

APOLLO

US Housing Outlook: Housing recovery making inflation more sticky

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Apollo Global Management

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Unless otherwise noted, information as of July 2023.

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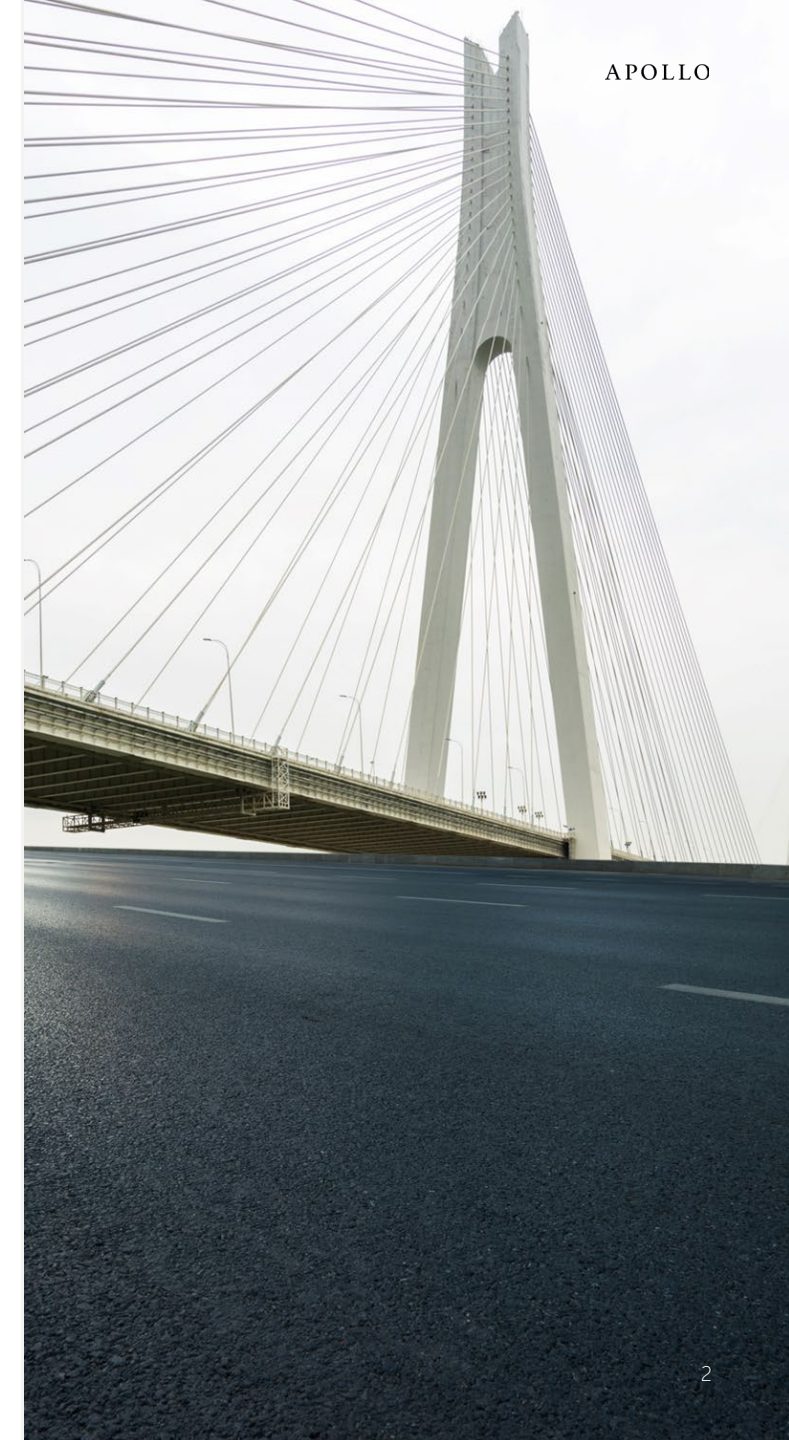
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Ten facts about the US housing market

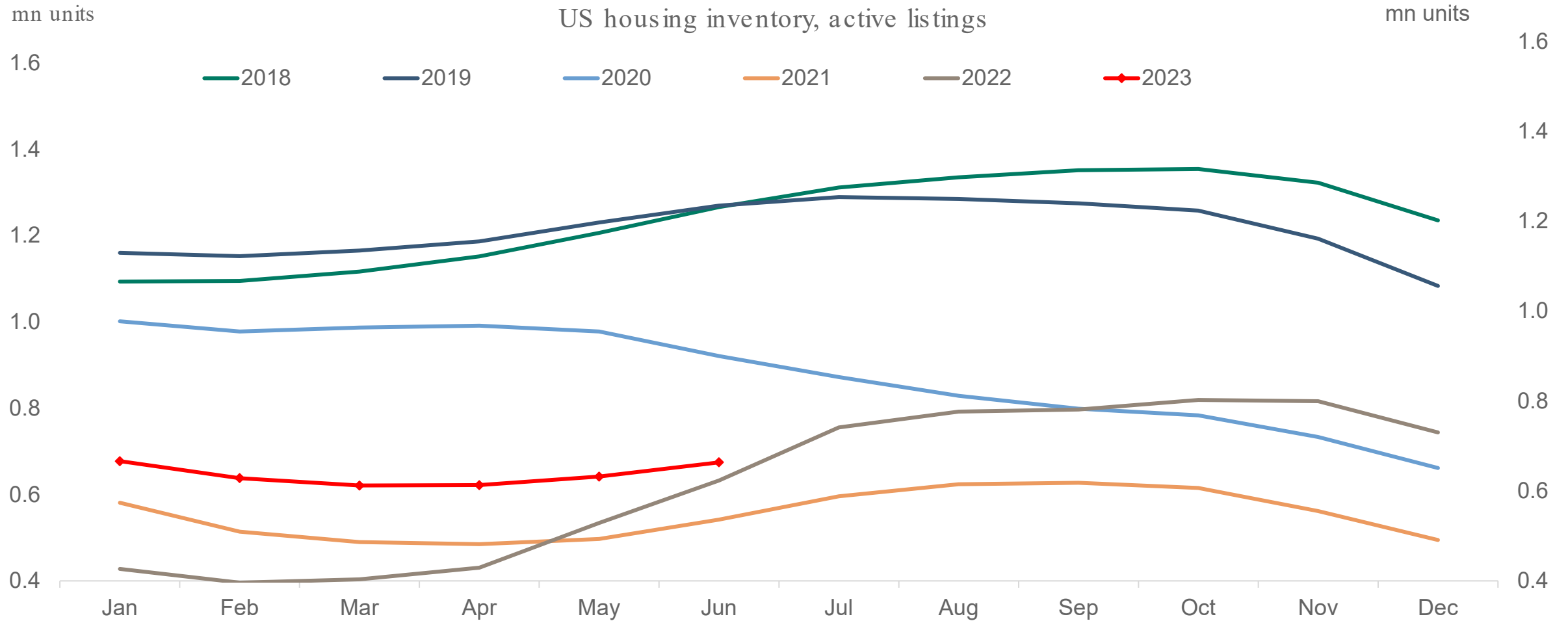
1. Traffic of prospective homebuyers is rebounding
2. Homebuilder and homebuyer confidence are rebounding
3. Existing home sales and new home sales are rebounding
4. Average number of offers received per sold property is currently 3, up from 2 six months ago
5. Housing inventory is very low, about 1/3 of what it was in 2007
6. US households move to a new address less than they did 10, 20, and 30 years ago
7. The effective mortgage rate for US households at 4% is much lower than a new mortgage at 7%
8. 60% of all mortgages outstanding were issued after 2018
9. It currently takes 8 months to build a single-family home
10. Investors account for 18% of all single-family homes sold, up from 10% in 2006

Why is housing rebounding despite higher mortgage rates?

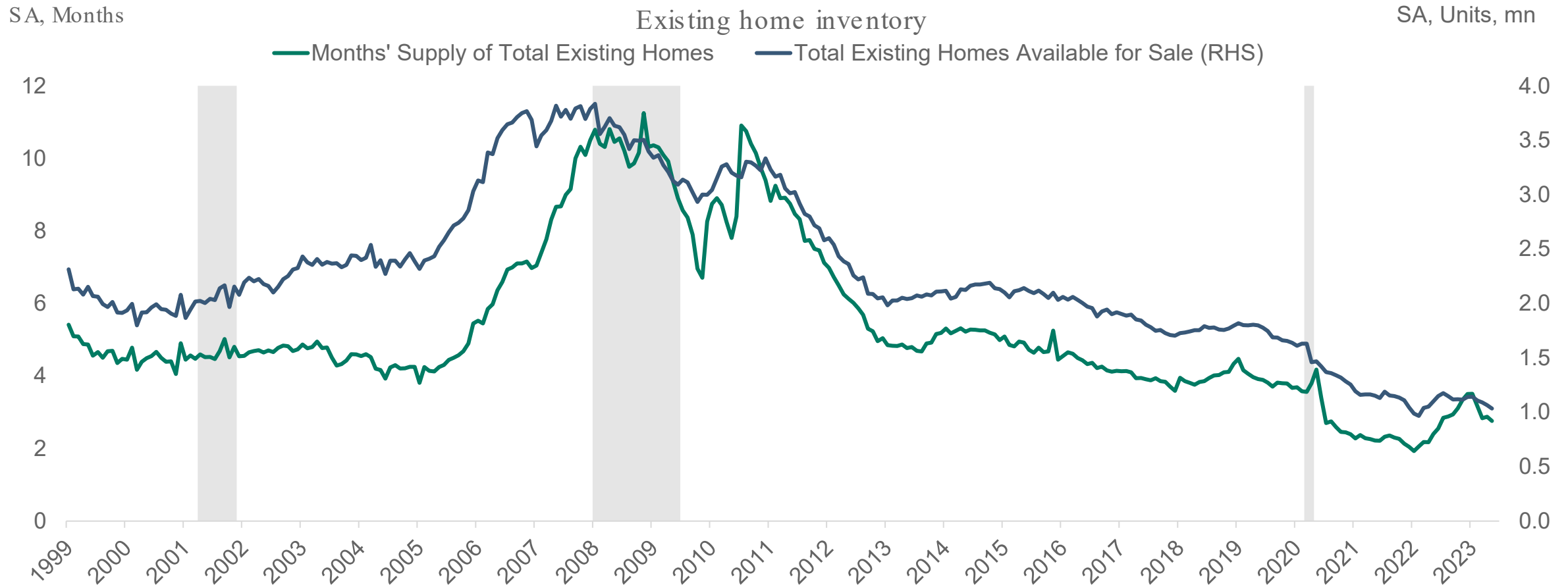
1. Low housing supply
2. Solid job growth
3. Solid wage growth
4. Excess savings

Leading indicators of the housing market

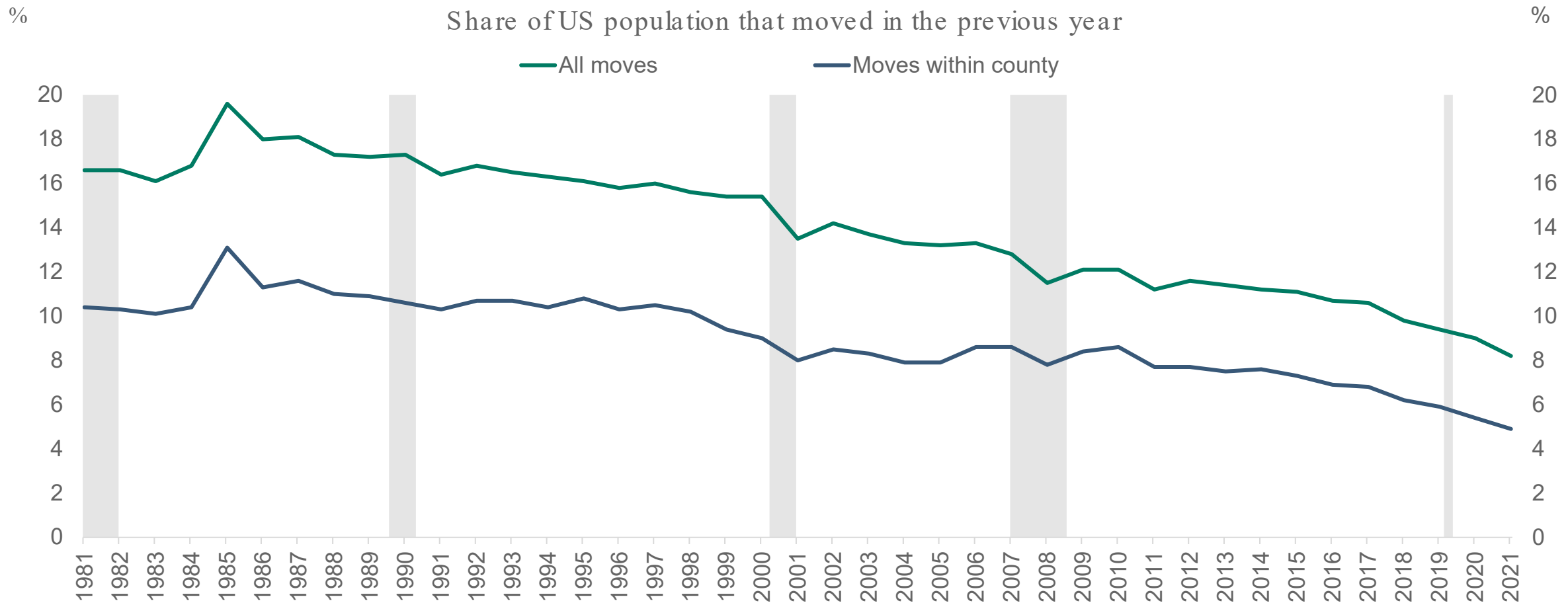
Active listings still at very low levels, very low inventory of homes for sale



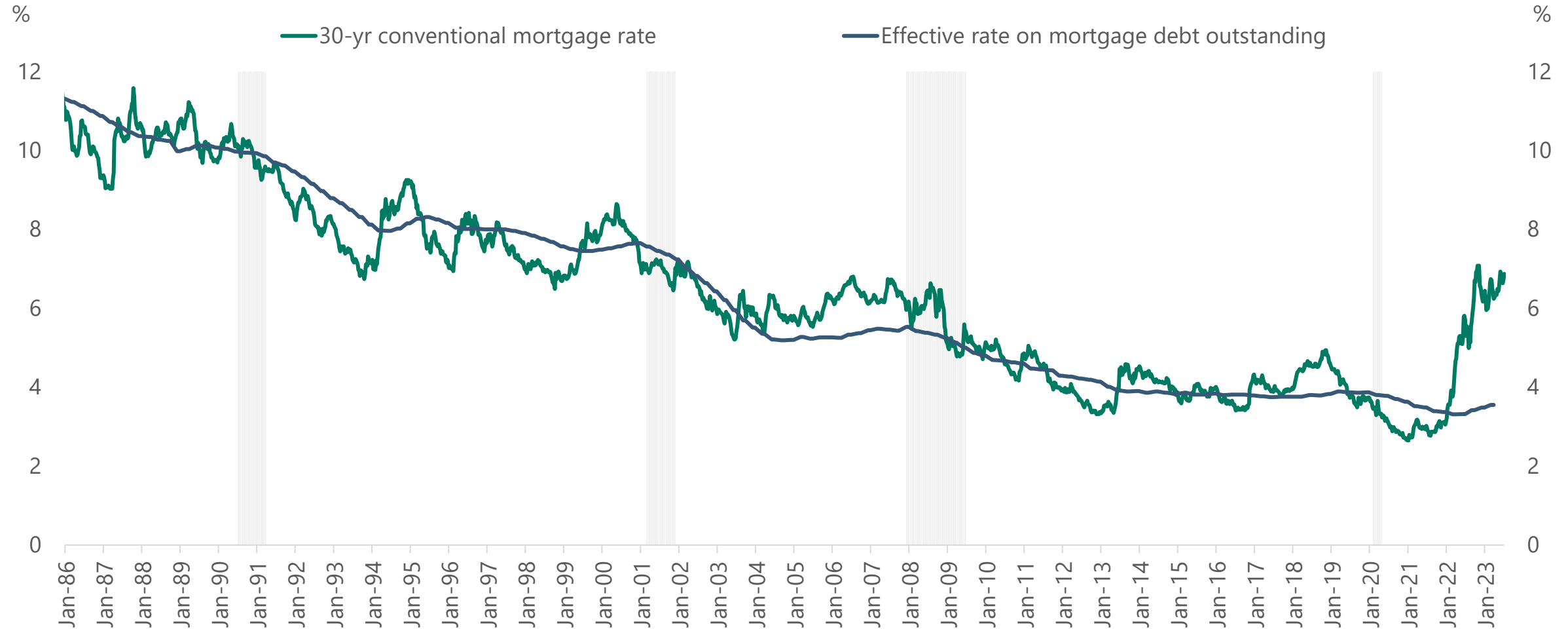
Homesellers don't want to sell their house at a discount: The stock of total existing homes for sale moving down



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

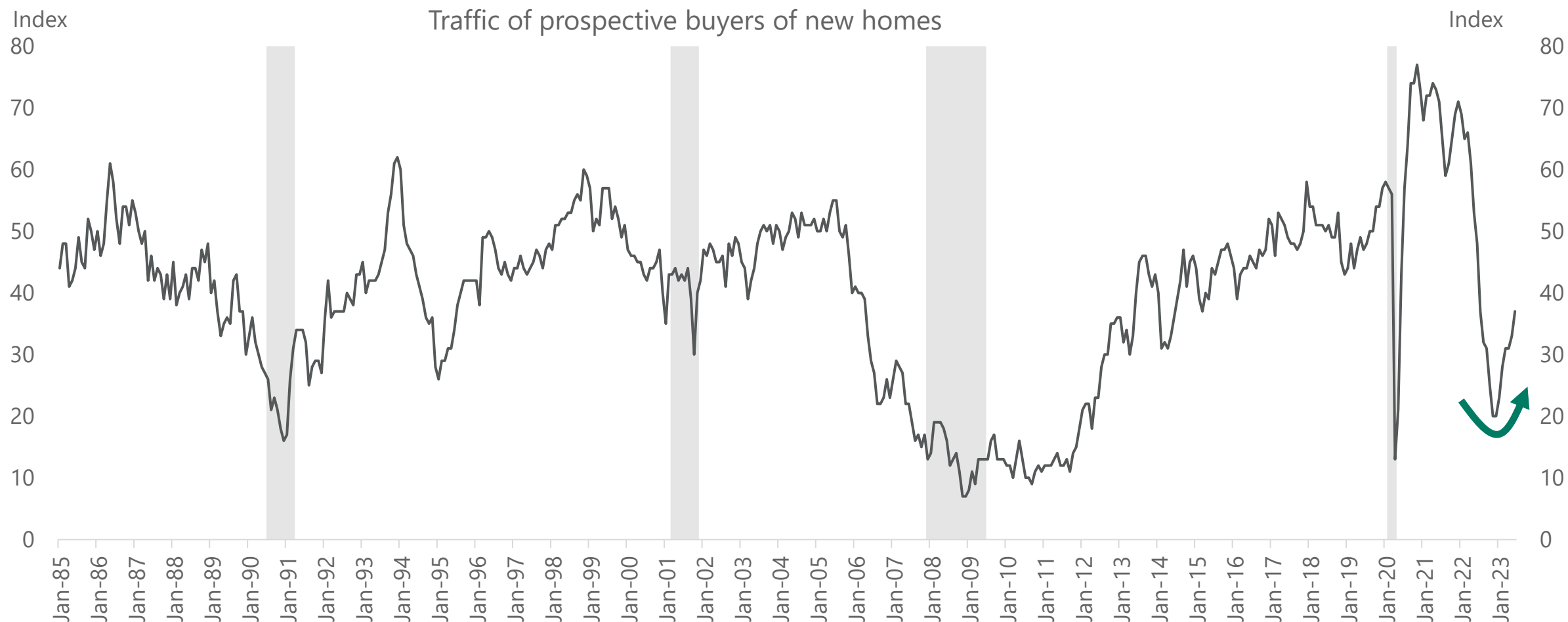


Effective outstanding mortgage rate vs the 30-year mortgage rate on a new mortgage

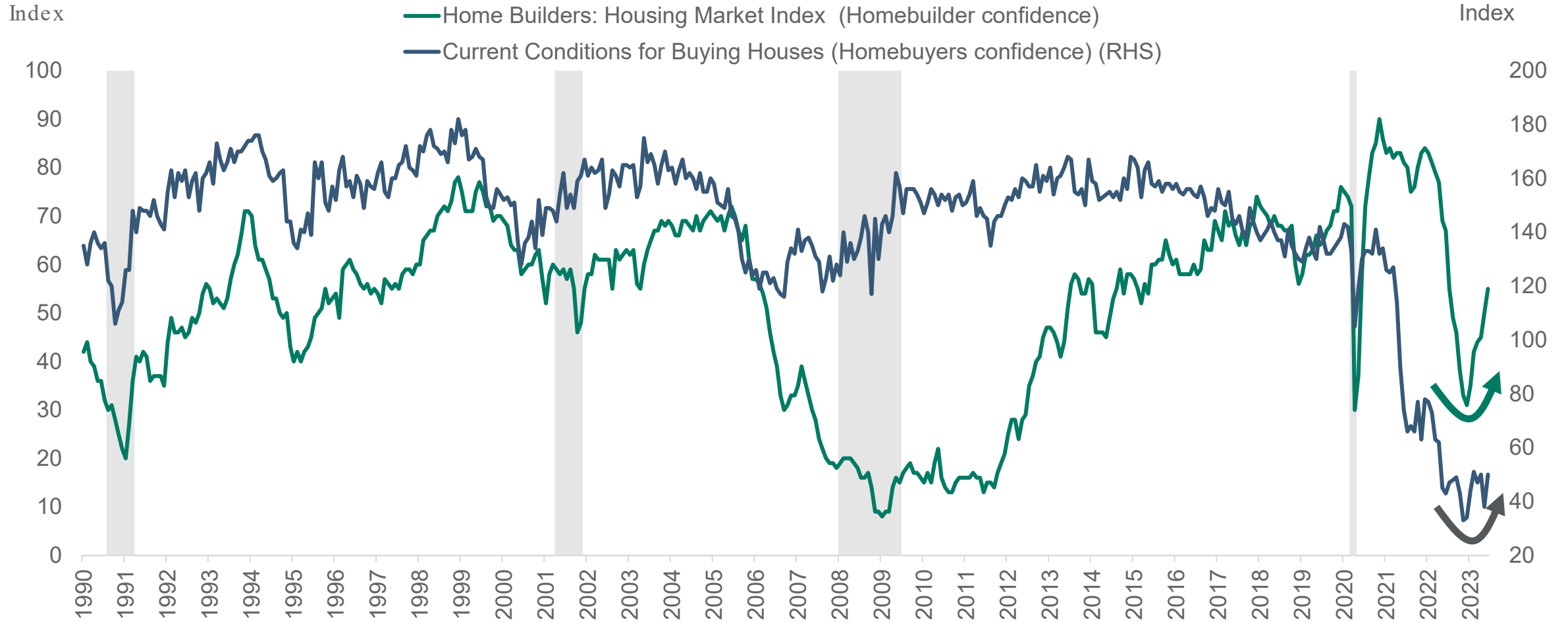


Source: Freddie Mac, BEA, Bloomberg, Apollo Chief Economist. The effective interest rate (%) reflects the amortization of initial fees and charges over a 10-year period, which is the historical assumption of the average life of a mortgage loan.

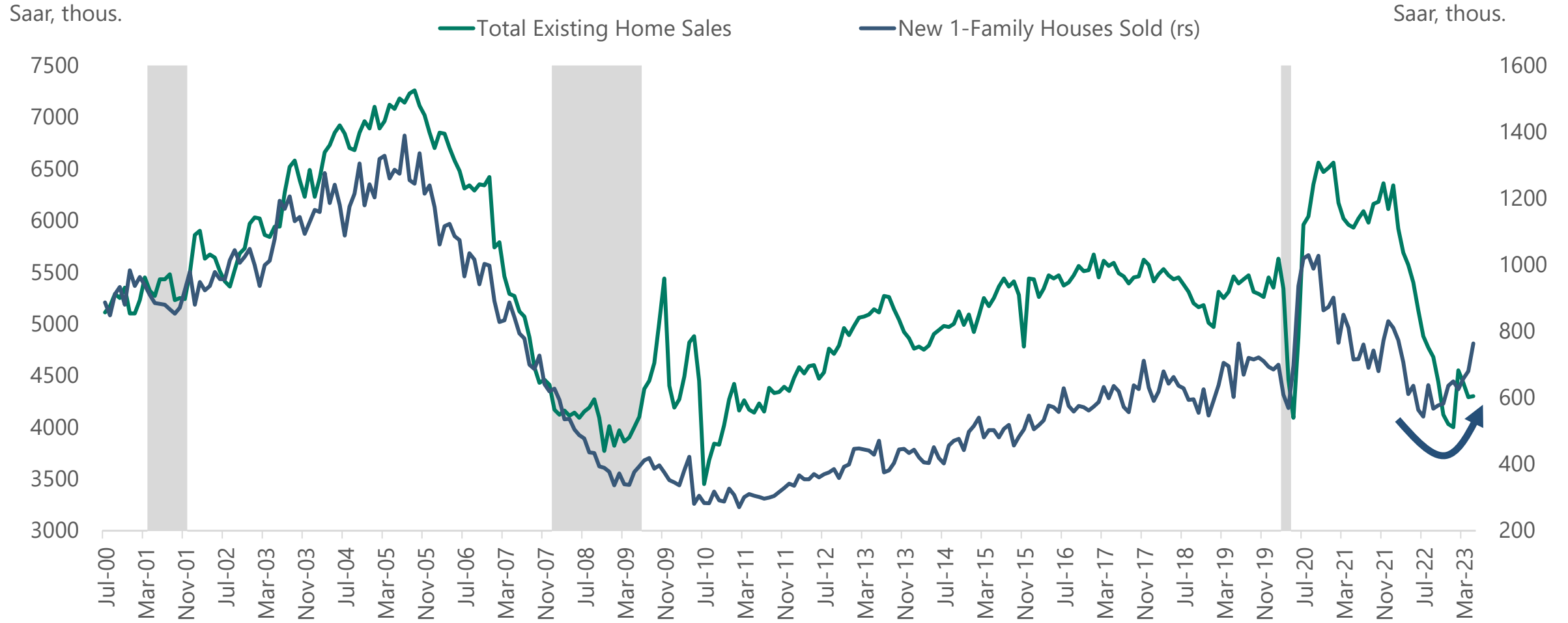
Traffic of prospective homebuyers starting to improve



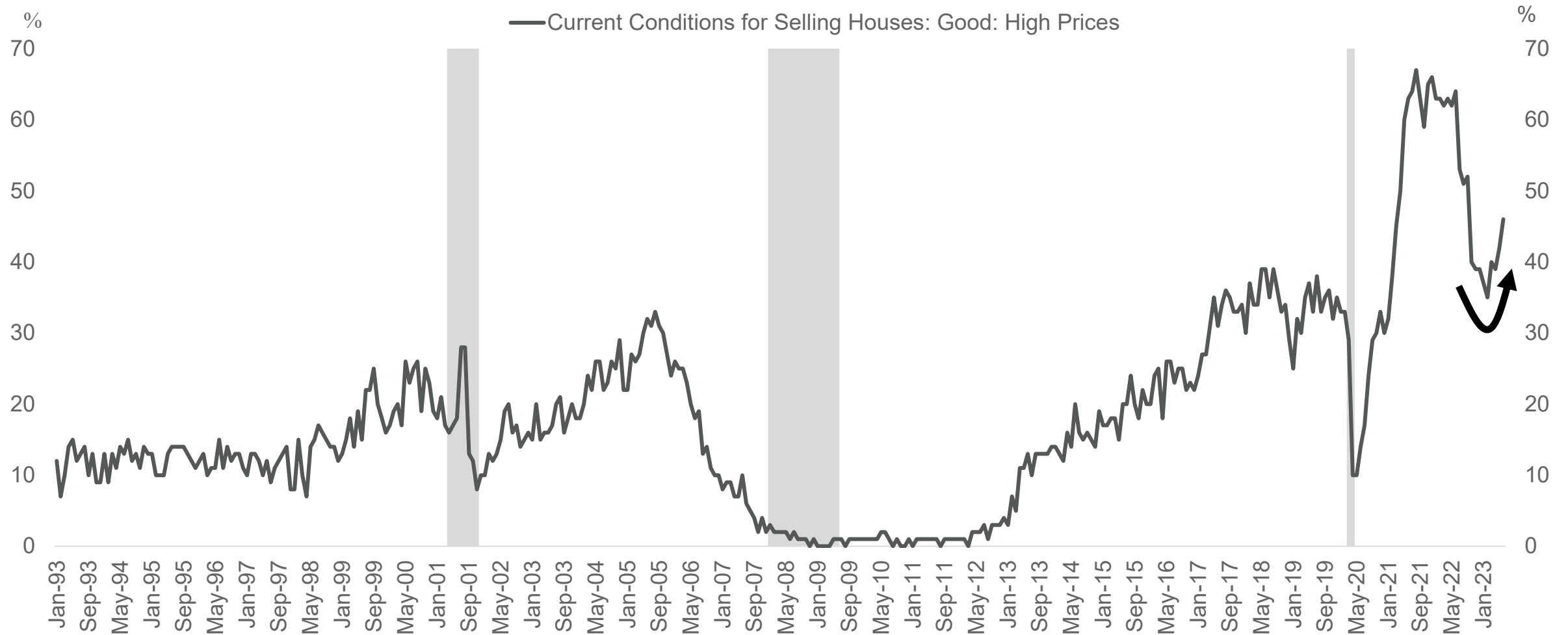
Confidence improving for homebuyers and homebuilders



