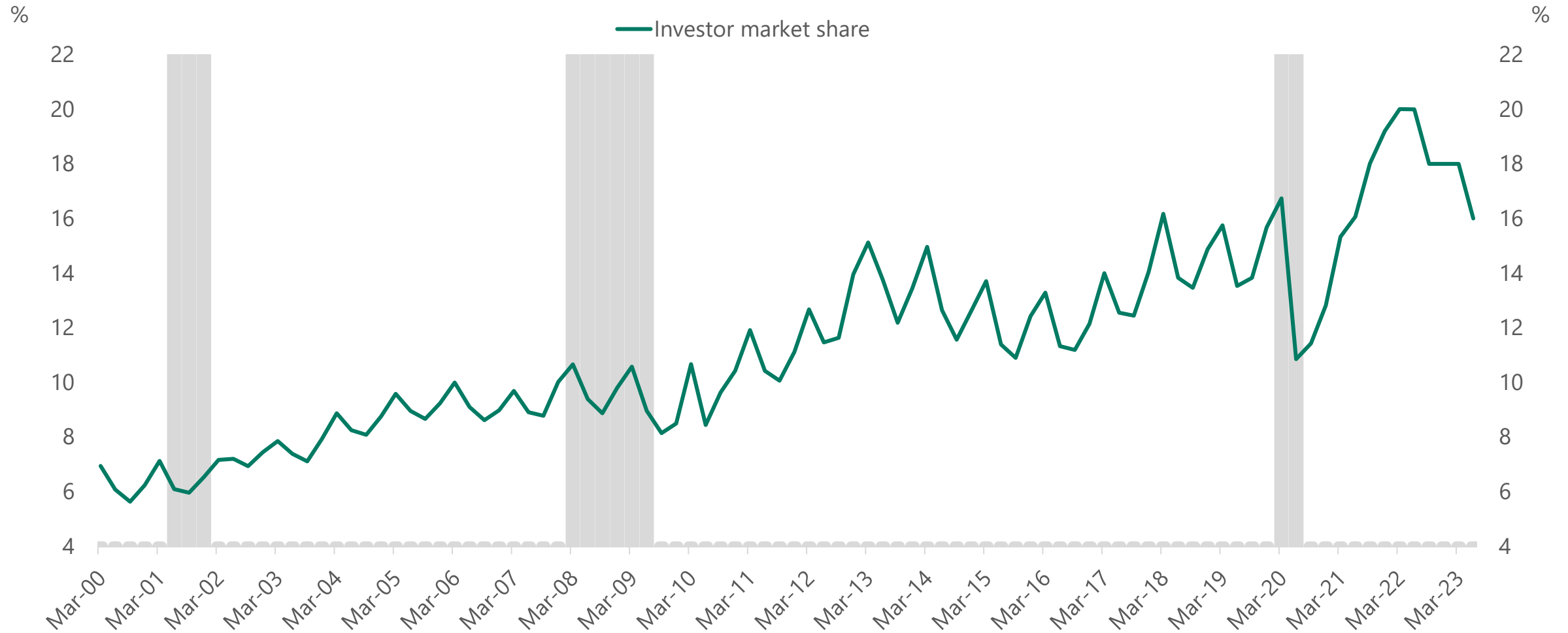
Low unemployment is a tailwind to housing demand



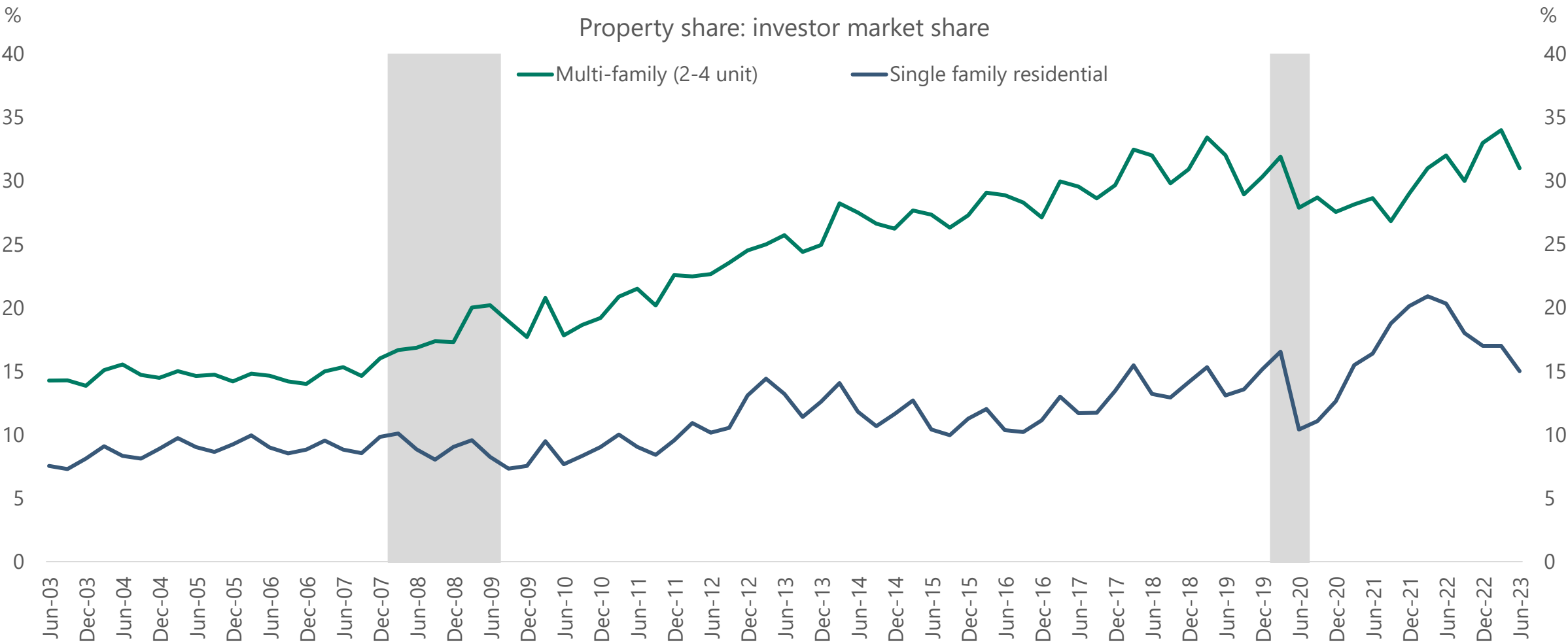
Very few delinquent mortgages



Investors accounting for 16% of all home purchases

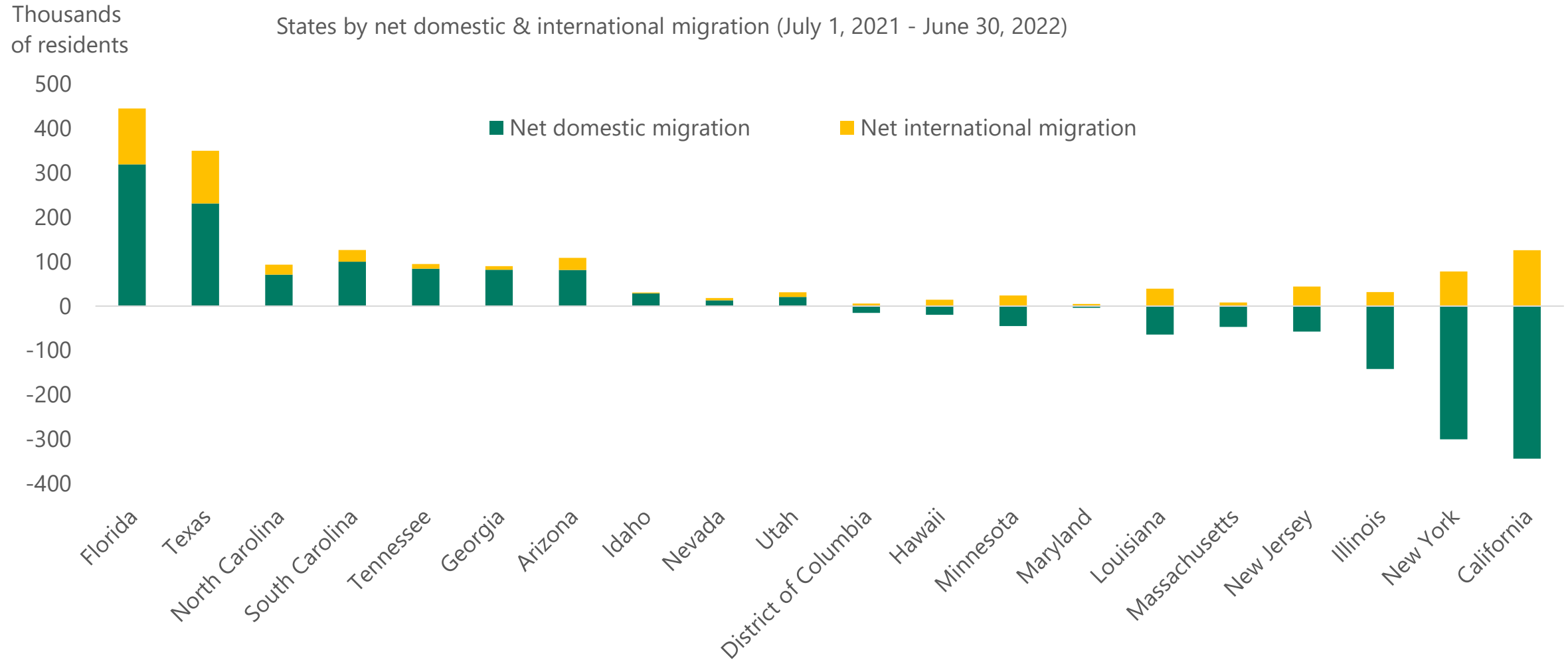


Investor share of single-family is trending lower

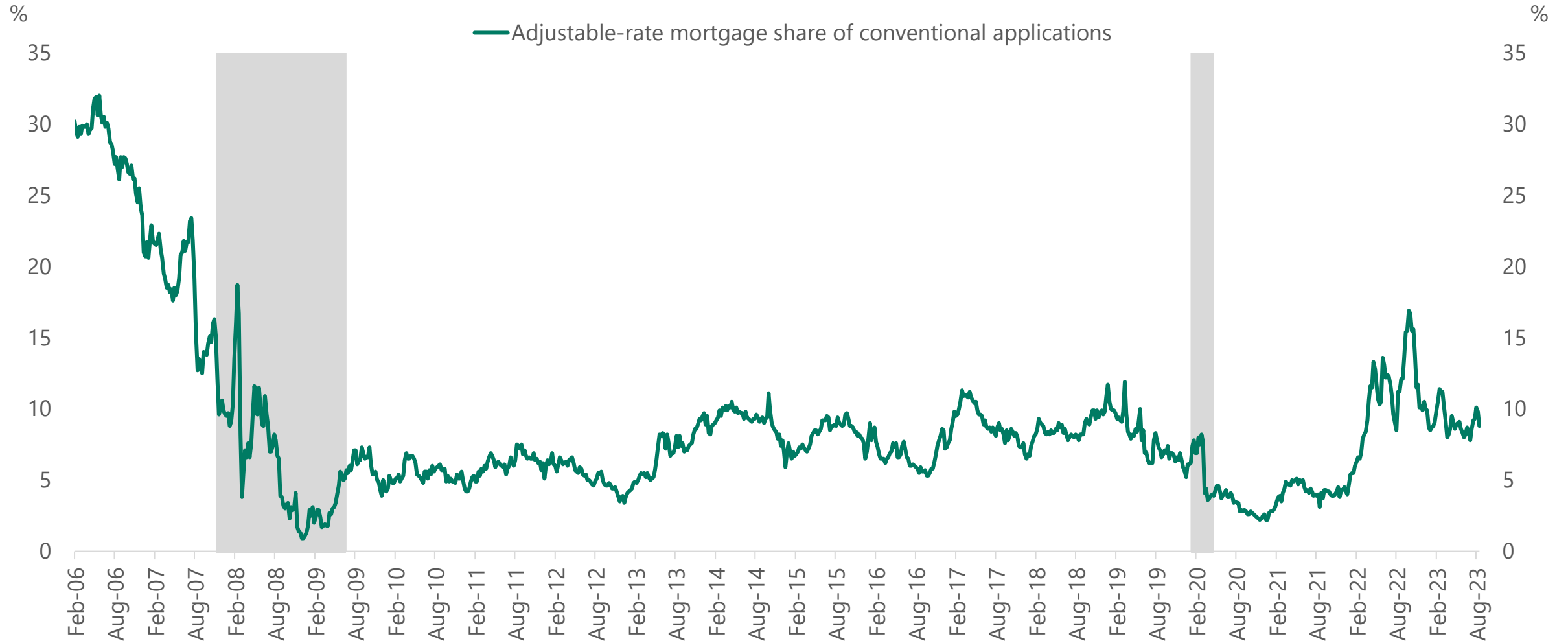


Source: Redfin, Apollo Chief Economist (Definition of Investor market share: the percentage of total home sales in which an investor was the buyer)

