

APOLLO

# US Housing Outlook:

Housing recovery continues, driven by low supply and pent-up demand boosted by mortgage rates coming down from the 8% peak

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**Apollo Global Management**

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Unless otherwise noted, information as of May 2024

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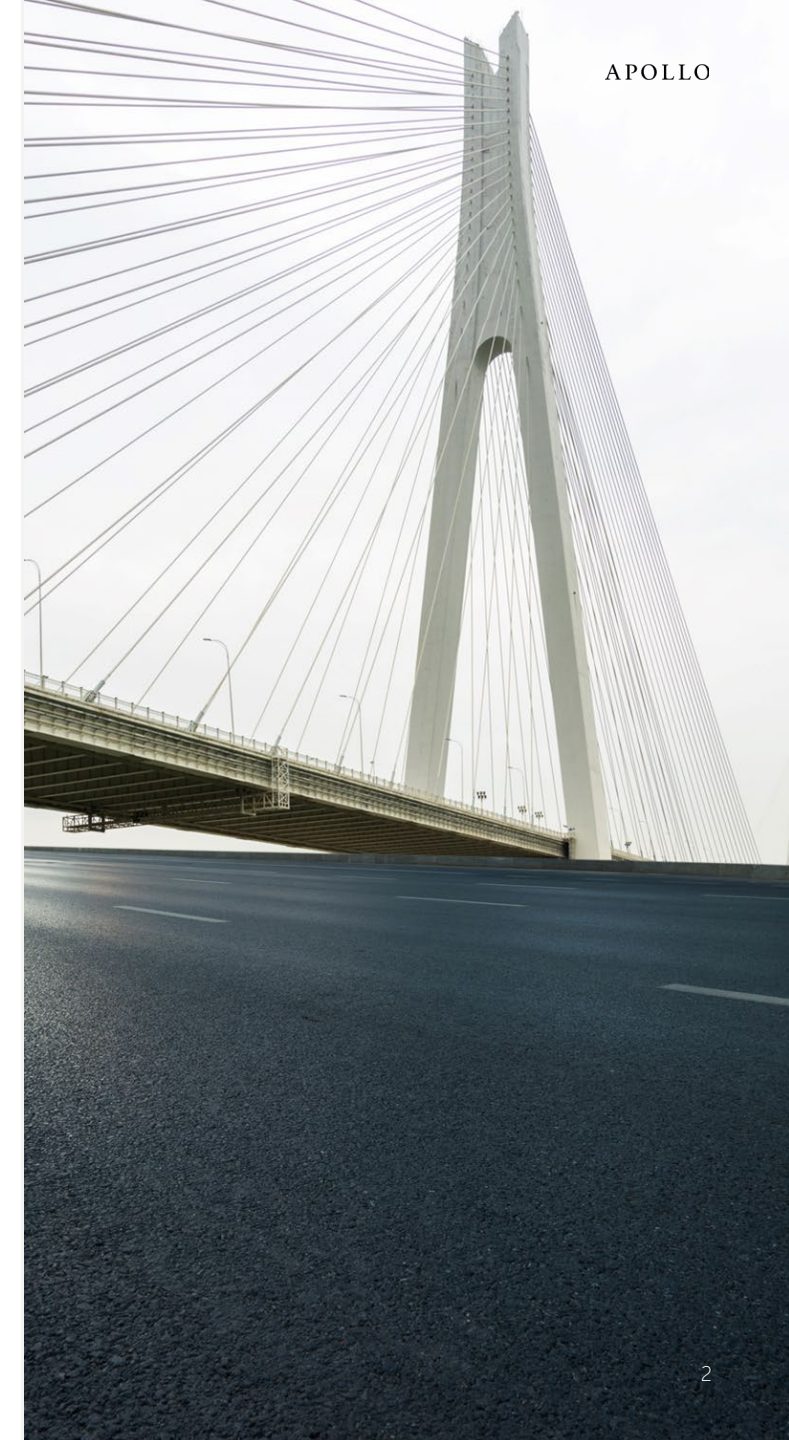
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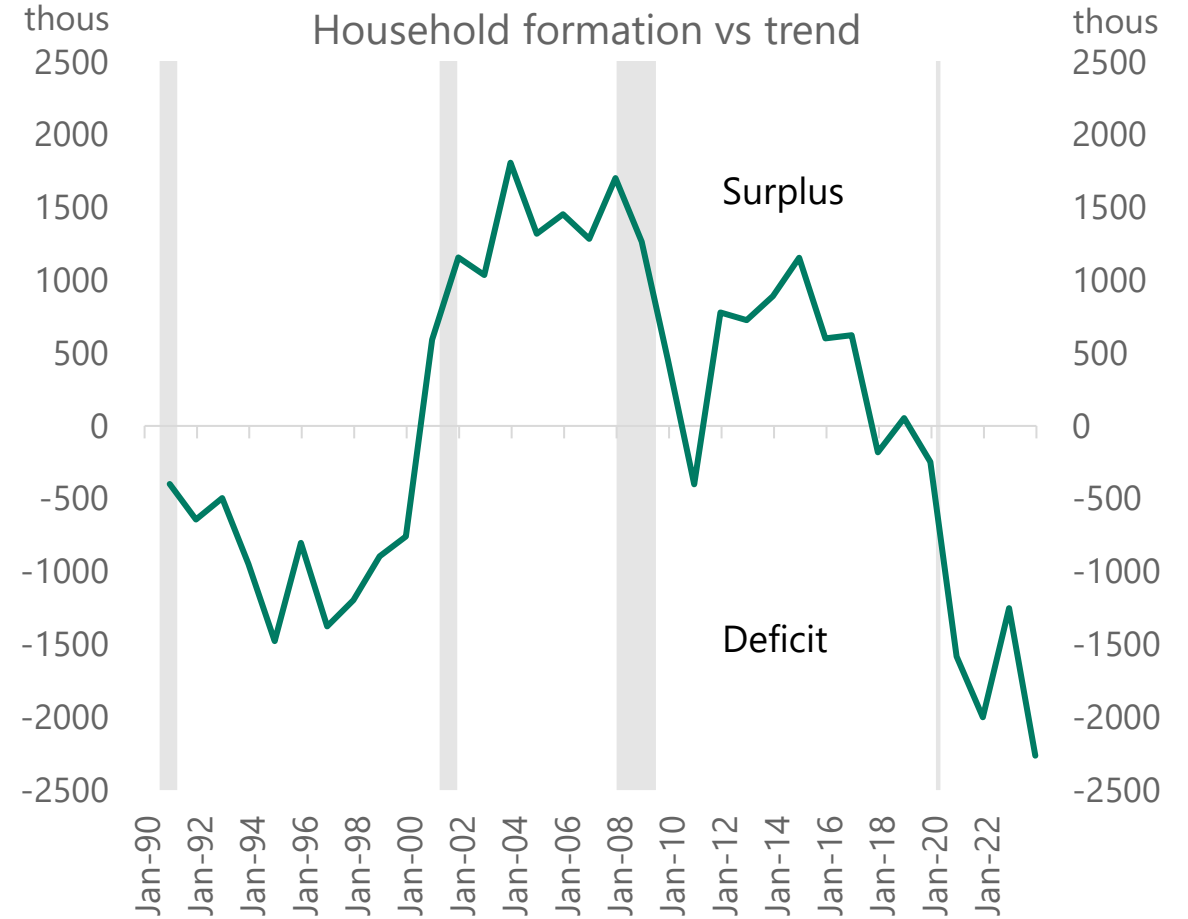
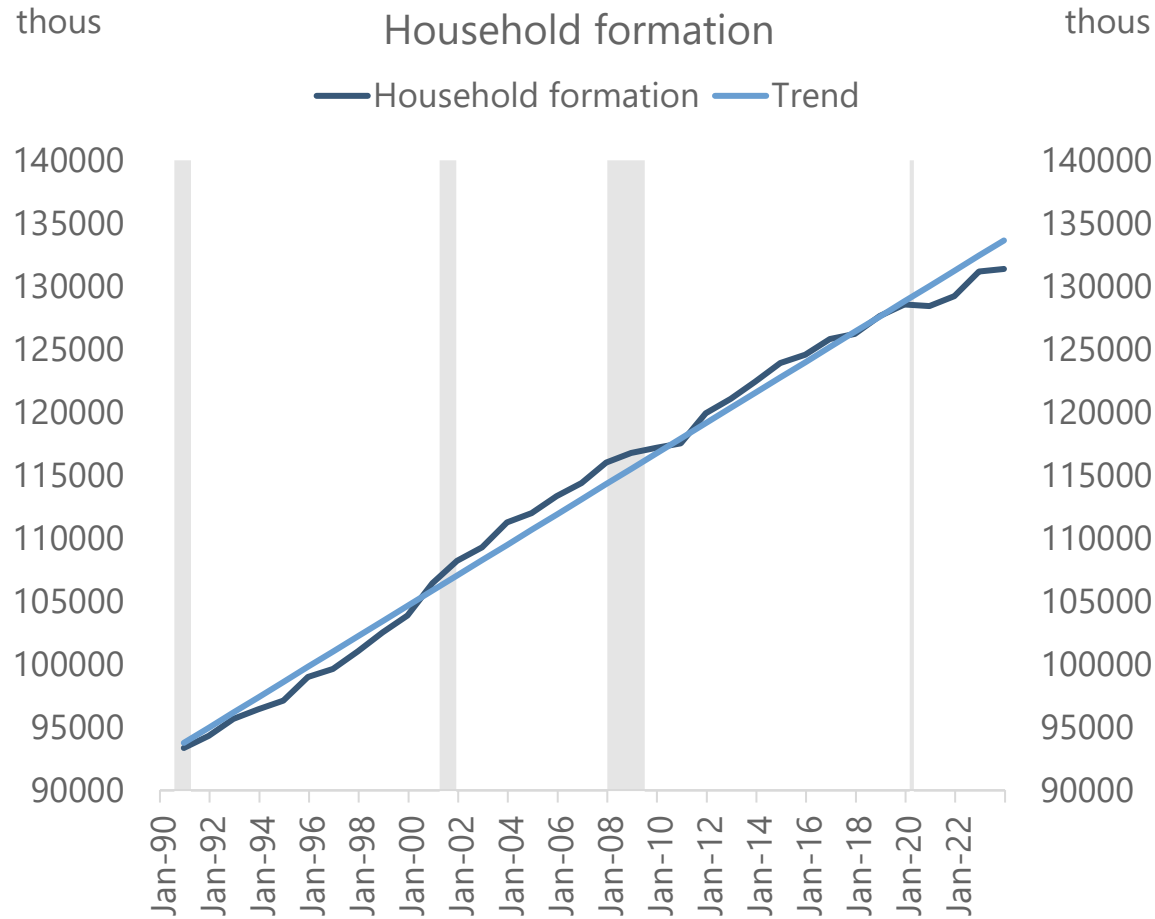