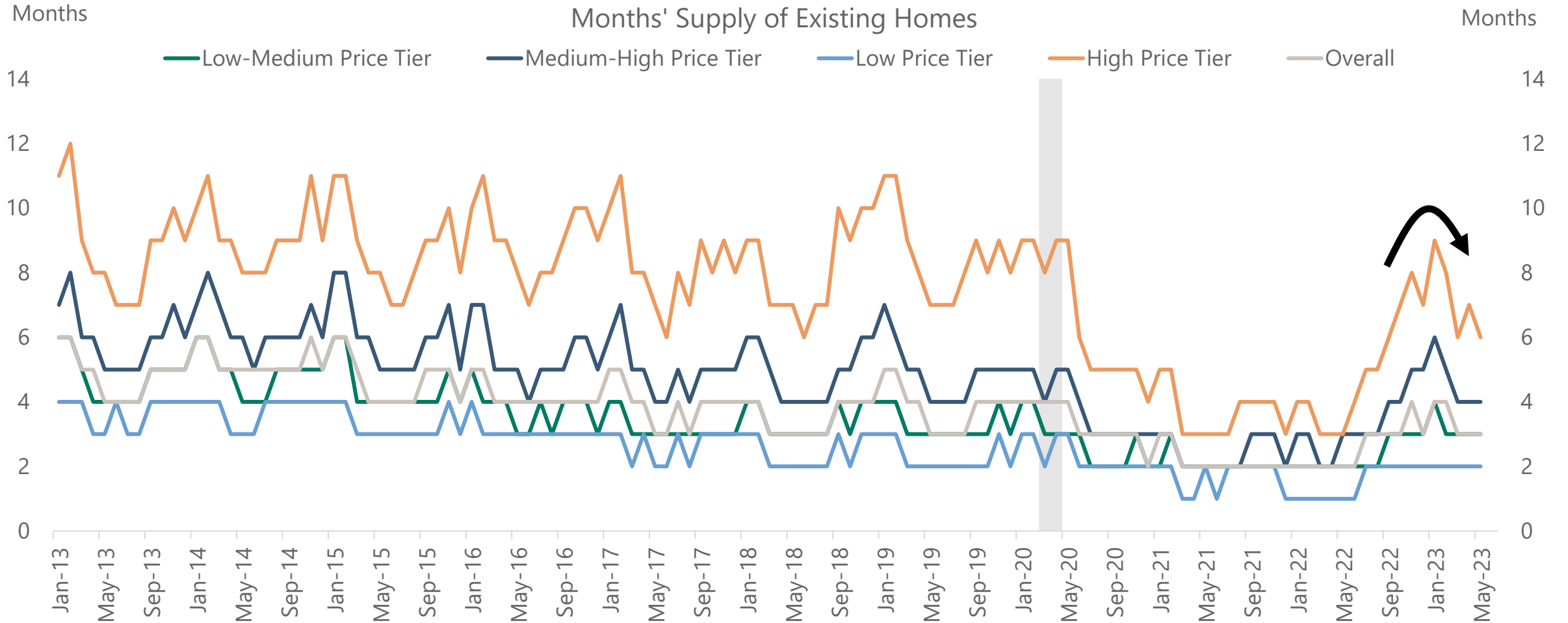
Home sales starting to recover



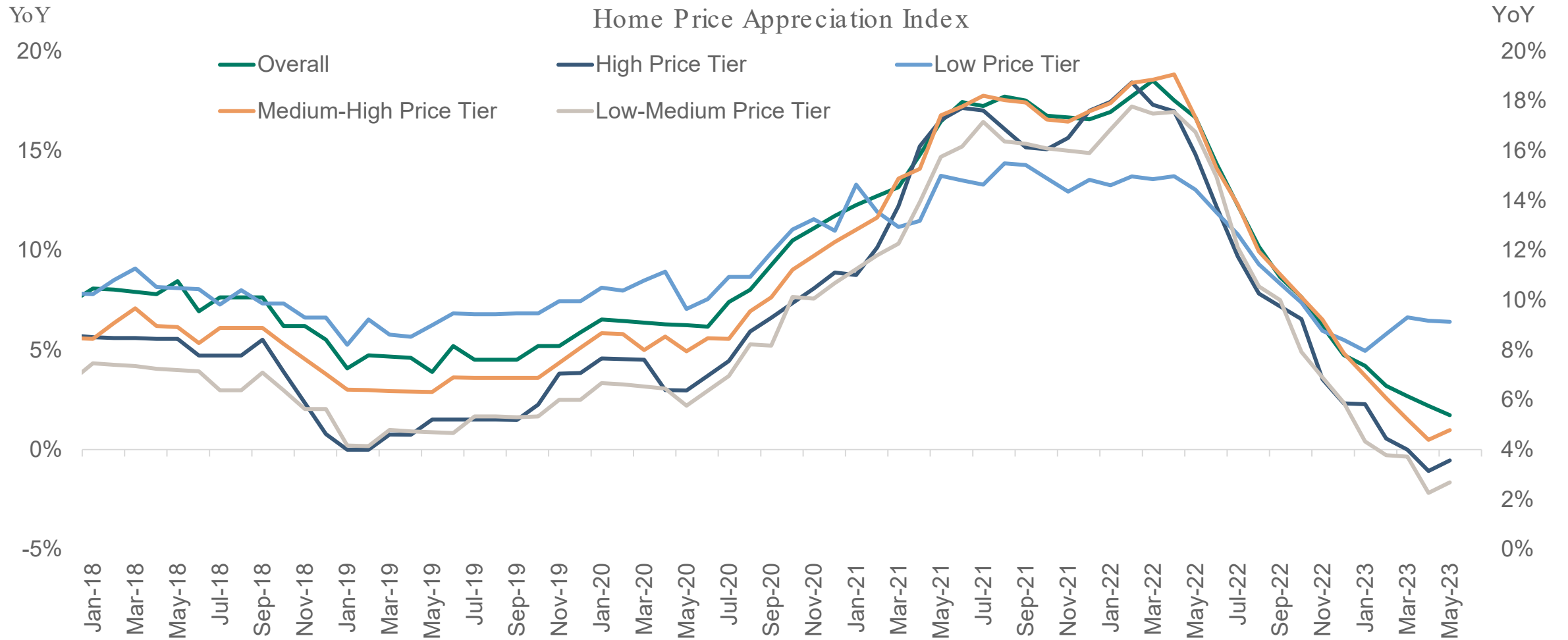
Consumers saying “This is a good time to sell a house” rebounding



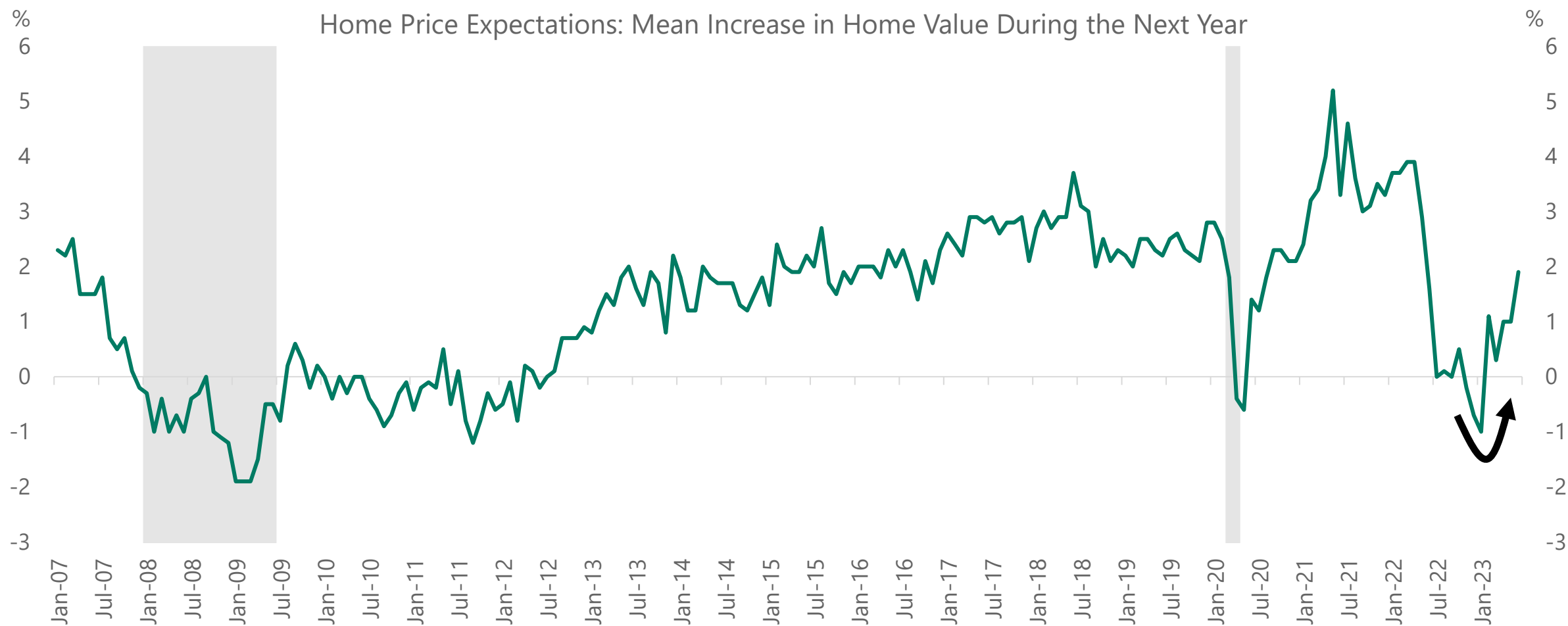
Inventory falling across price tiers



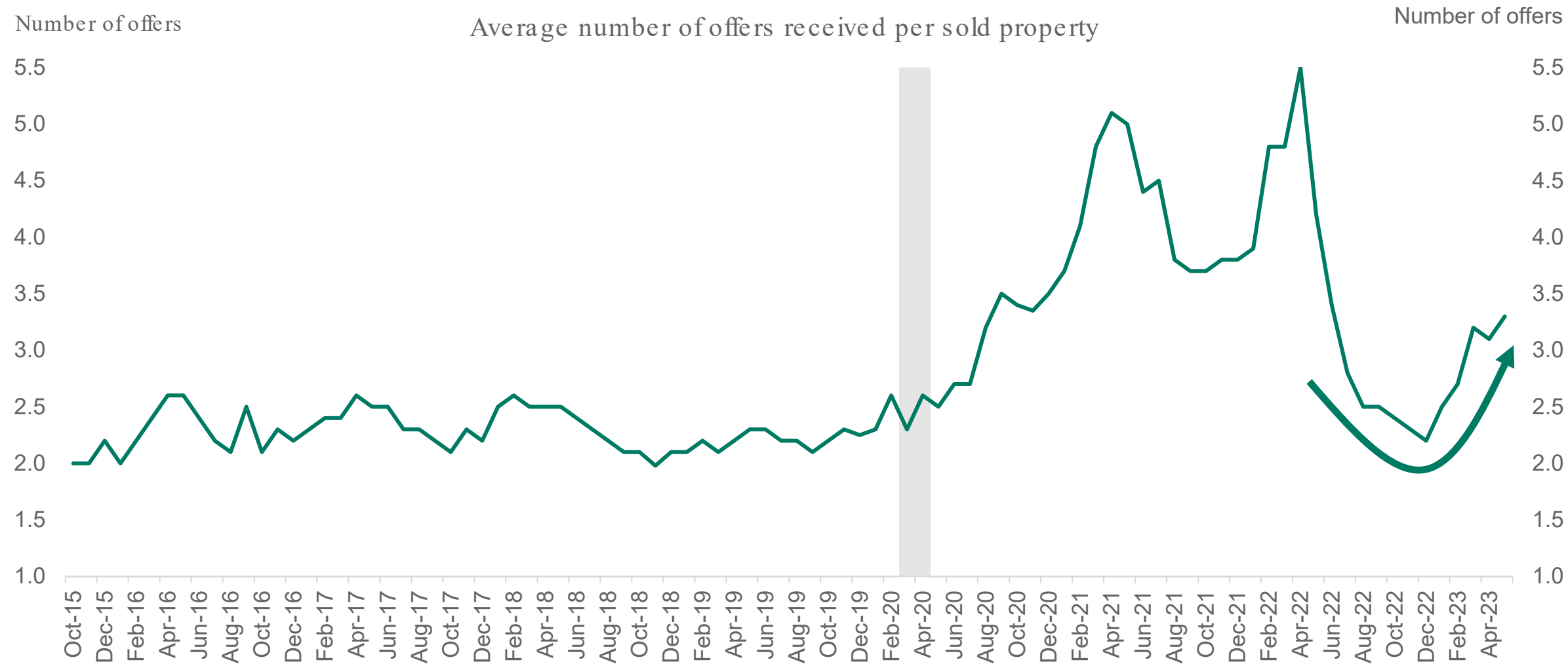
House price inflation stabilizing



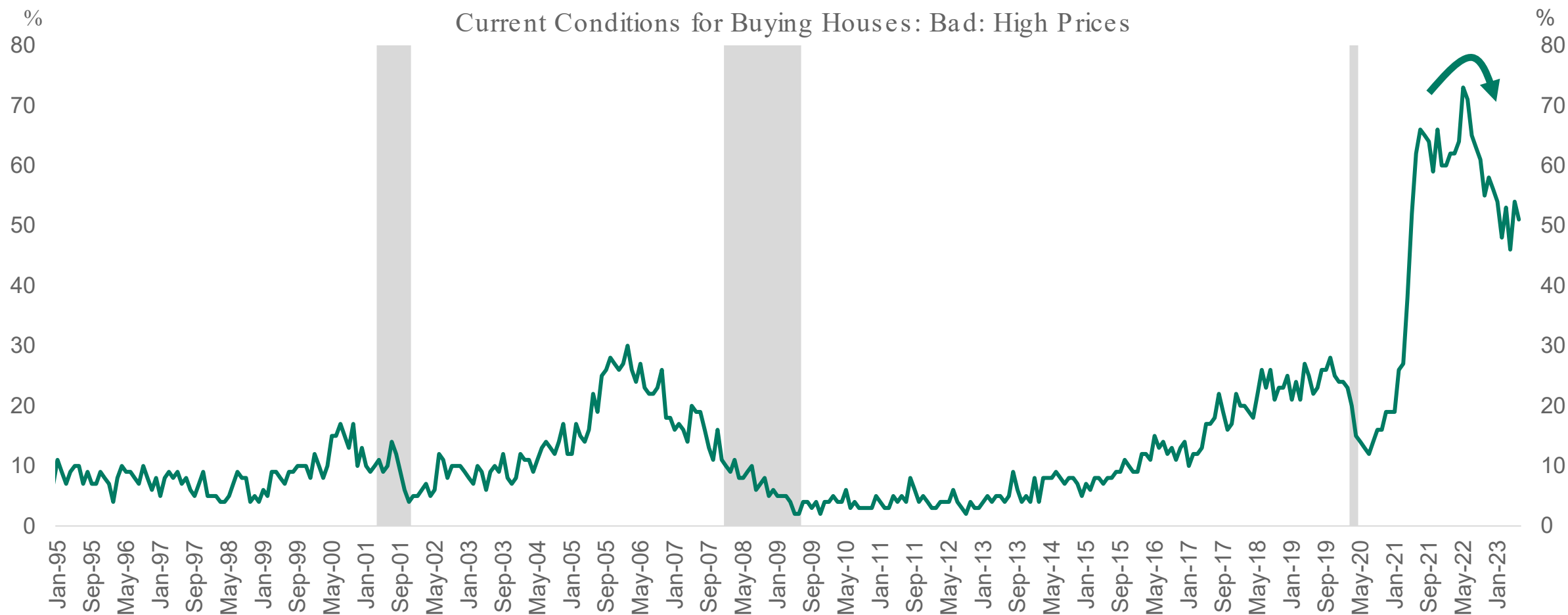
Home price inflation expectations rising



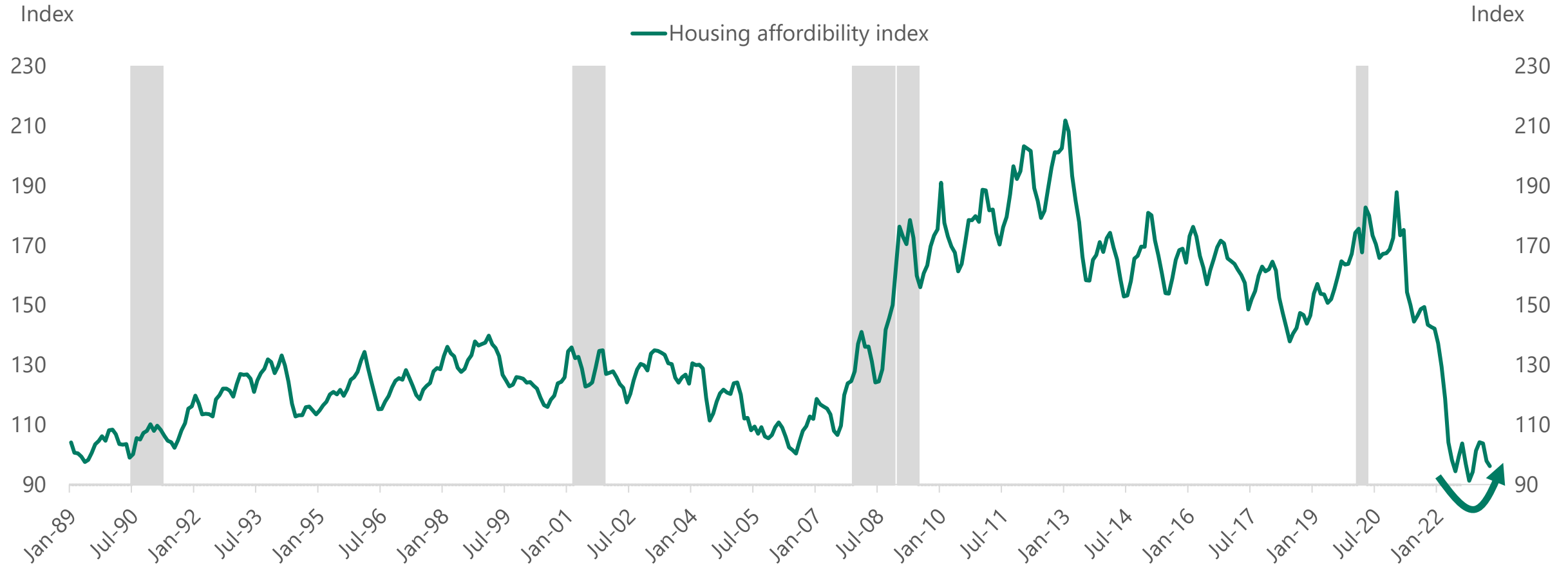
Bidding wars are coming back



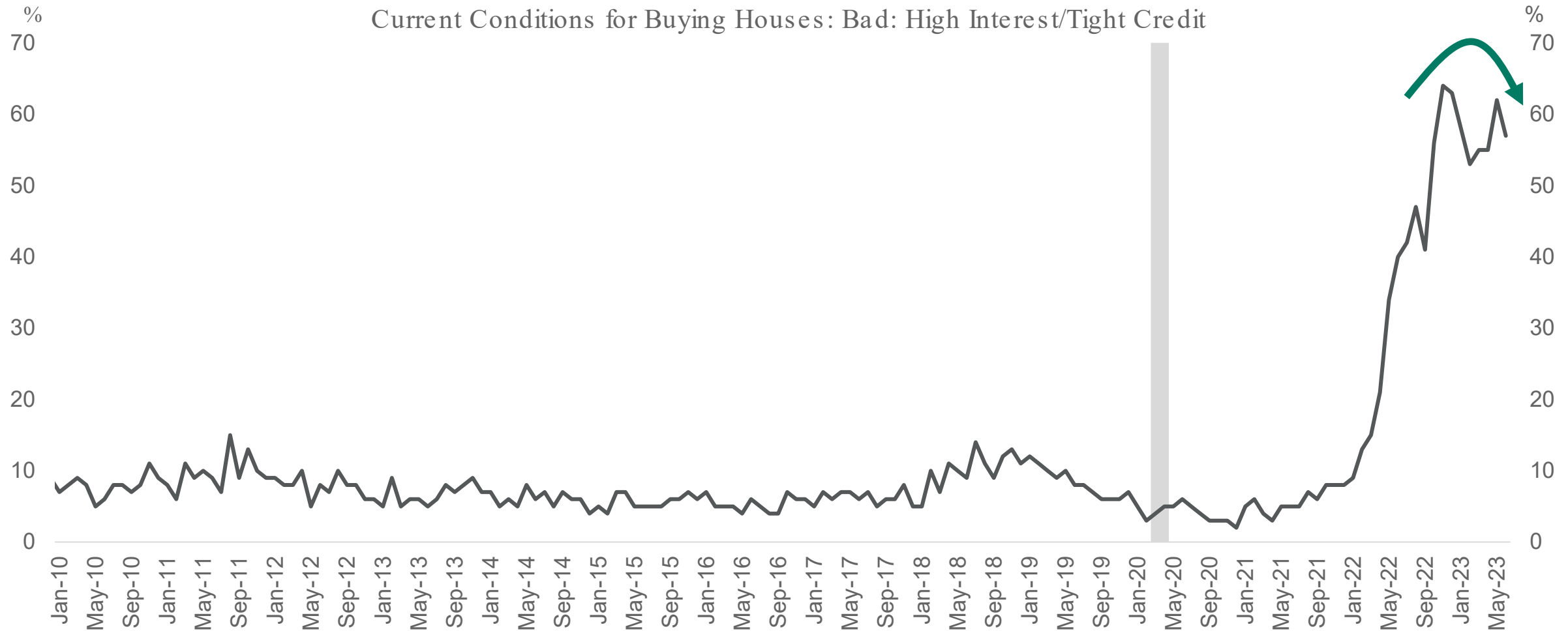
Despite high prices, homebuyer sentiment improving