Migration out of California and migration into Florida during the pandemic

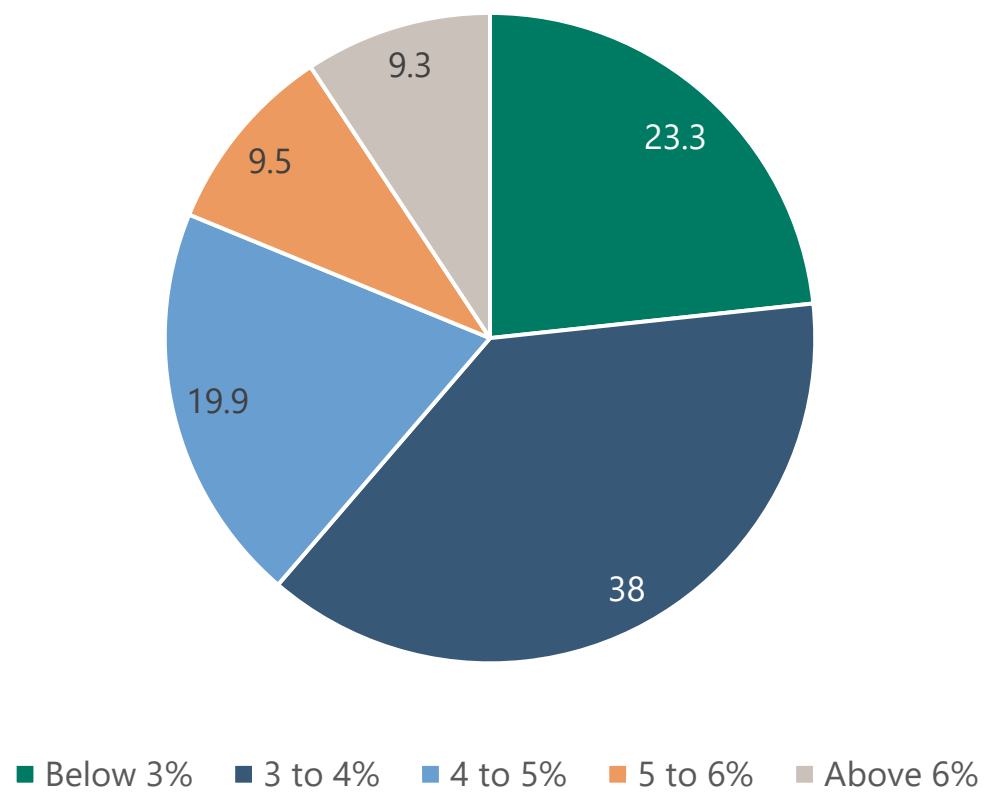


ARM share of total mortgage applications at 9%

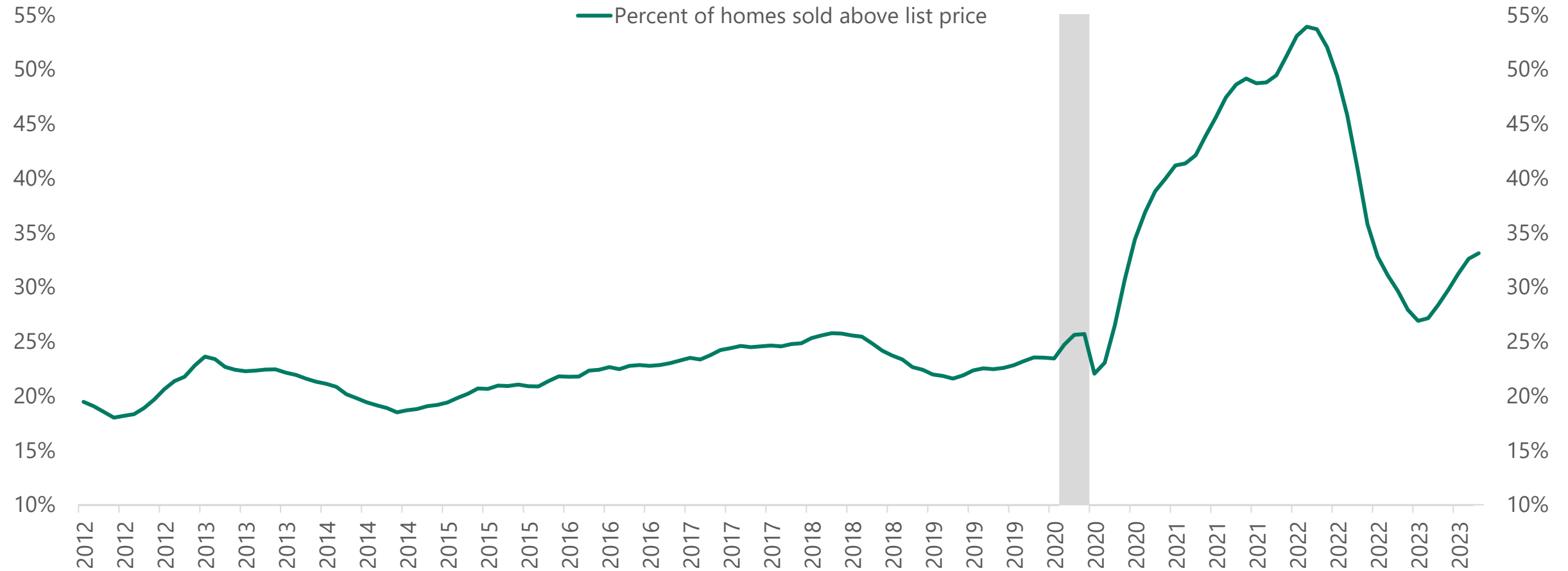


Share of mortgages outstanding by interest rate

Share of mortgages outstanding by interest rate at origination by count, 2023 Q1

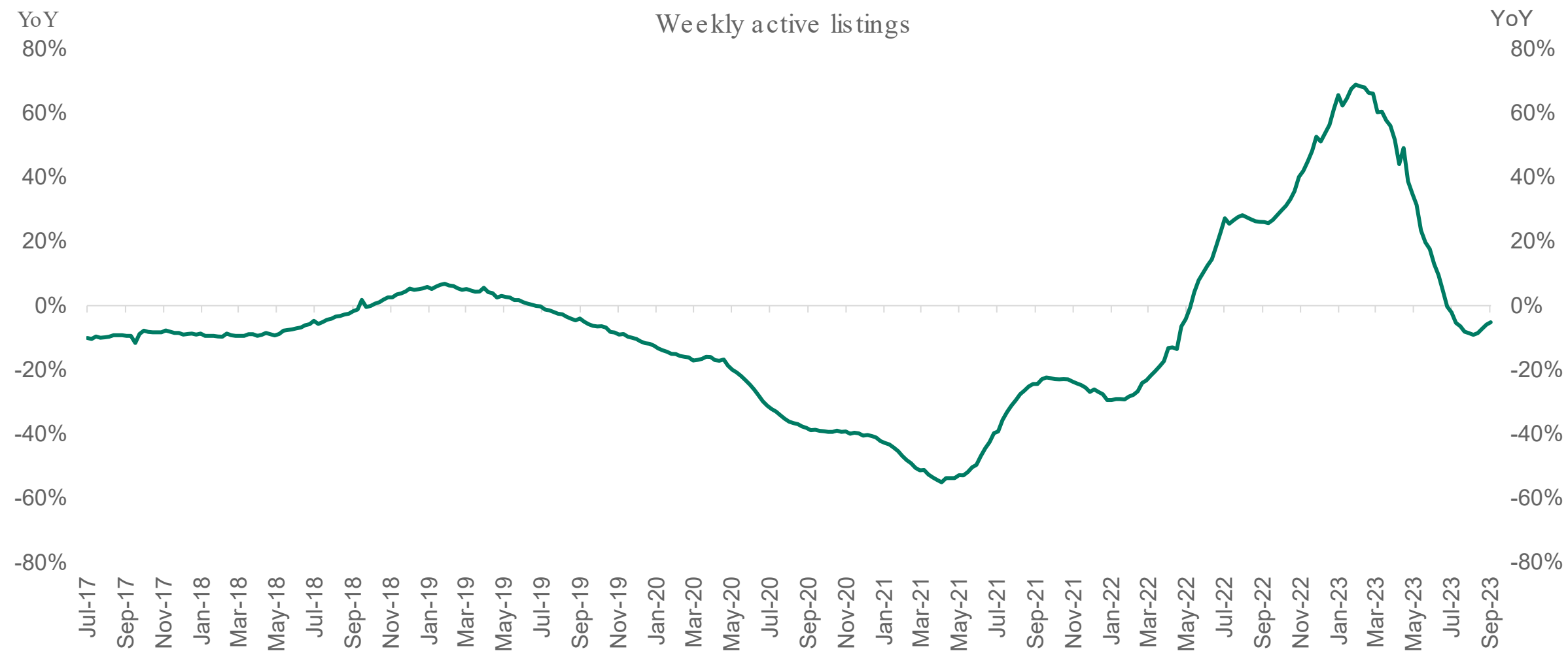


Housing demand: 33% of homes sold above their list price

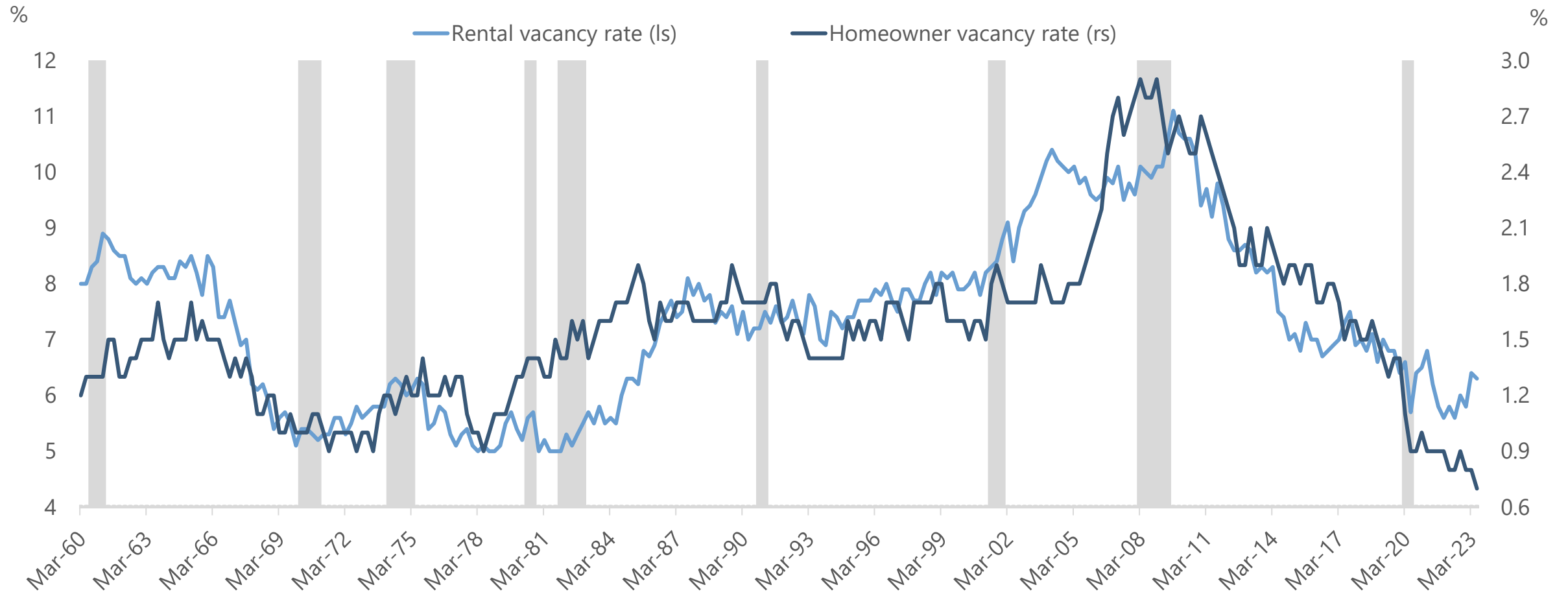


2) Housing Supply: Housing supply is low, construction coming down from record-high levels

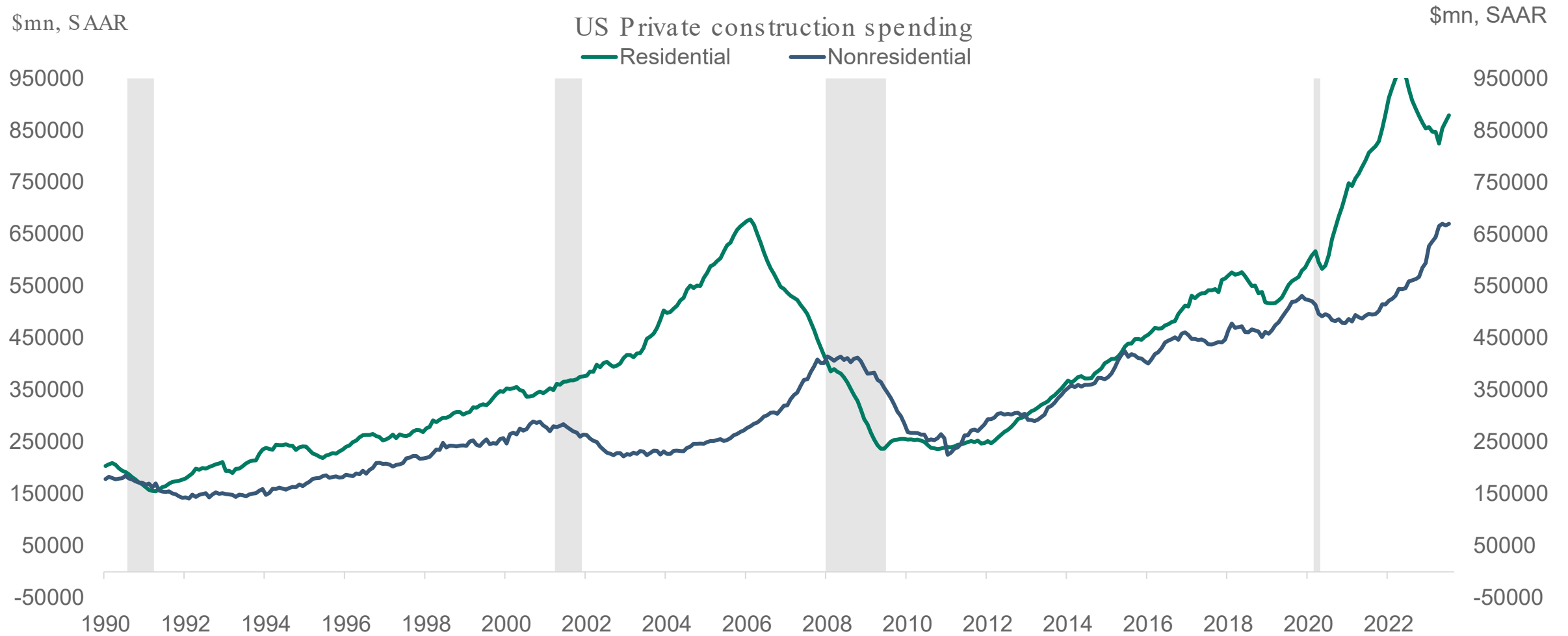
Low inventory of homes for sale



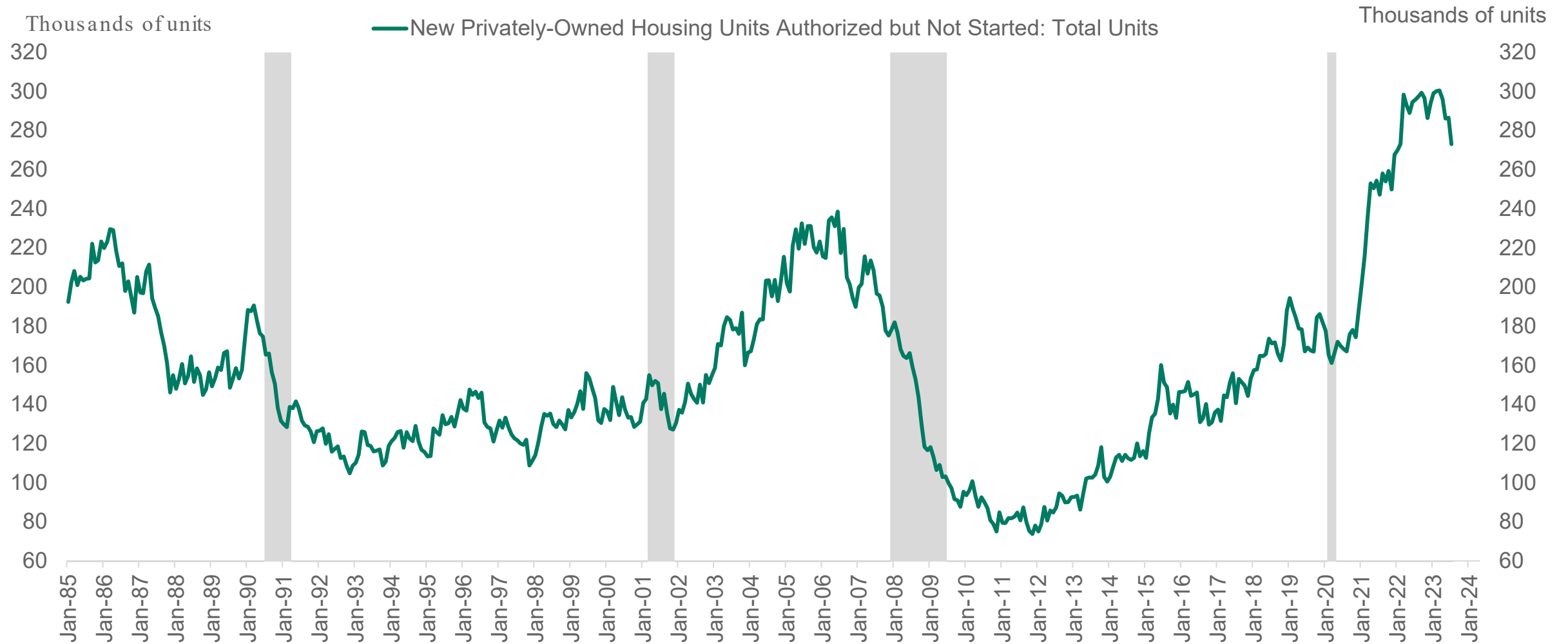
Homeowner vacancy rate is at historical low level