## **A housing recovery has started driven by:**

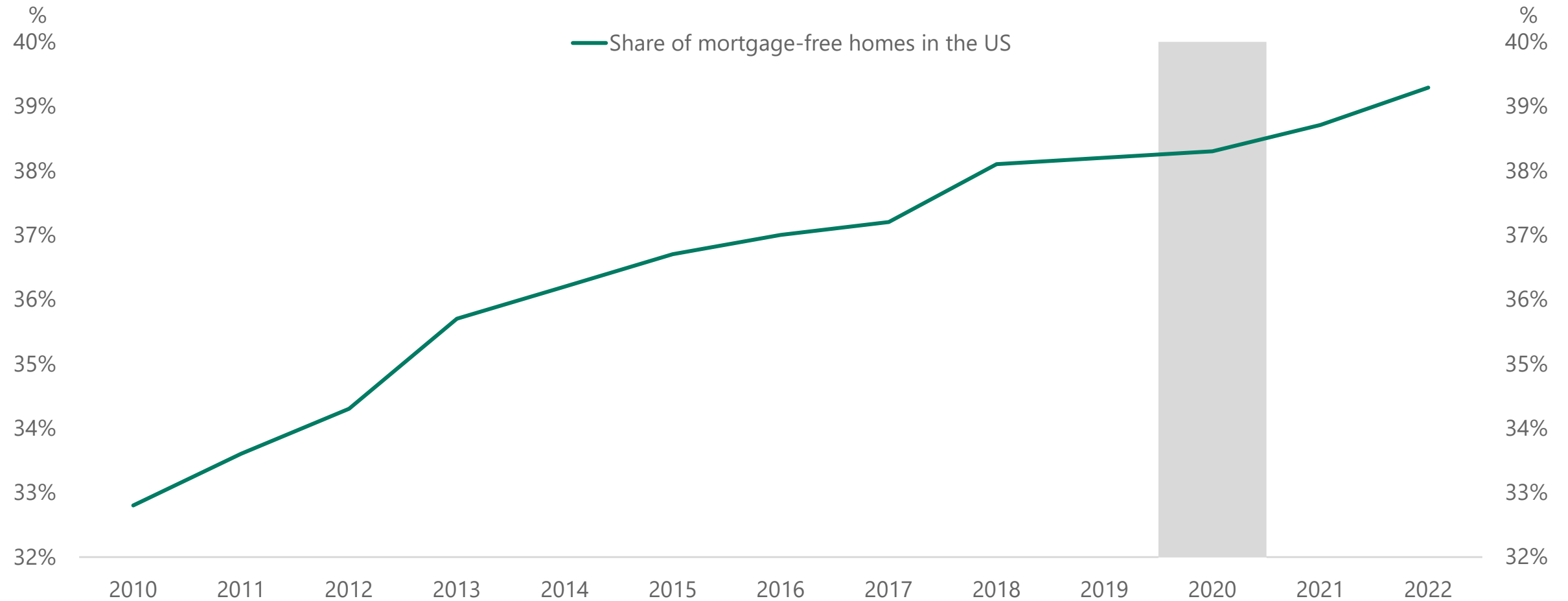
1. Low housing supply
2. Pent-up demand boosted by lower mortgage rates
3. Decent job growth
4. Robust wage growth
5. Still some excess savings left for households

# Leading indicators of the housing market

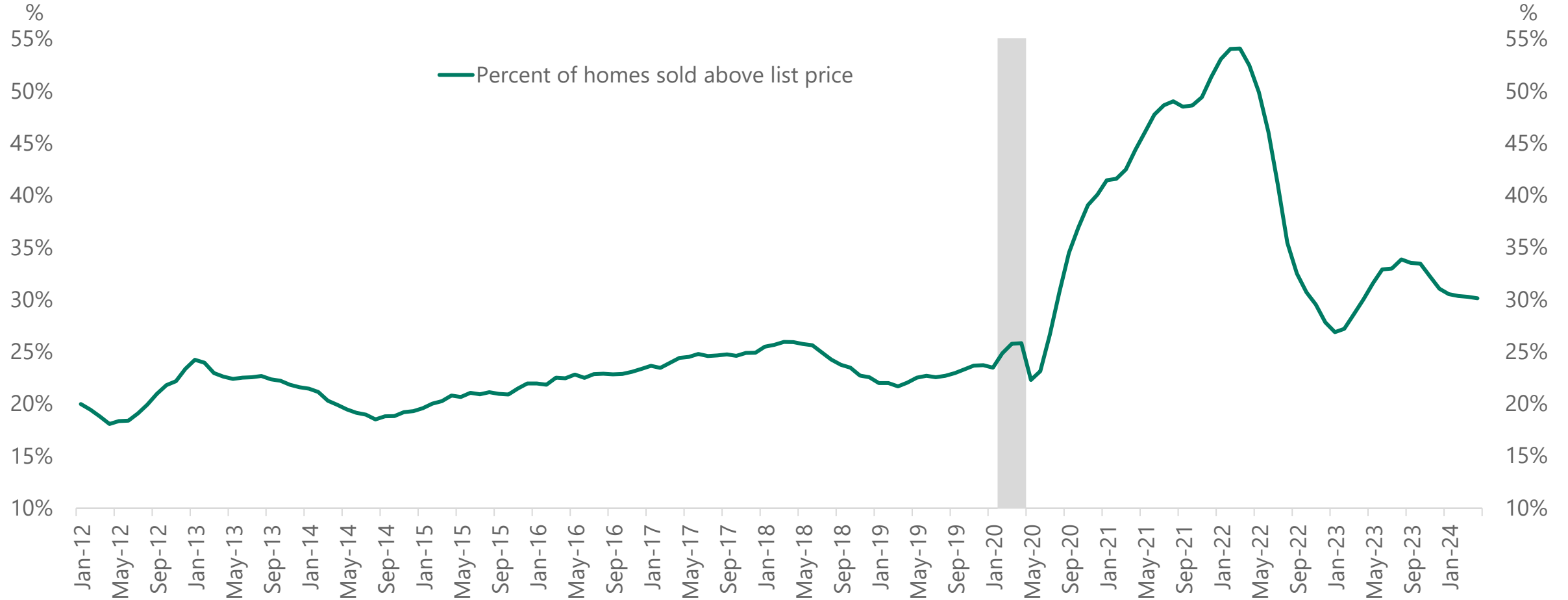
# US has an estimated deficit of 2.3mn homes



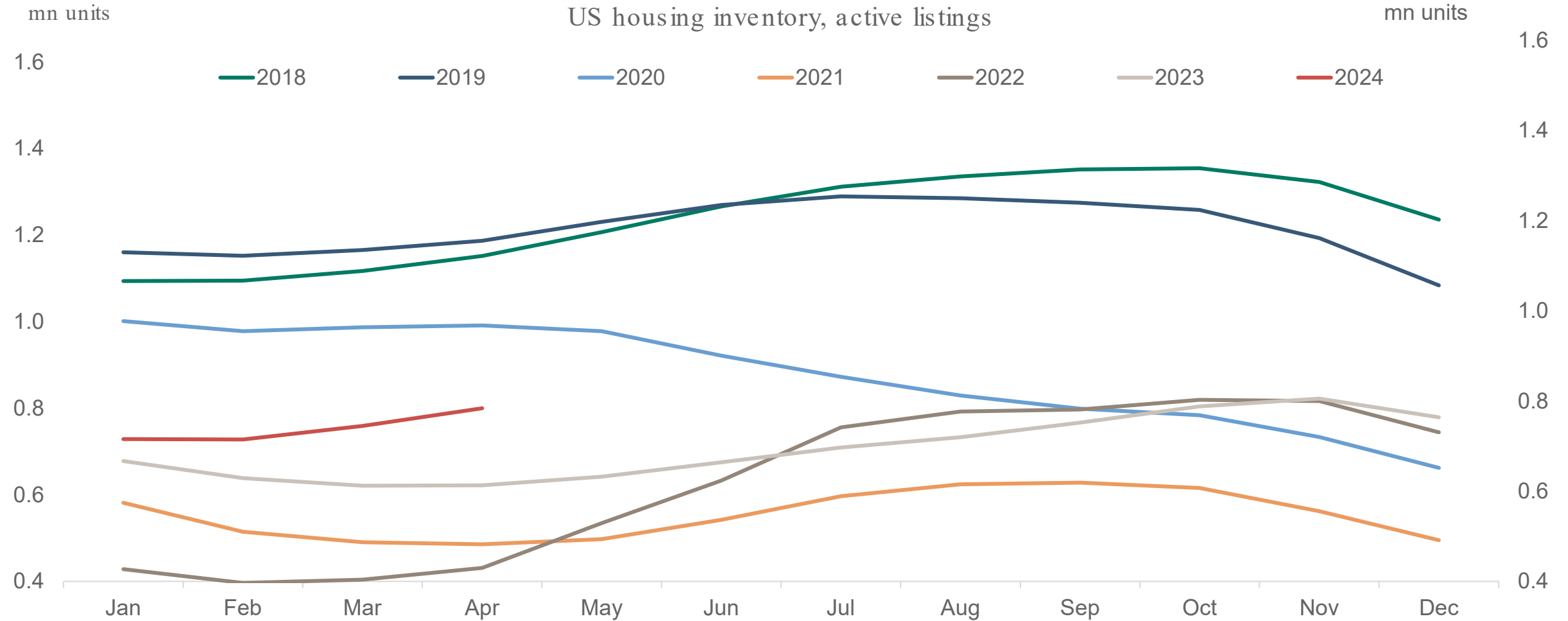
# Almost 40% of US homes don't have a mortgage