Housing affordability at 2007 levels but starting to bottom



Homebuyer sentiment about mortgage rates and credit conditions getting better

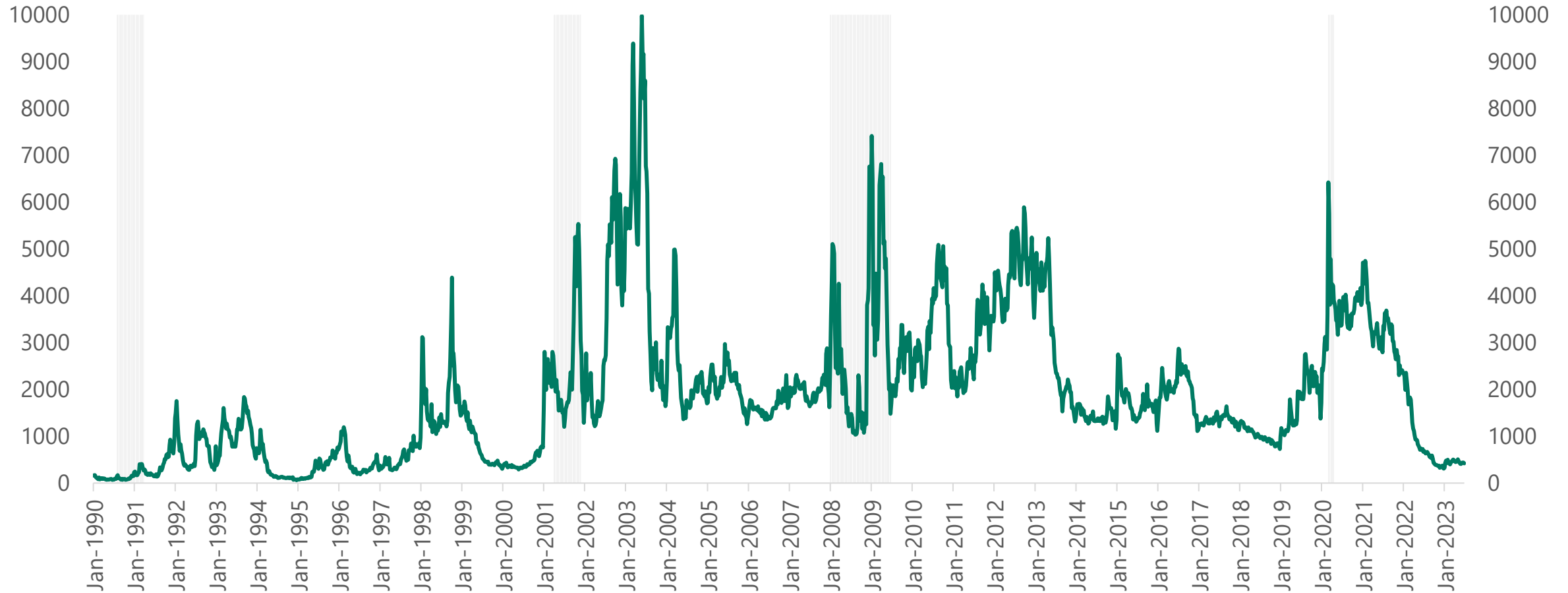


Mortgage refi applications stabilizing

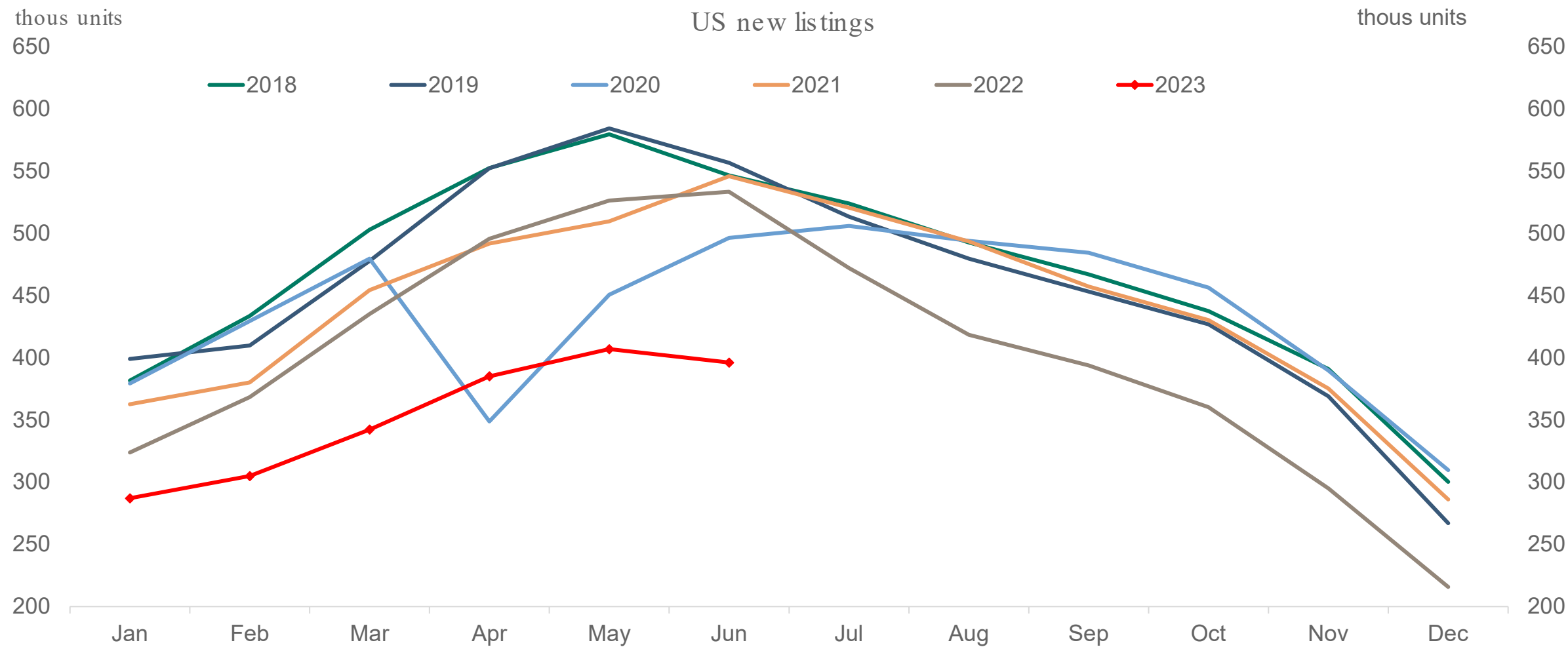
Index, Mar 1990 = 100

— Mortgage loan applications for refinancing

Index, Mar 1990 = 100



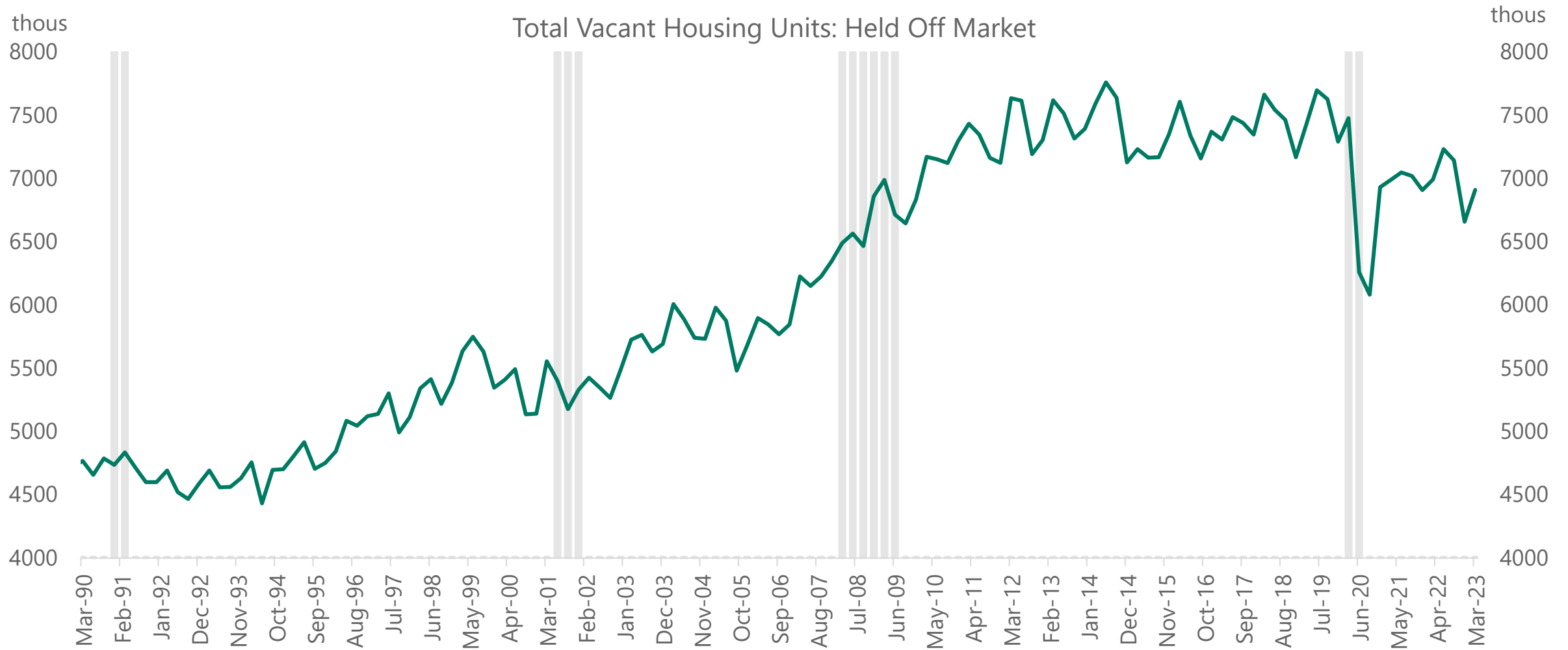
Newly listed homes very low



Fewer people listing their home for sale in a down market



Vacant housing units held off market coming down

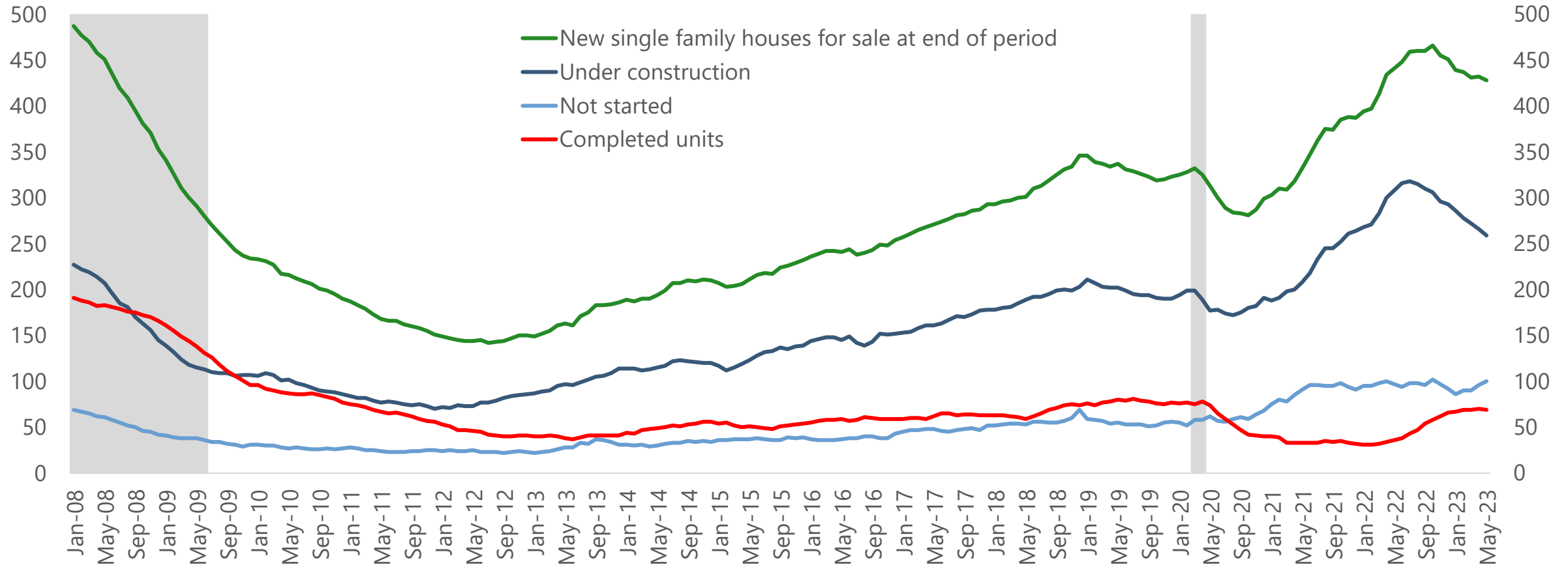


New houses for sale under construction is coming down

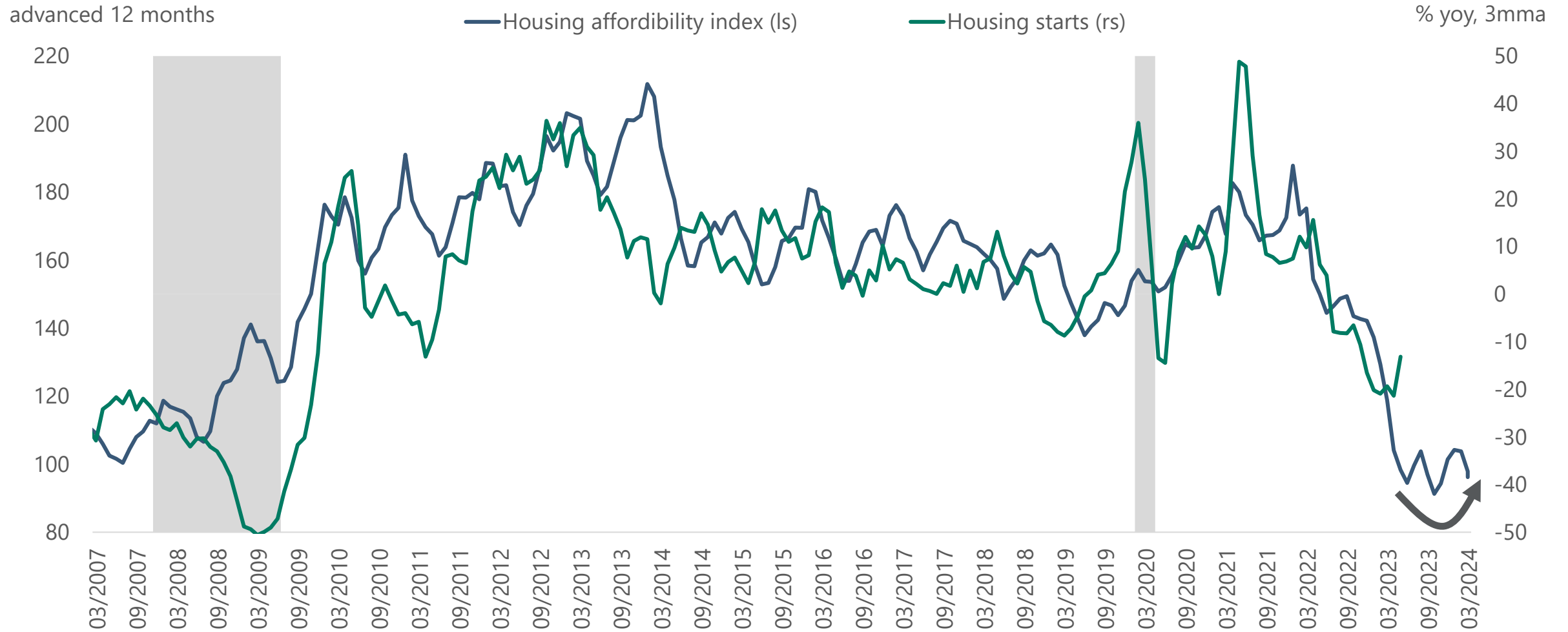
Thousands of units

Number of new houses for sale

Thousands of units



Housing starts also showing signs of bottoming



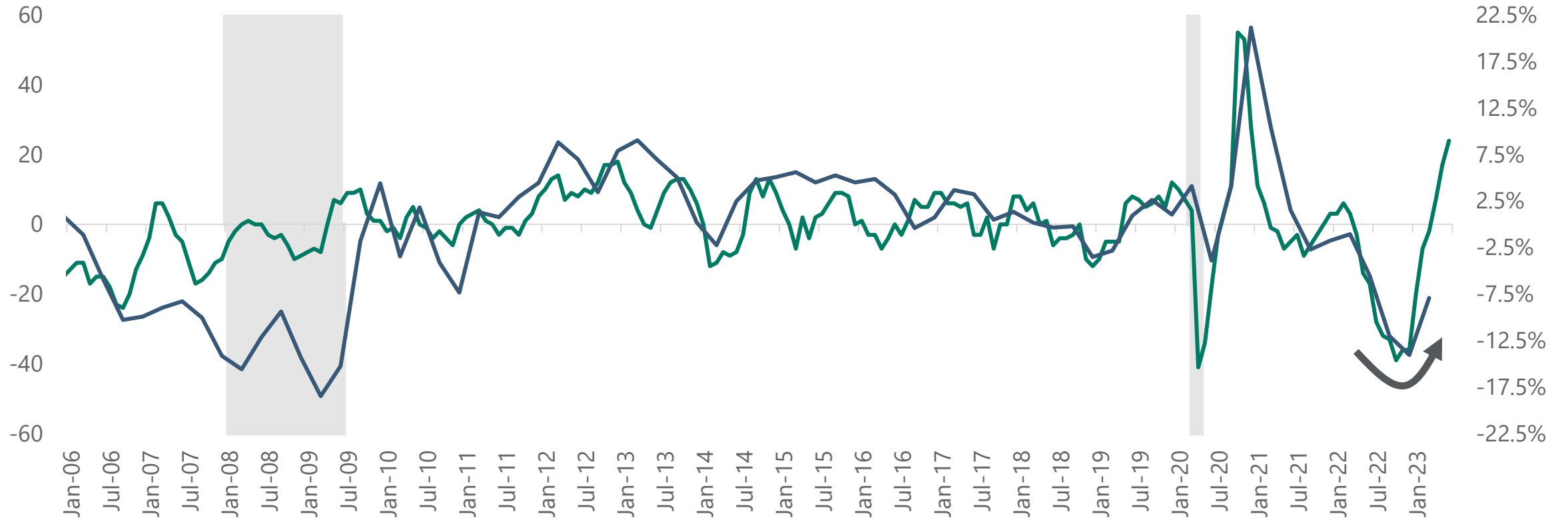
Upside risks to residential investment

Index, 6 month change

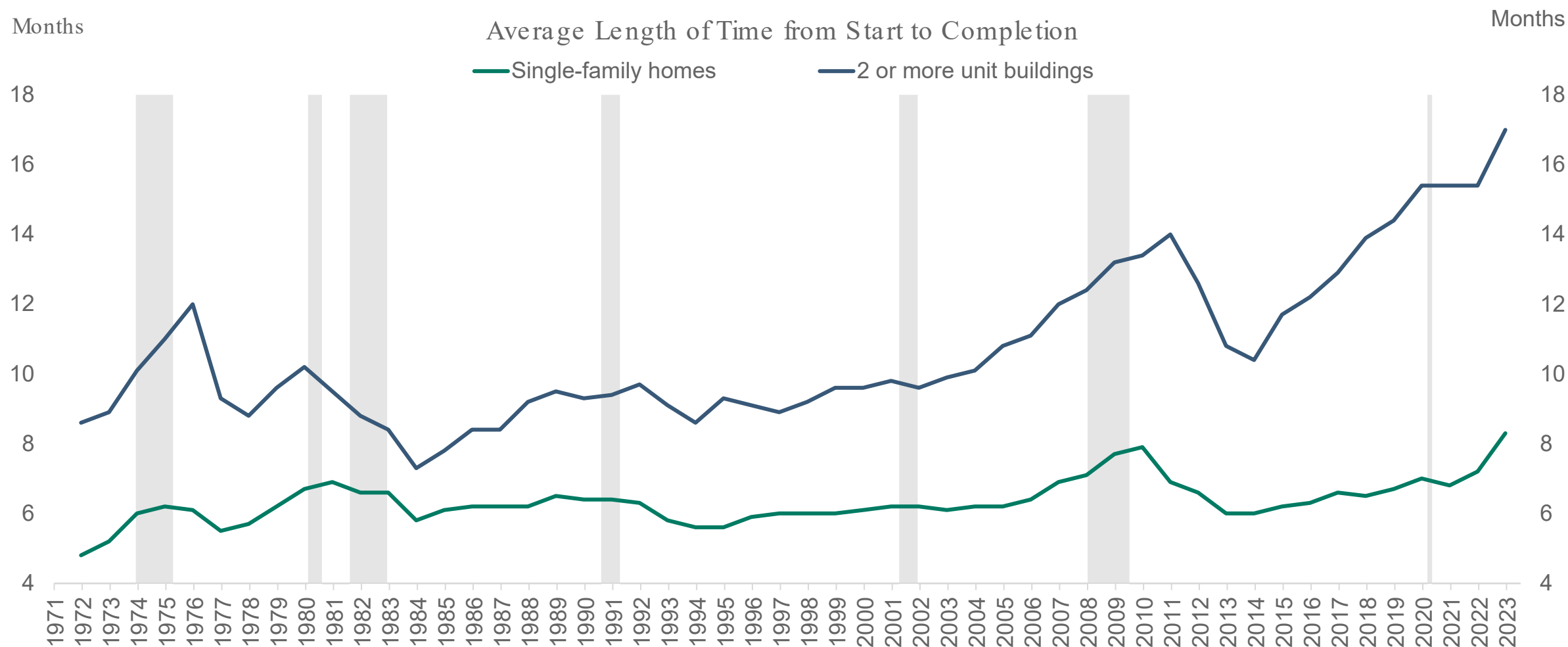
Home Builders: Housing Market Index

Real Private Residential Fixed Investment (RHS)

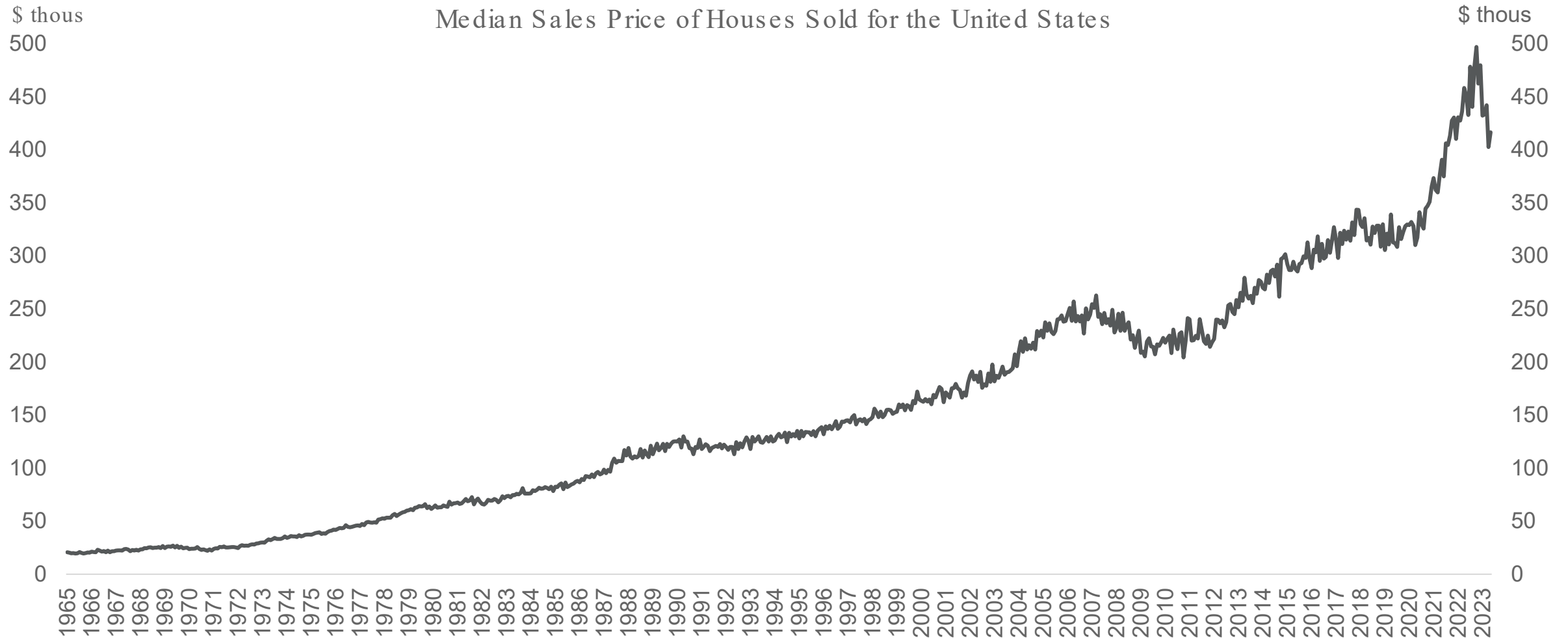
%, 2 quarter change



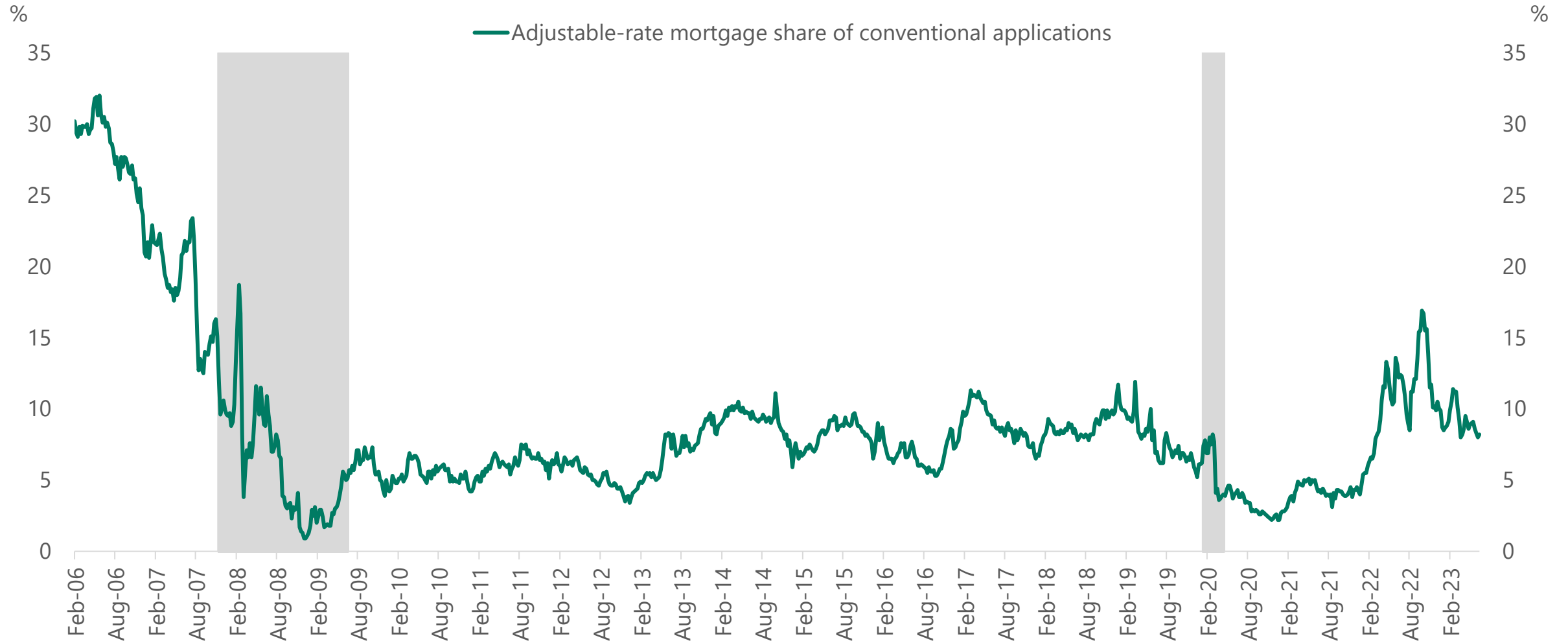
It currently takes 8 months on average to build a single-family house



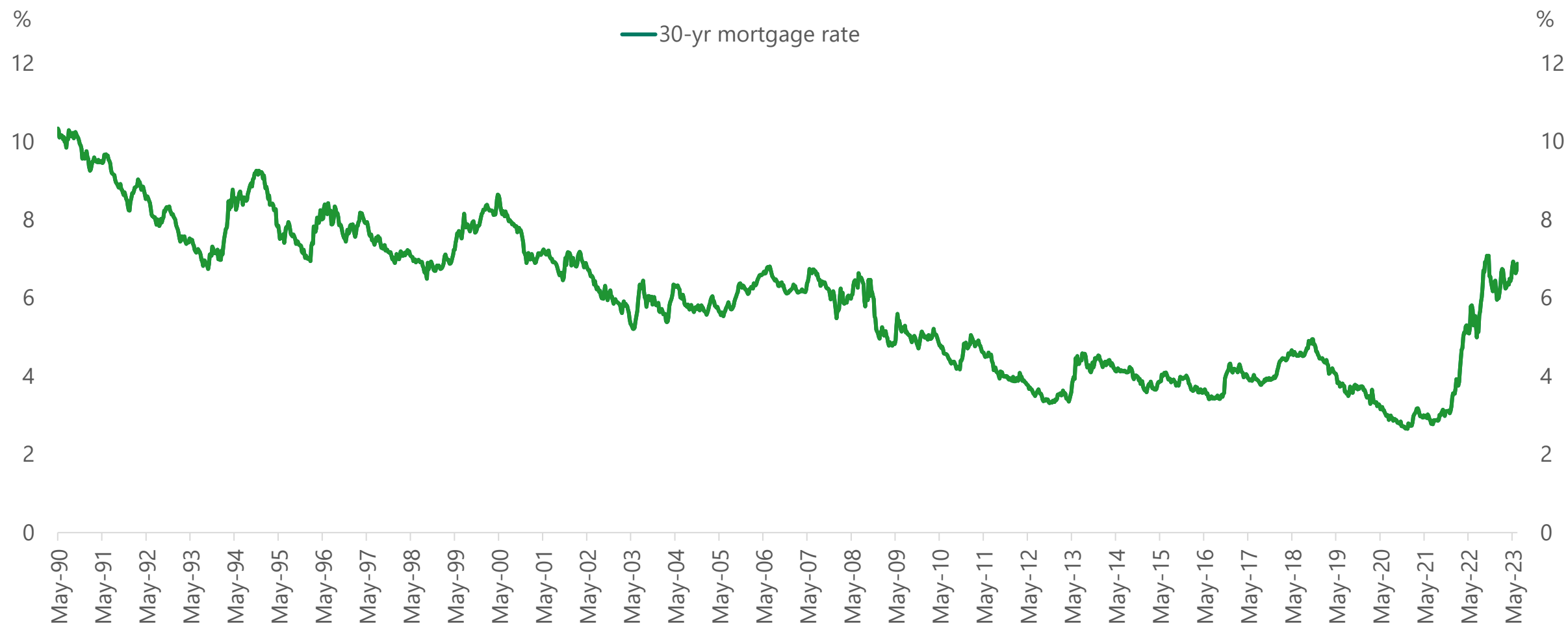
Median home sales price now \$417K



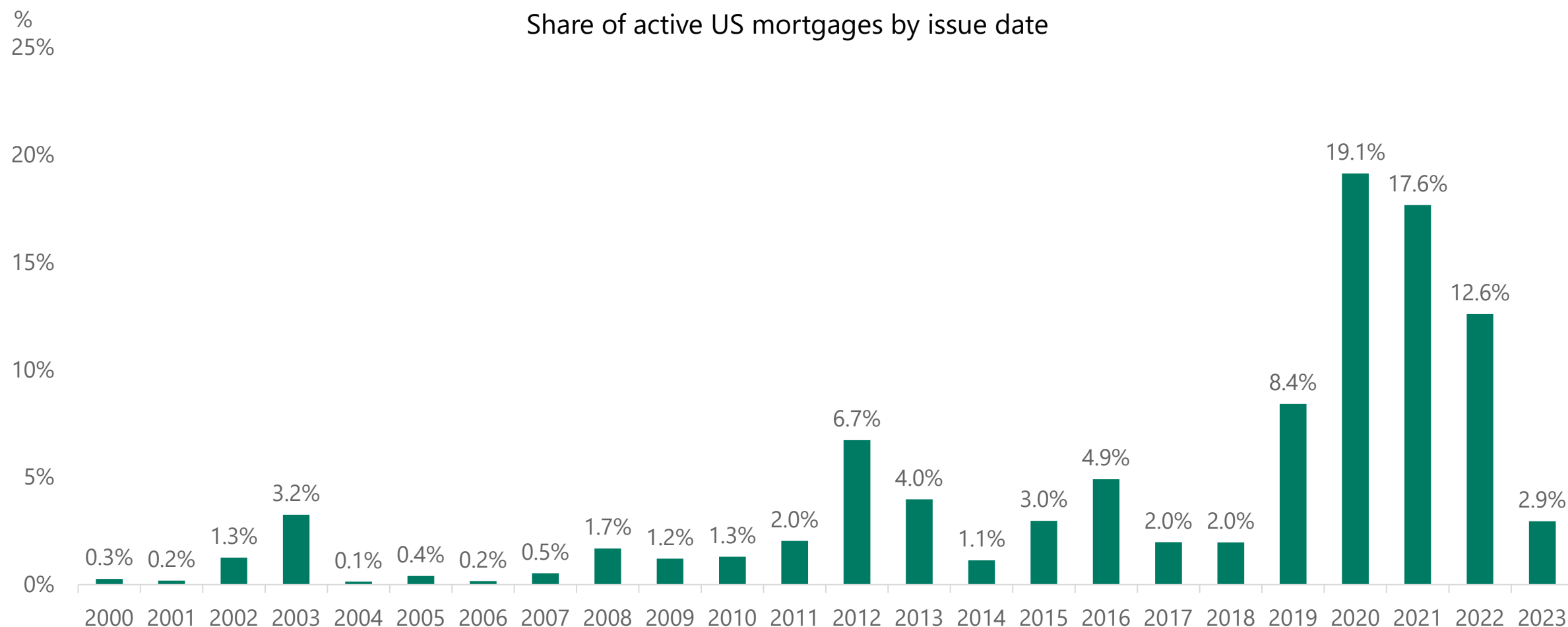
ARM share of total mortgage applications at 8%