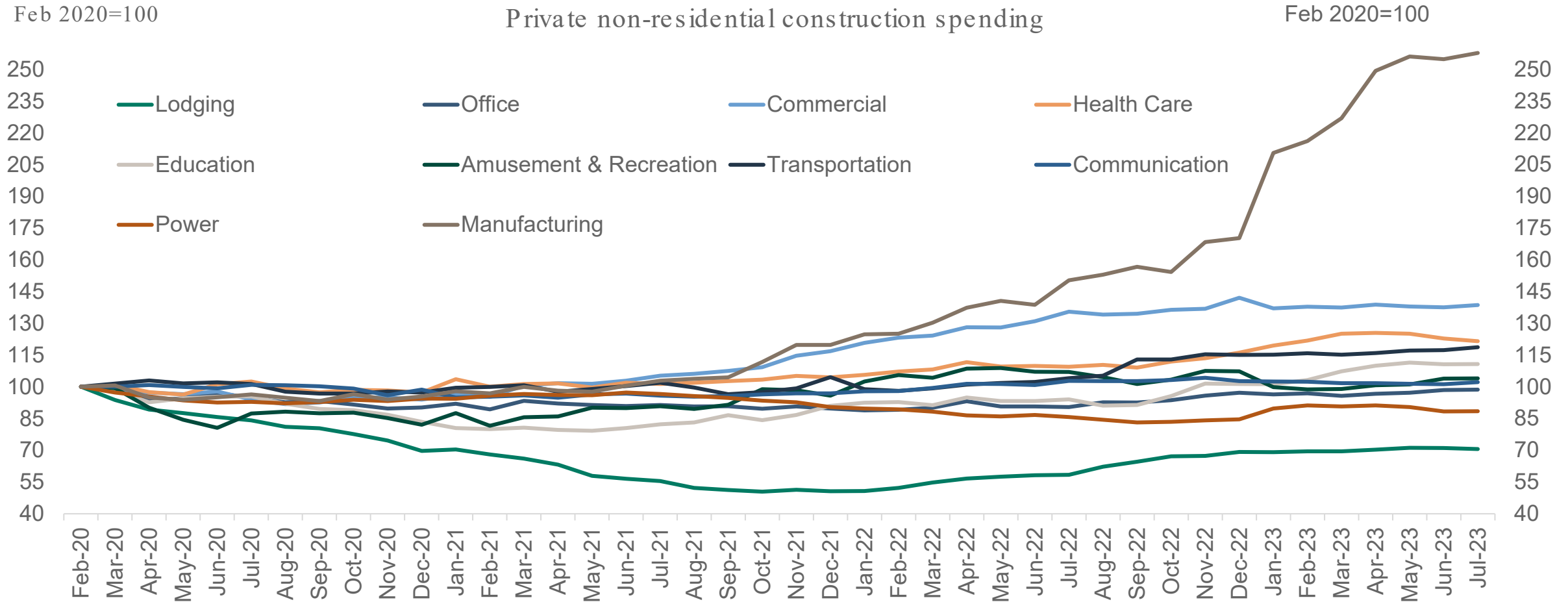
Residential construction spending starting to rise again



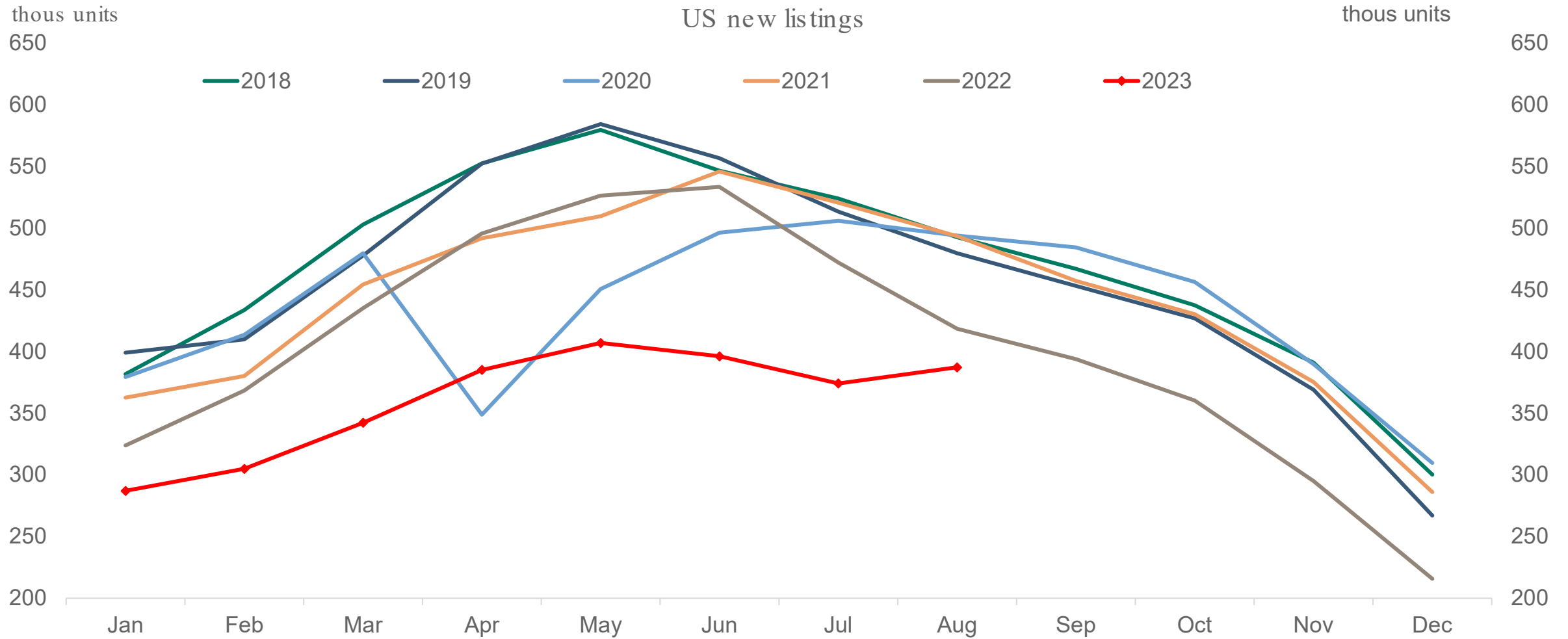
New housing units authorized but not started



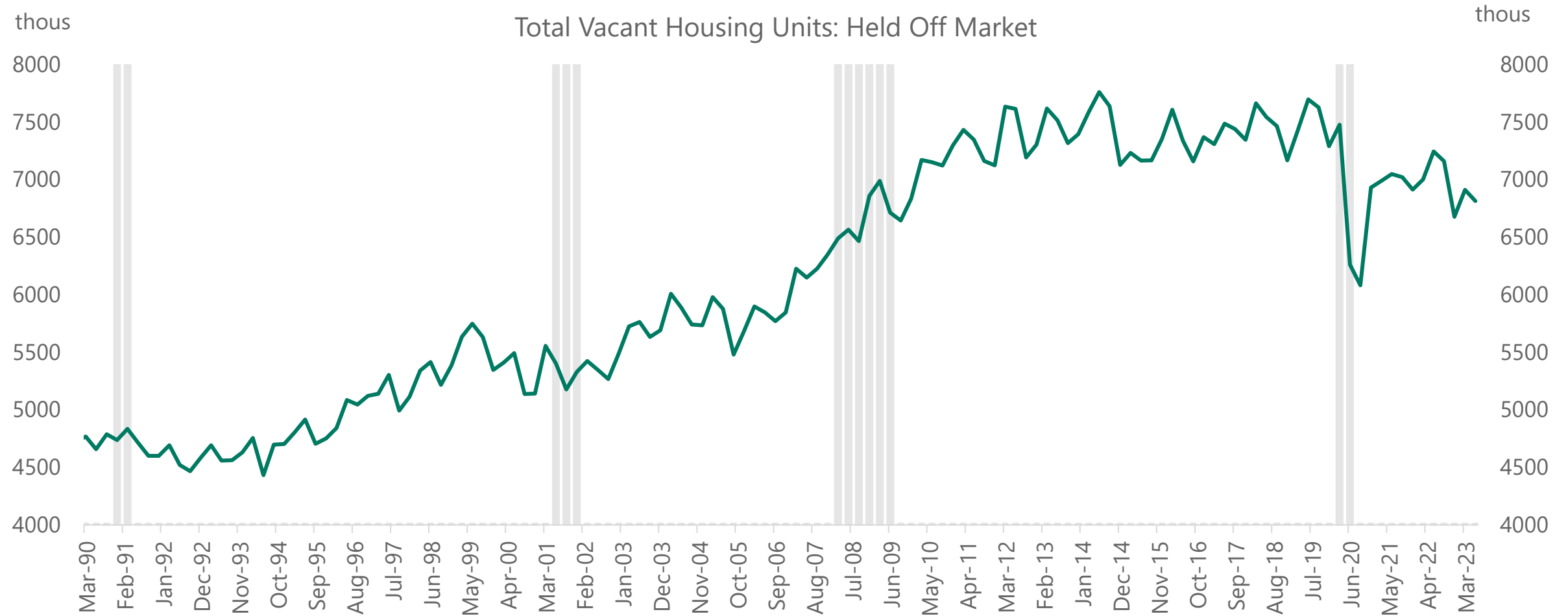
The biggest increase in non-residential construction has been in manufacturing