# Despite high mortgage rates, 30% of homes selling above their list price

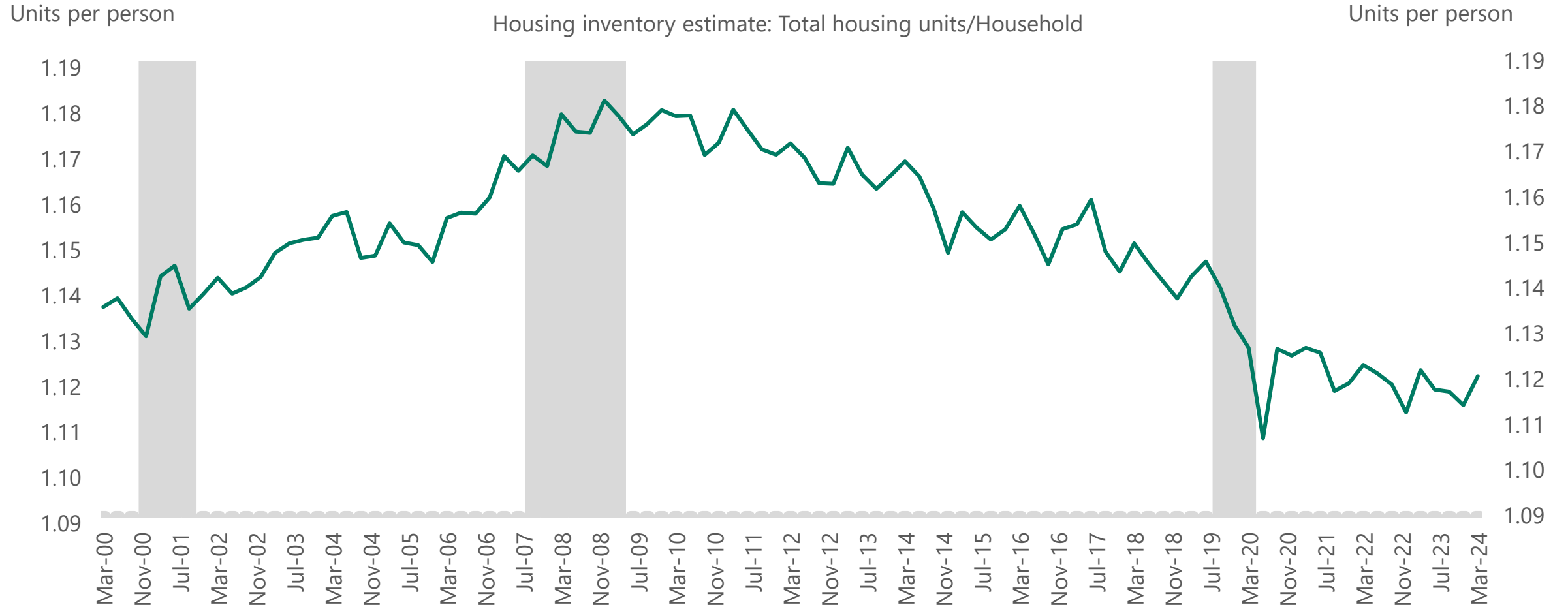


# Very low inventory of homes for sale

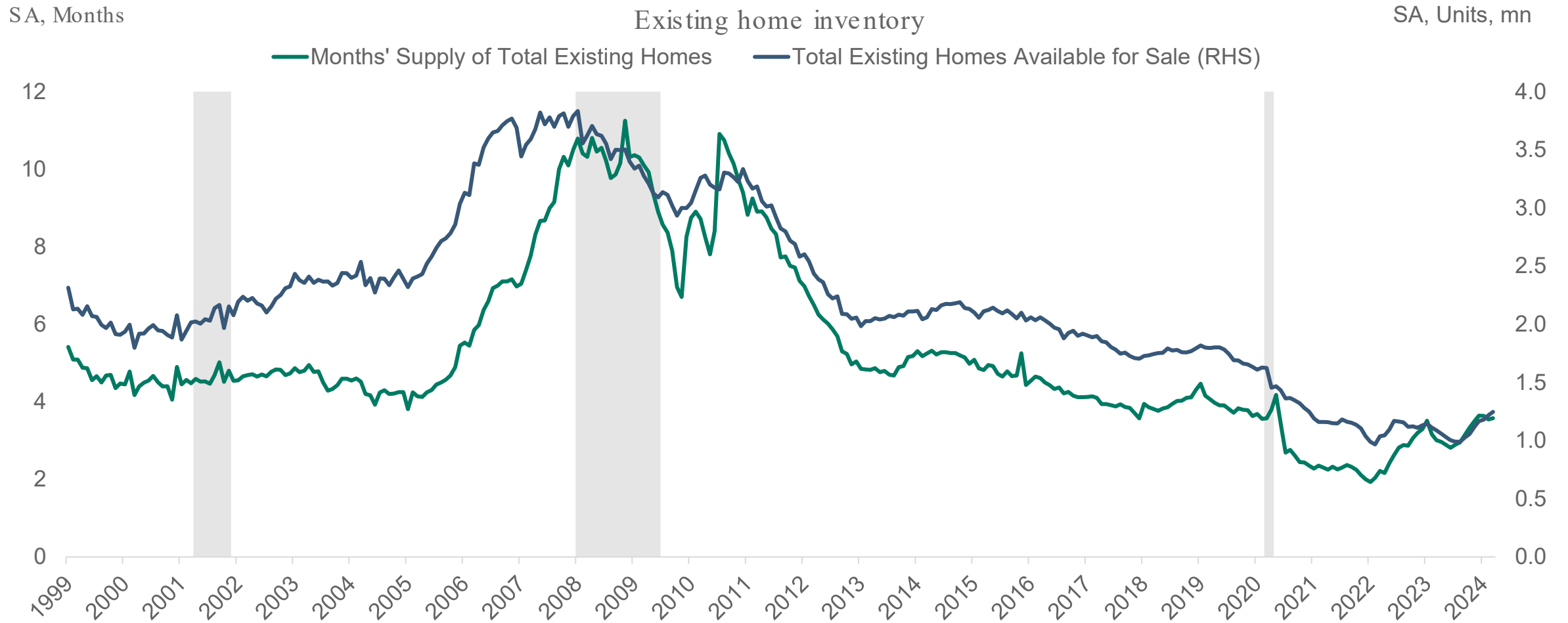




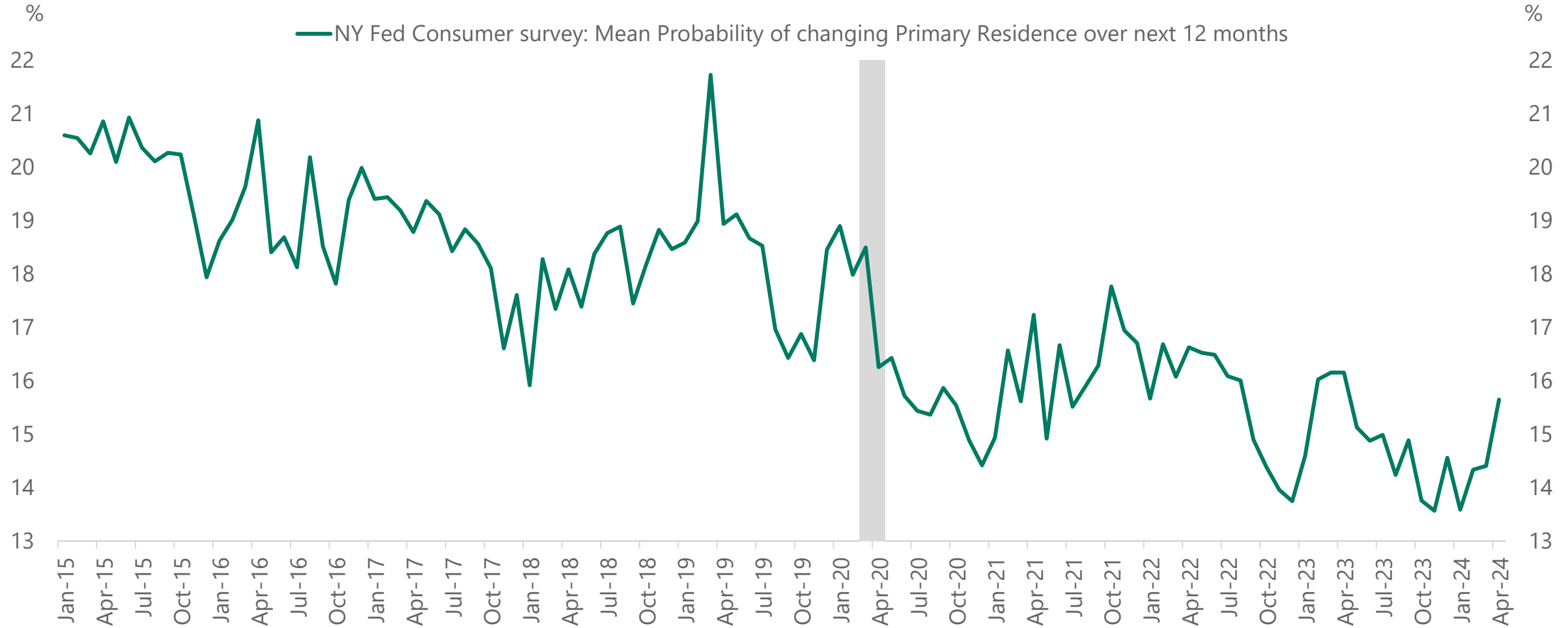
# Total housing inventory per person very low