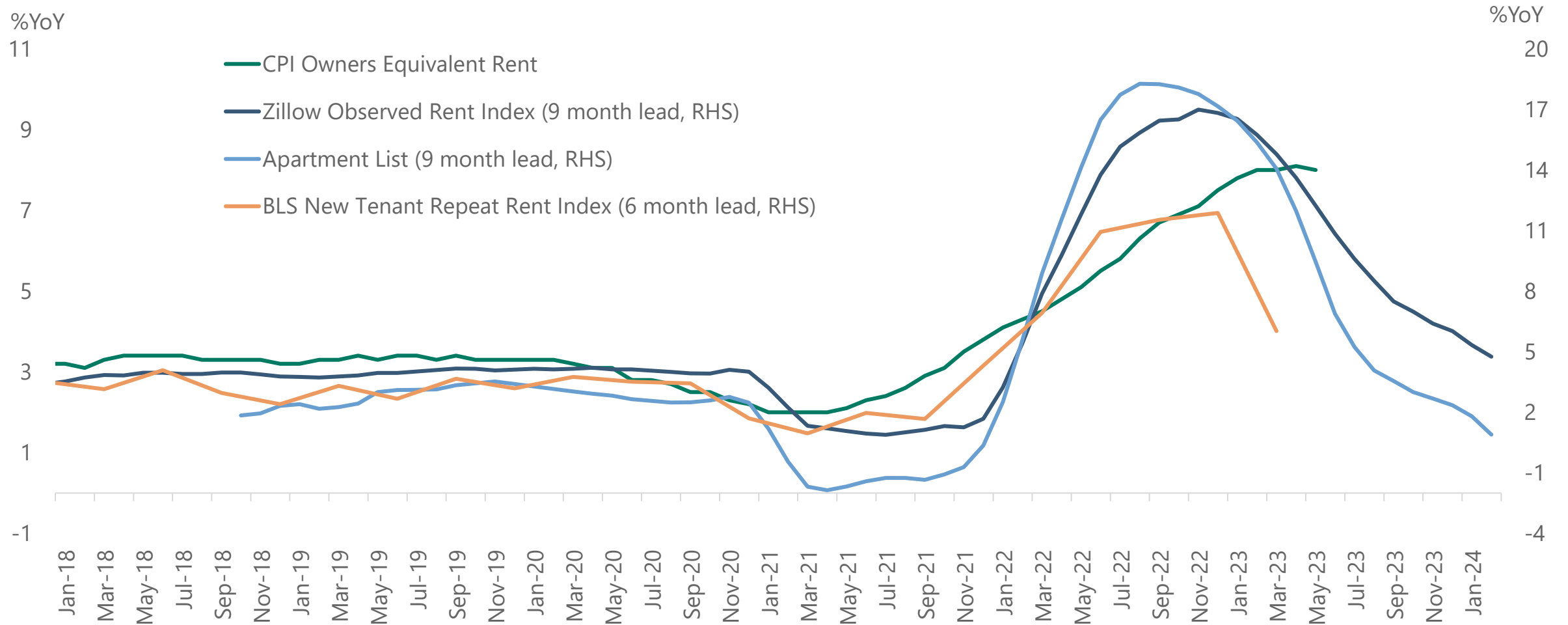
Mortgage rates moving higher



60% of all mortgages outstanding were issued after 2018

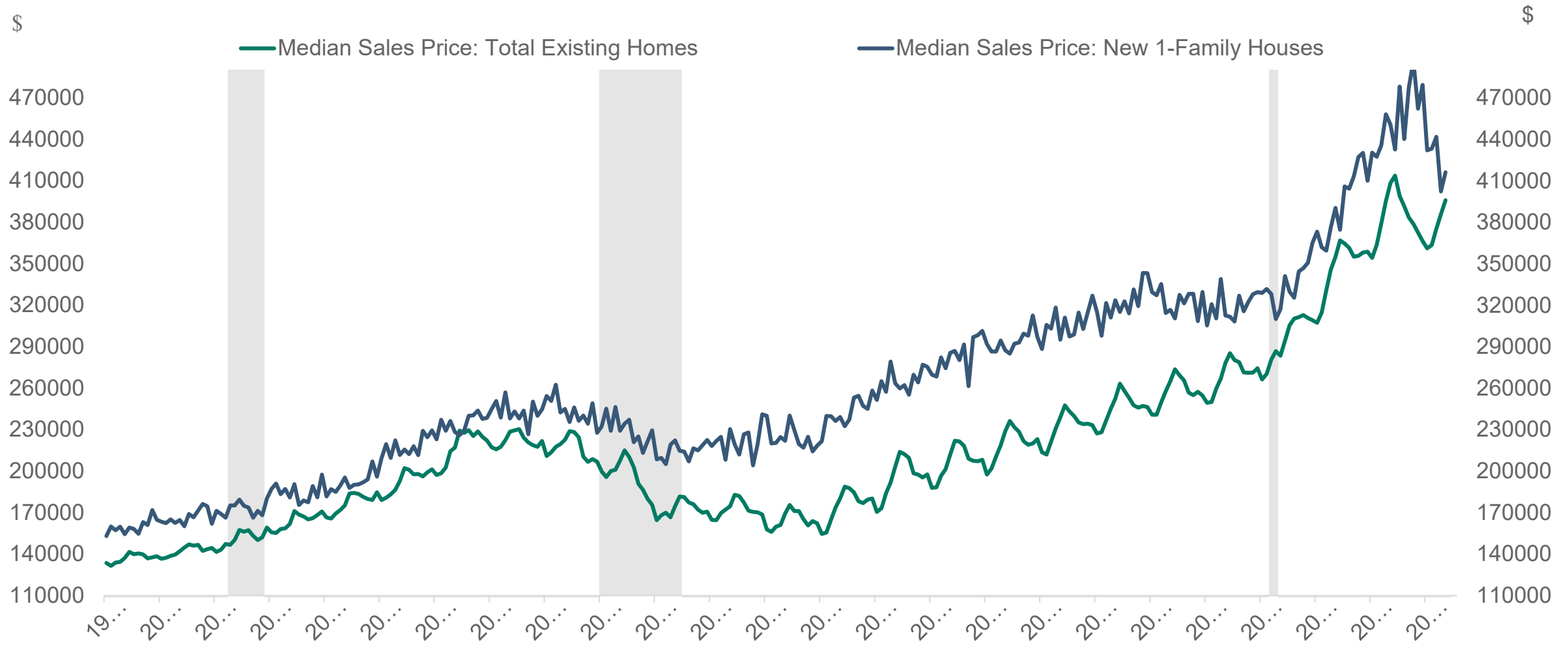


With the housing market recovering, housing inflation will be more sticky

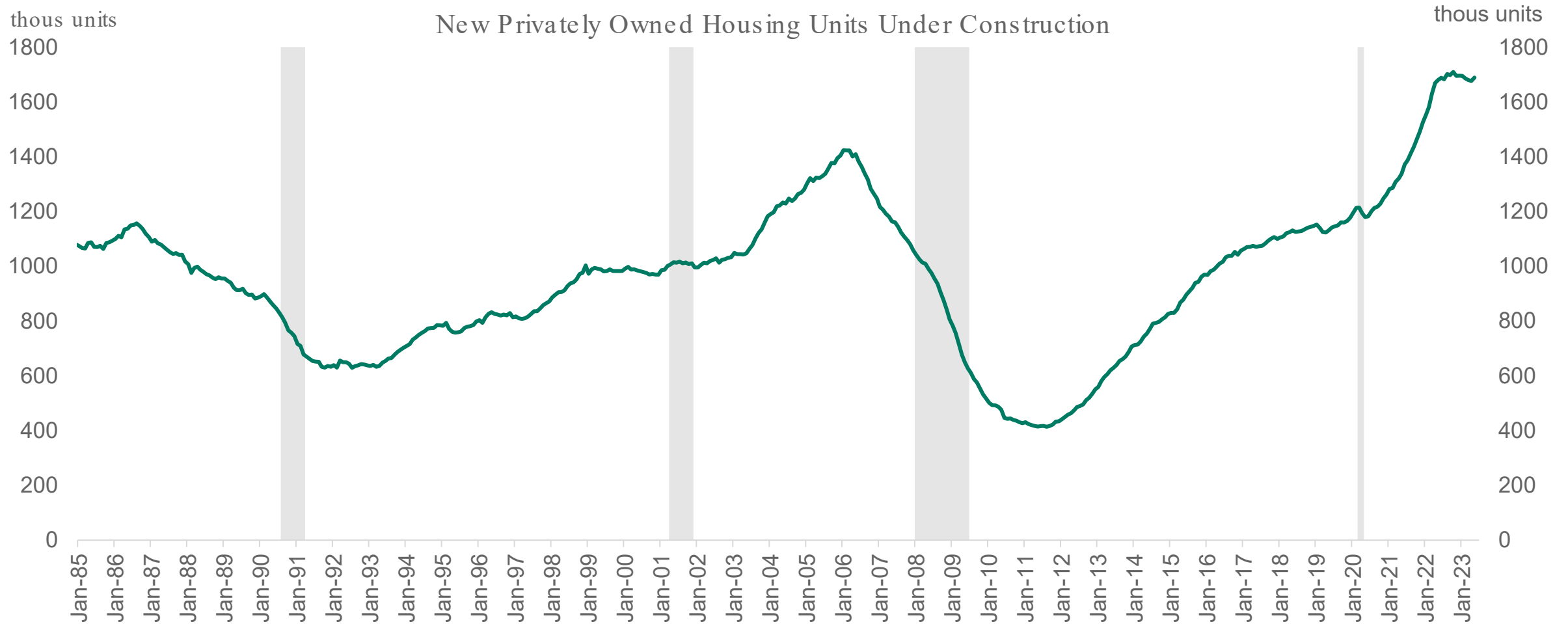


New versus existing homes

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

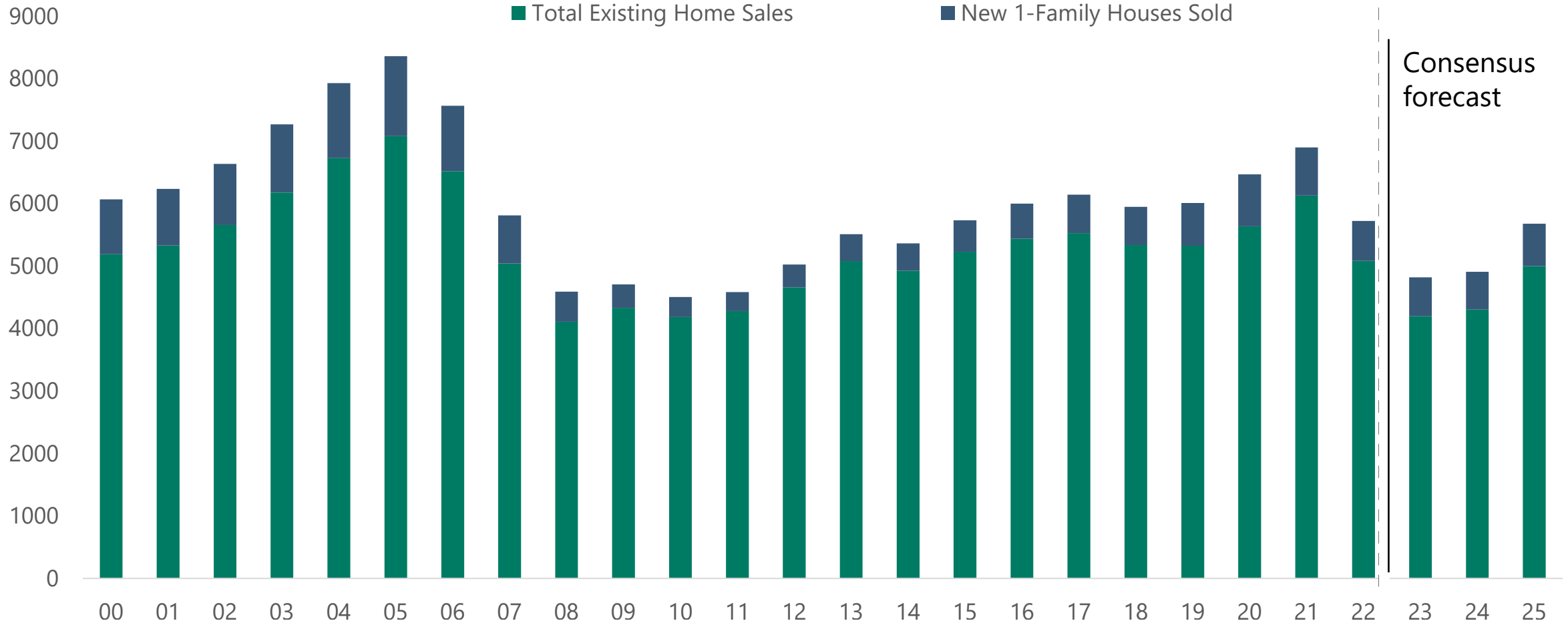


New privately owned housing units under construction starting to peak



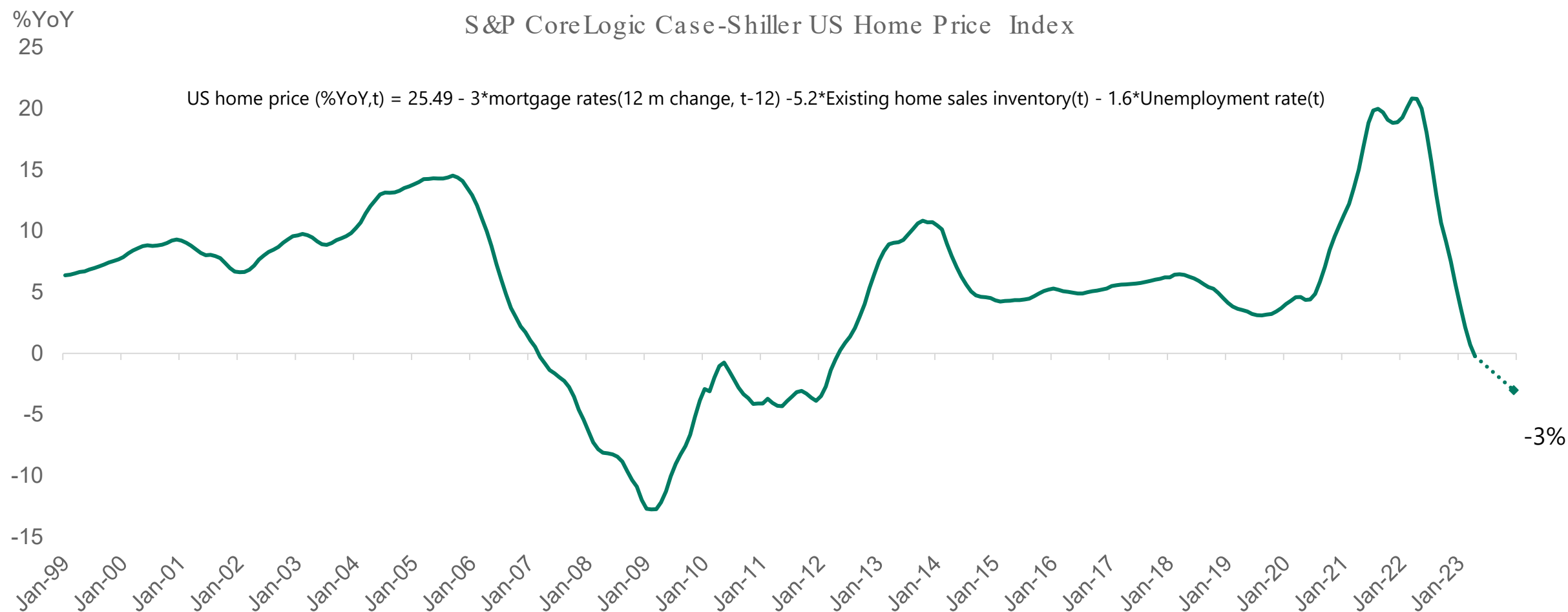
Consensus is forecasting a rebound in home sales

SAAR, thous.



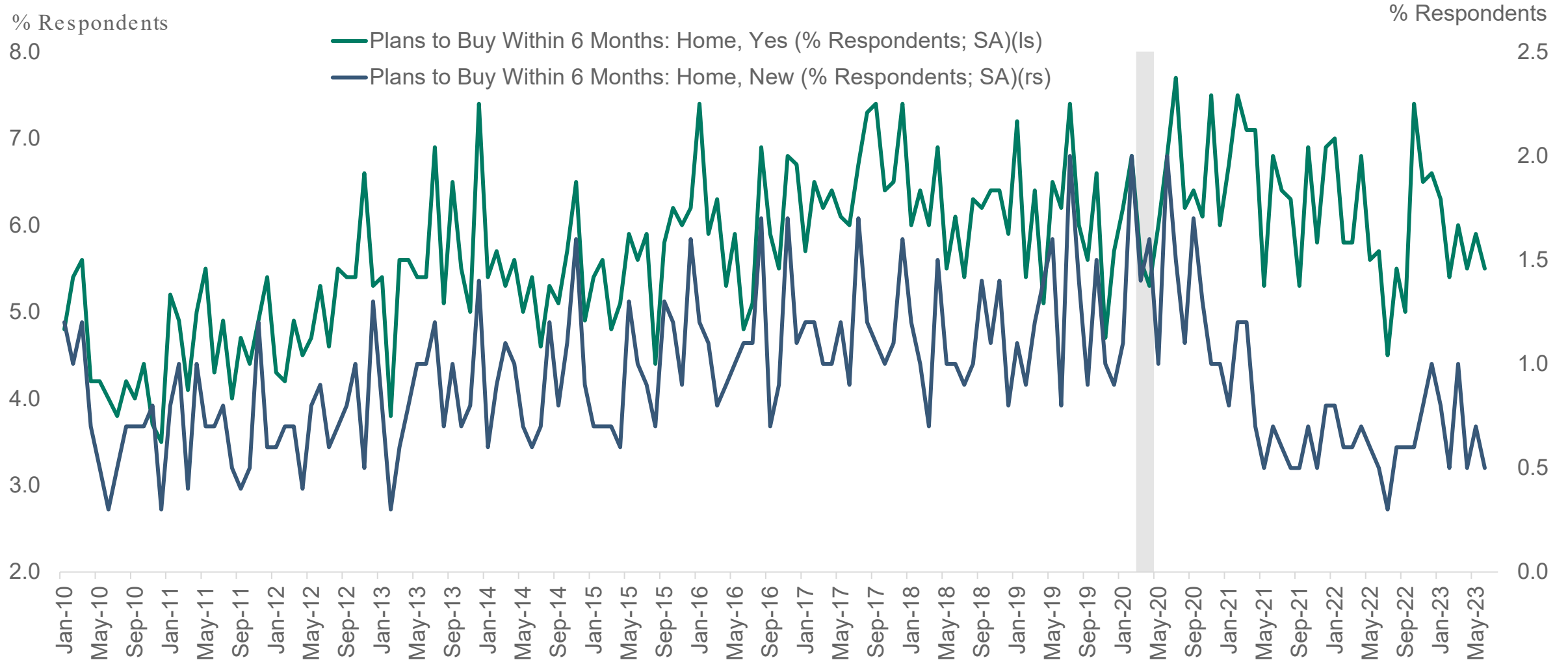
Our US house price model

US house price model

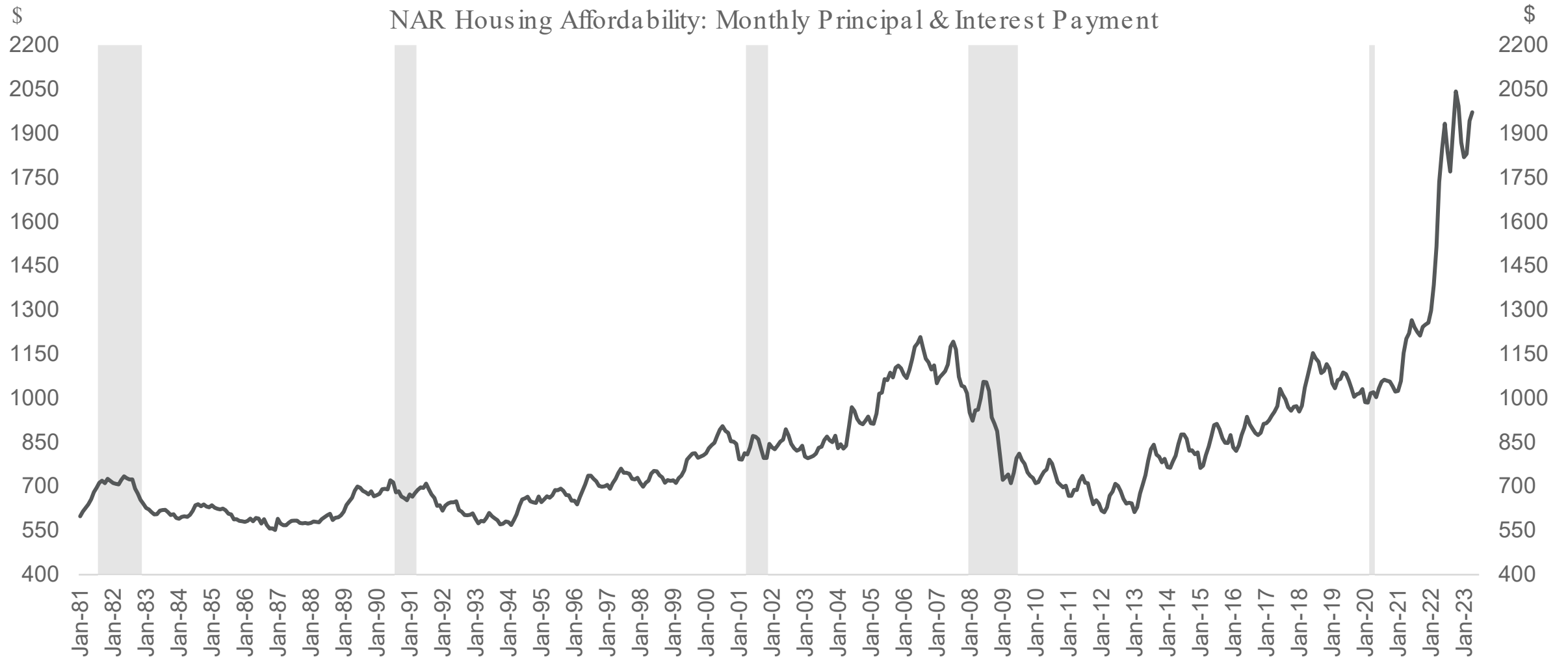


1) Housing Demand: Higher mortgage rates and high home prices slowing demand

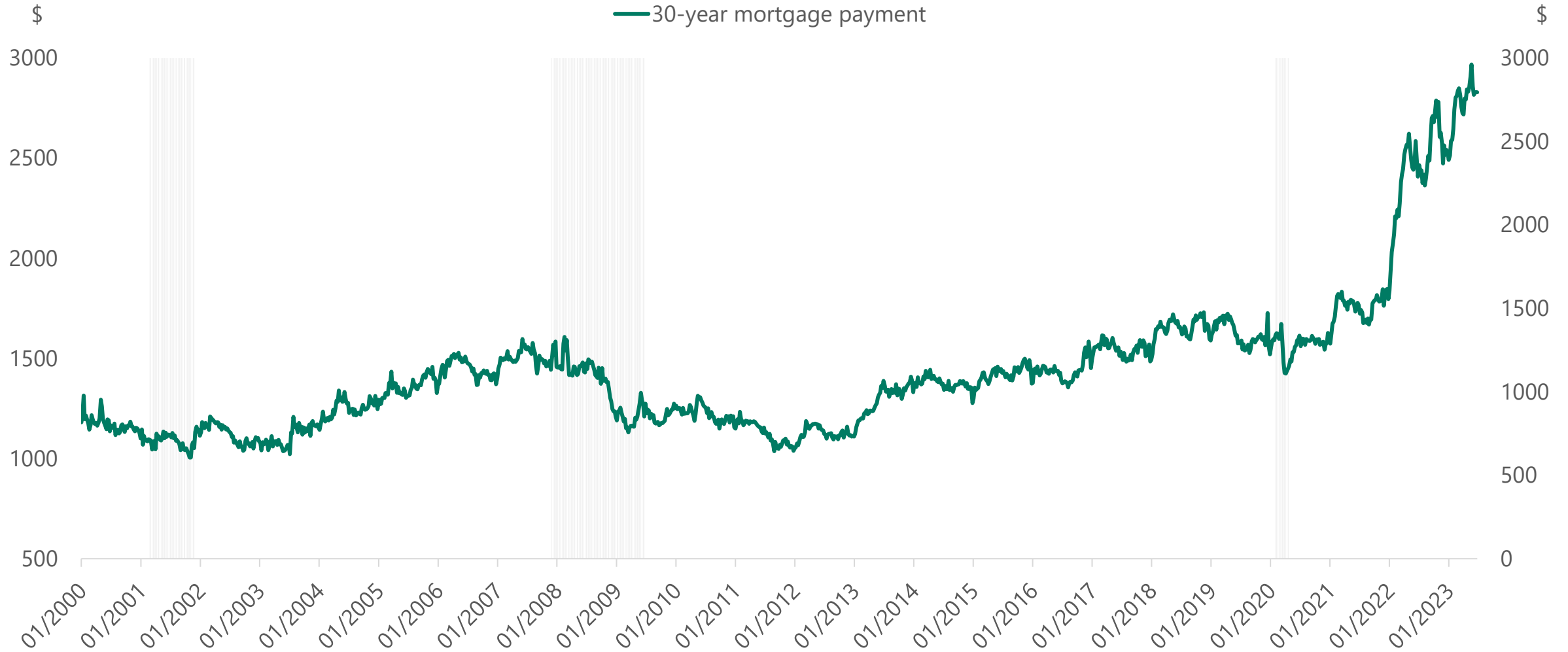
Plans to buy a home stabilizing



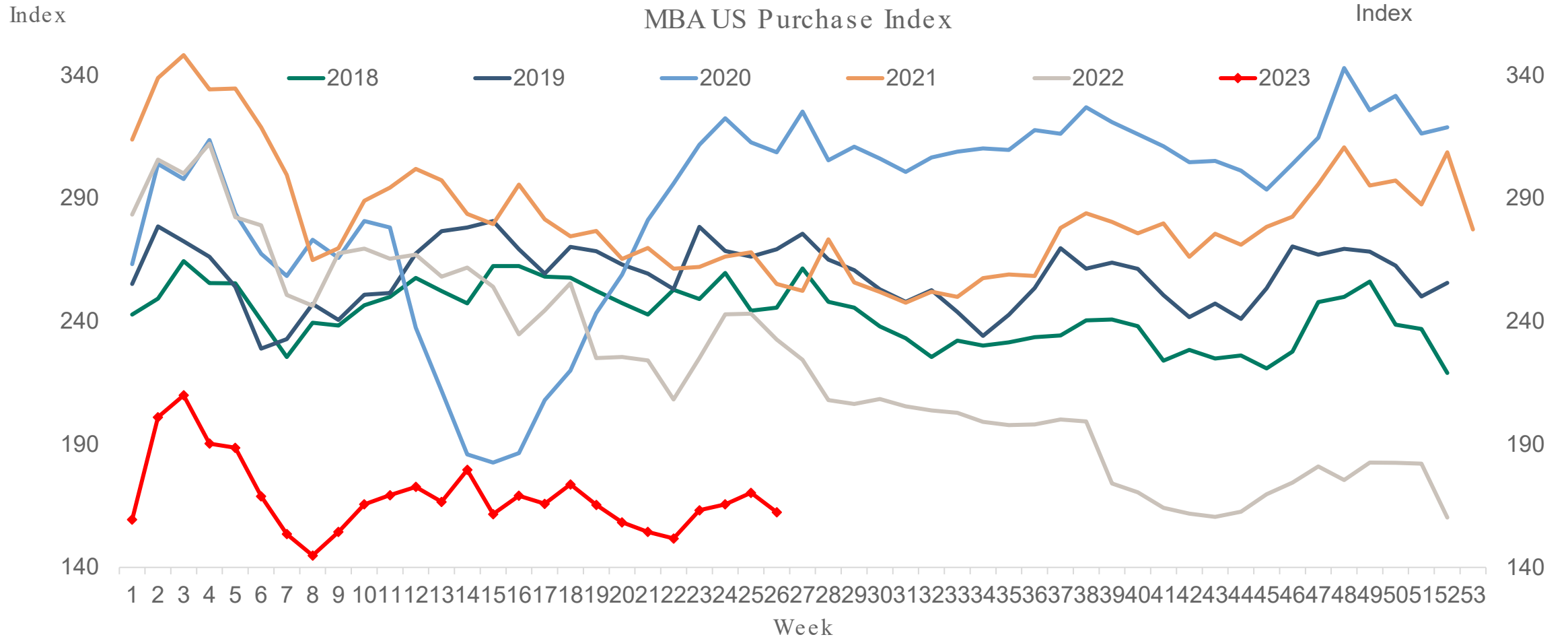
Monthly mortgage payments on new mortgages still very high