Newly listed homes very low



Vacant housing units held off market coming down

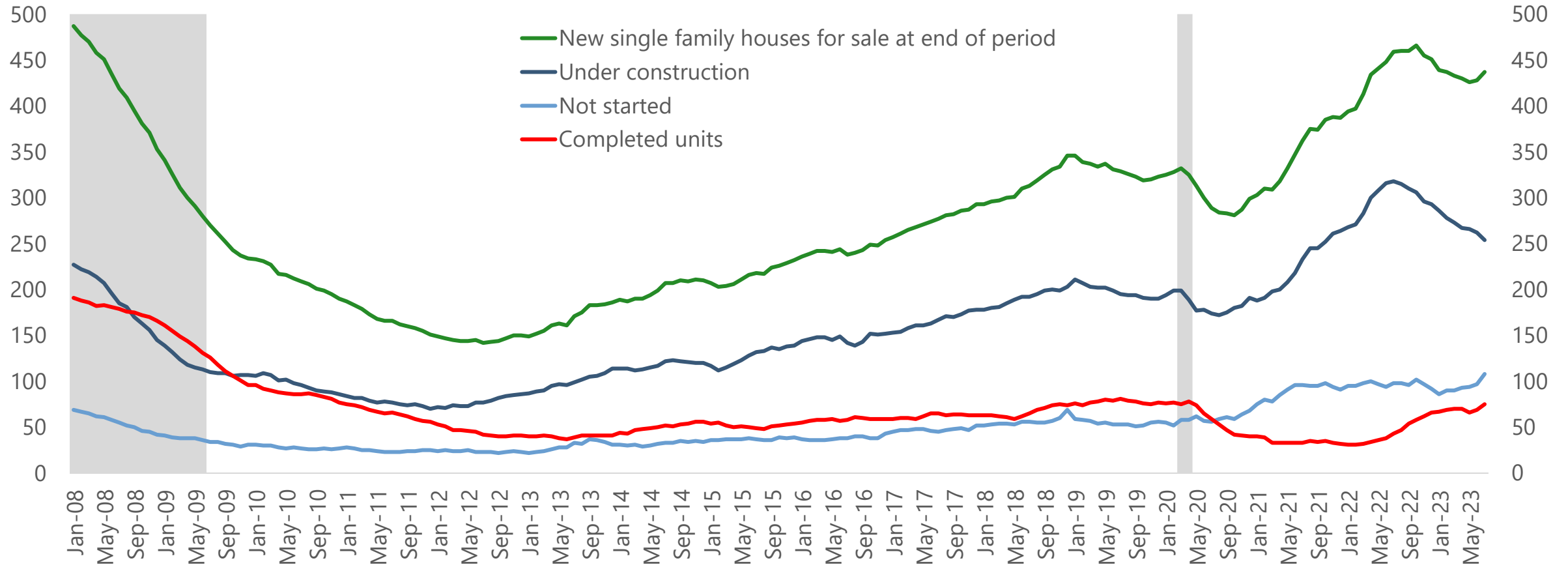


Decline in the number of new houses for sale under construction

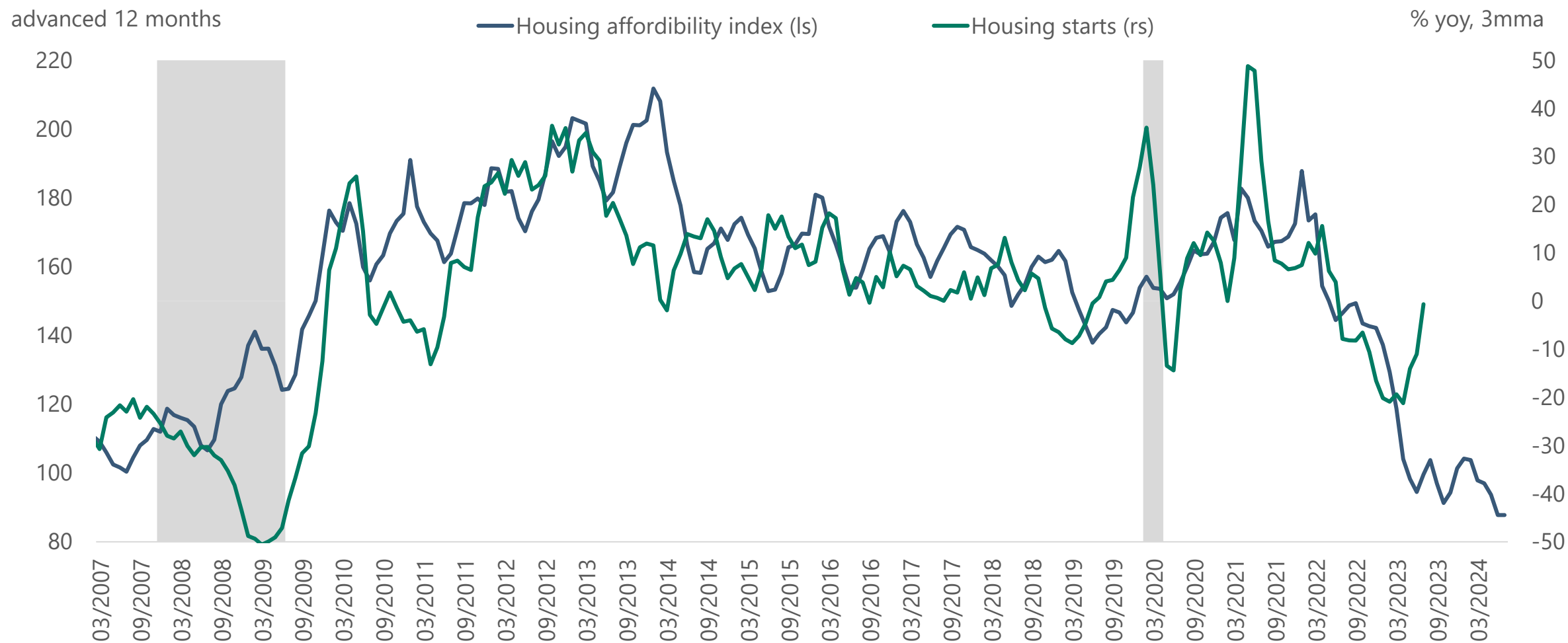
Thousands of units

Number of new houses for sale

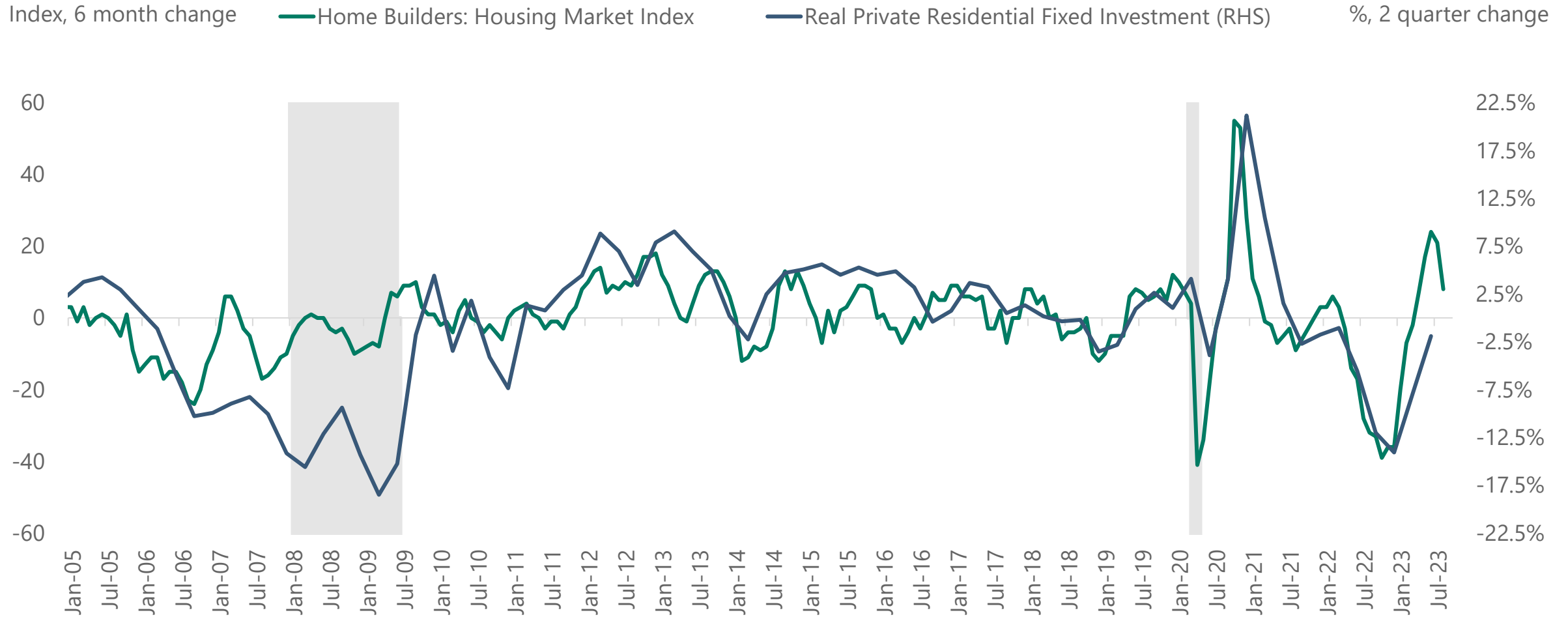
Thousands of units



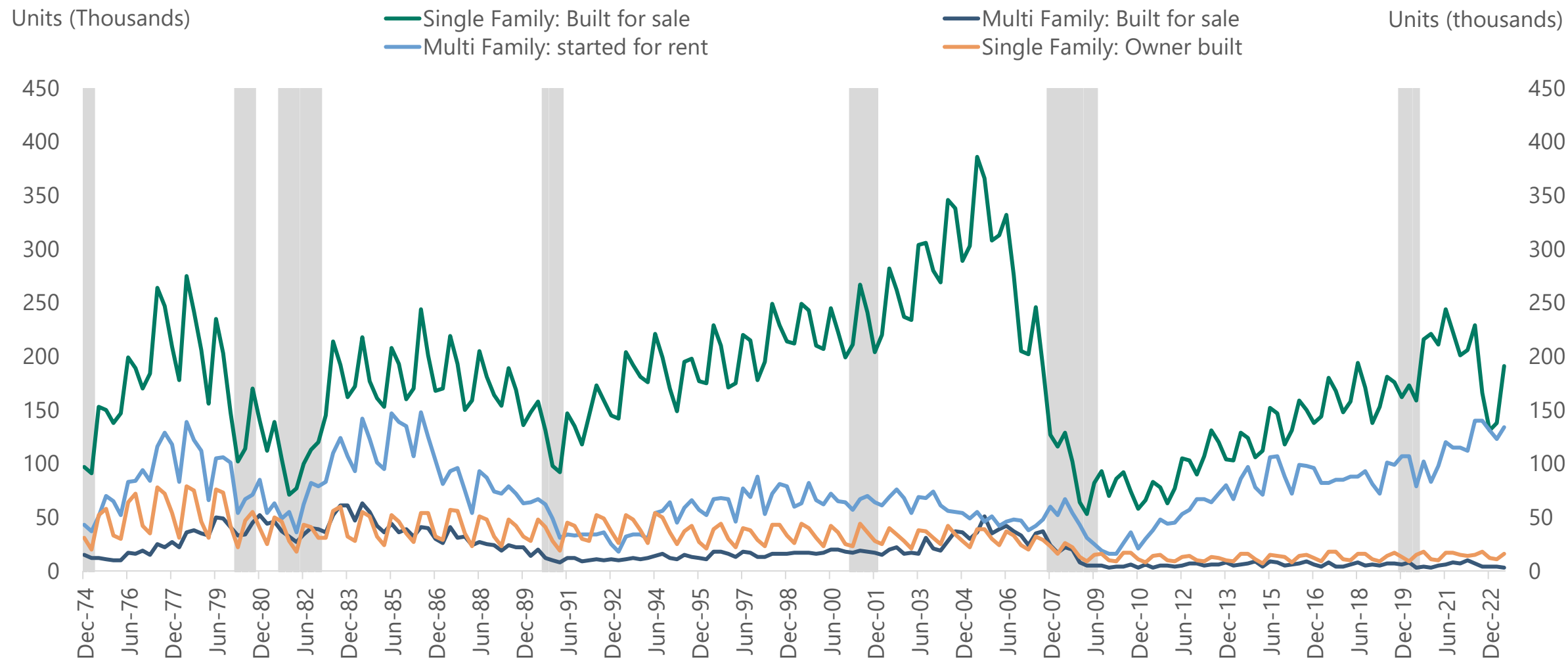
Housing starts high despite low affordability



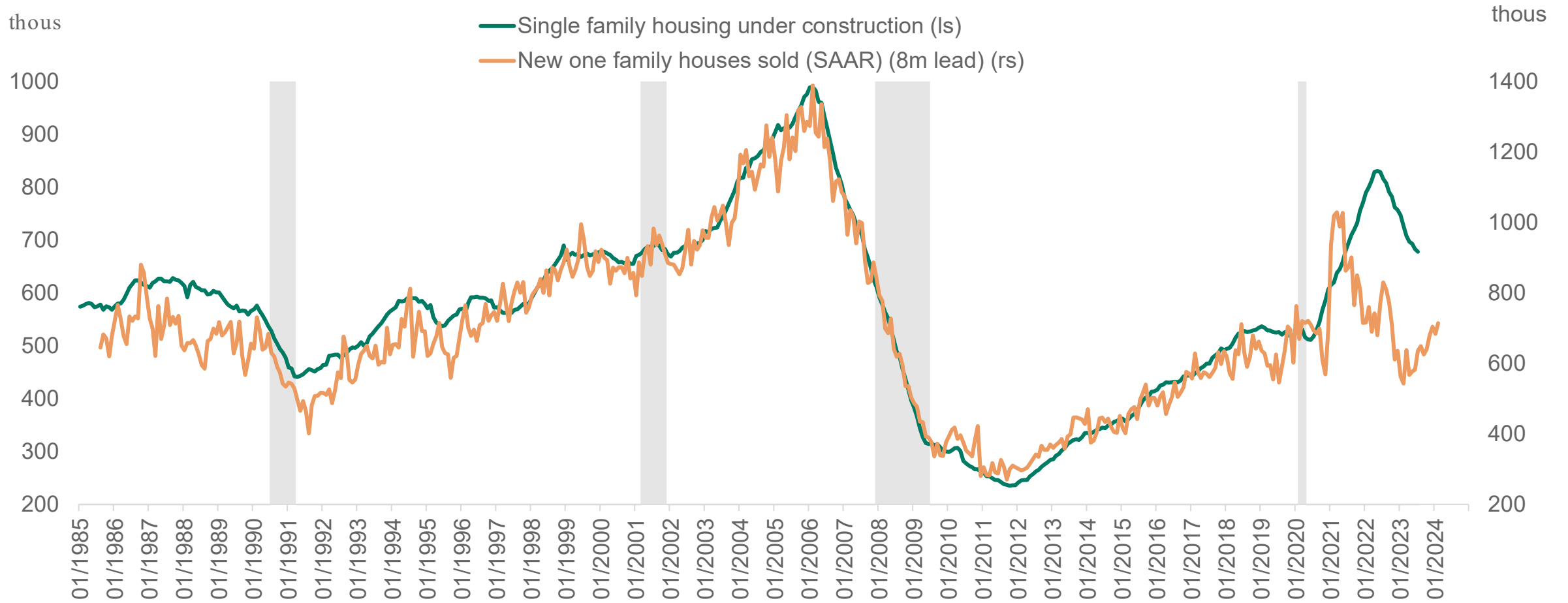
Homebuilder confidence highly correlated with residential investment