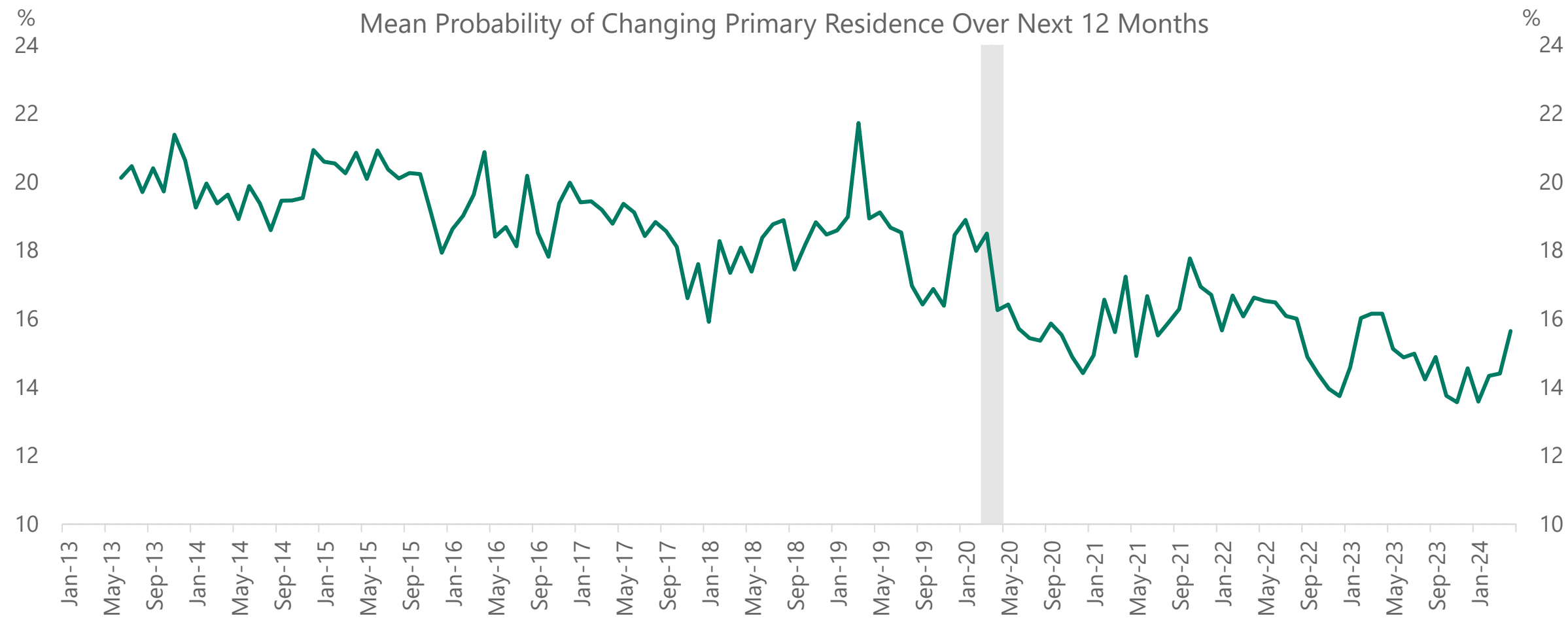
# Existing housing inventory very low



# Share of households planning to move starting to recover

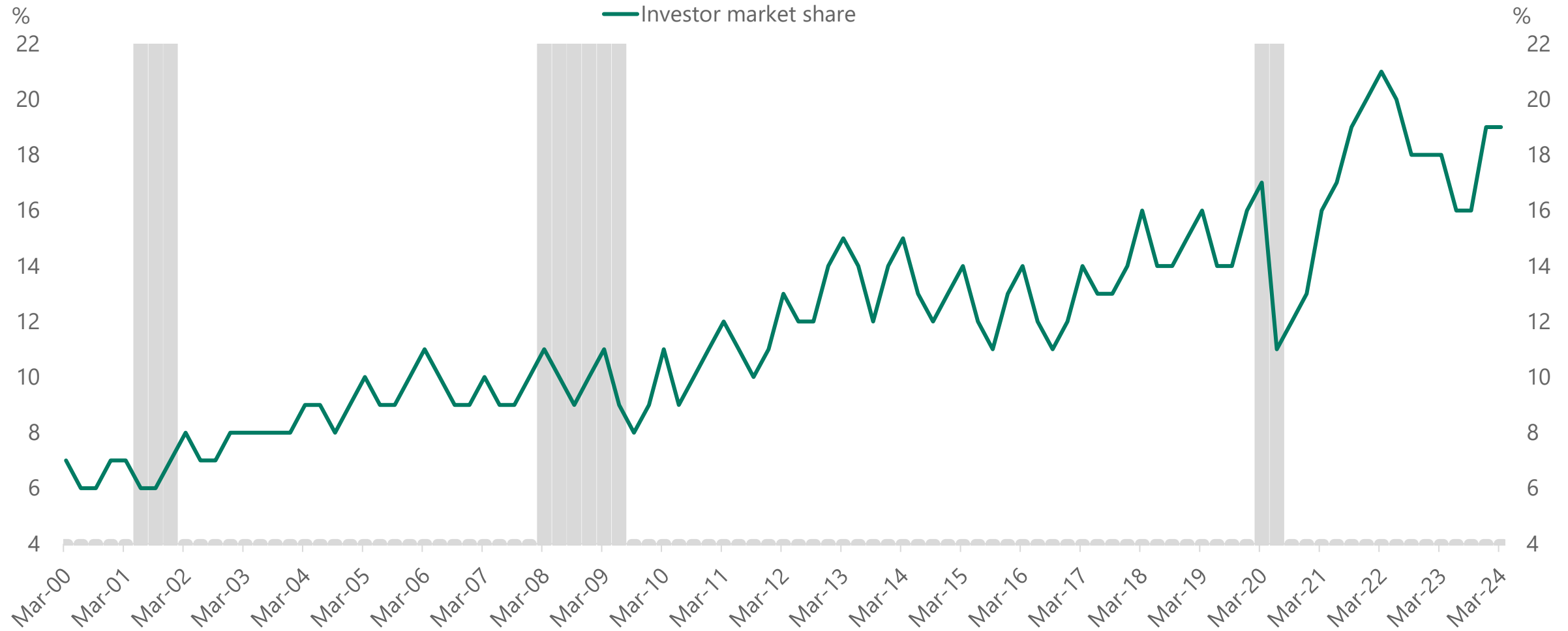


# Probability of moving residence showing an uptick

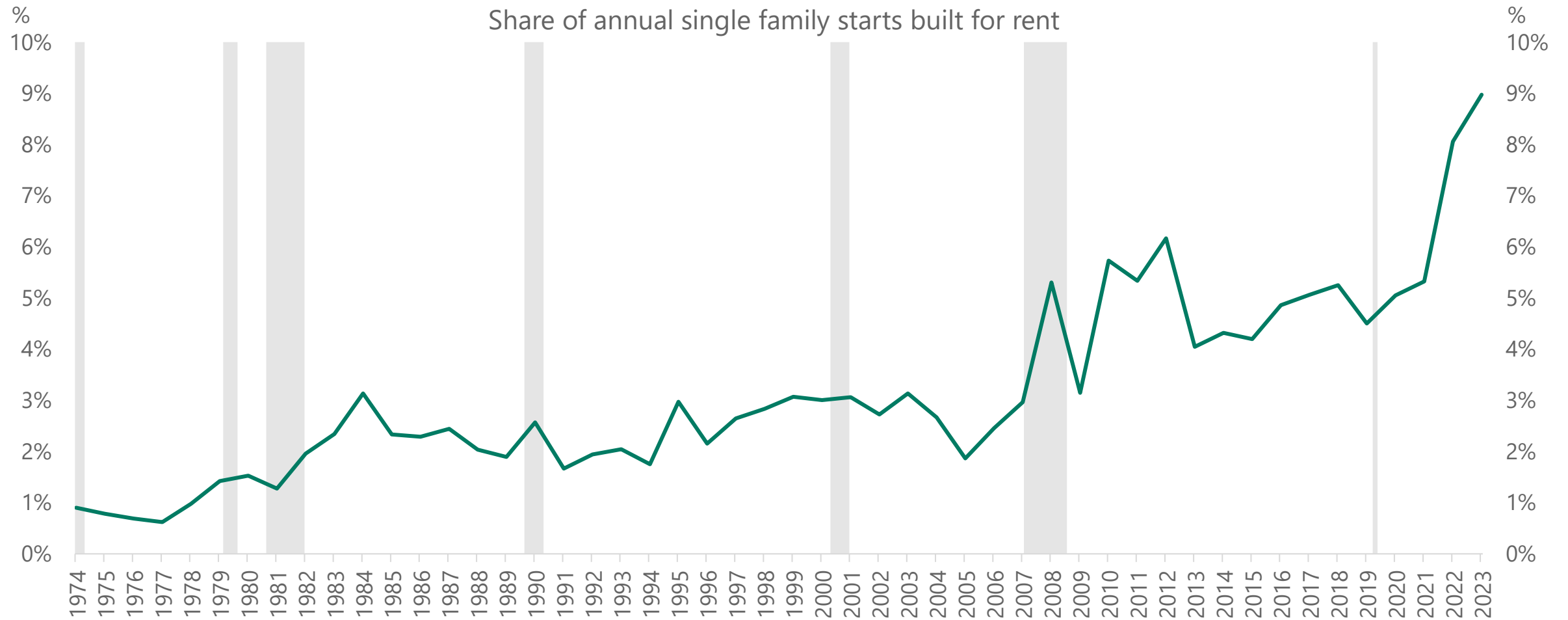


Source: FRBNY, Haver Analytics, Apollo Chief Economist

# The investor share of home purchases is rising



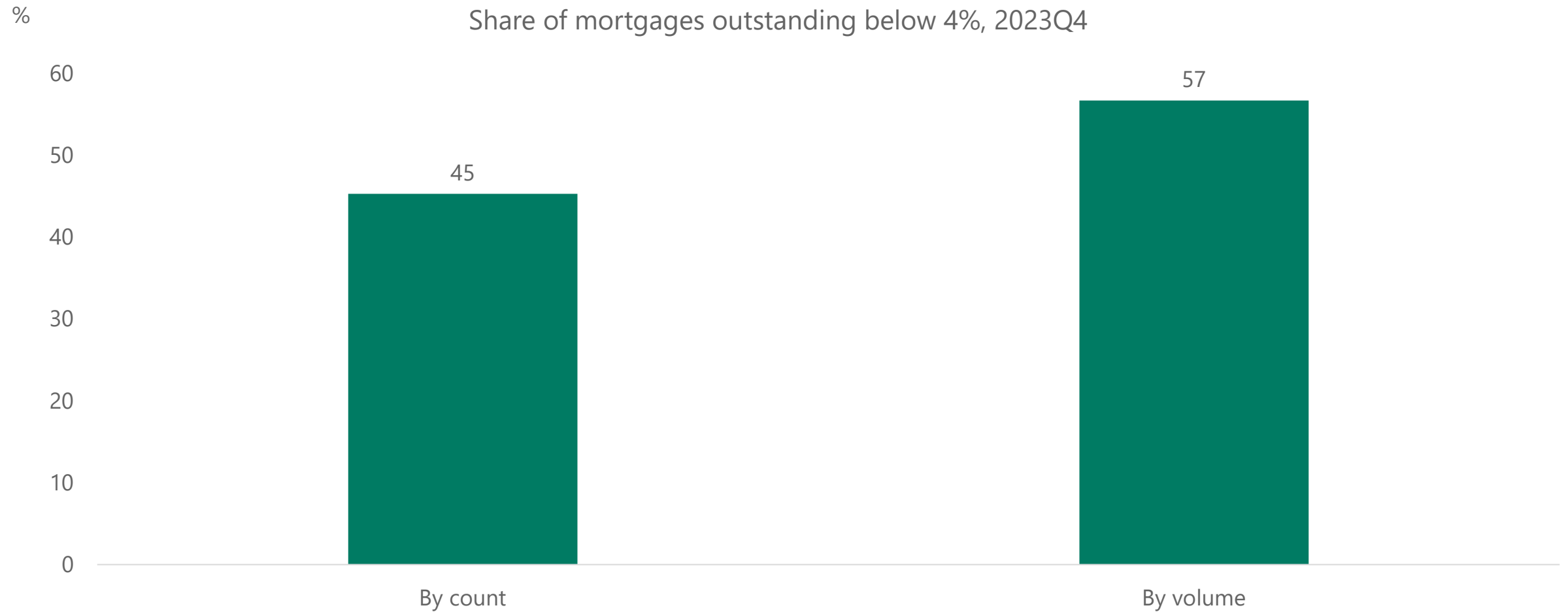
# Share of homes built for rent going up