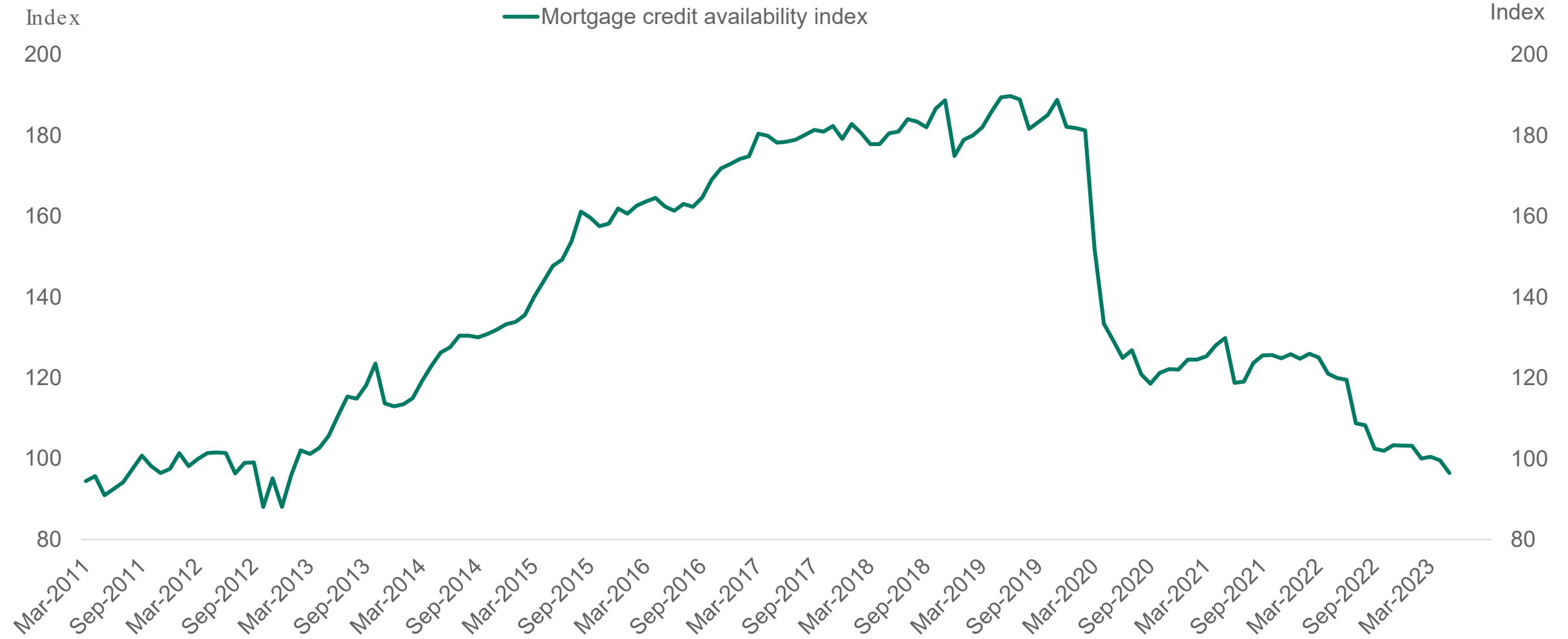
Mortgage payment reached an all time high



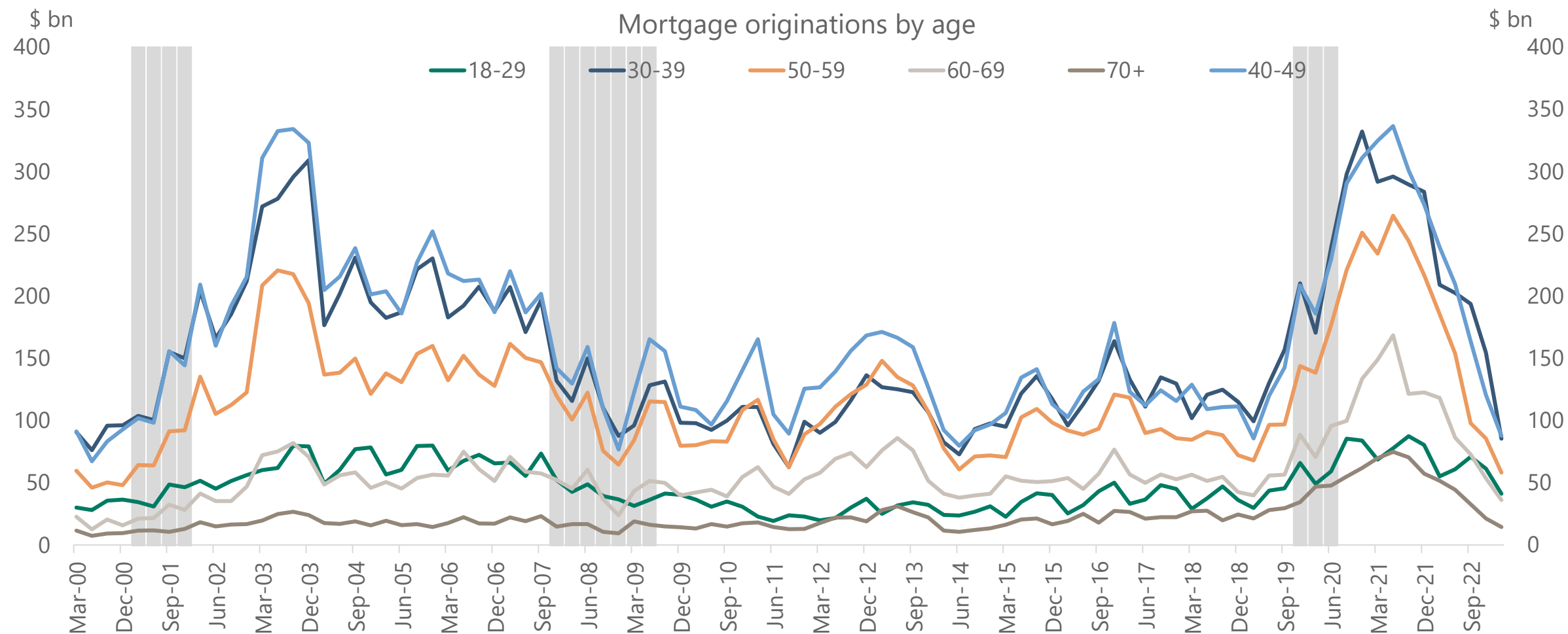
Mortgage purchase applications weaker than usual



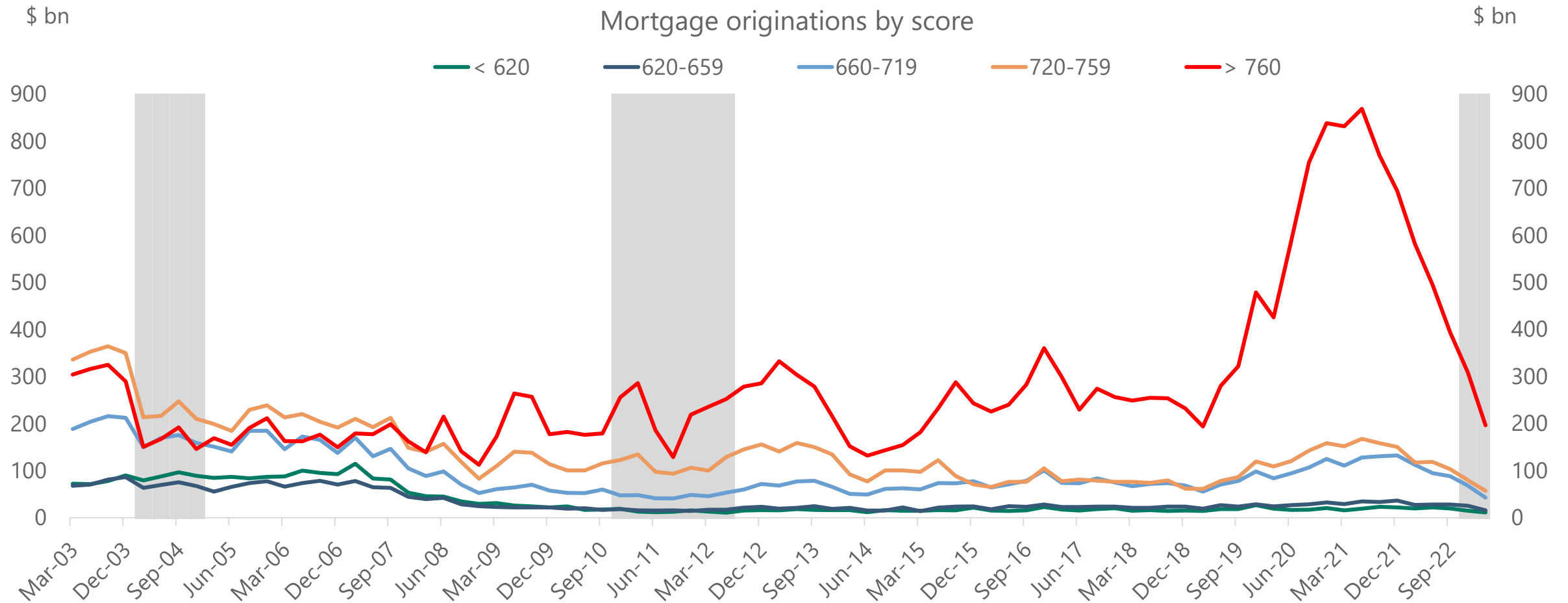
Availability of mortgage credit continues to tighten



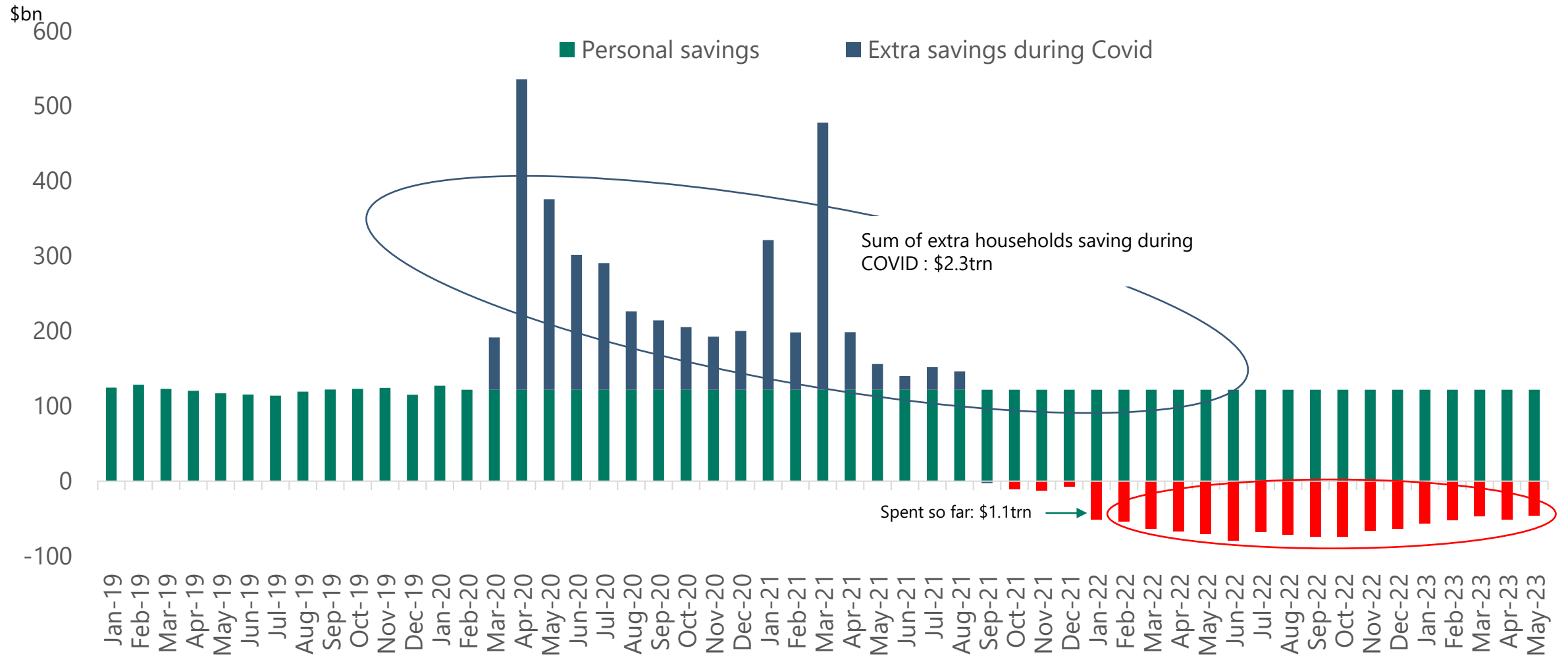
Mortgage originations coming down to pre-pandemic levels