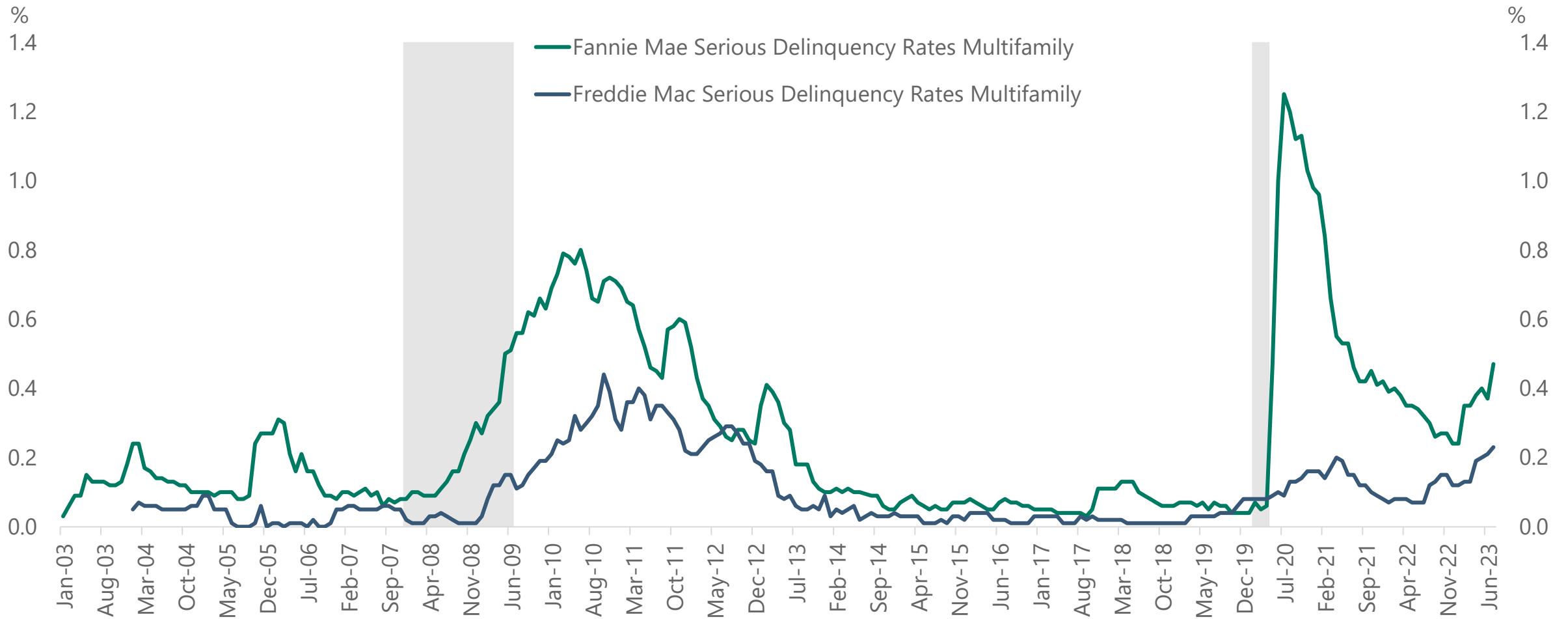
Intent of housing starts



Some disconnect between housing under construction and new homes sold

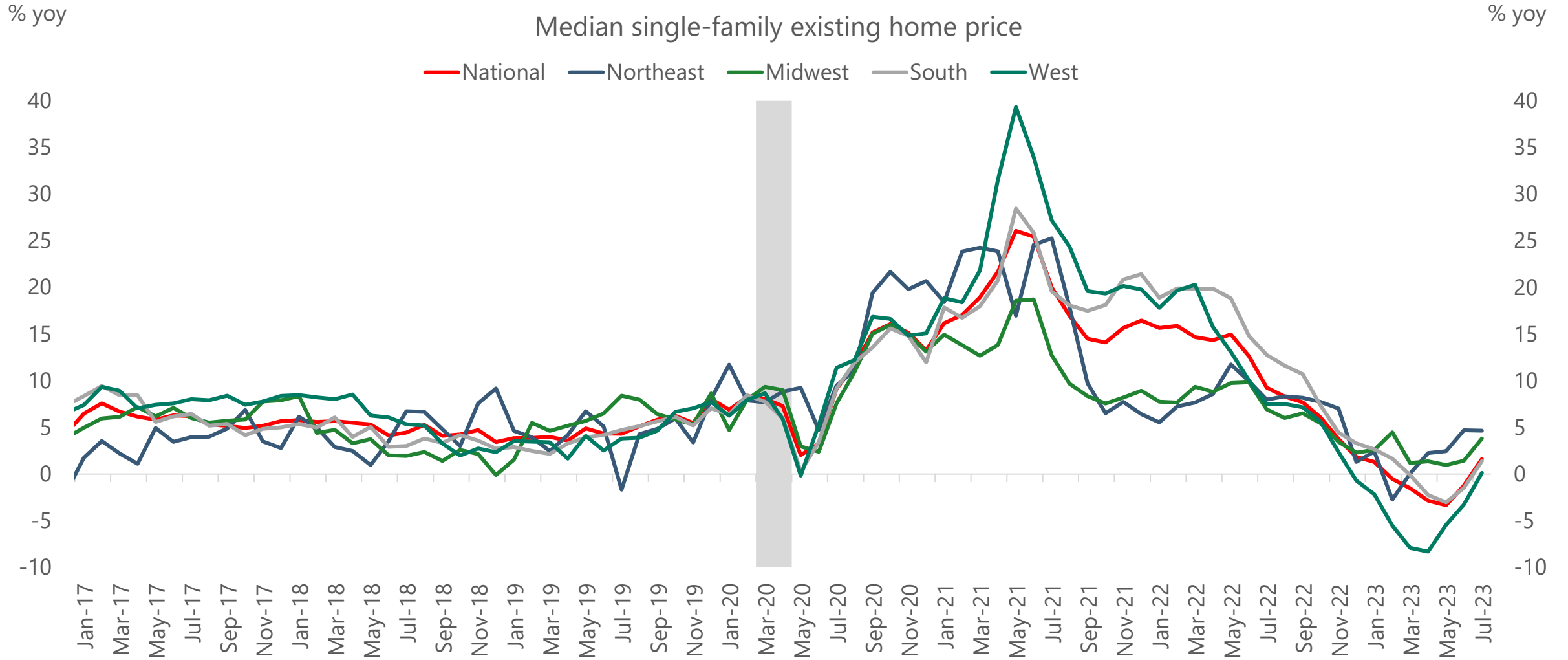


Multifamily delinquencies rising

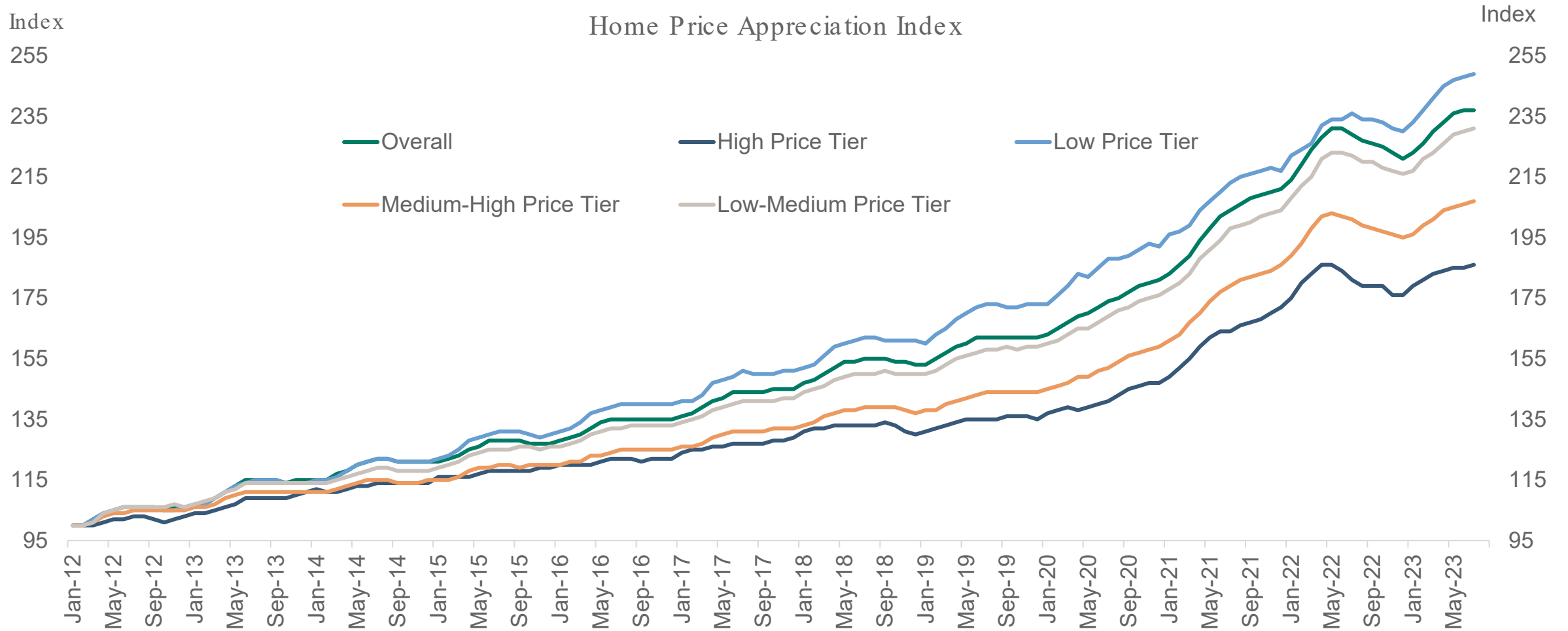


3) House Prices: Home price inflation stabilizing

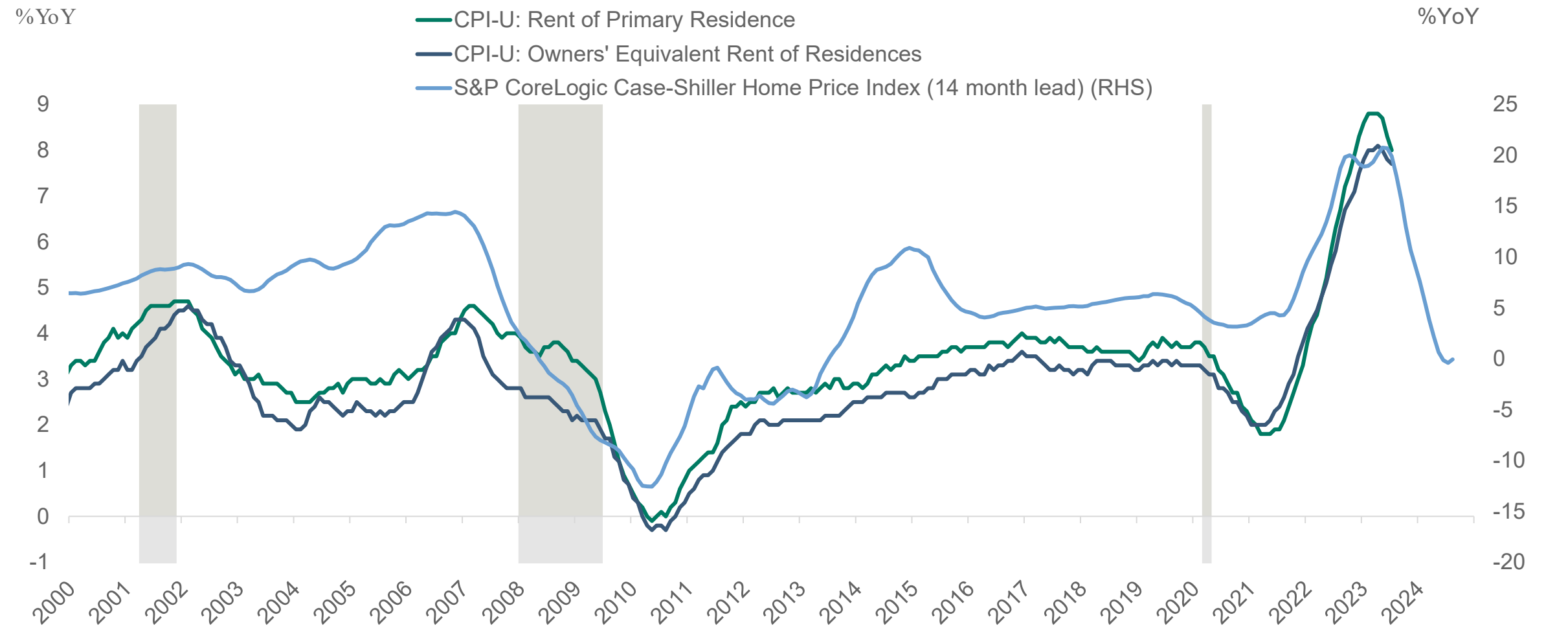
Home price inflation stabilizing



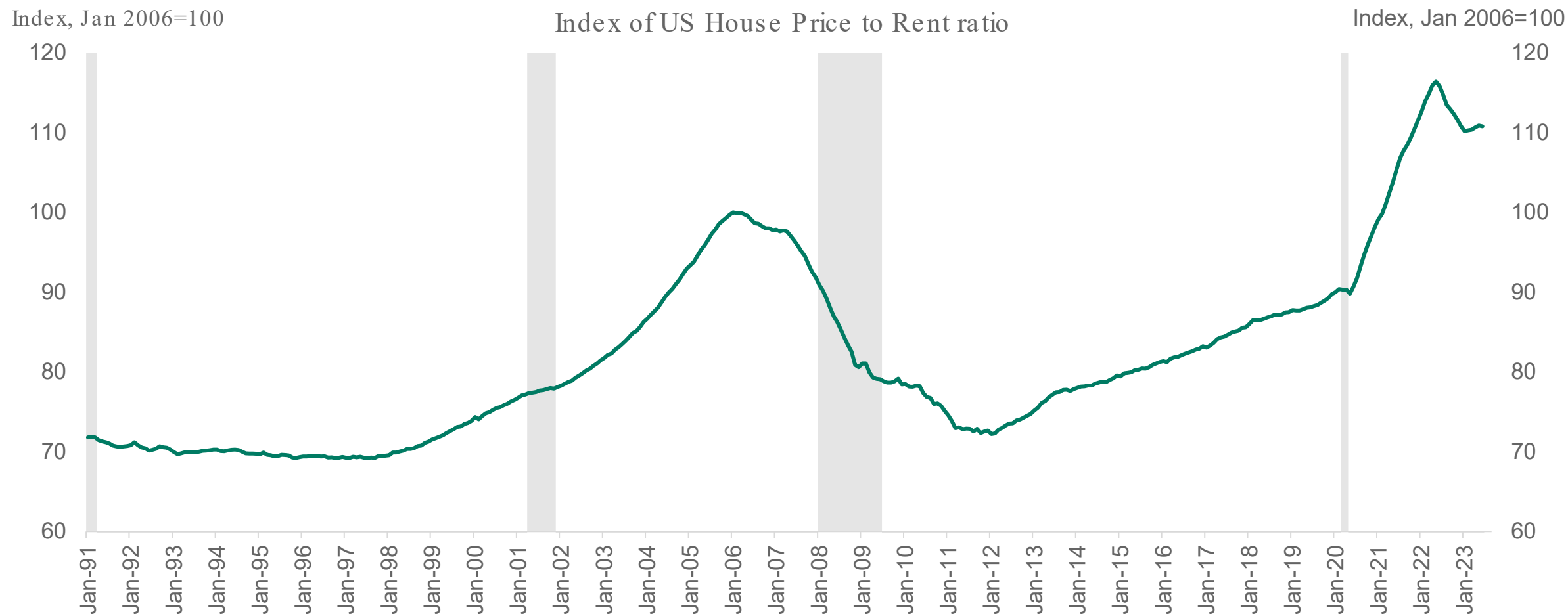
House price inflation stabilizing across price tiers