# Employment in residential construction rebounding



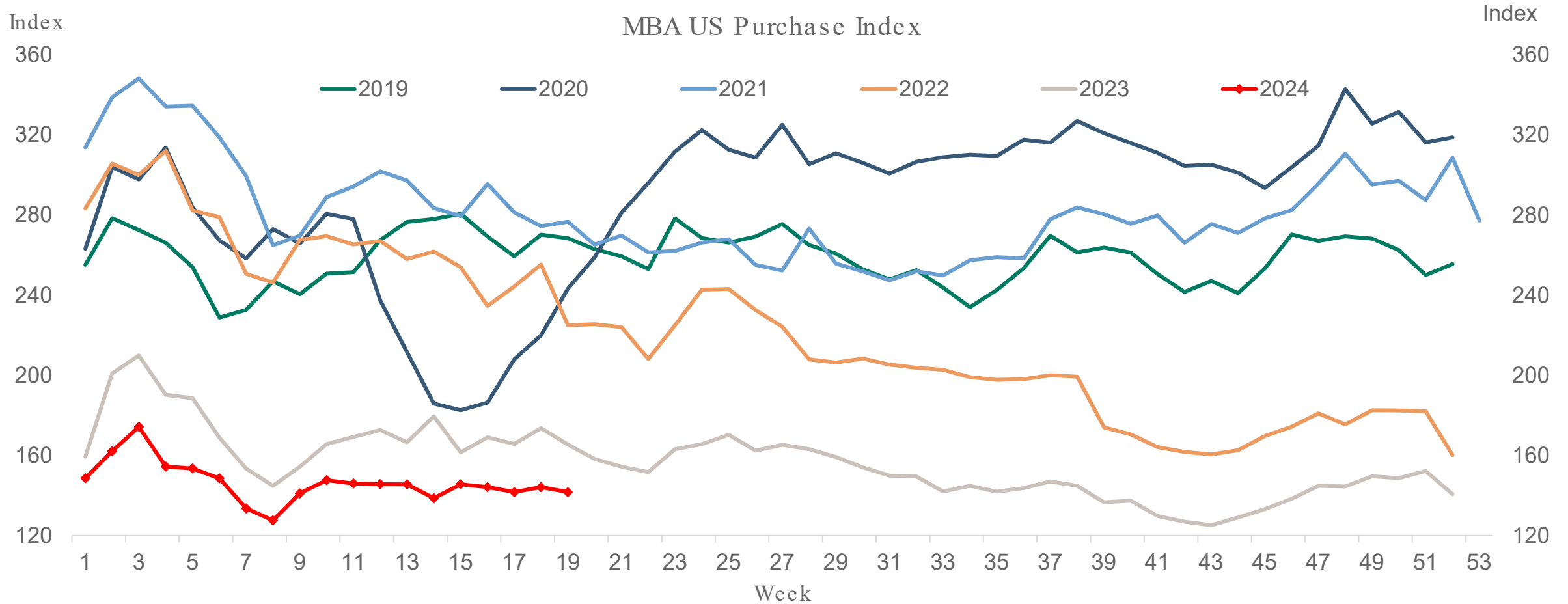
# About half of all mortgages outstanding have an interest rate below 4%



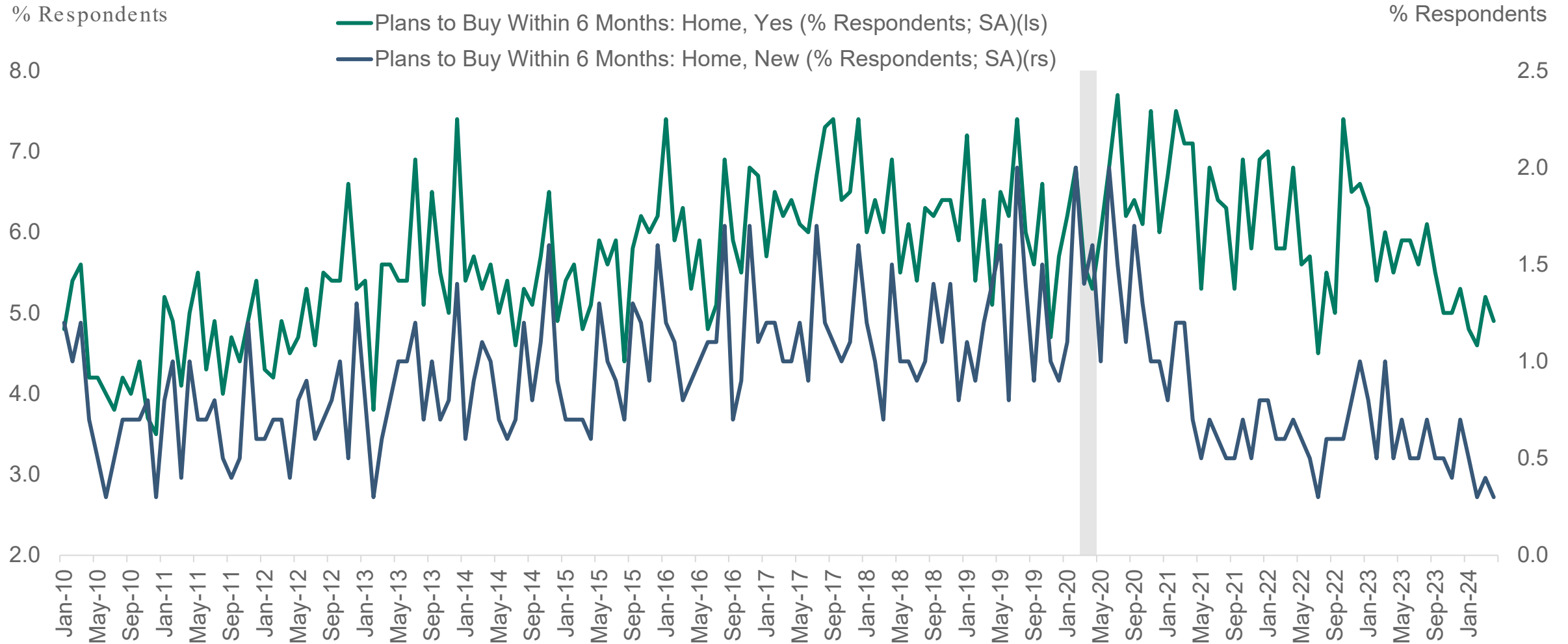


1) Housing Demand: Higher mortgage rates and high home prices slowing demand

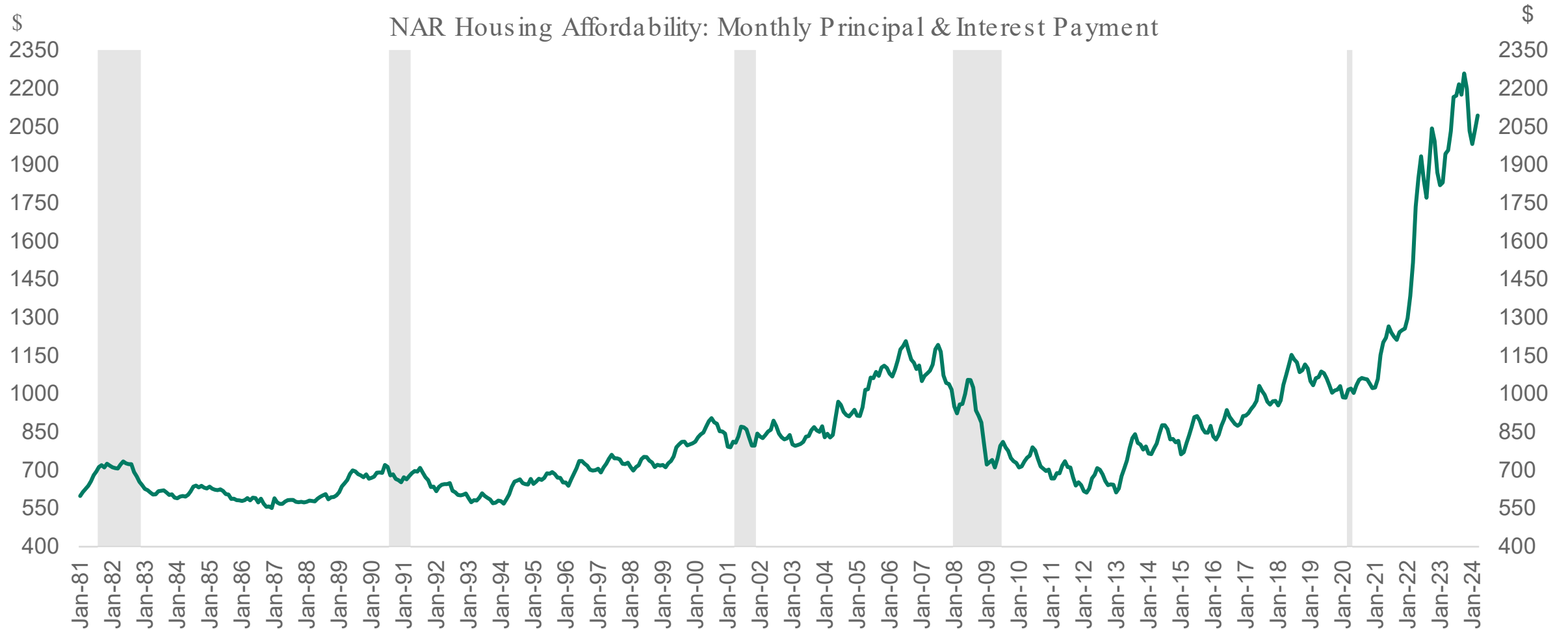
# Mortgage purchase applications remain much lower than normal