Mortgage originations normalizing for households with high credit scores



Households are running down their excess savings, but still about \$1.2trn left

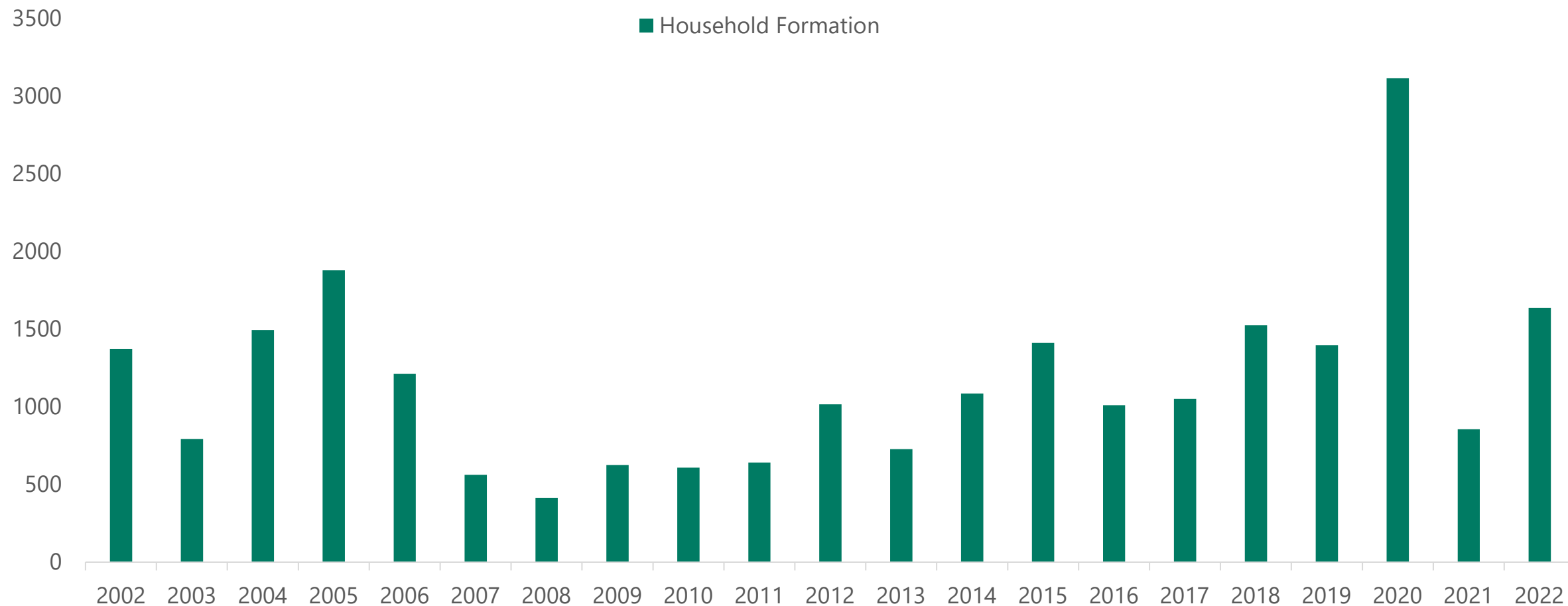


Demographics are a tailwind to housing demand

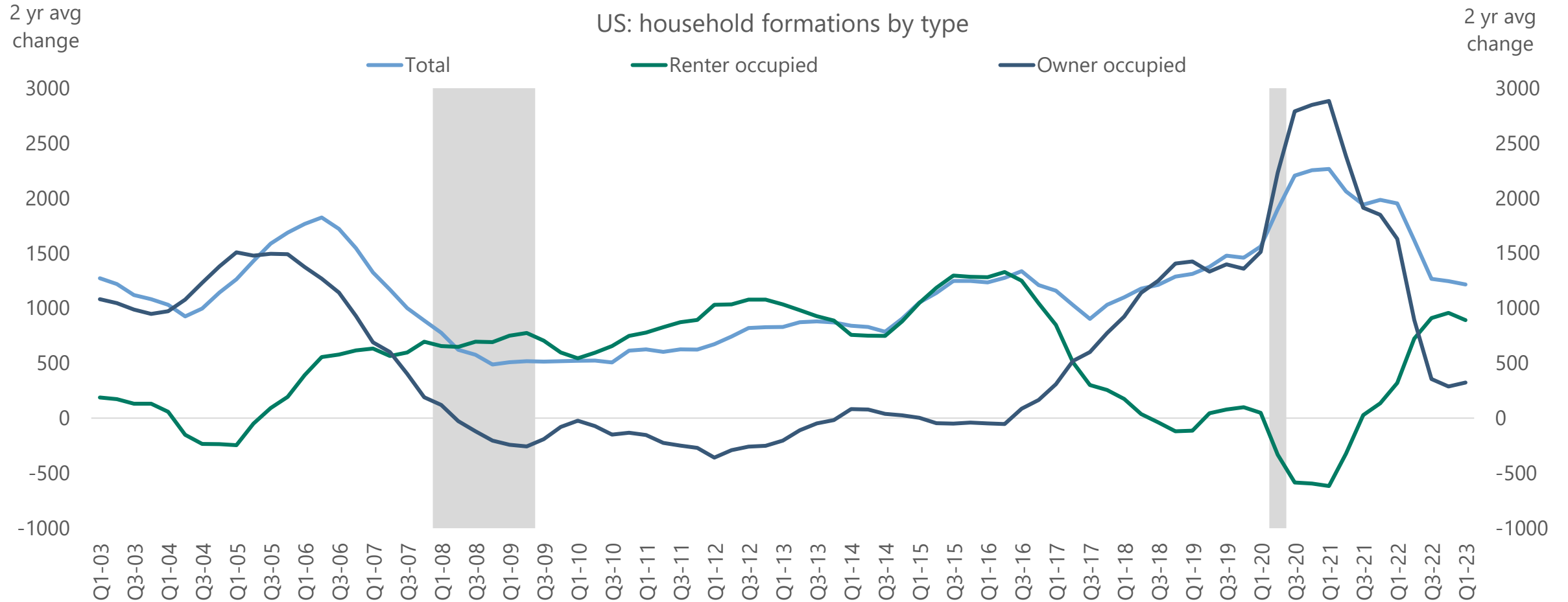


Household formation rising

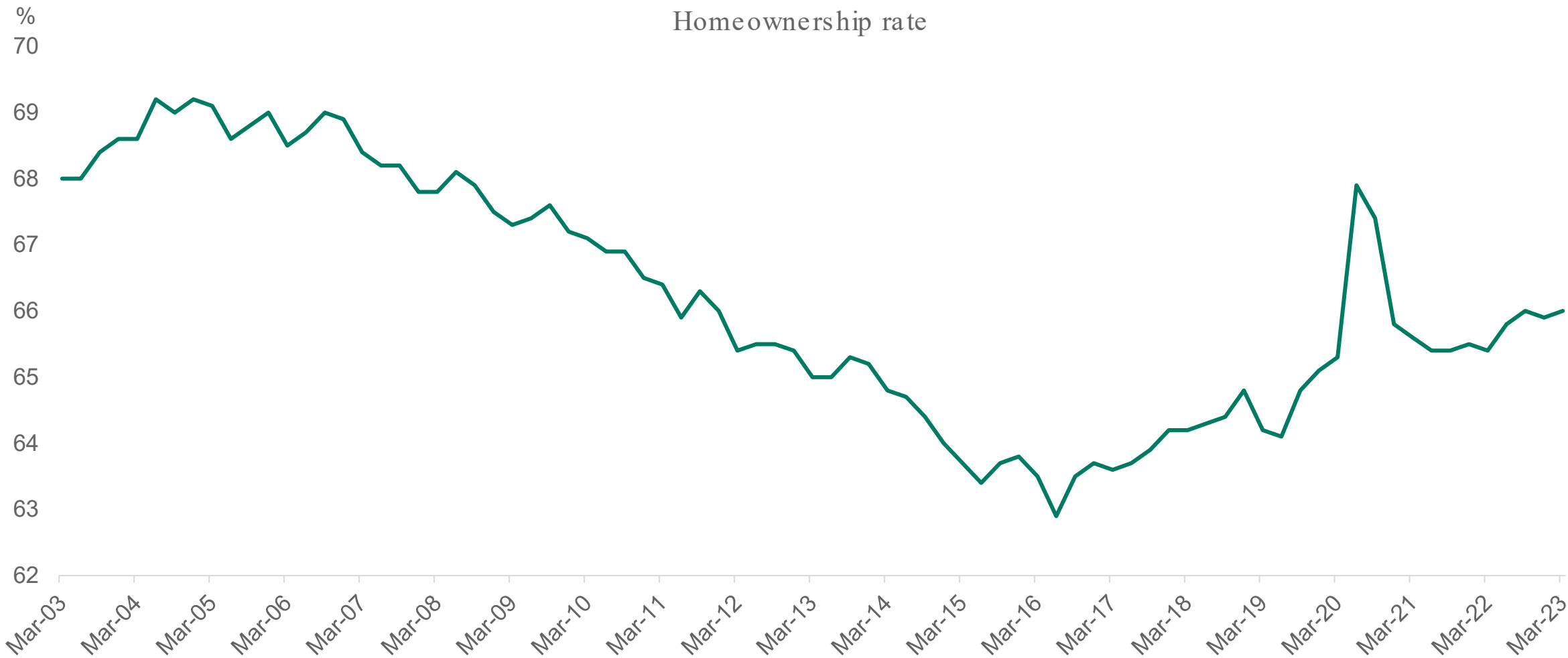
Thousands of units



The number of renter occupied housing units getting elevated



Homeownership rate moving gradually higher

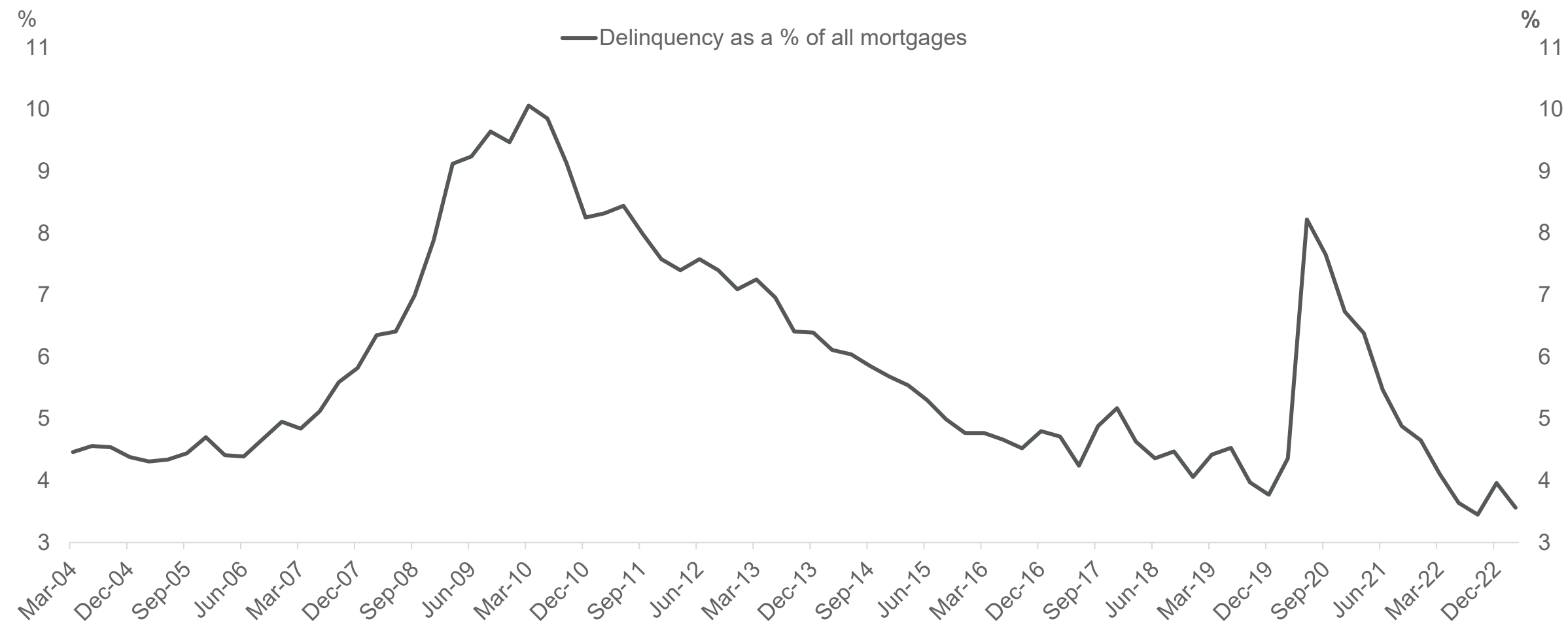


Source: Bloomberg, Apollo Chief Economist

Low unemployment is a significant tailwind to housing demand

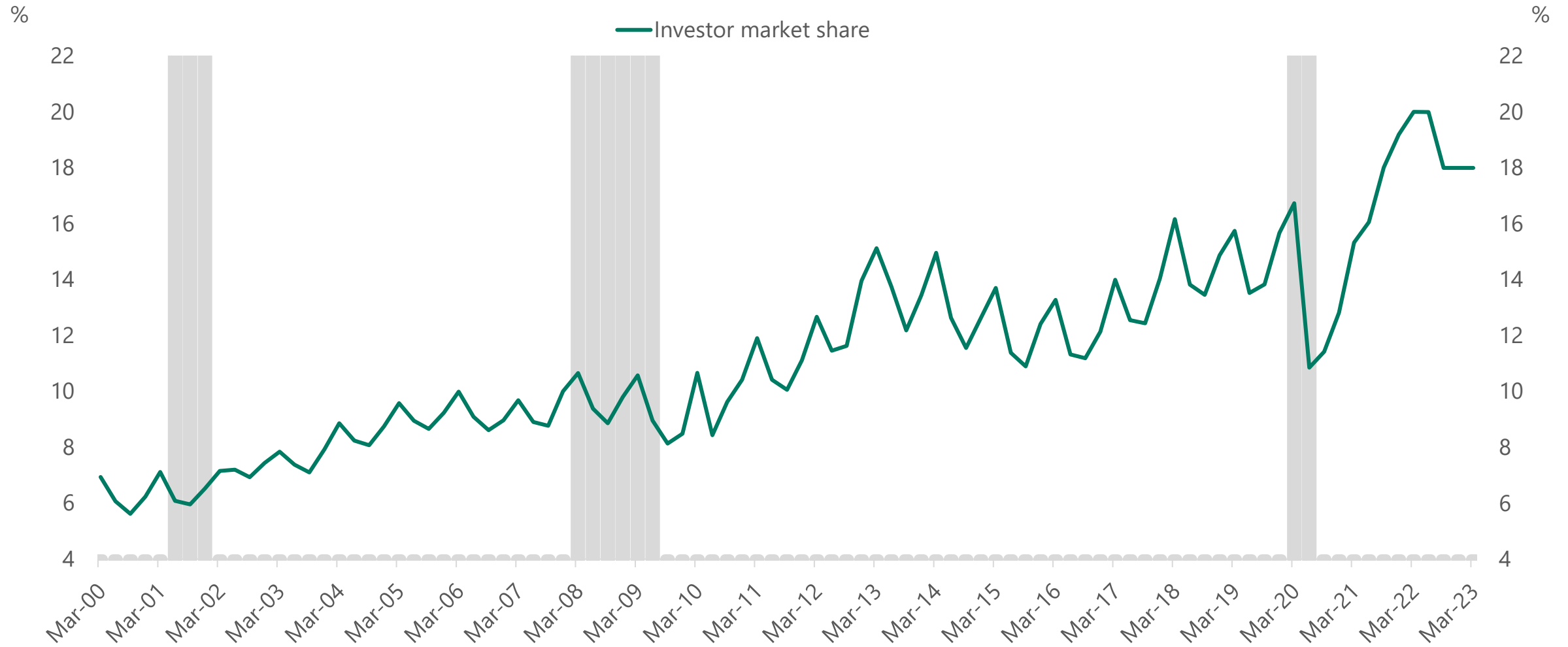


Delinquent mortgages still low

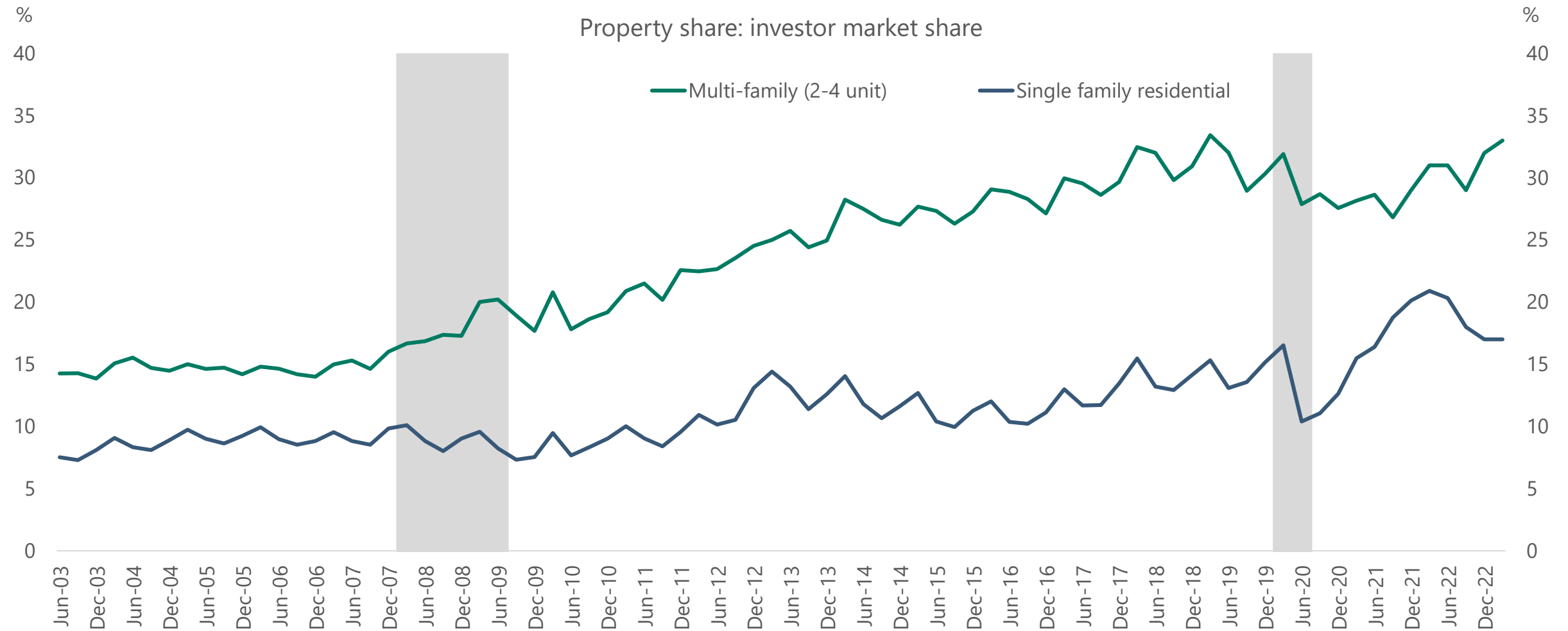


Source: Bloomberg, Apollo Chief Economist

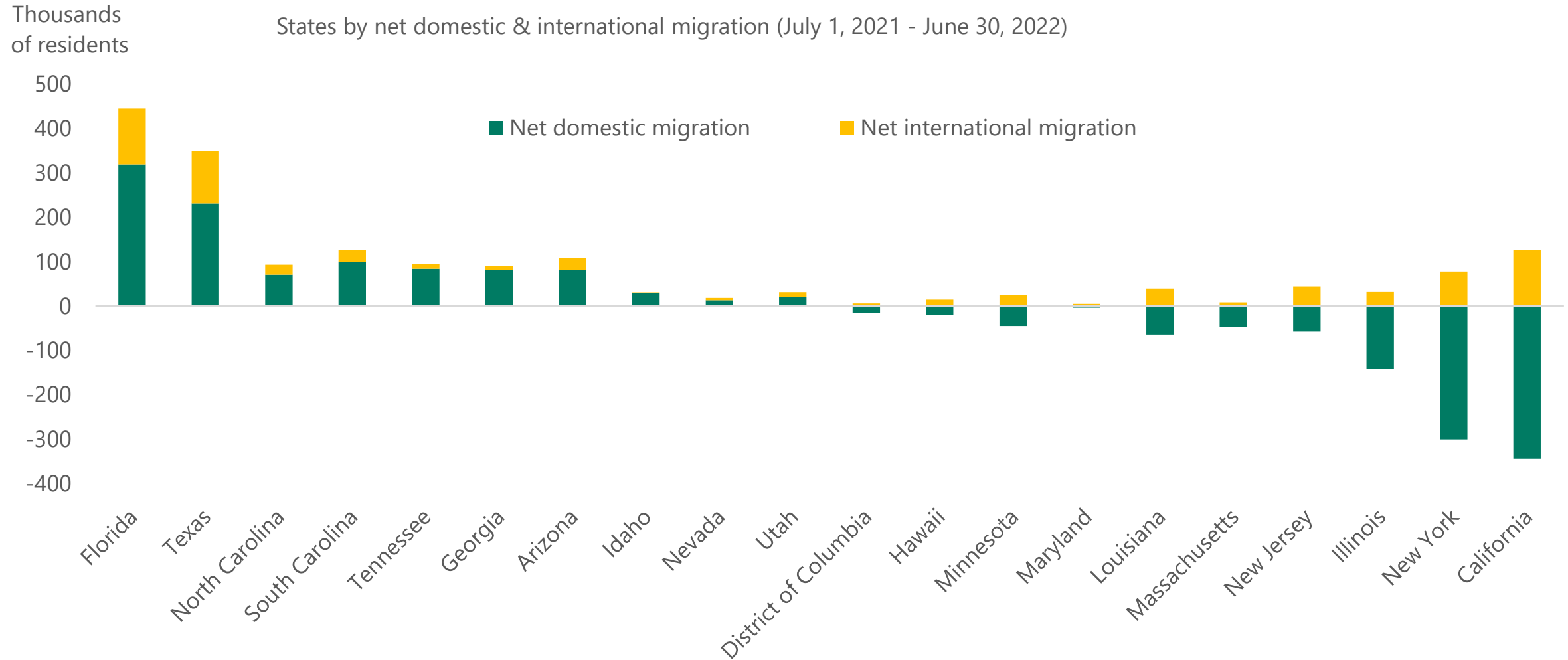
Investors accounting for 18% of all home purchases



Investor share of multi family trending higher

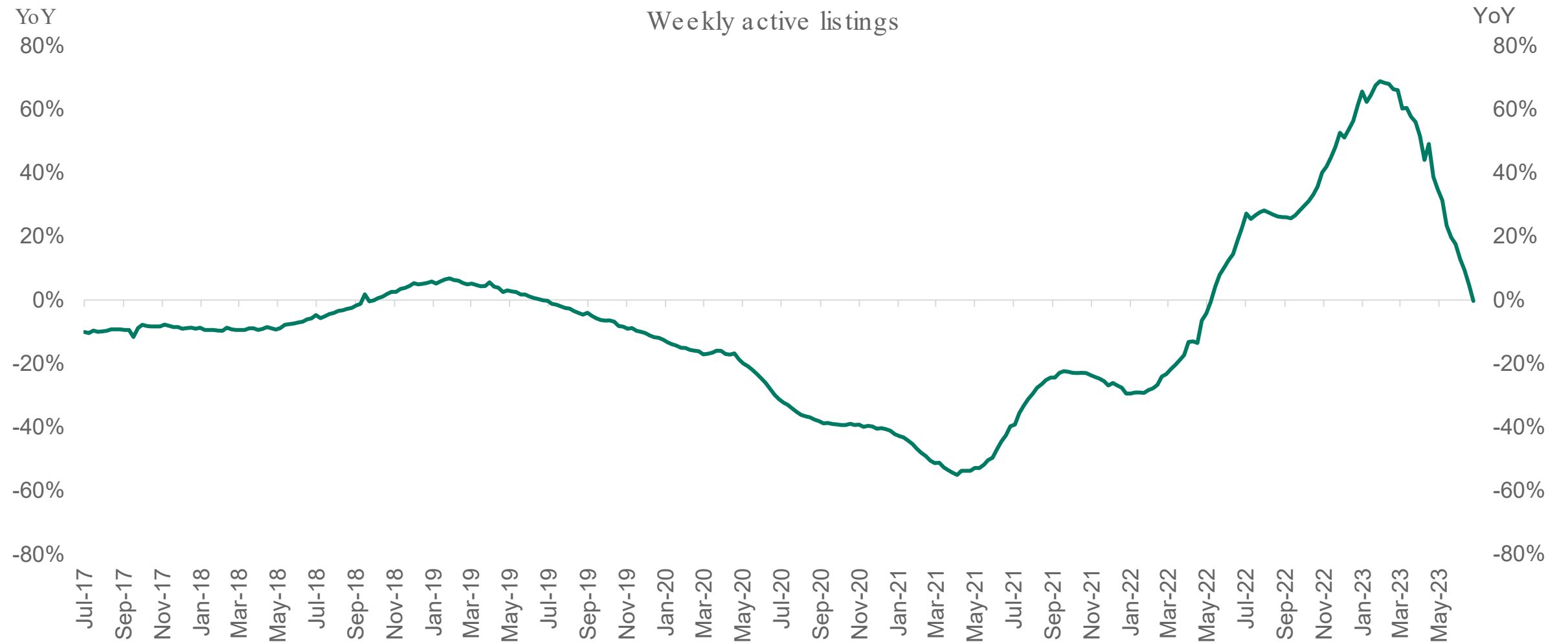


Migration out of California and migration into Florida during the pandemic



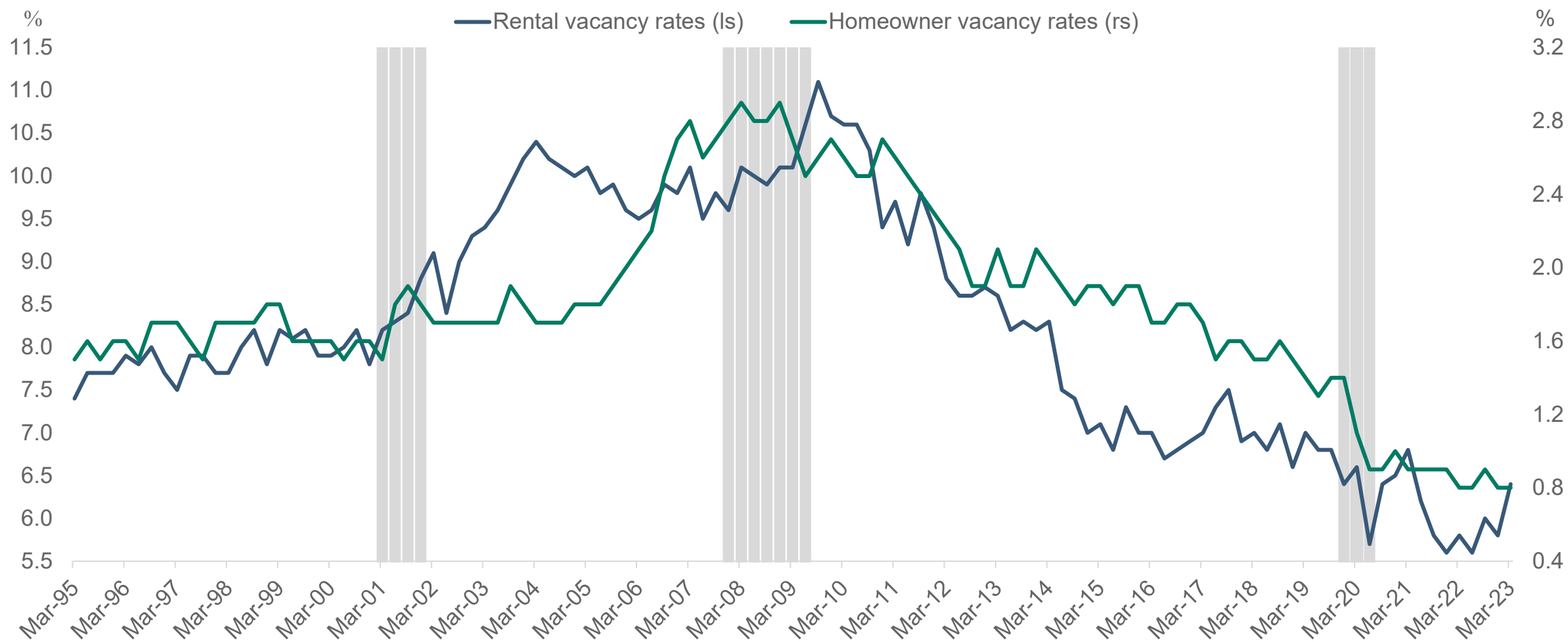
2) Housing Supply: Housing supply is low,
construction coming down from record-high levels

US housing inventory falling

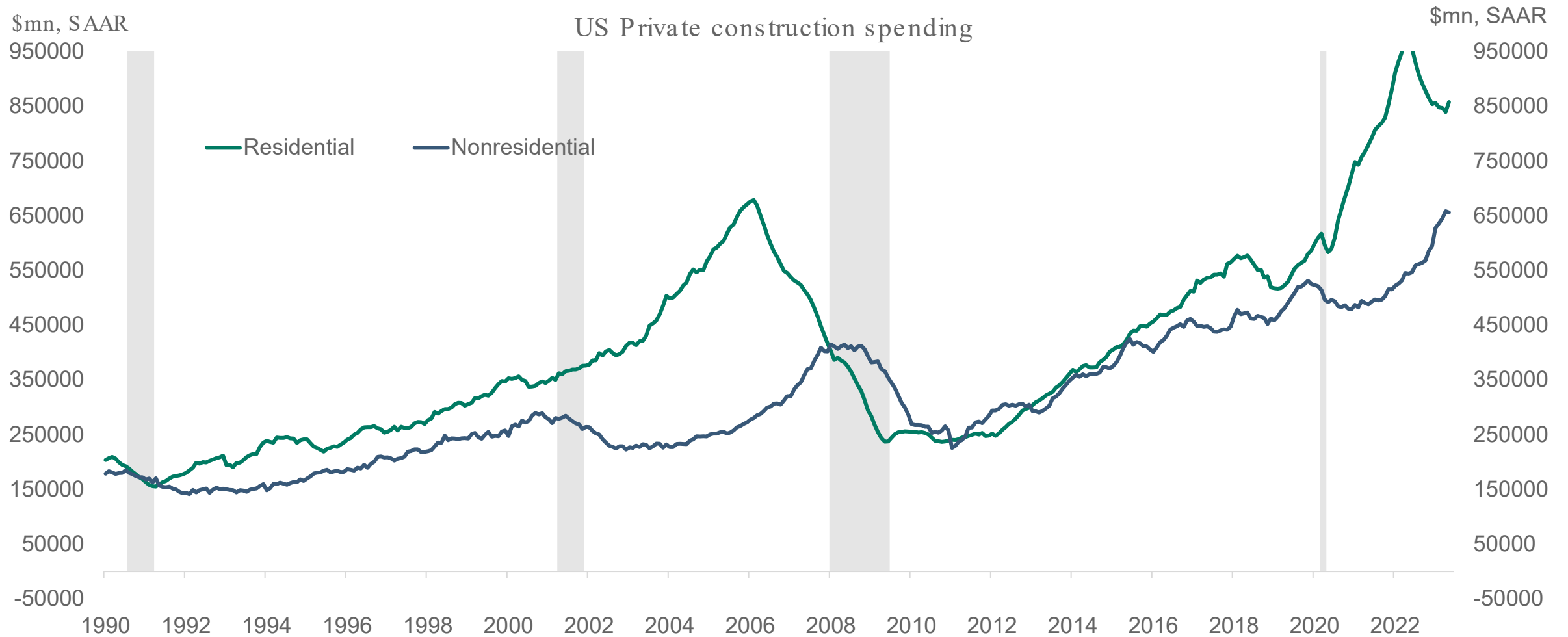


Source: Realtor.com, Apollo Chief Economist

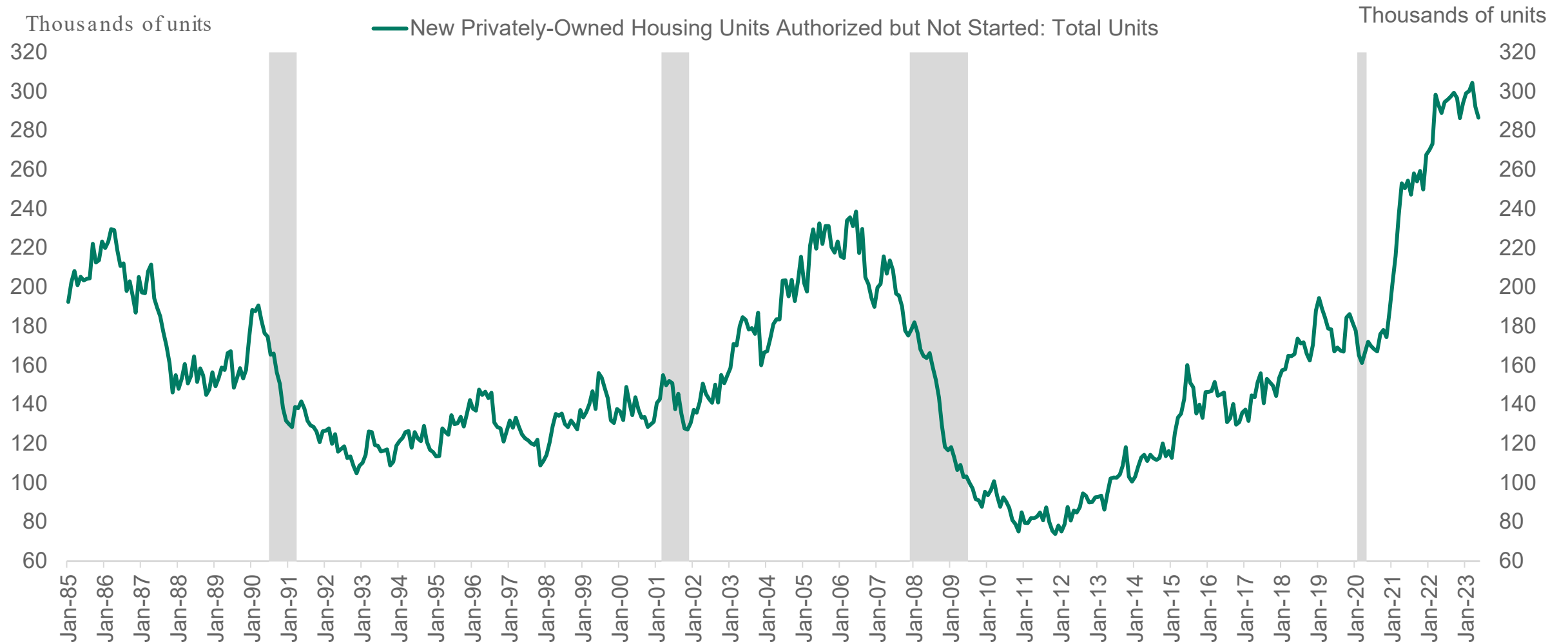
Homeowner and Rental vacancy rates very low



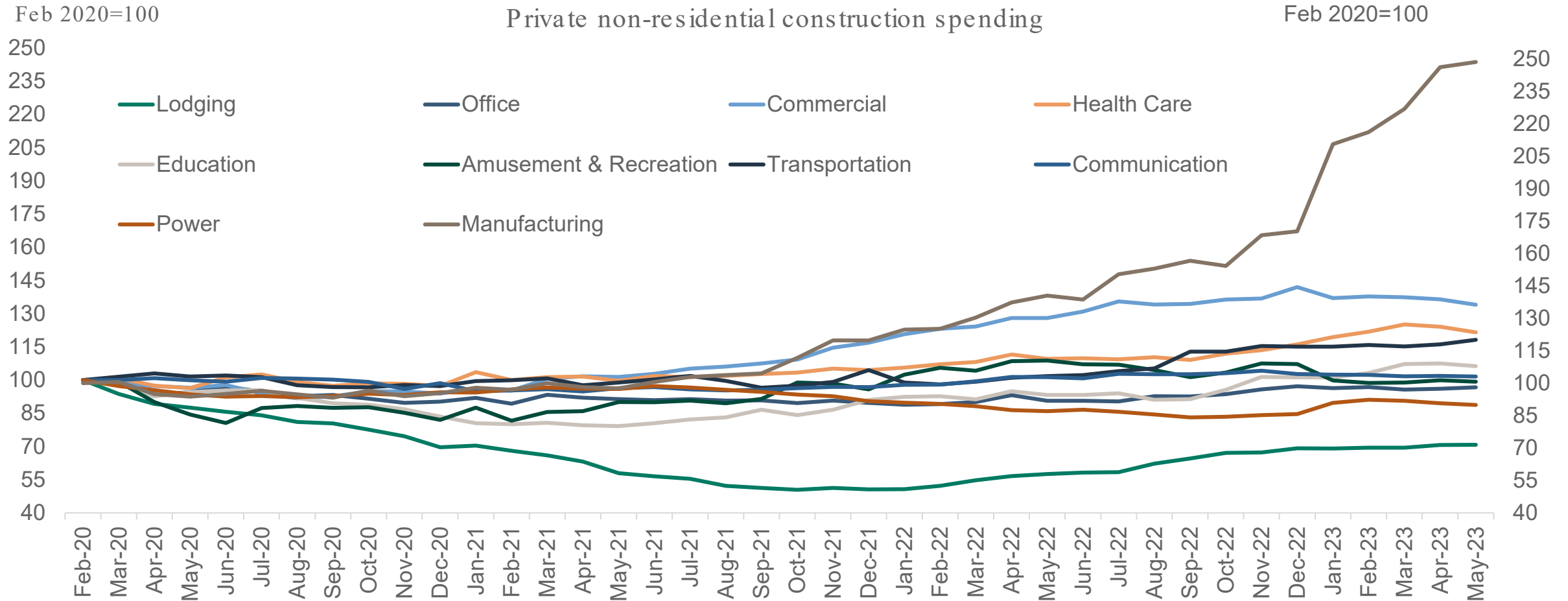
Residential construction spending coming down from recent peak