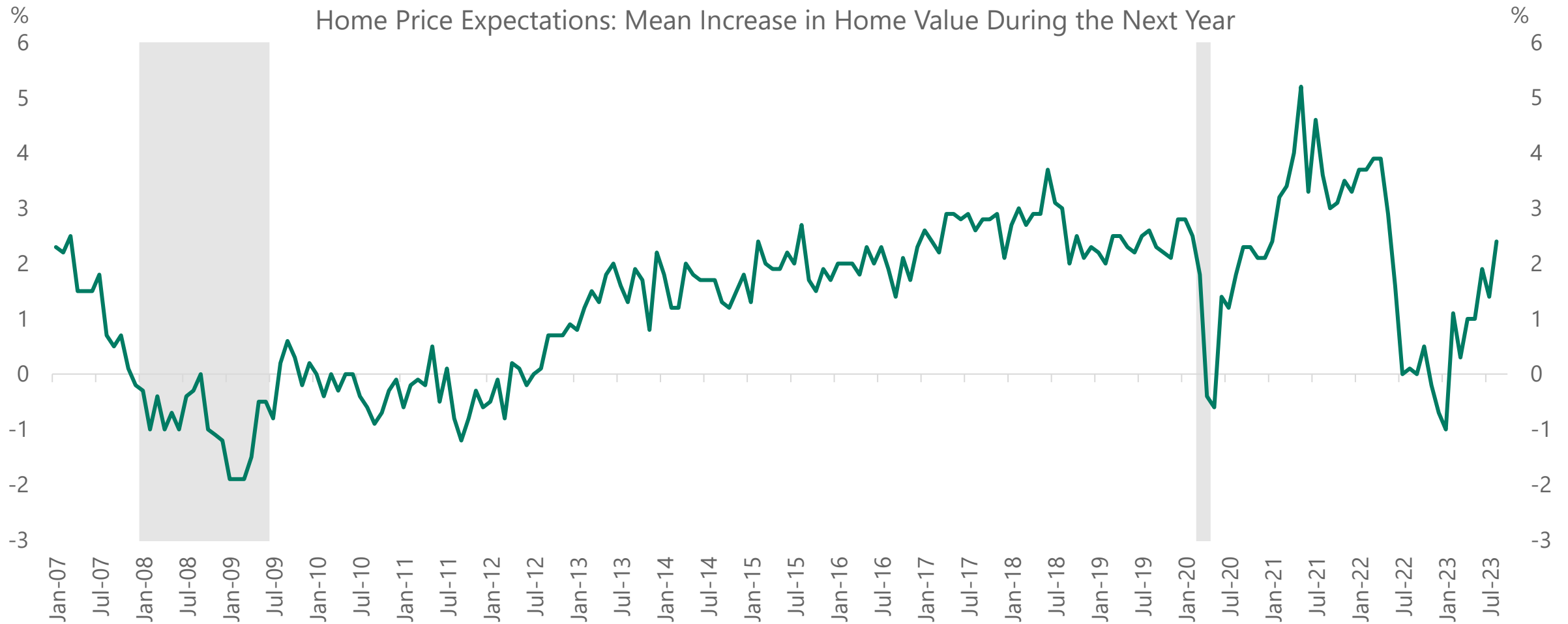
Home price inflation has peaked



Home price to rent ratio significantly above 2006 levels



Steady increase in consumers' expectations to home price inflation

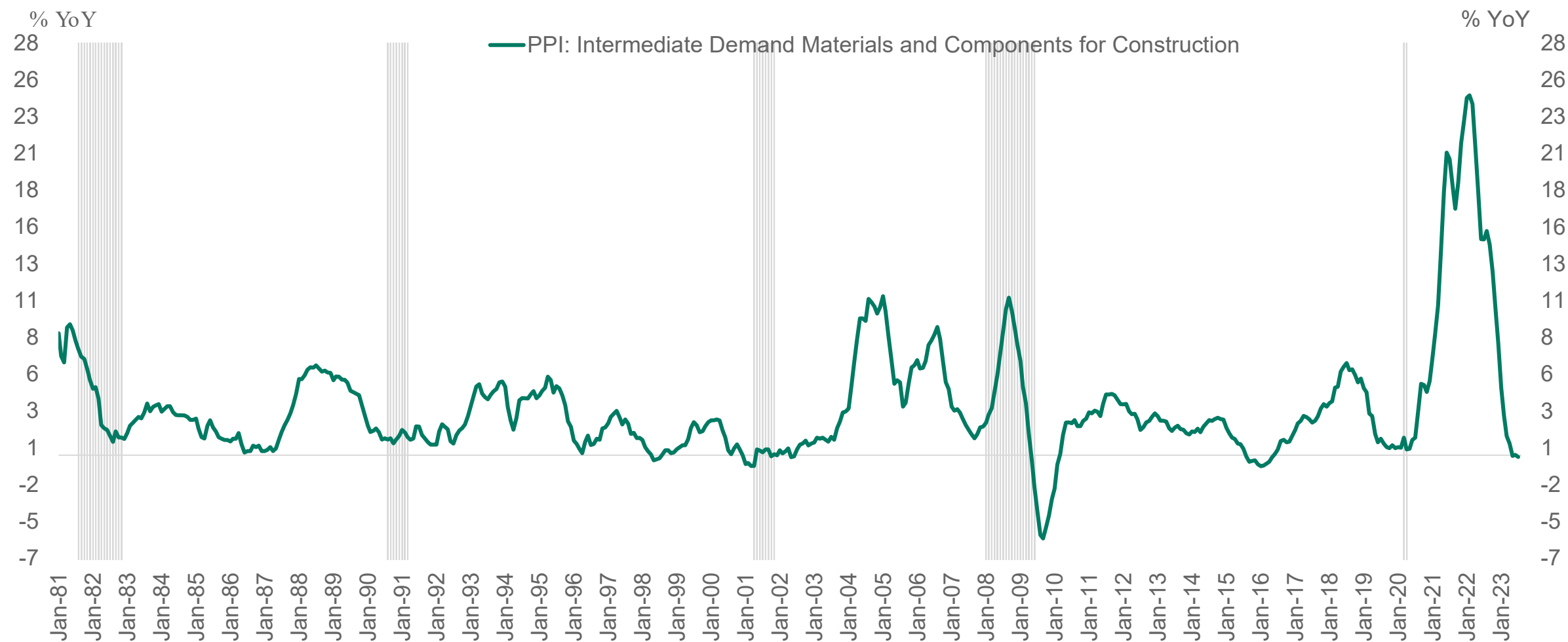


4) Housing Outlook: **High mortgage rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle**

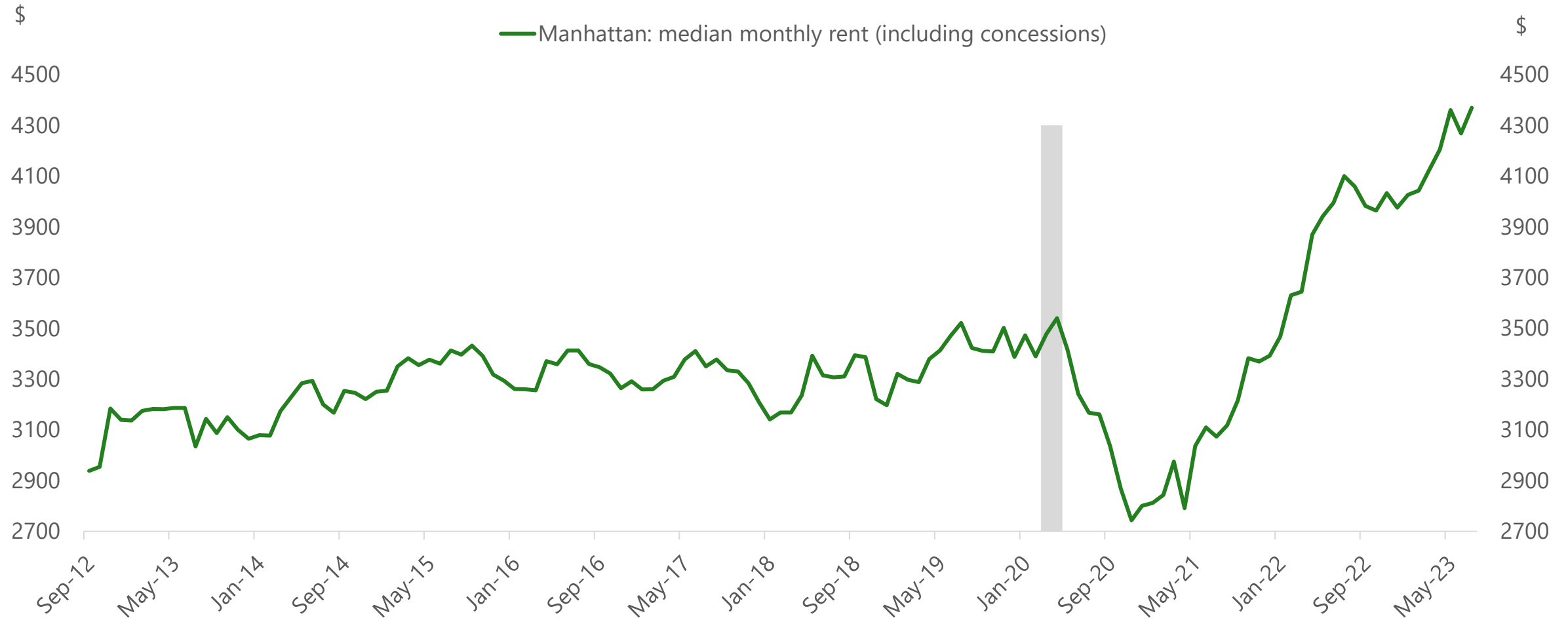
Housing construction costs are high



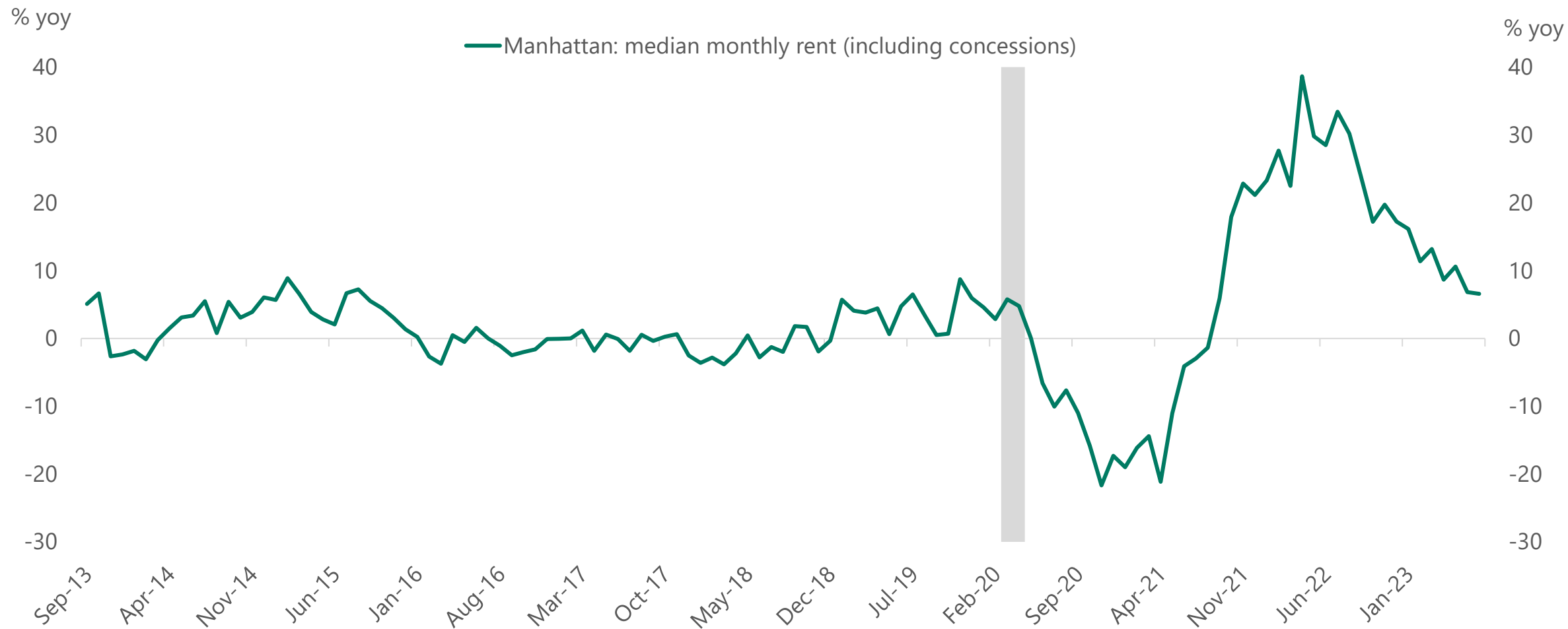
Inflation in input costs for home builders declining



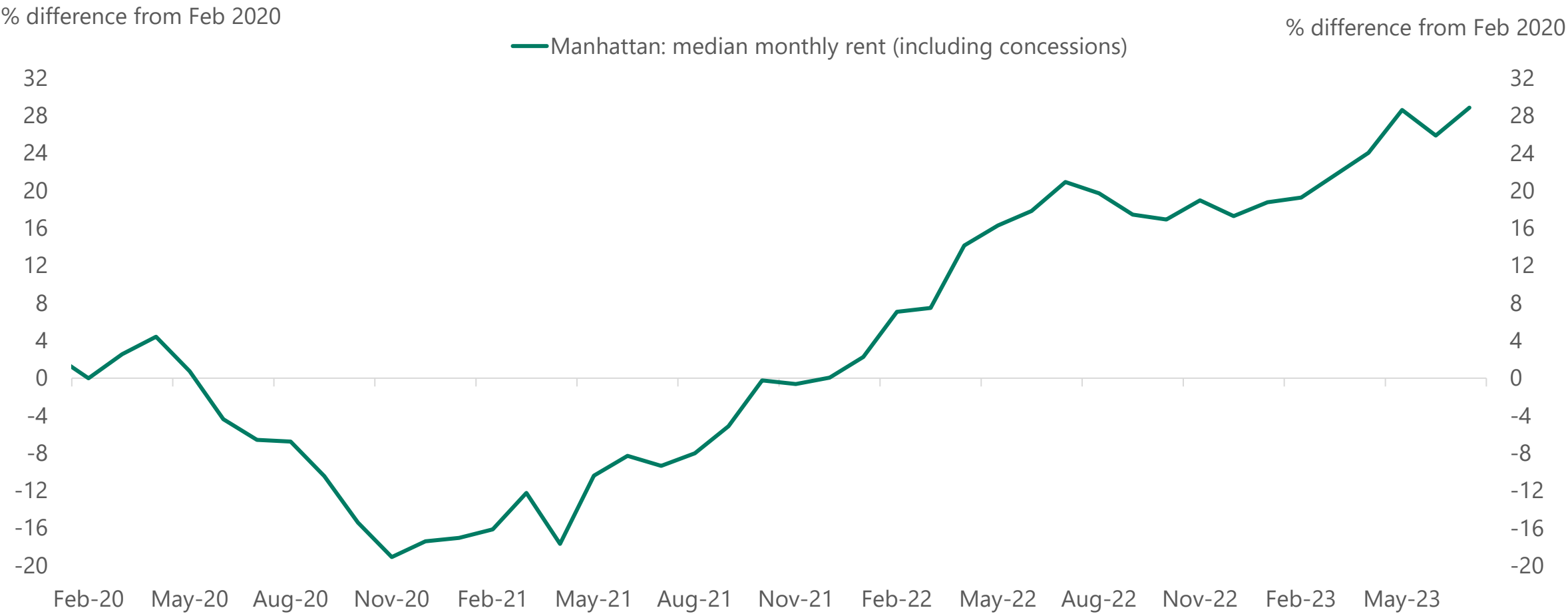
Manhattan median rent at a new high at \$4369 in July 2023