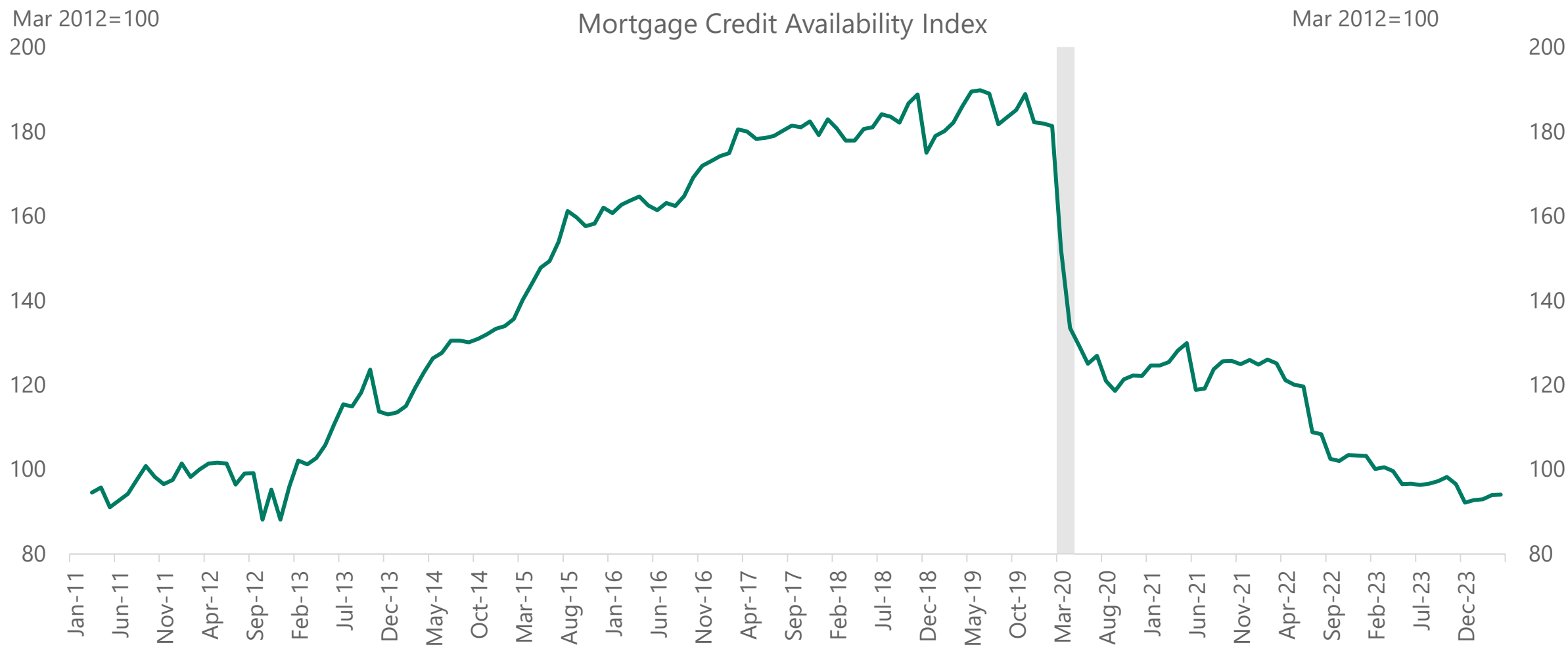
# Home buying plans



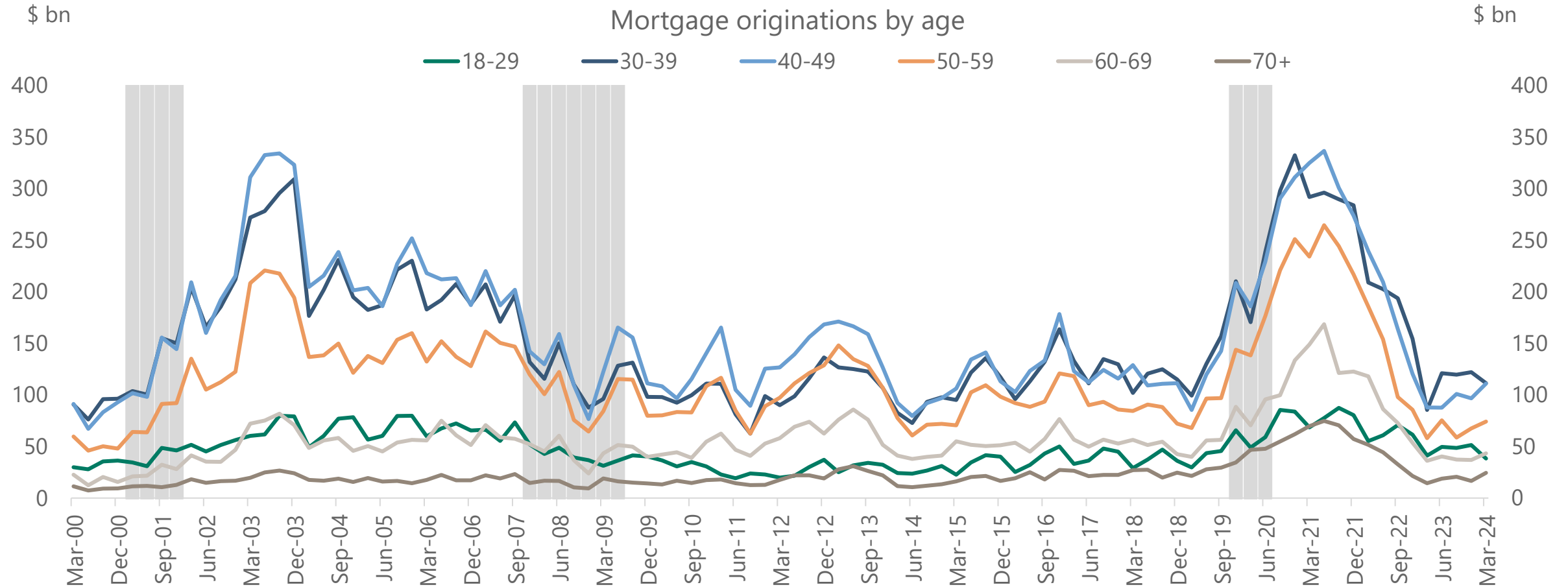
# Monthly mortgage payments on new mortgages have doubled since 2021



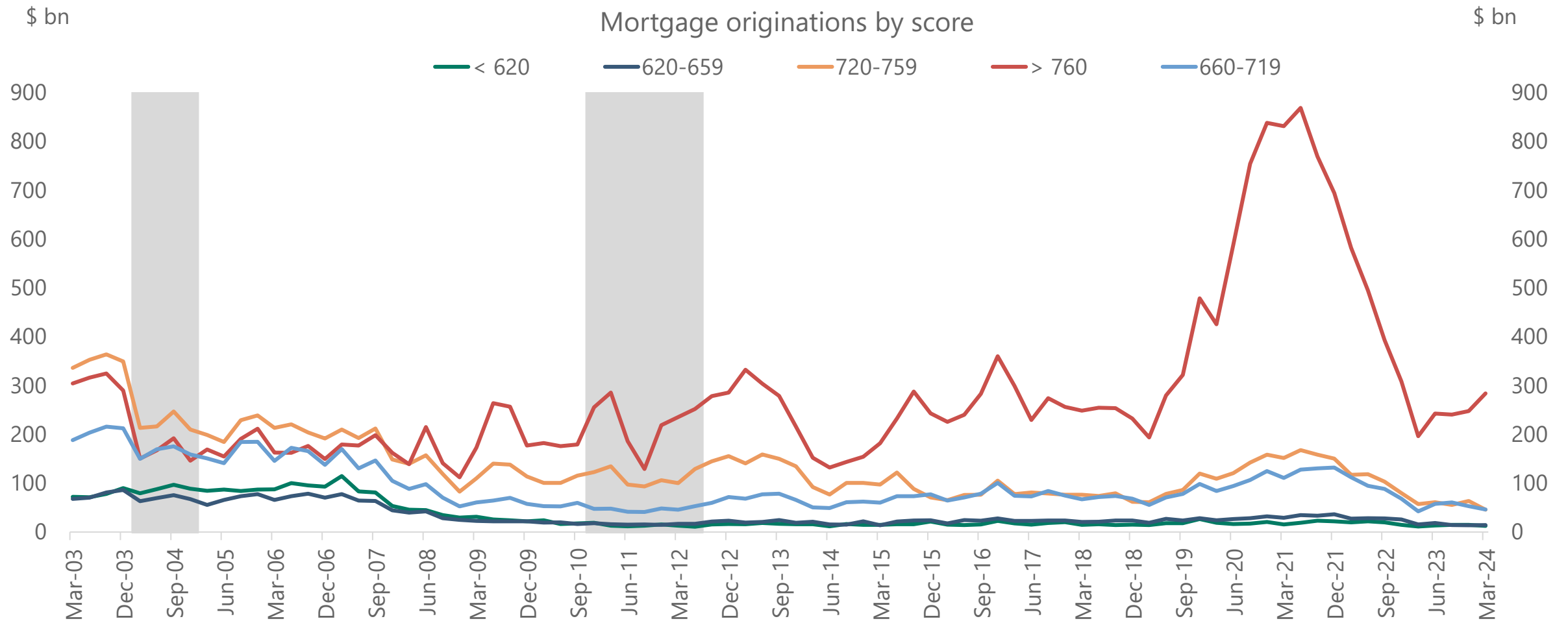
# Availability of mortgage credit at tight levels



# Mortgage originations back at pre-pandemic levels



# Mortgage originations normalizing for households with high credit scores



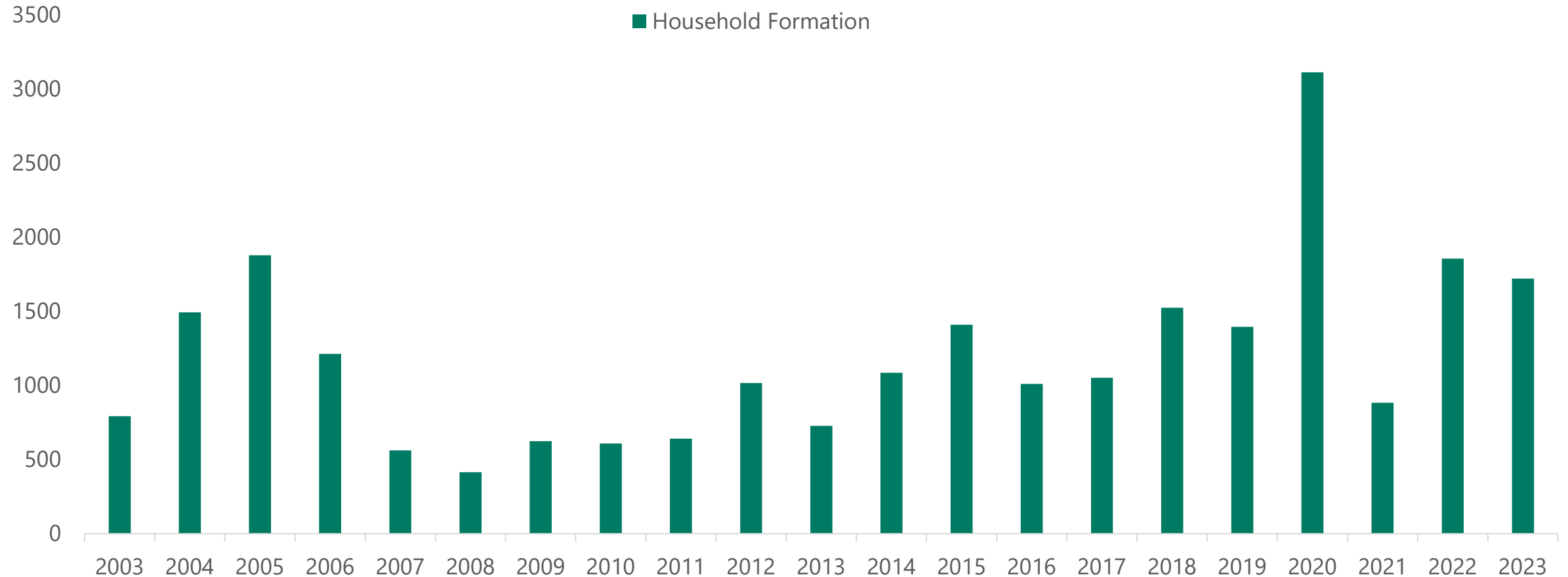
# Demographics are a tailwind to housing demand