New housing units authorized near record highs

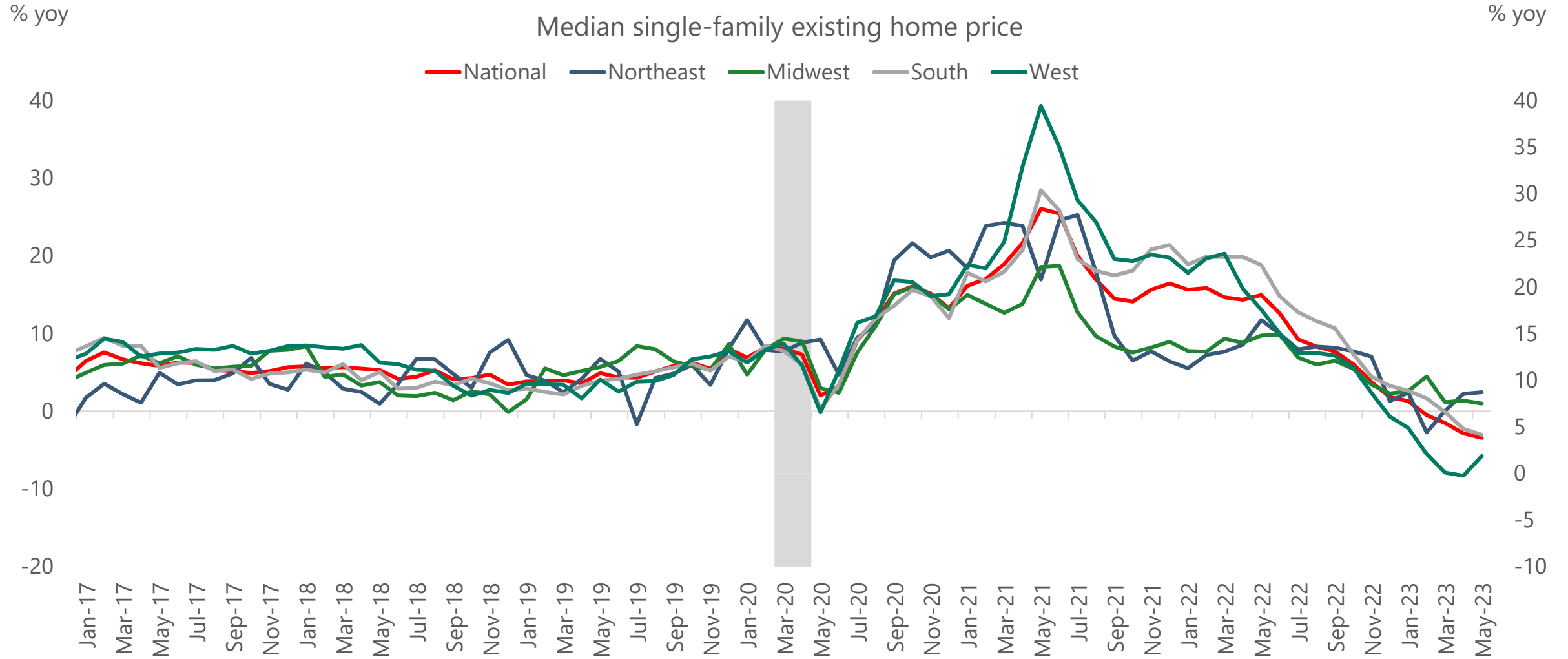


The biggest decline in non-residential construction has been in lodging

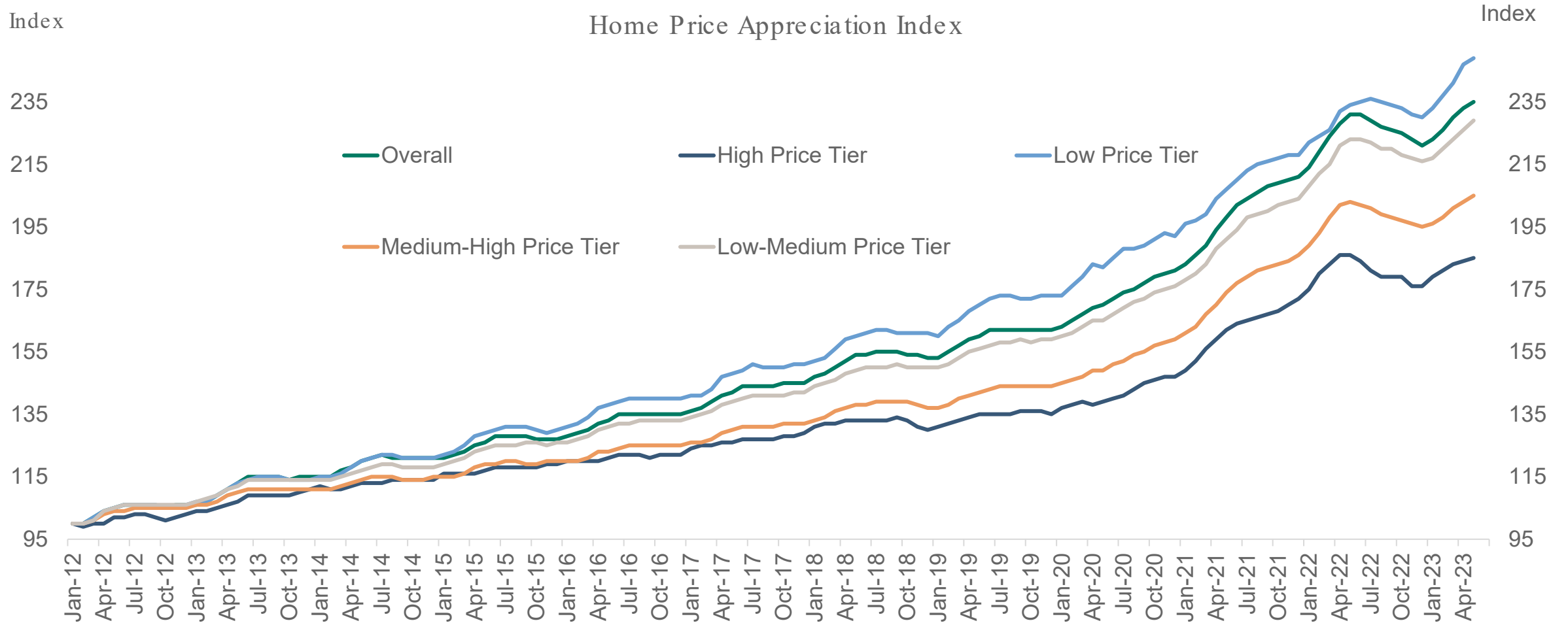


3) House Prices: Home price inflation stabilizing

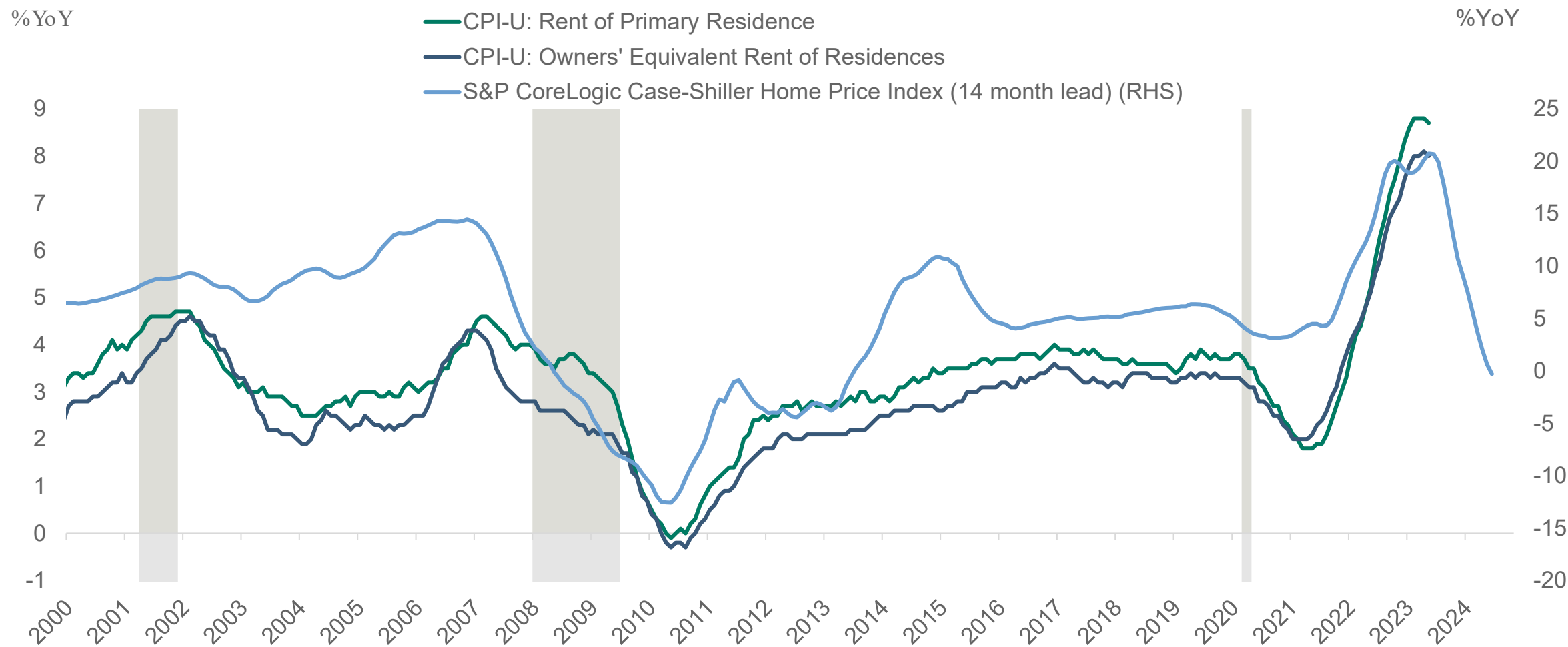
Home price inflation stabilizing



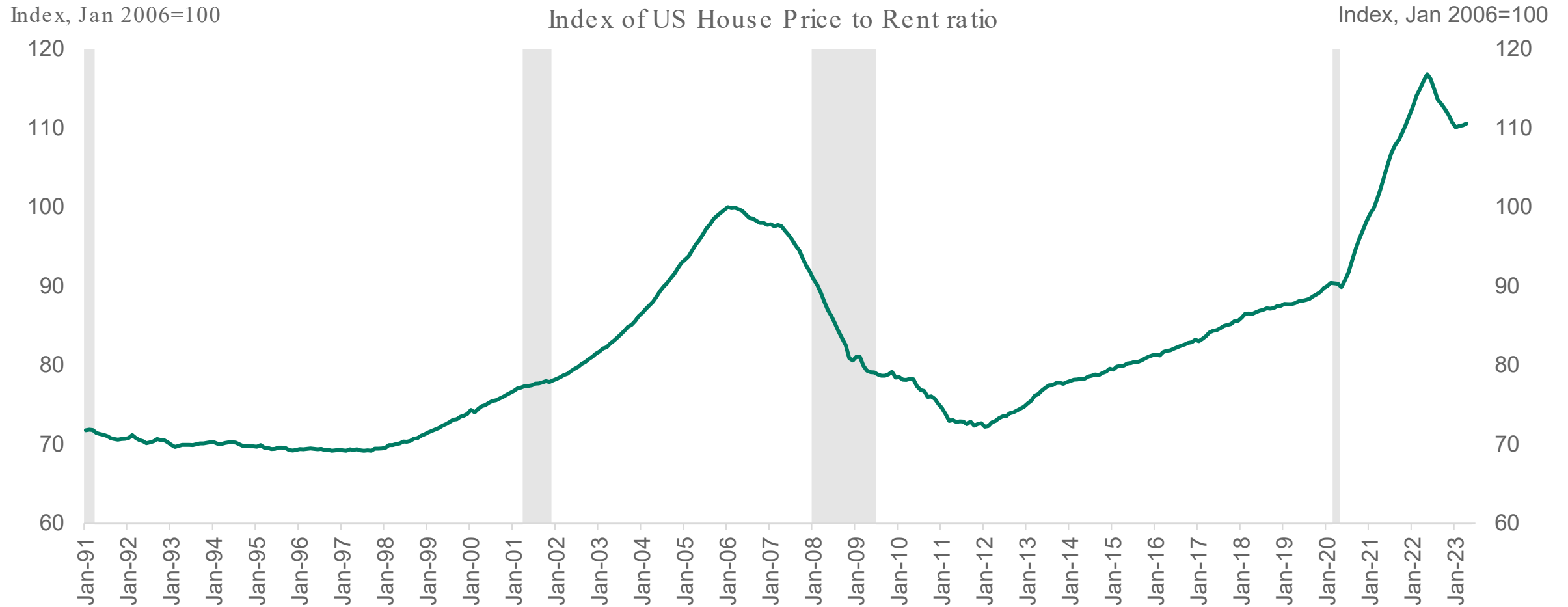
House price inflation slowing across price tiers



Home price inflation has peaked



Home price to rent ratio significantly above 2006 levels

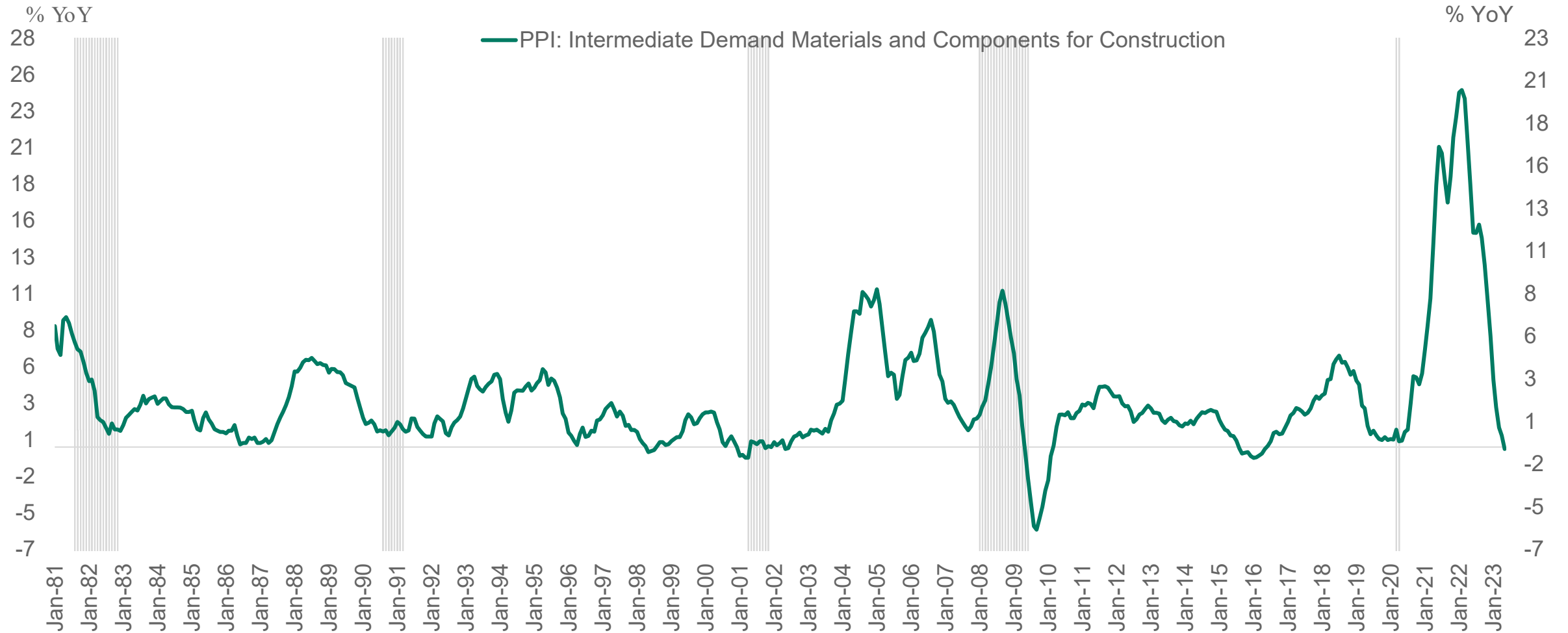


4) Housing Outlook: **High mortgage rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle**

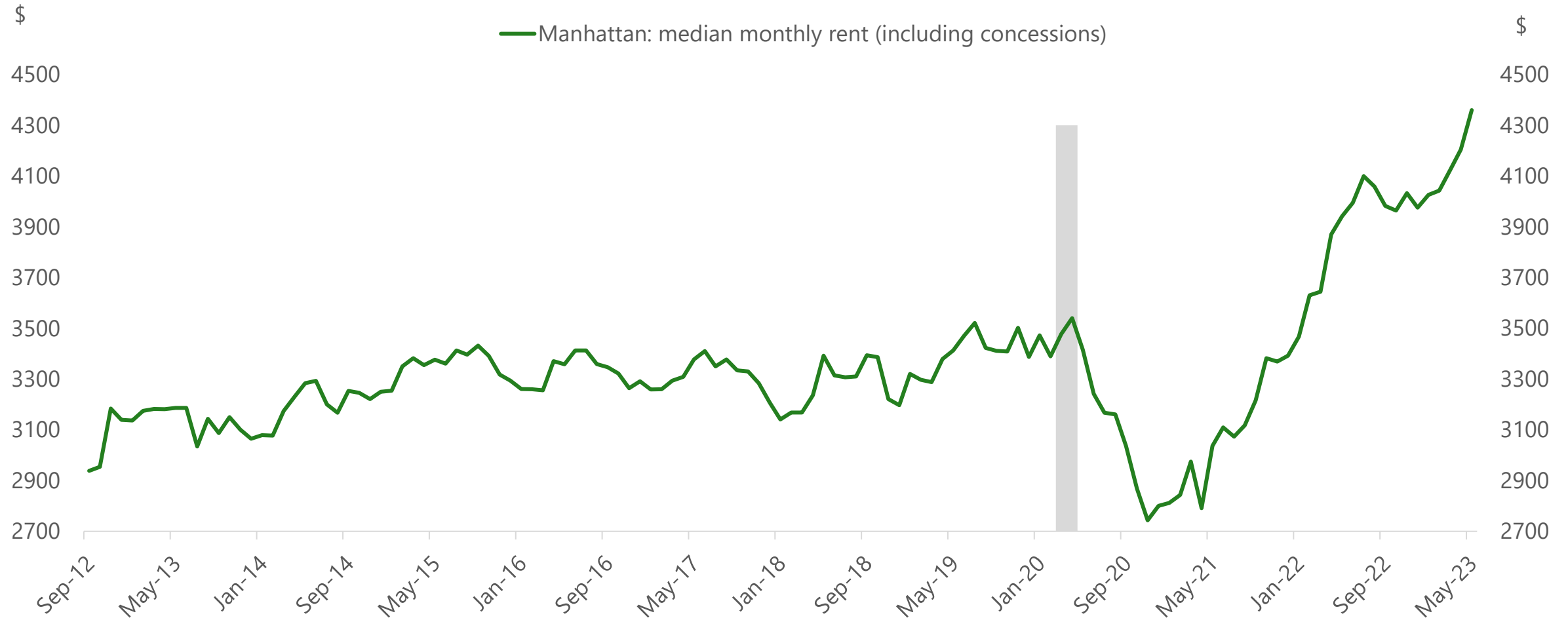
Housing construction costs are high



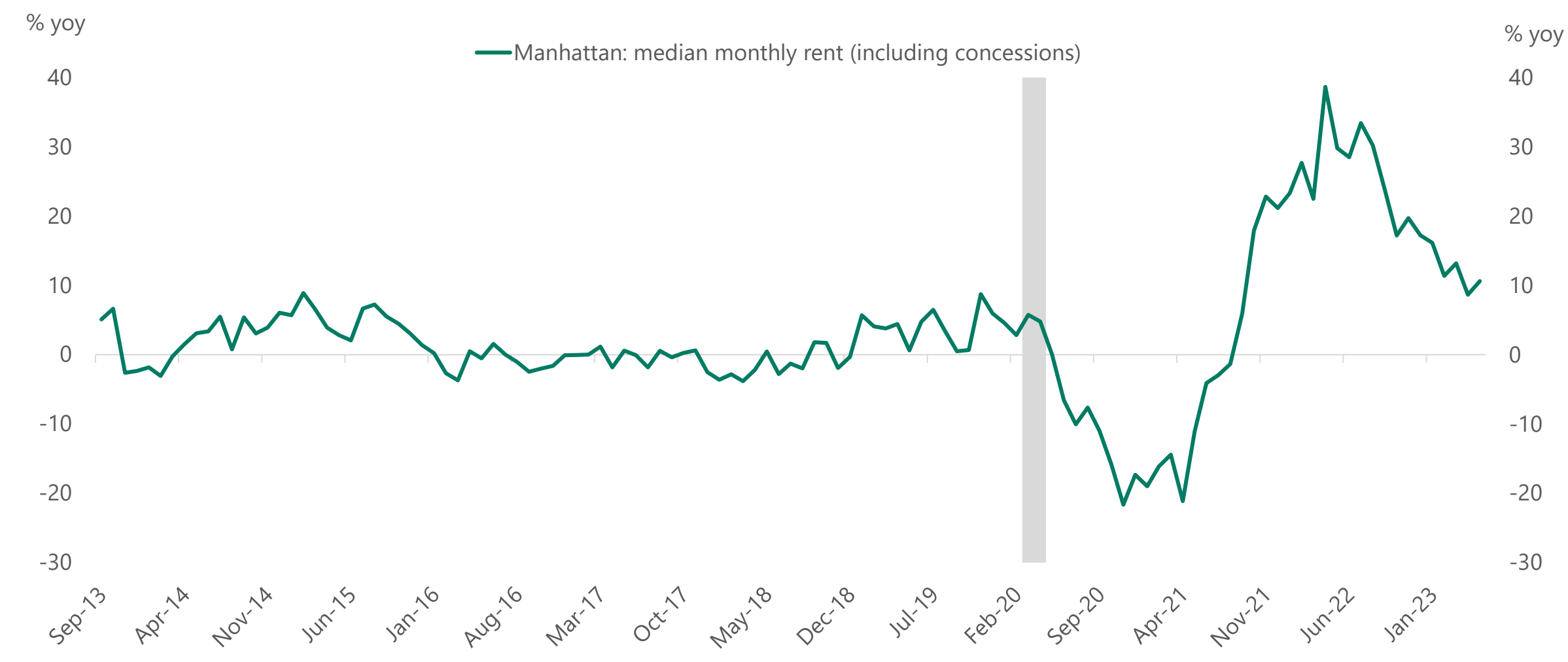
Inflation in input costs for home builders declining



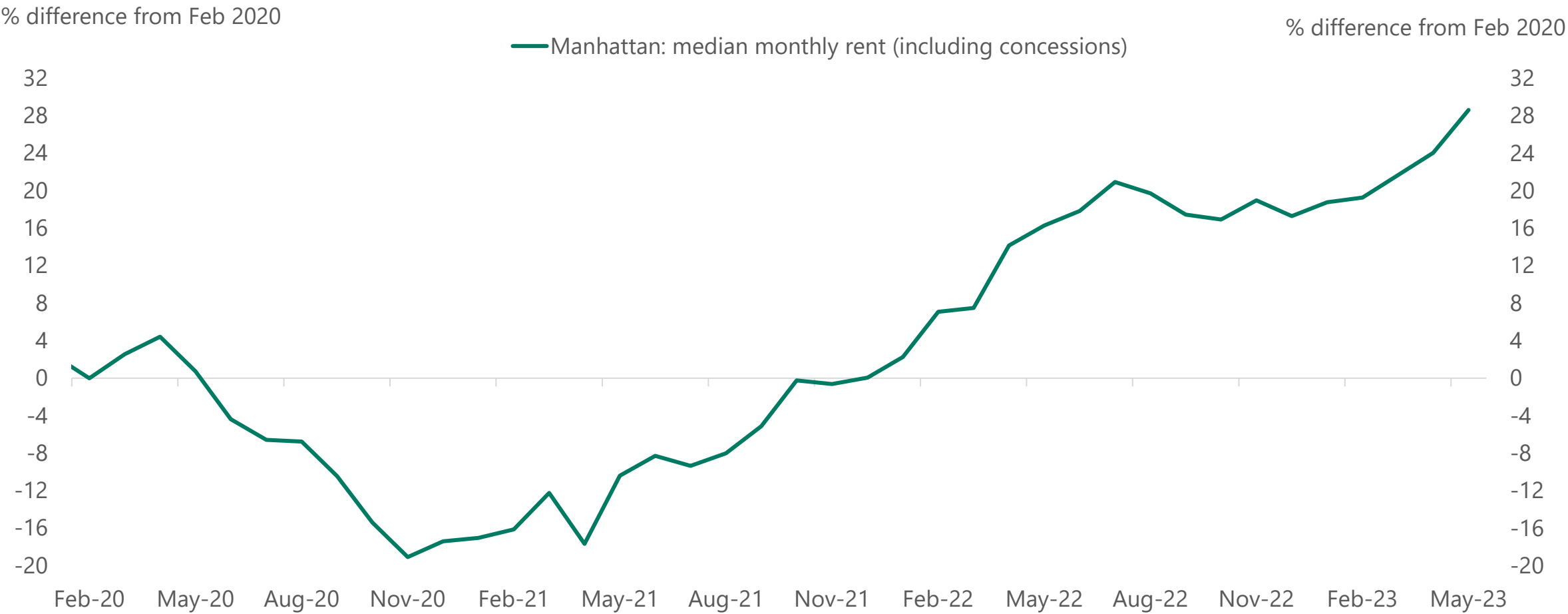
Manhattan median rent at a new high at \$4360 in May 2023



Manhattan rents up 11% year-over-year

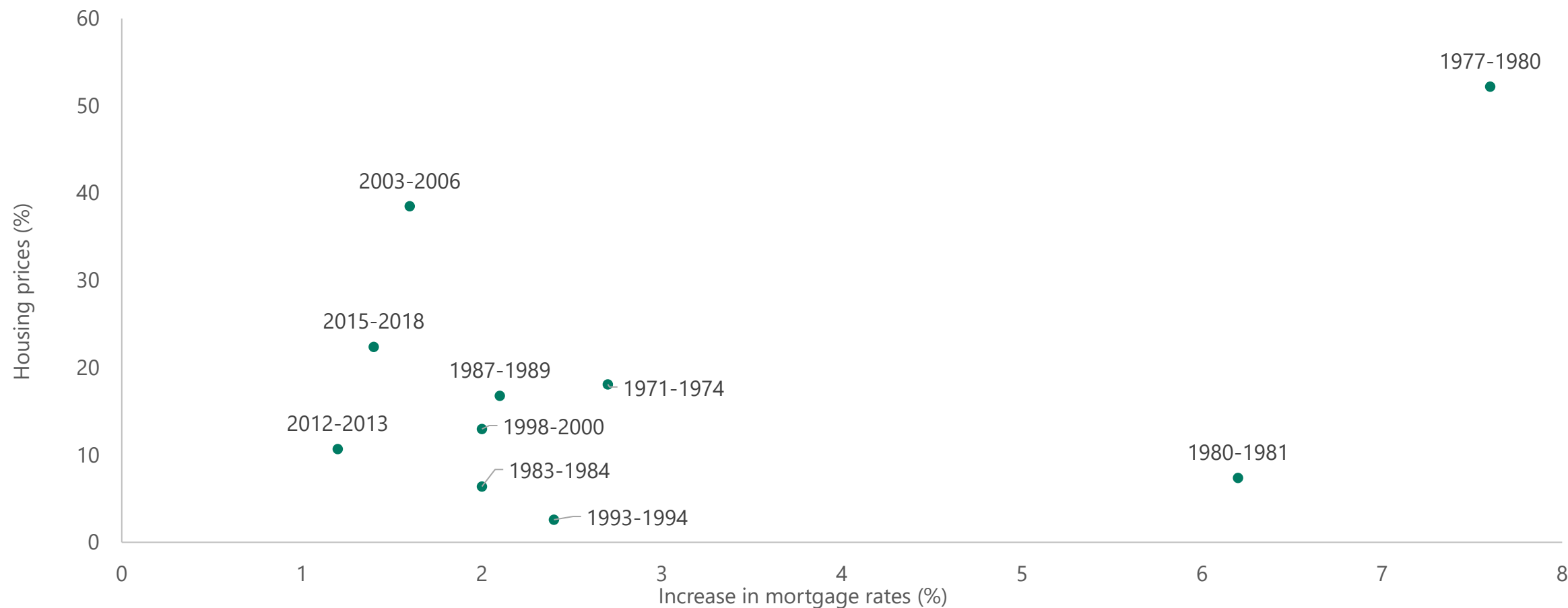


Manhattan rents above pre-pandemic levels

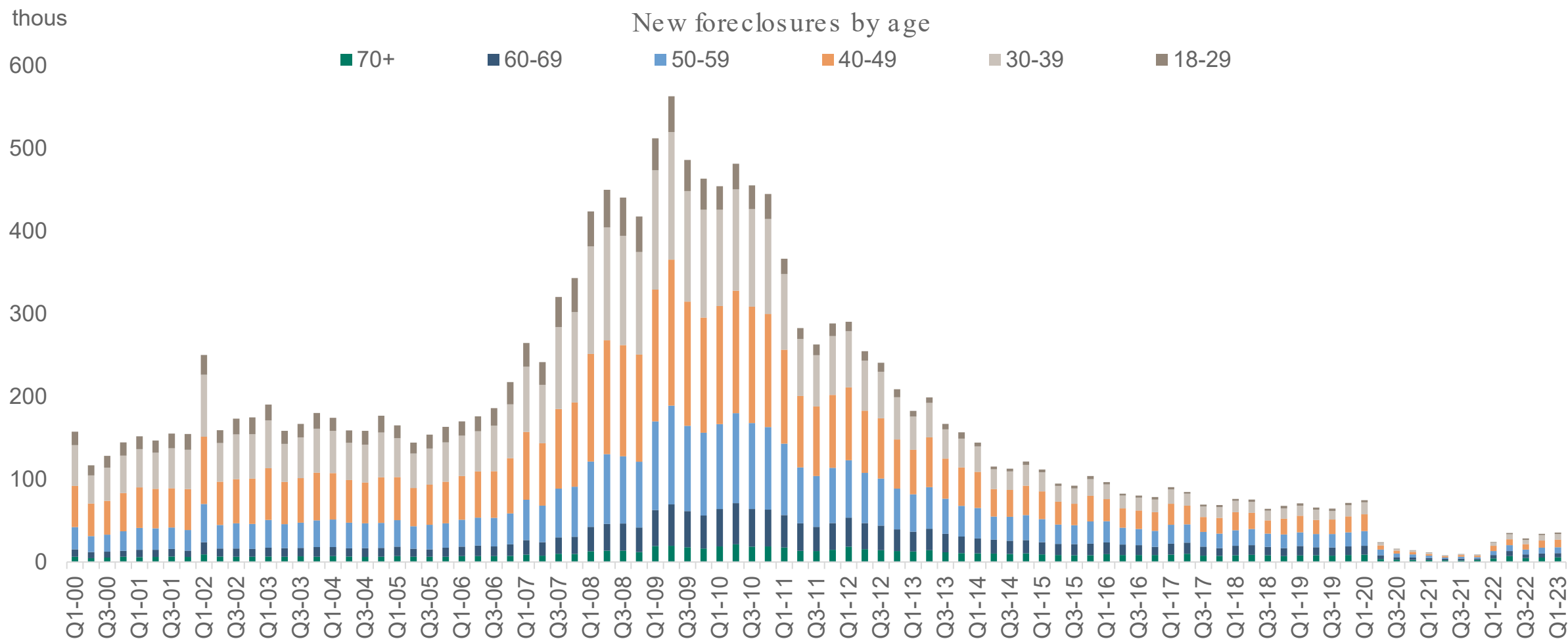


Source: Elliman, Apollo Chief Economist

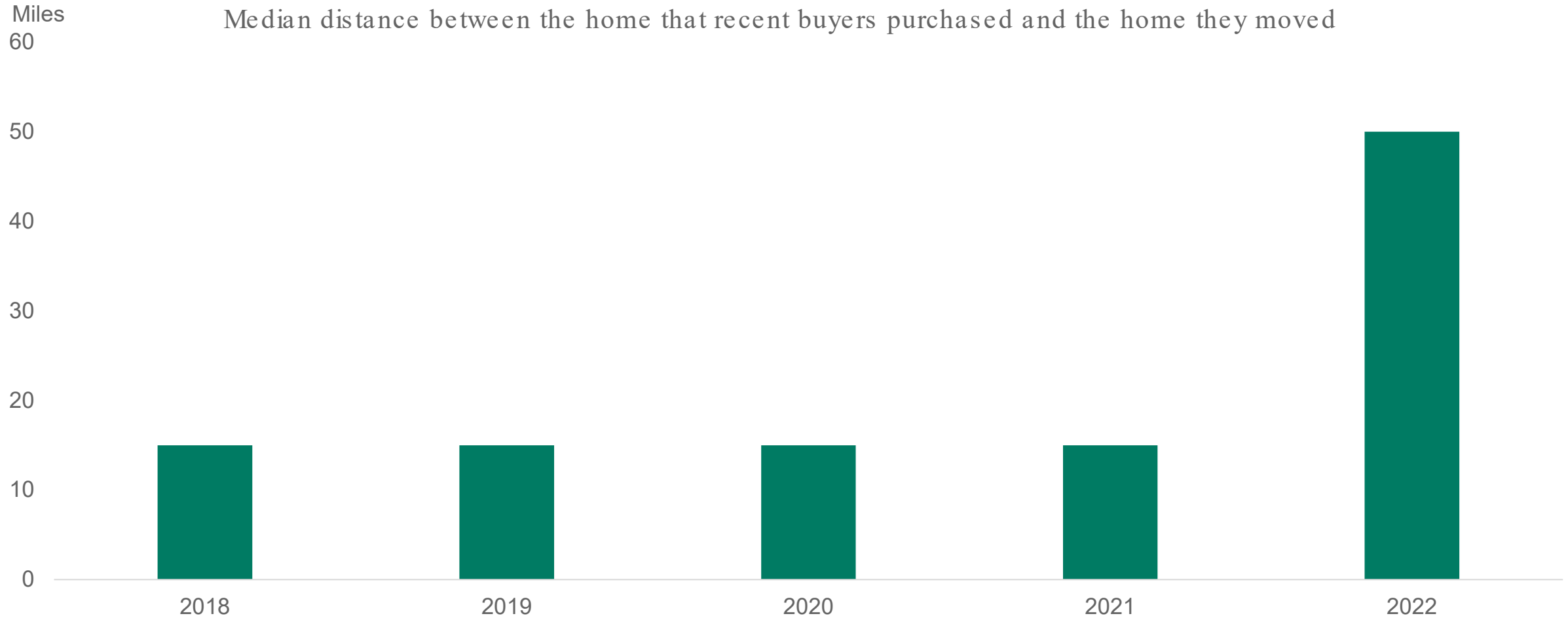
Rising mortgage rates generally associated with lower home price inflation