Manhattan rent growth slowing

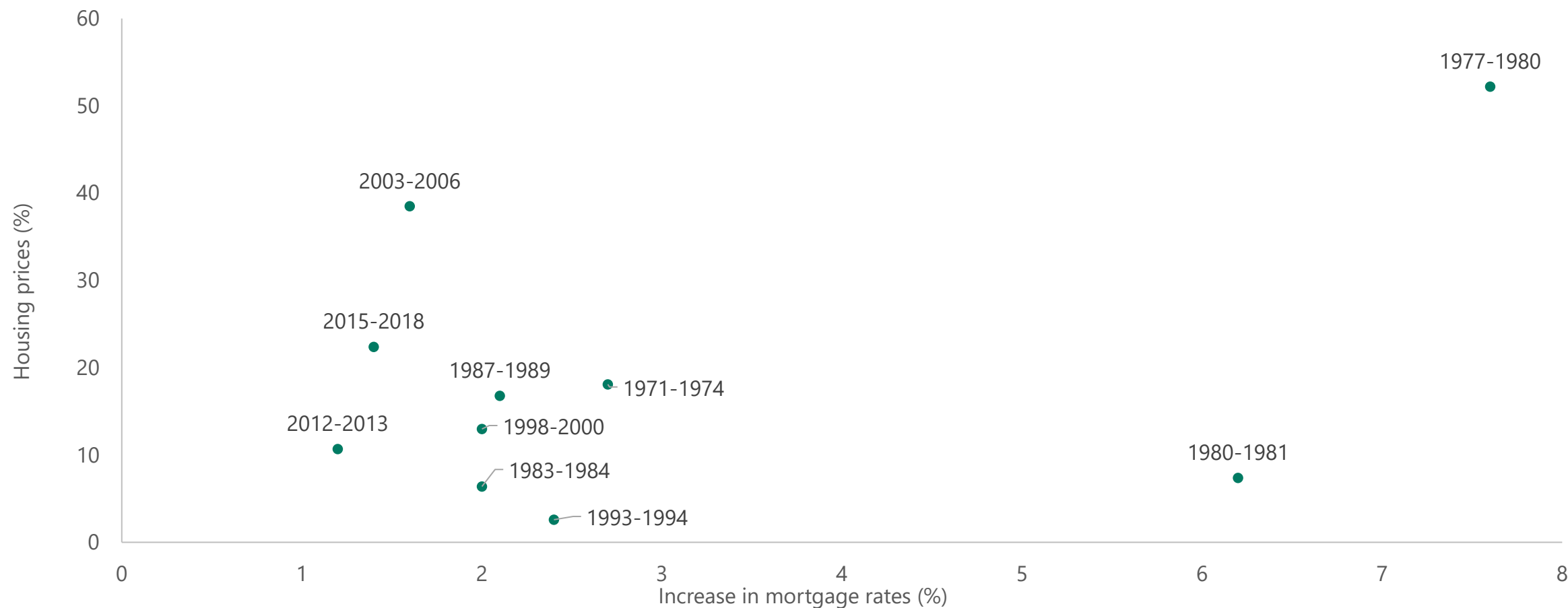


Manhattan rents above pre-pandemic levels

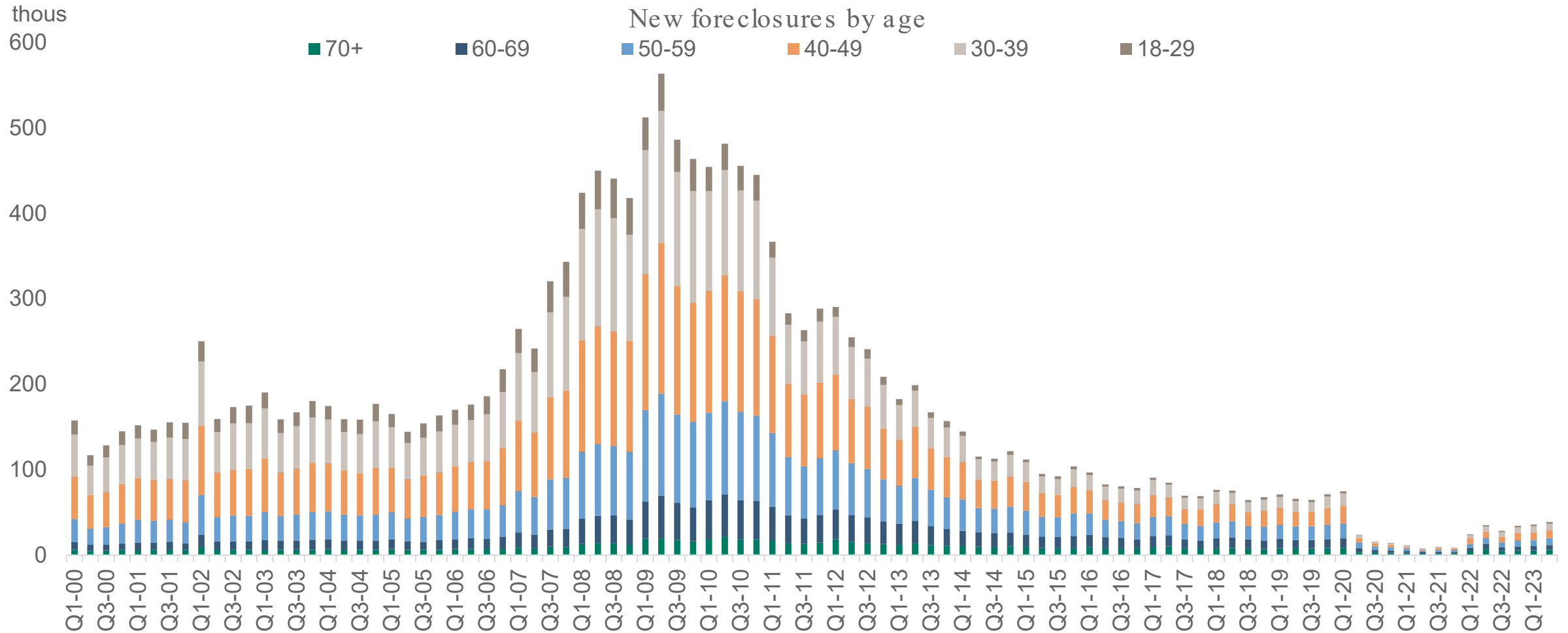


Source: Elliman, Apollo Chief Economist

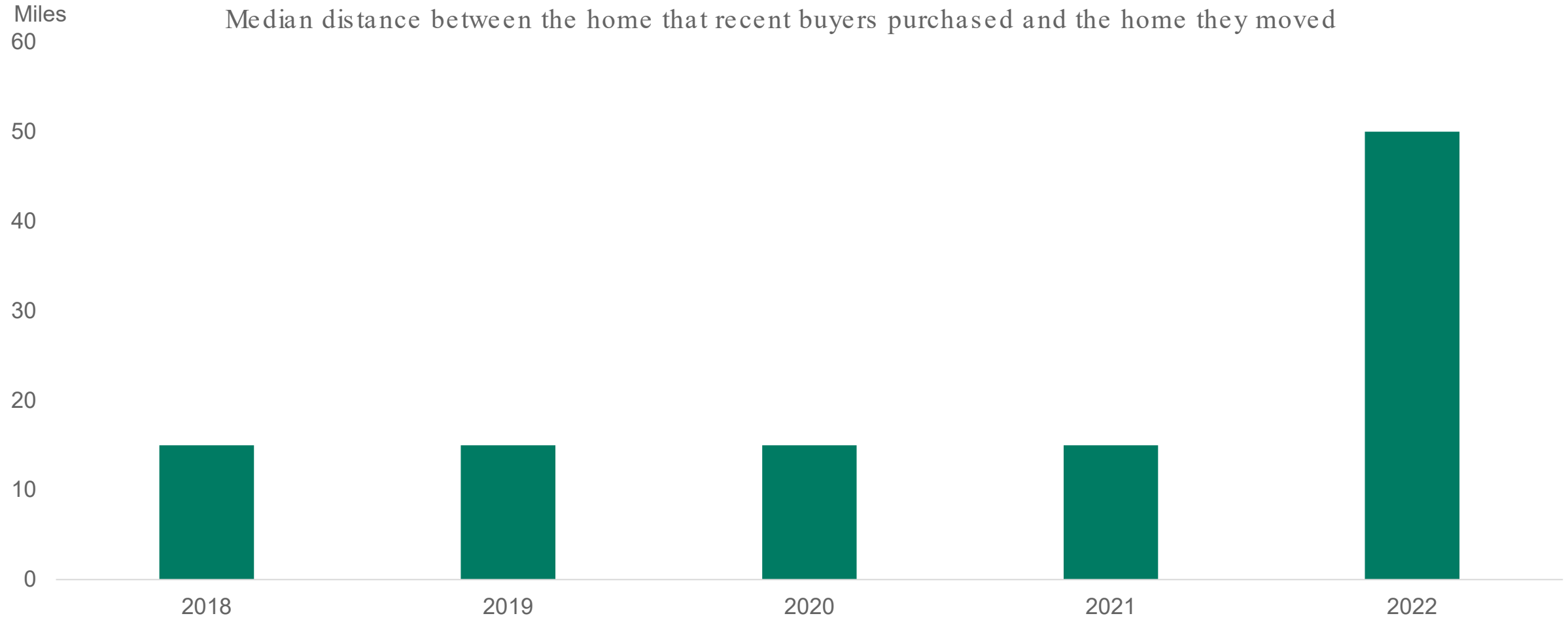
Rising mortgage rates generally associated with lower home price inflation



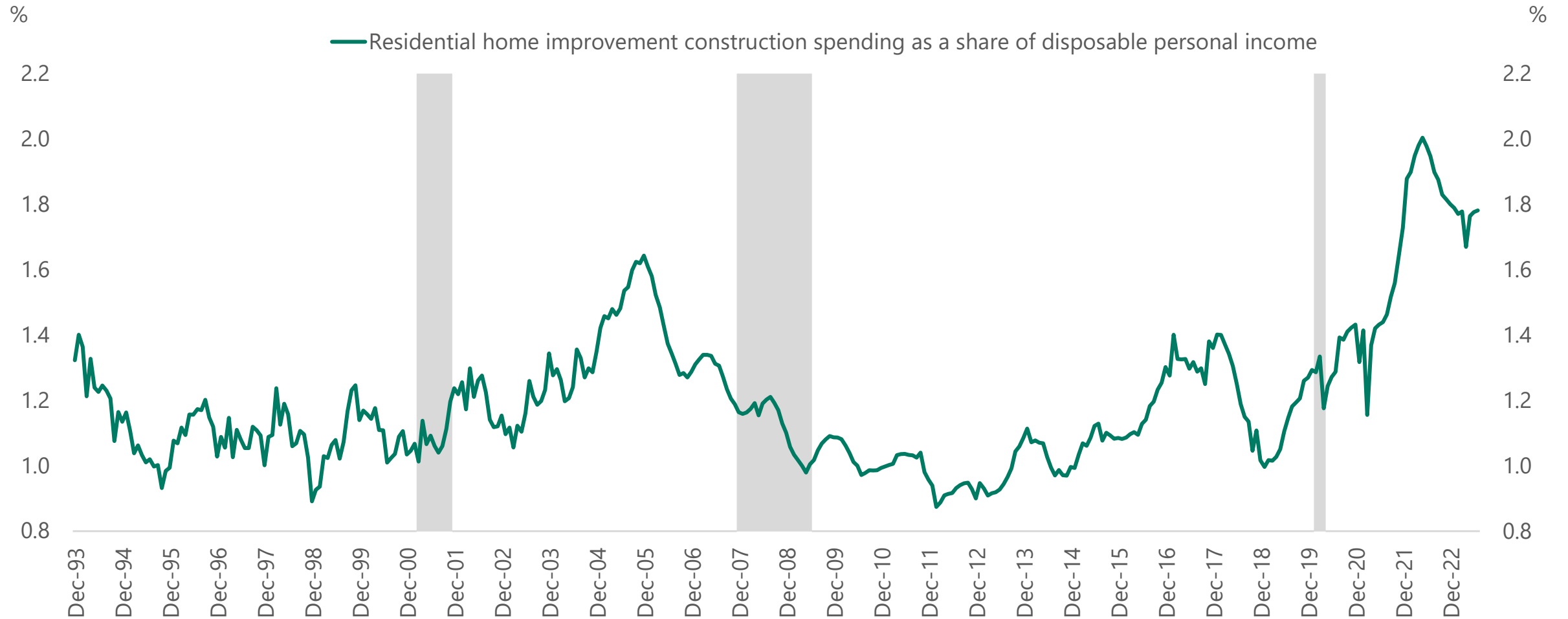
New foreclosures, by age of homeowner



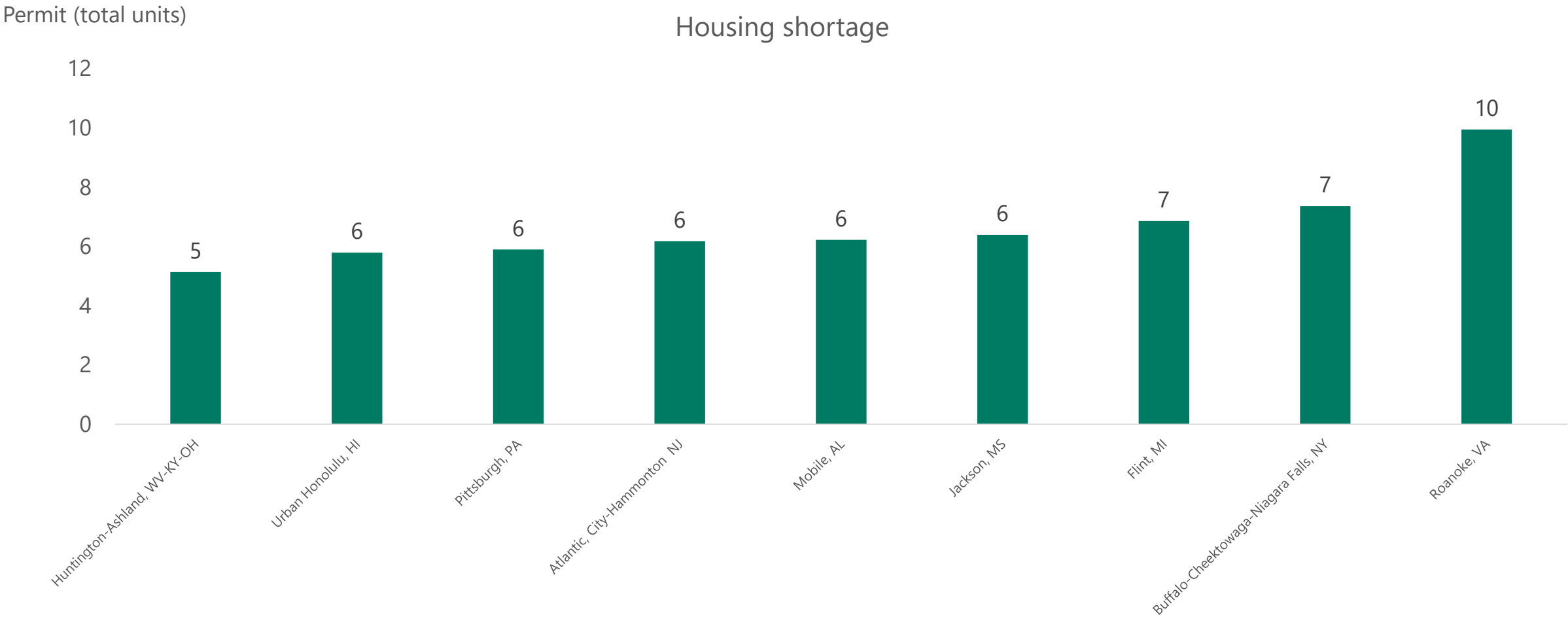
Median distance between the home that recent buyers purchased and the home they moved from at 50 miles in 2022