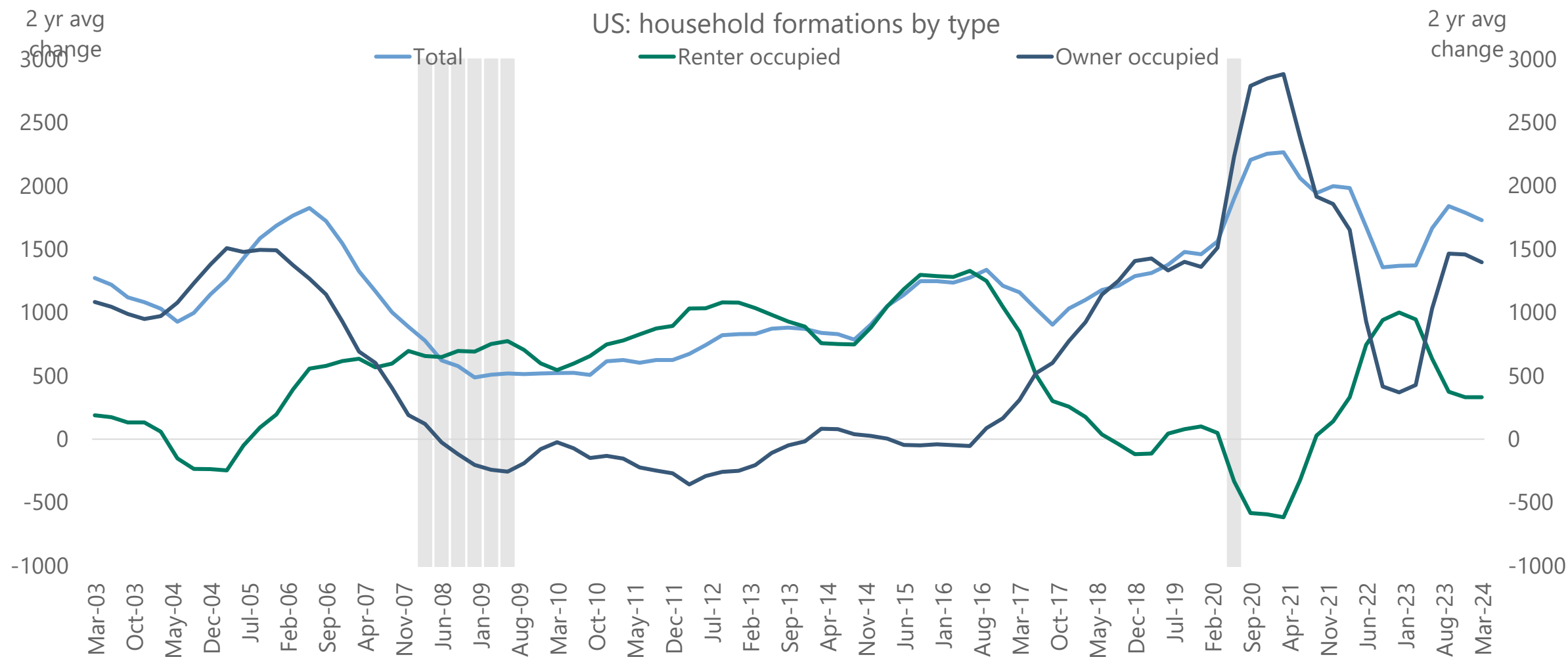


# Rebounding household formation is a tailwind to housing

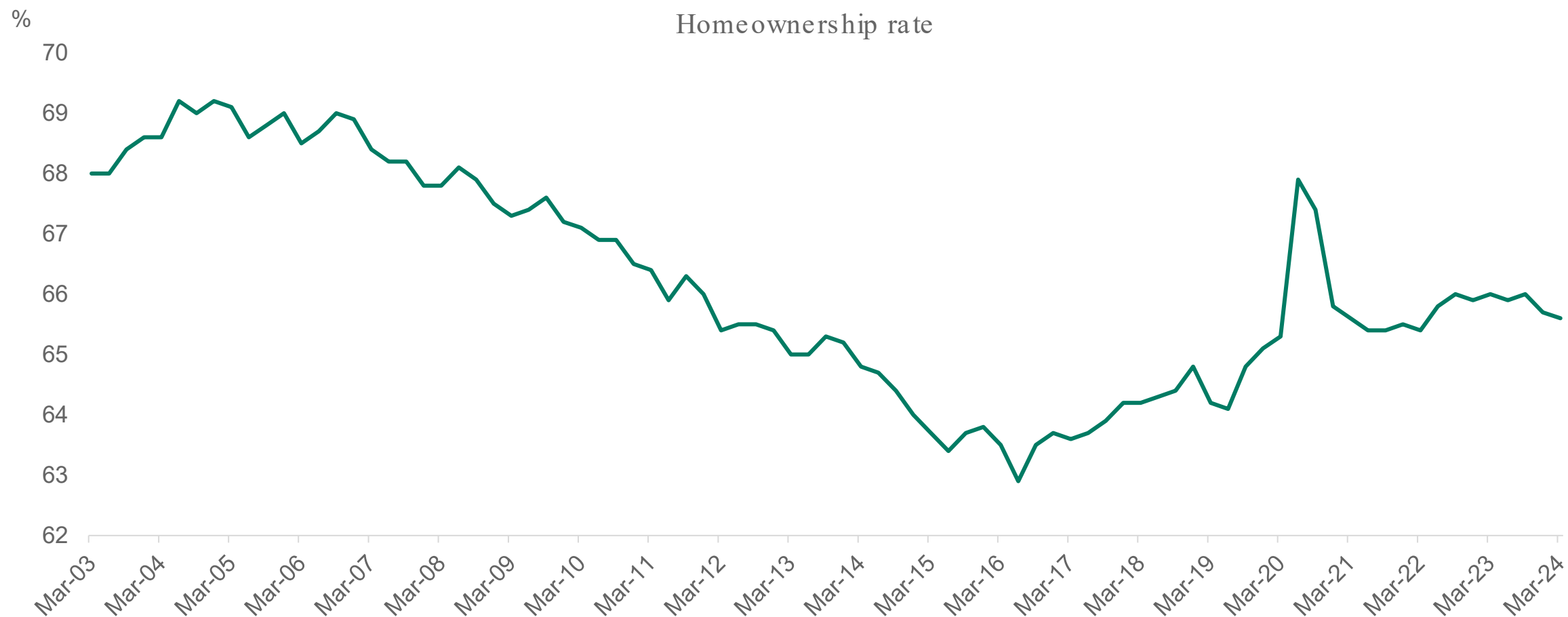
Thousands of units



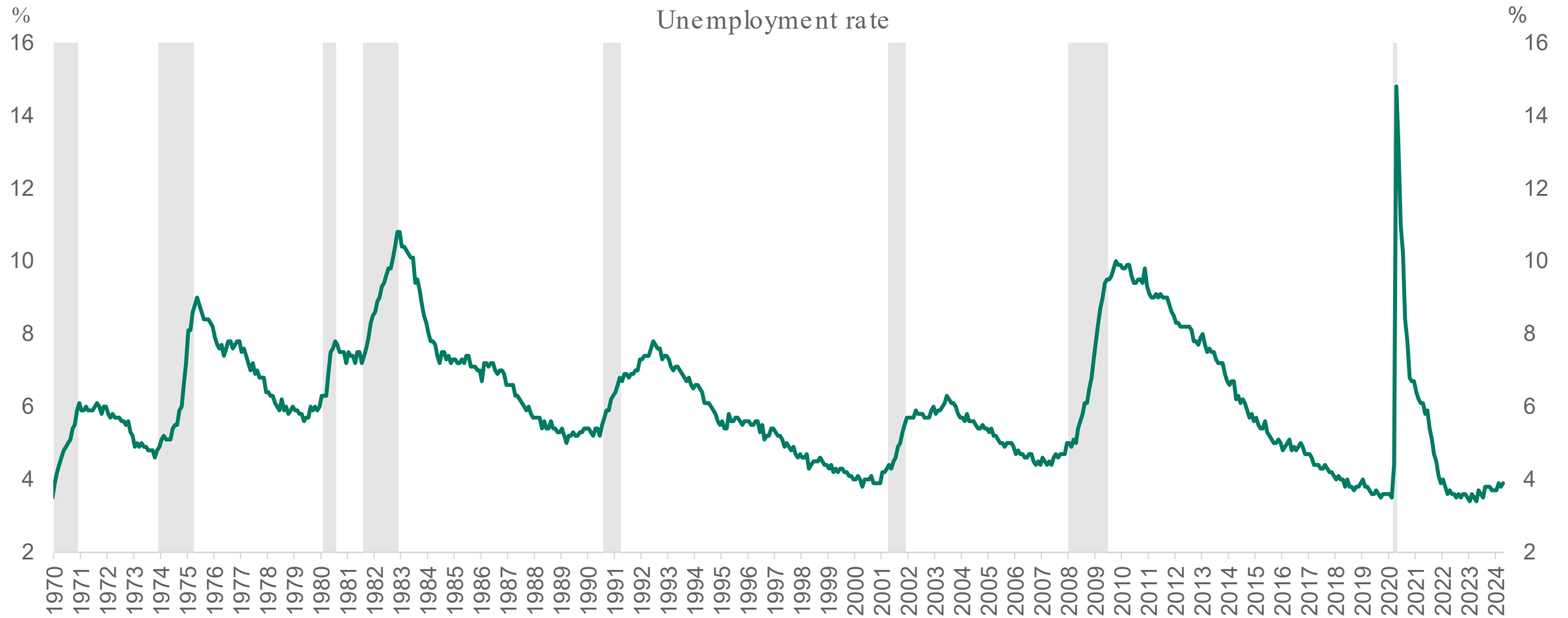
# Decline in the number of renters recently