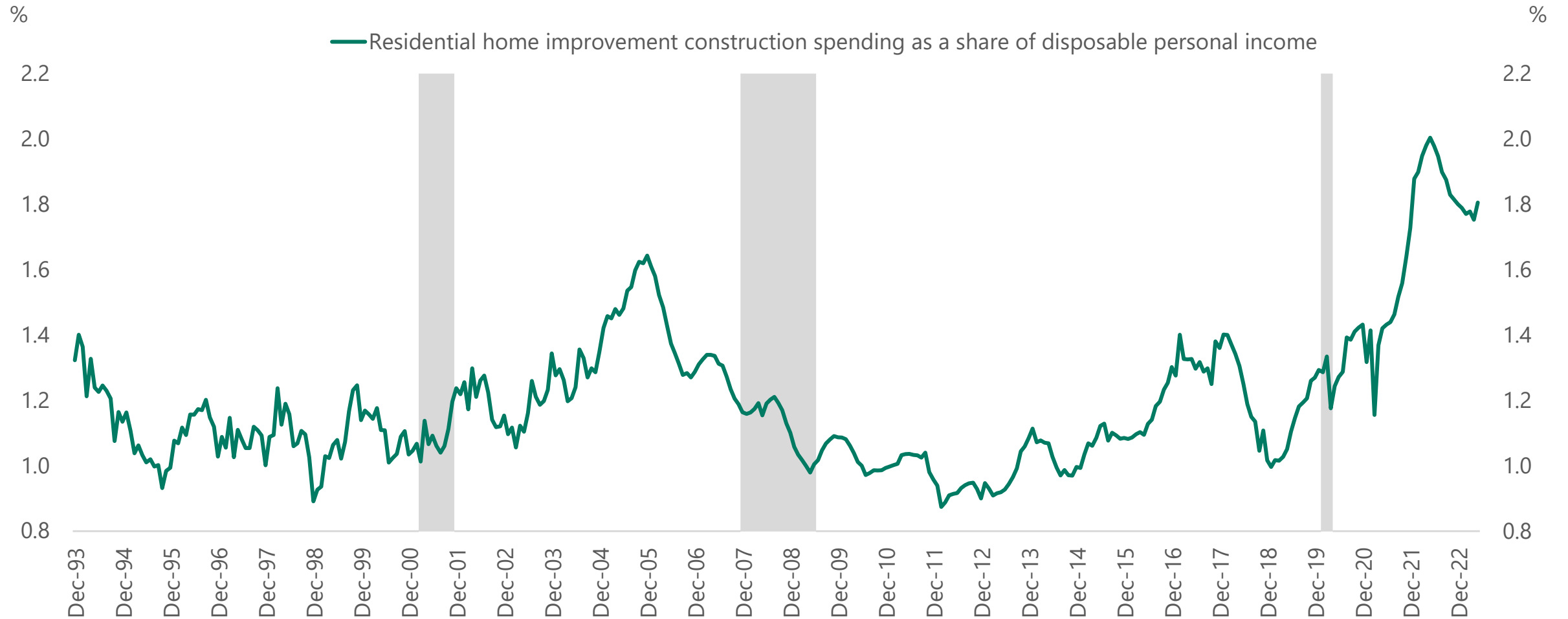
New foreclosures, by age of homeowner



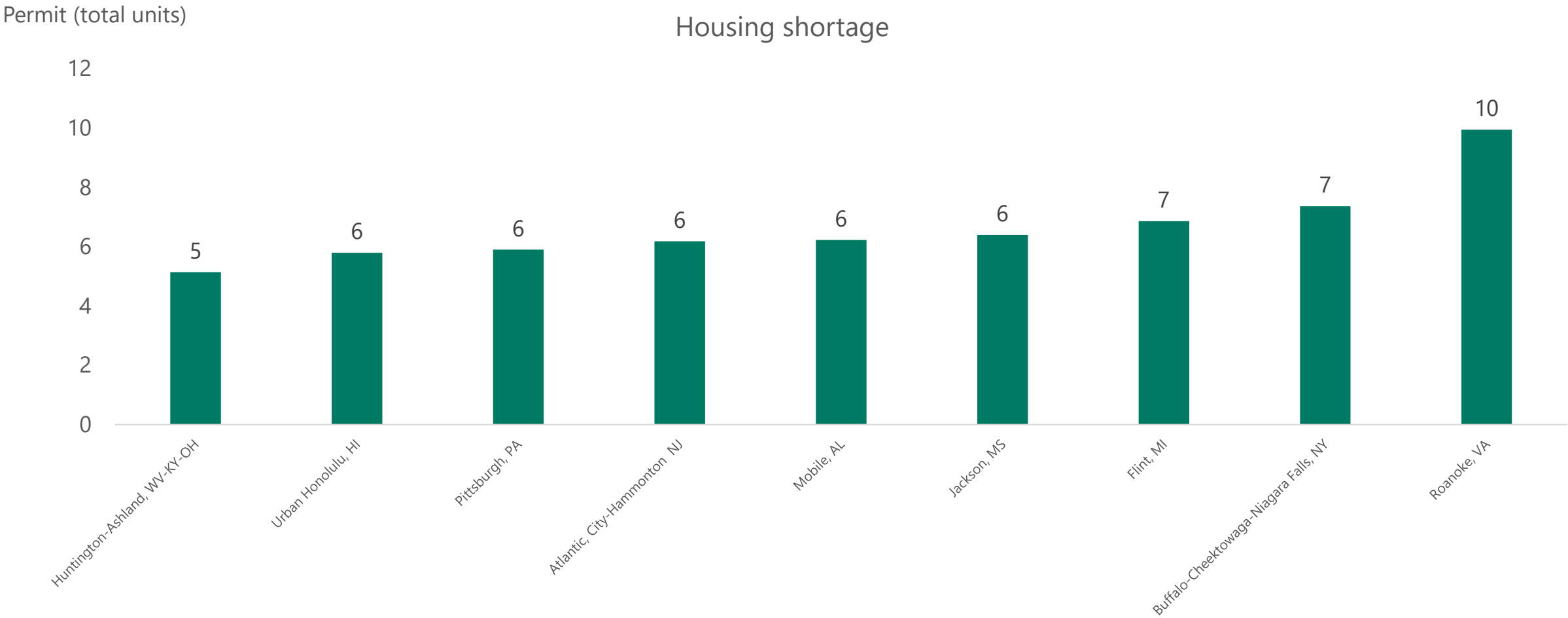
Median distance between the home that recent buyers purchased and the home they moved from at 50 miles in 2022



Home improvement spending near all-time high levels

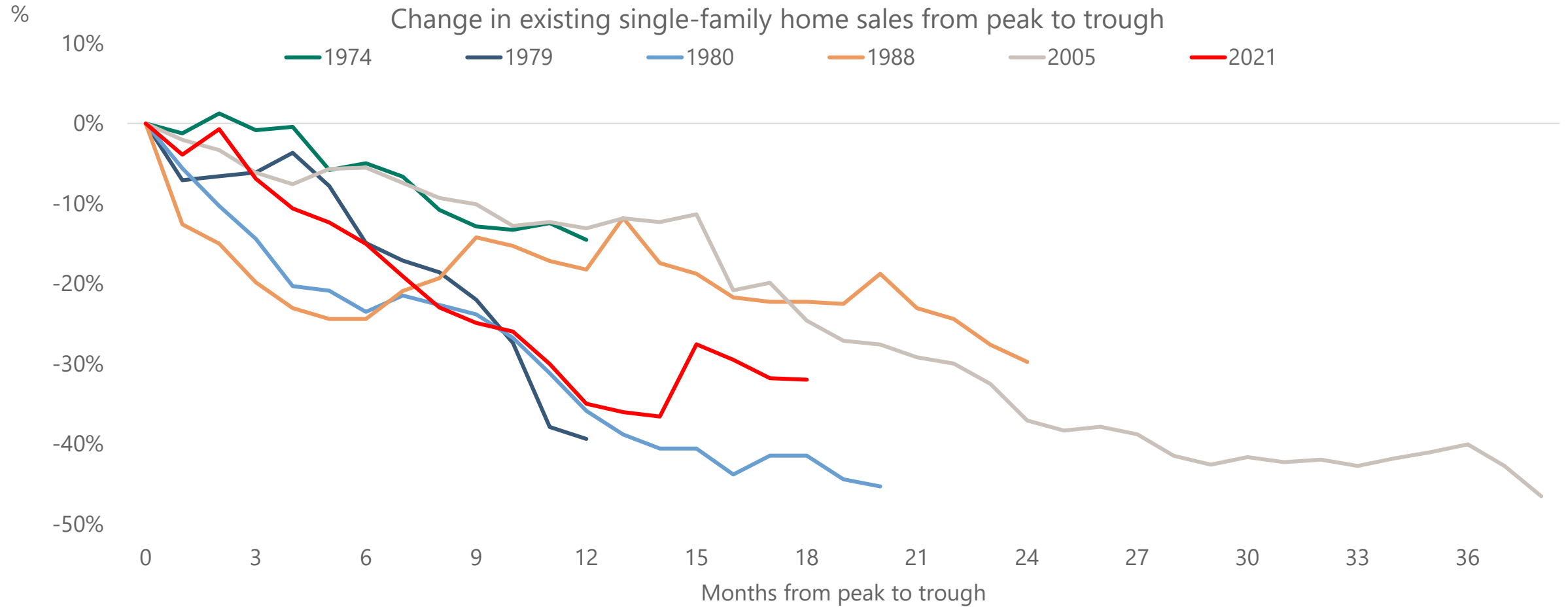


Areas that need to build more houses in order to keep up with the increased demand

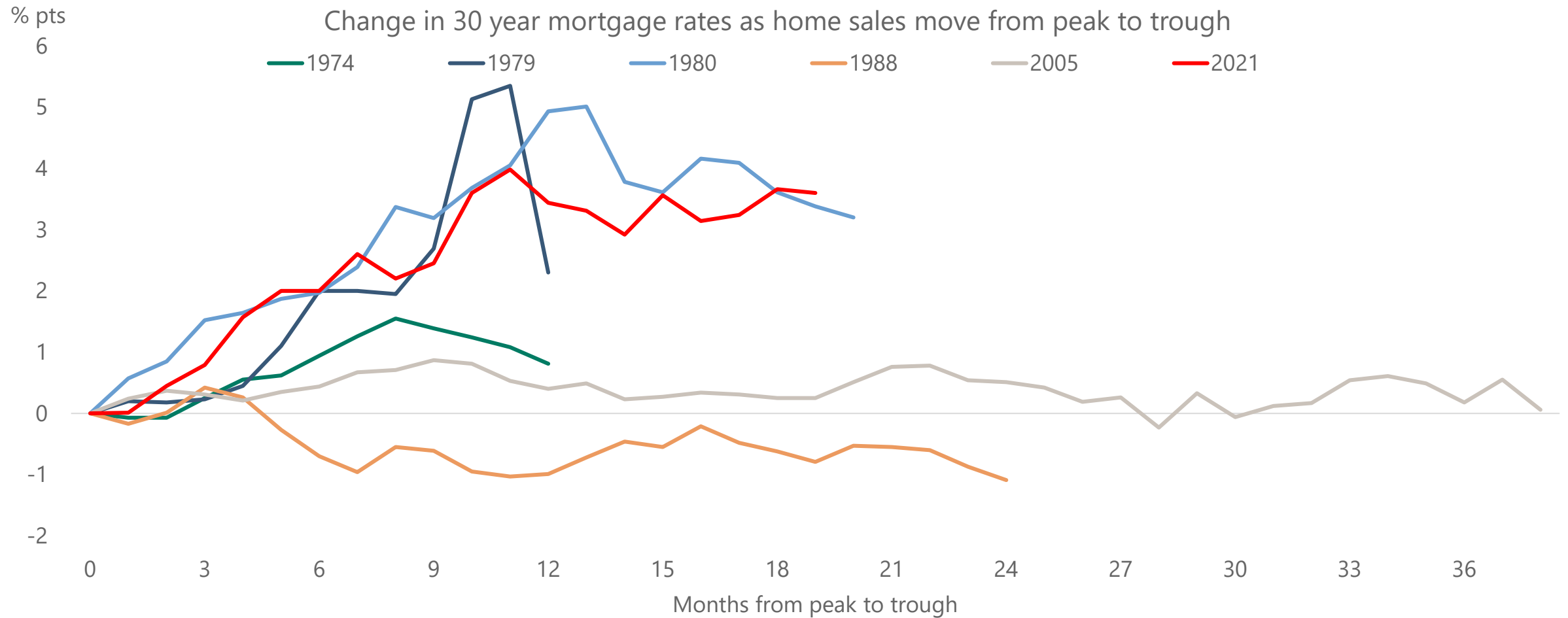


Comparing the current housing slowdown to previous housing slowdowns

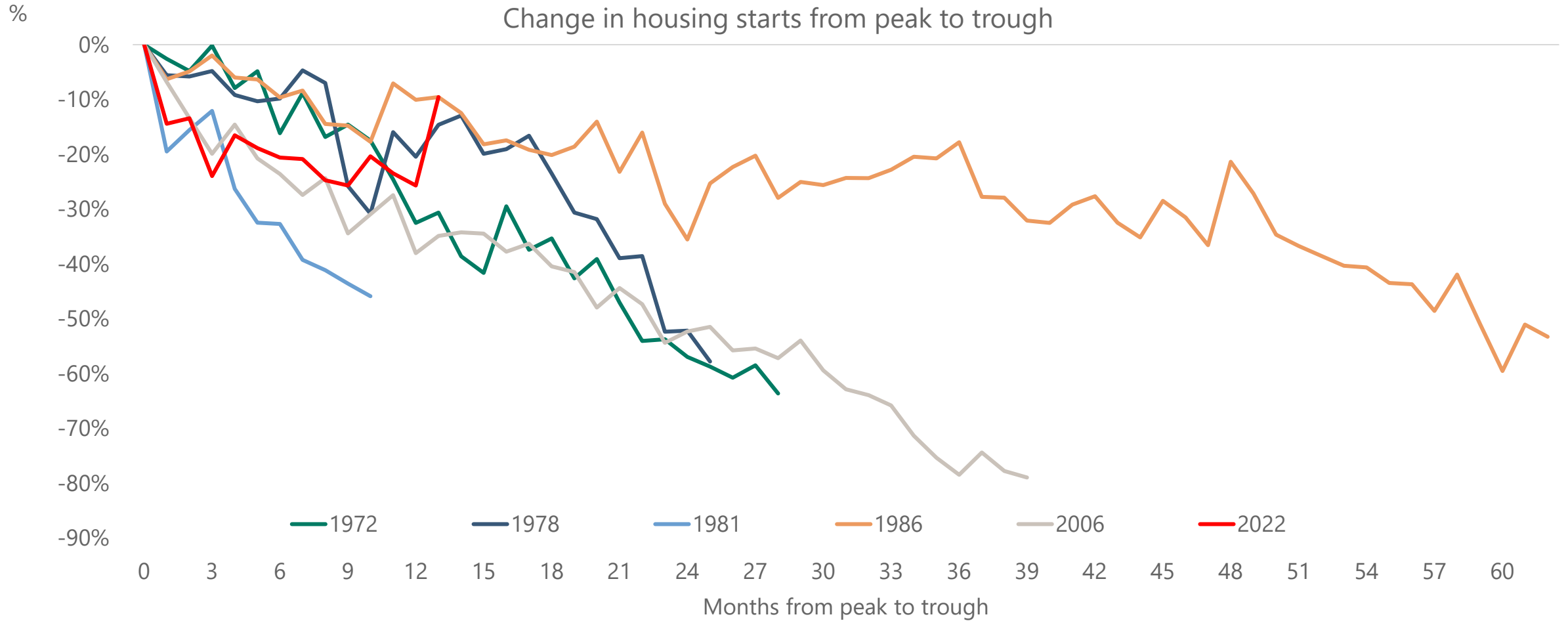
The current decline in existing home sales in line with previous housing slowdowns



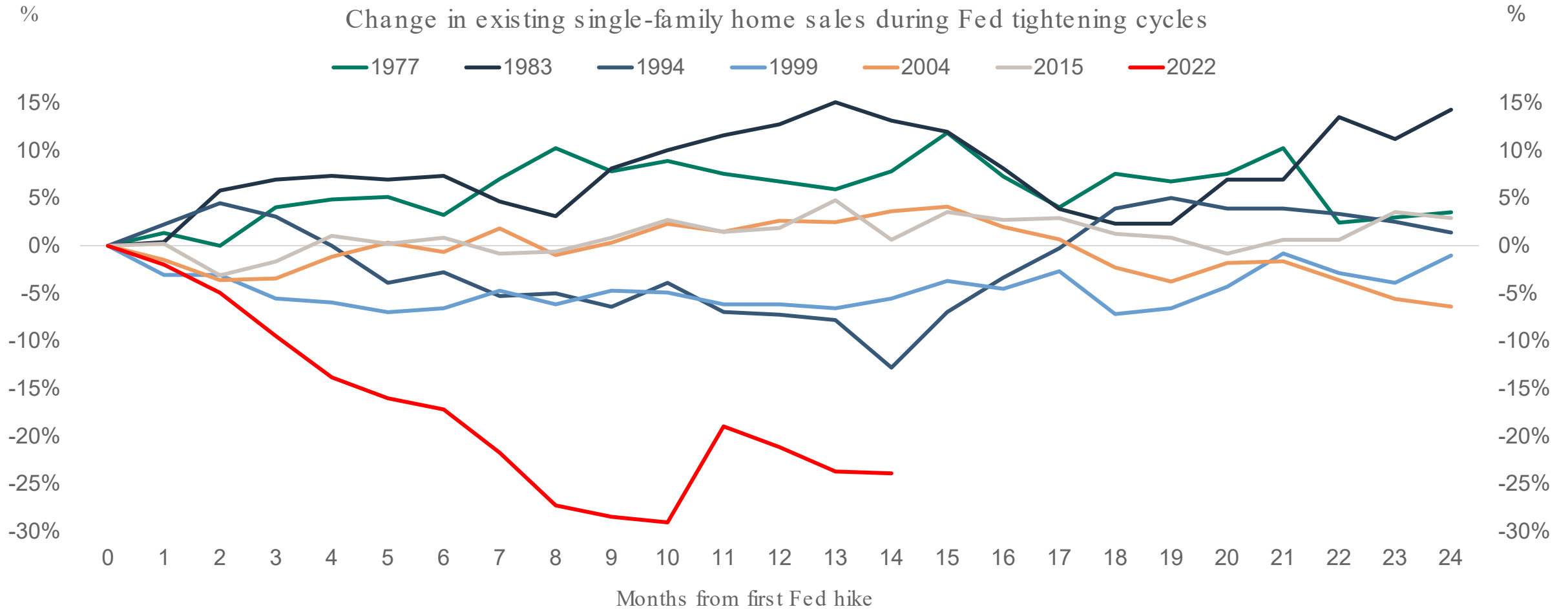
The current rise in mortgage rates is similar to what we saw during the Volcker disinflation



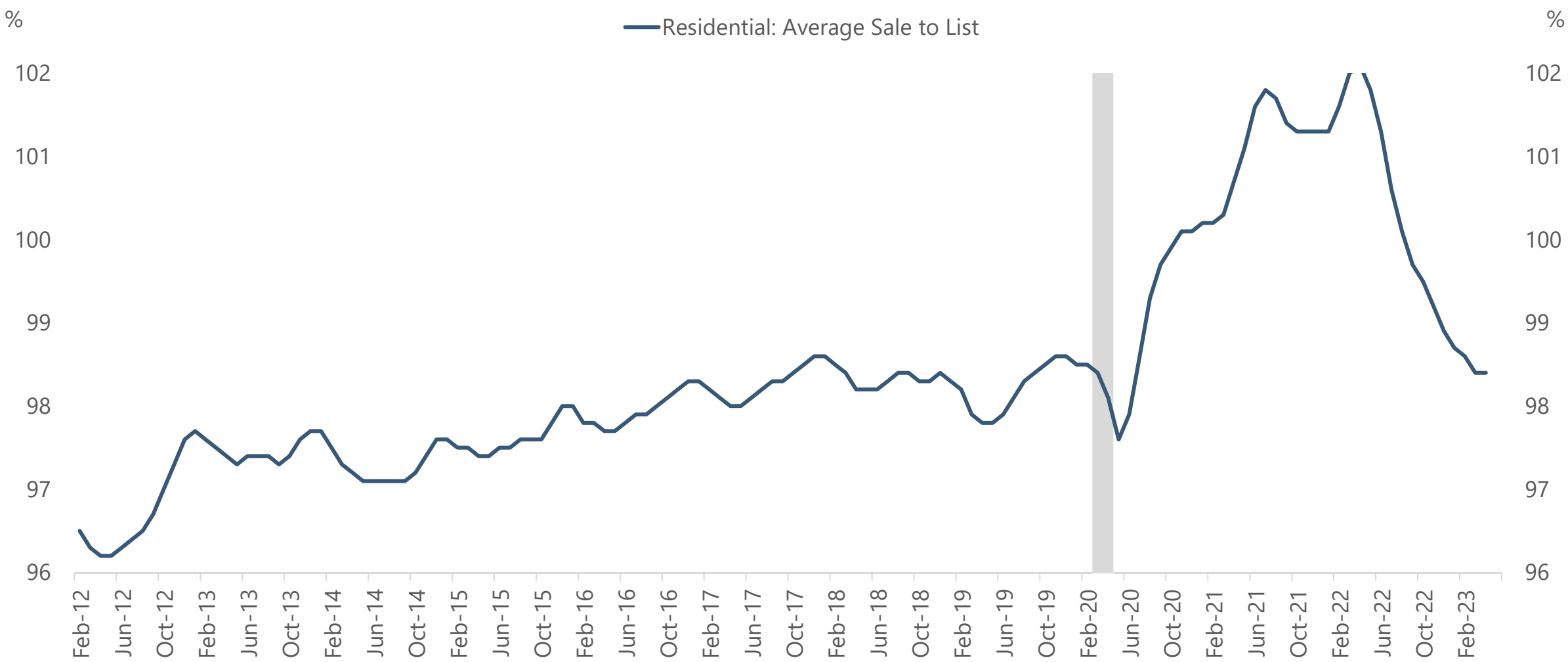
The current decline in housing starts follows pattern of previous slowdowns



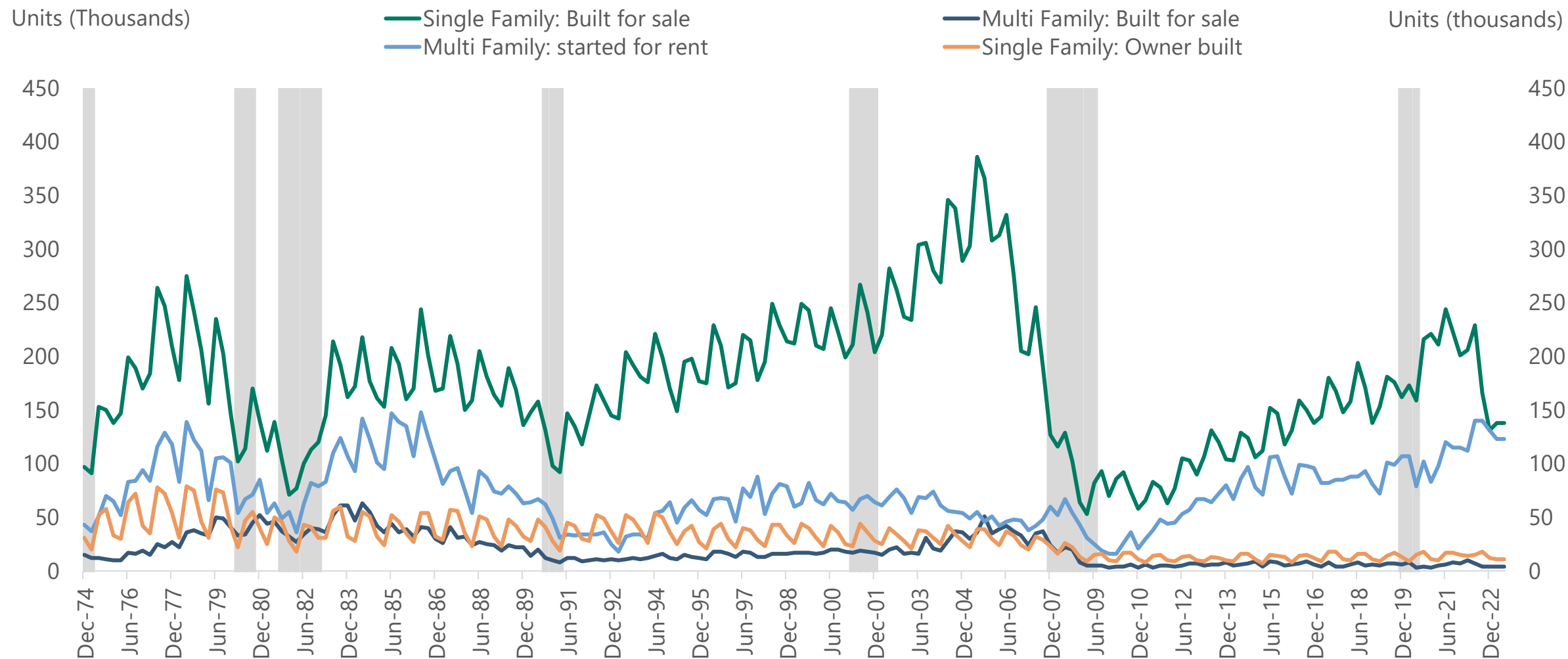
This is the fastest Fed-driven housing slowdown on record



Post Covid, homes were sold for less than the list price



Intent of housing starts





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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.