Home improvement spending at high levels

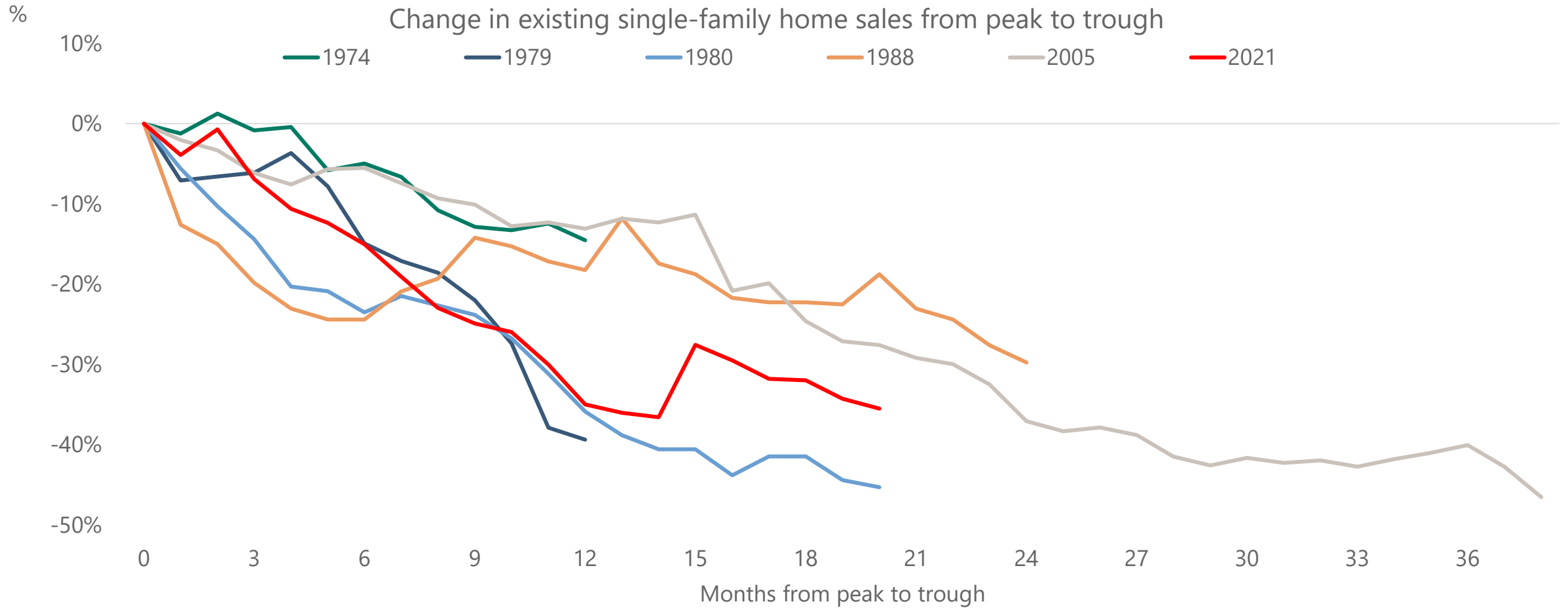


Areas that need to build more houses in order to keep up with the increased demand

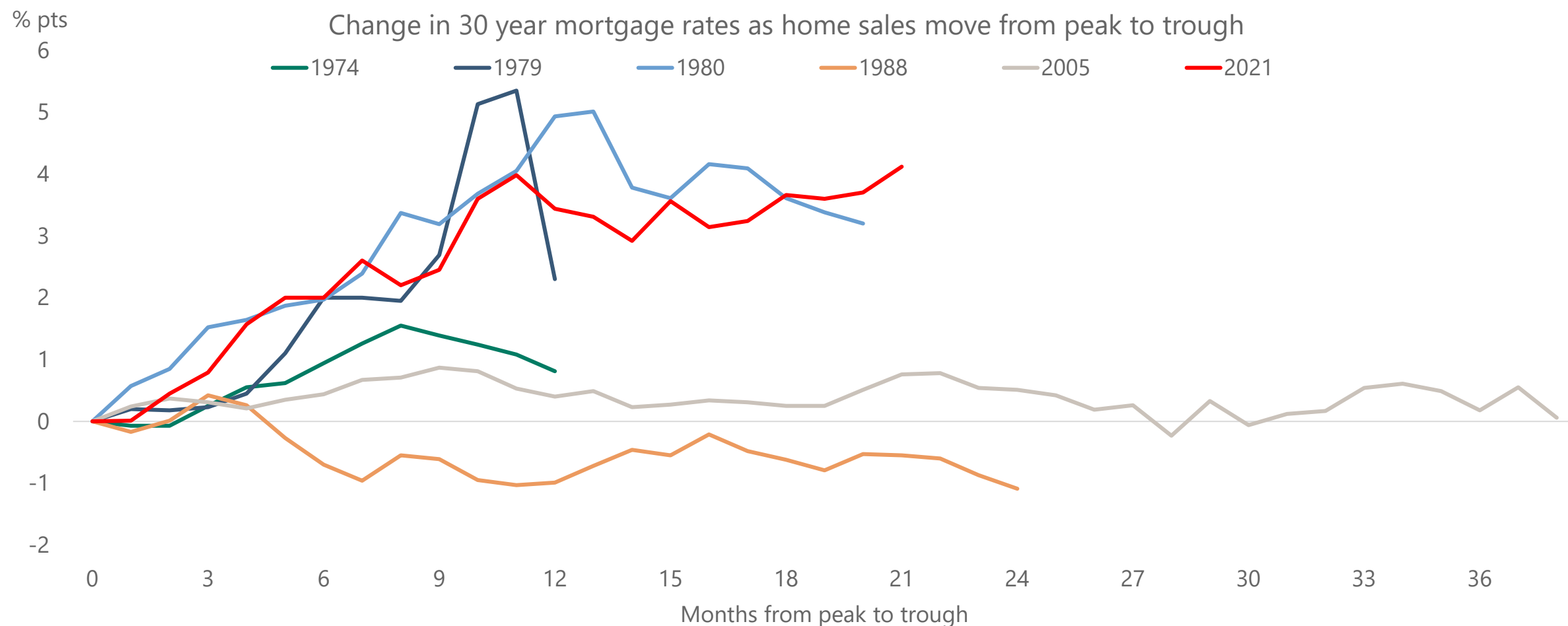


Comparing the current housing slowdown to previous housing slowdowns

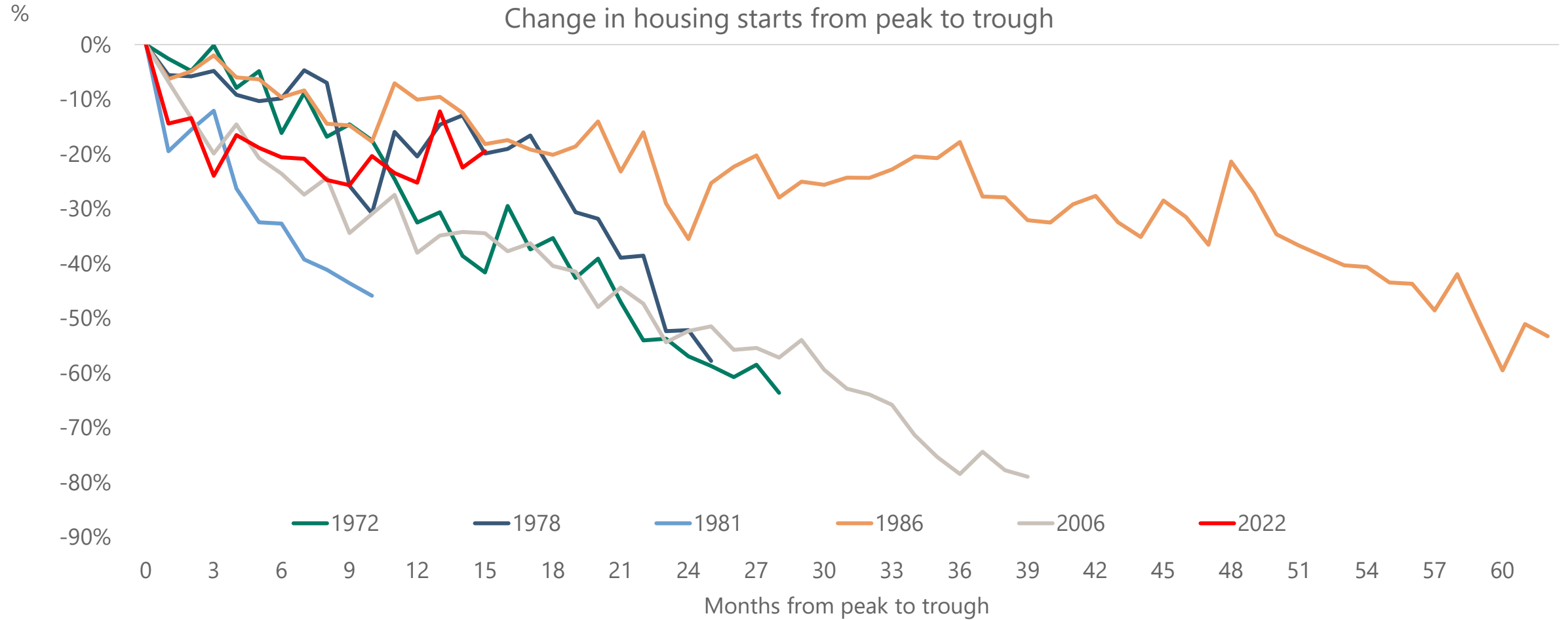
The current decline in existing home sales is in line with previous housing slowdowns



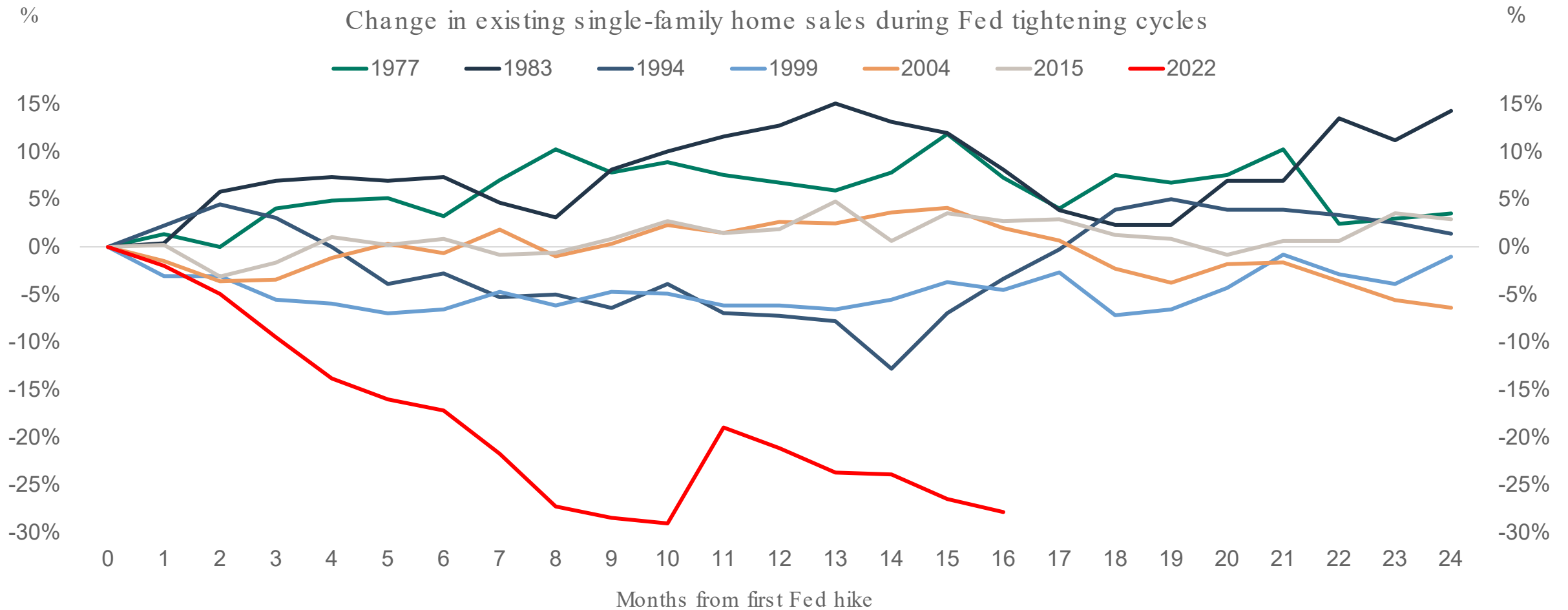
The current rise in mortgage rates is similar to what we saw during the Volcker disinflation



The current decline in housing starts follows the pattern of previous slowdowns



This is the fastest Fed-driven housing slowdown on record





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Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and has studied at the University of Copenhagen and Princeton University.