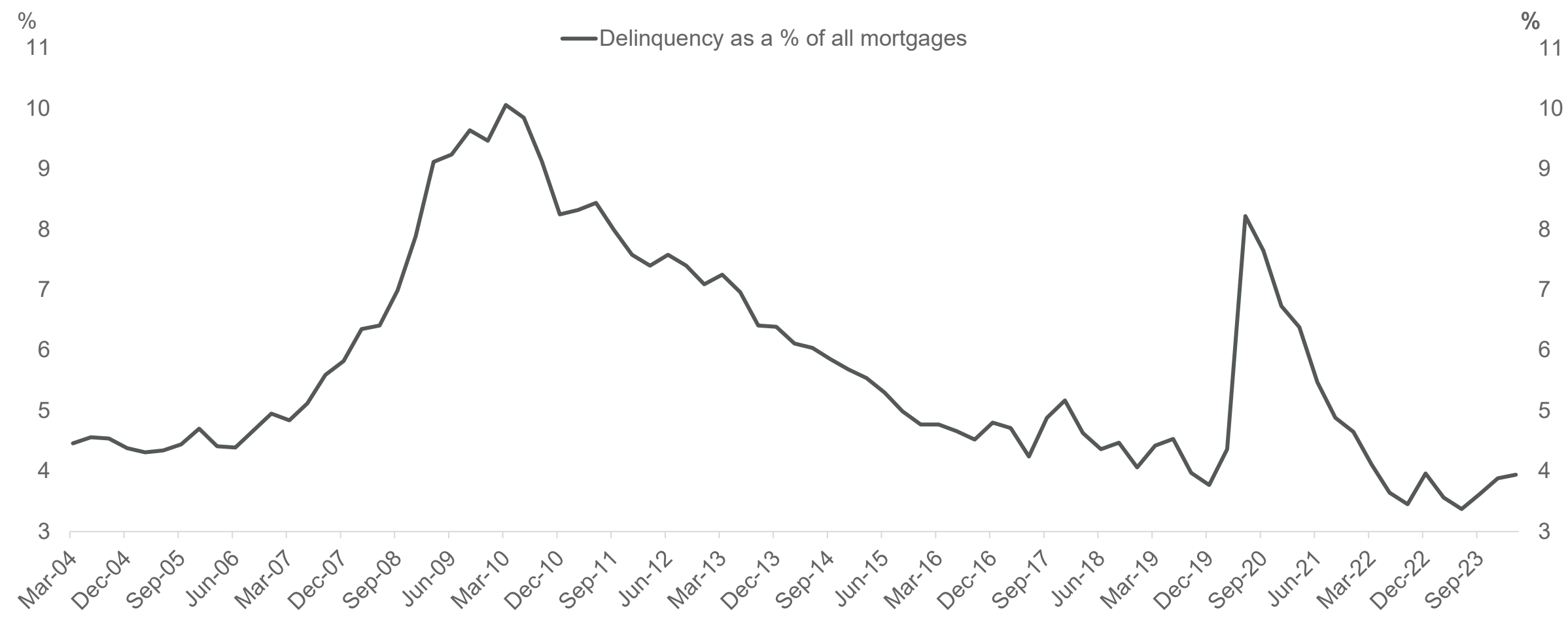
# Homeownership rate moving sideways



# Low unemployment is a tailwind to housing demand

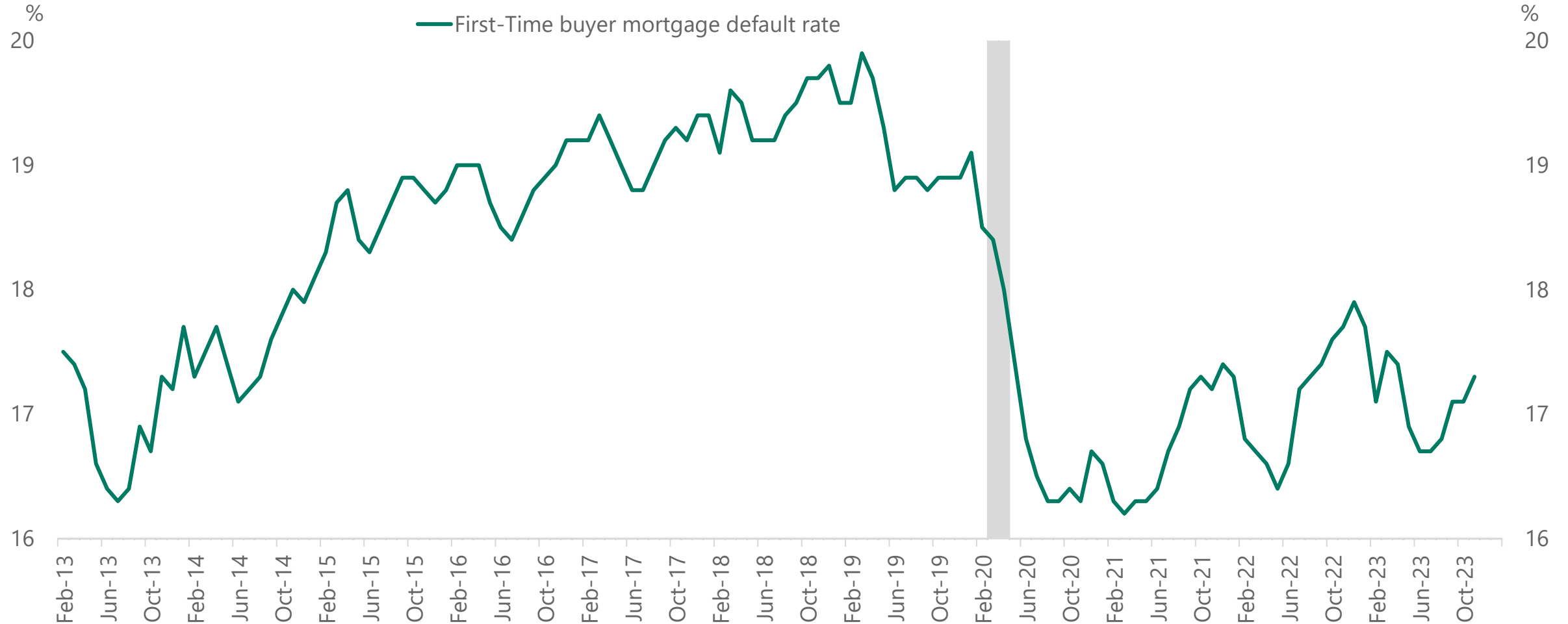


# Delinquency starting to rise



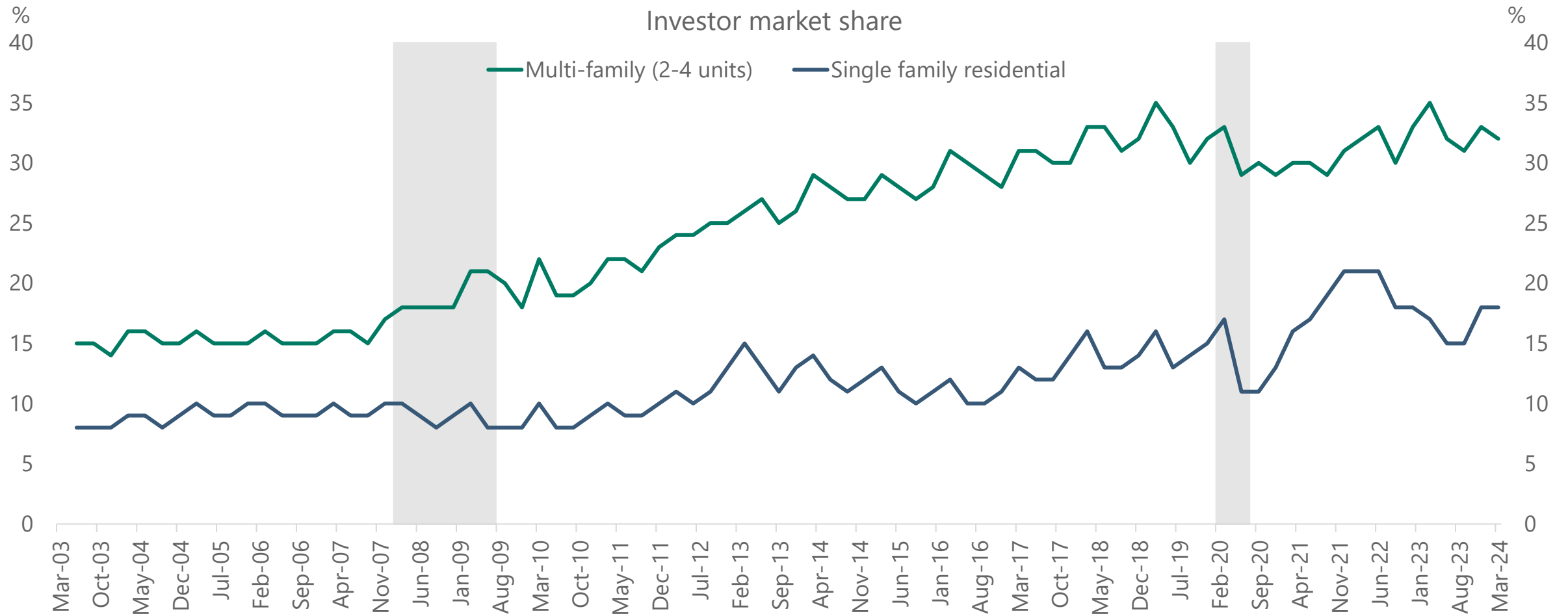
Source: Bloomberg, Apollo Chief Economist

# First time homebuyers are feeling pinch of high interest rates

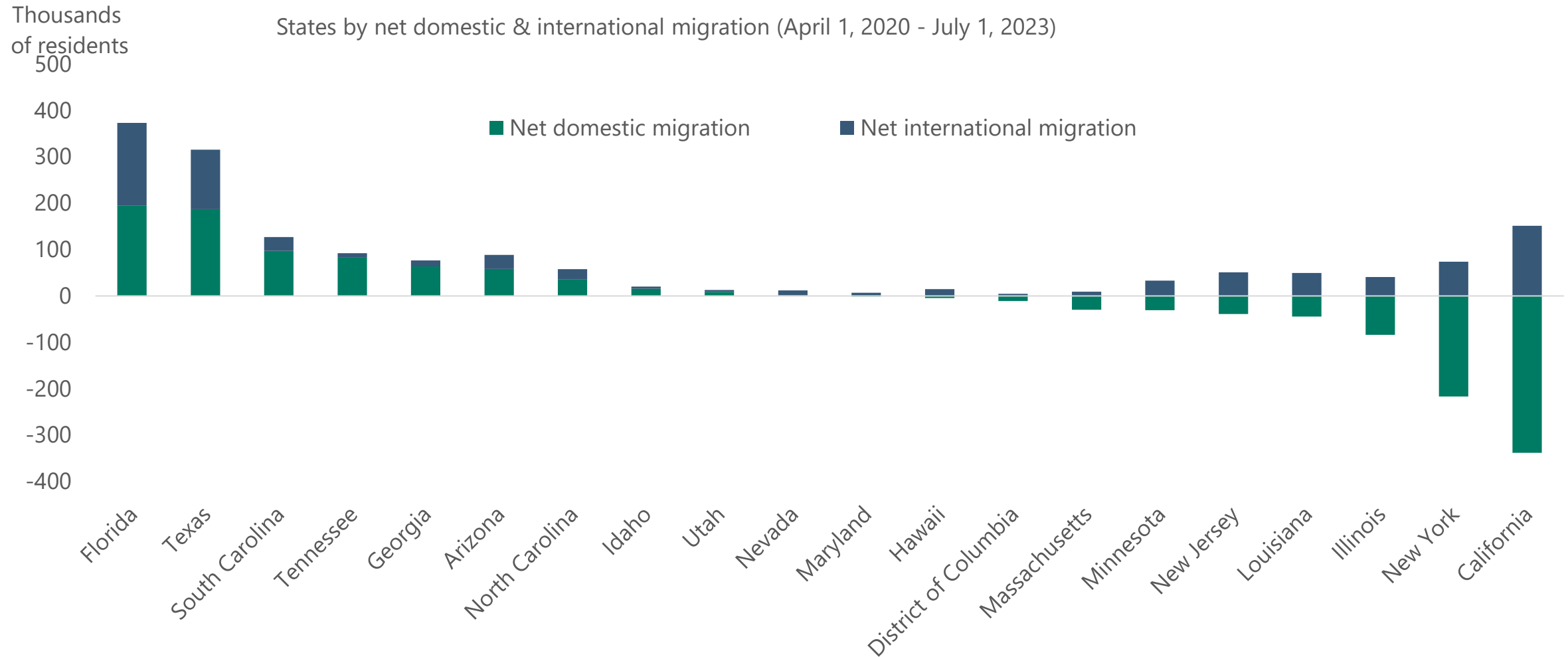


Source: American Enterprise Institute, Haver Analytics, Apollo Chief Economist (Note: The First-time Buyer Mortgage Default Rate (FBMDR) is calculated using the same methodology as for the National Mortgage Default Rate (NMDR). The only difference is that the set of included loans is restricted to first-time buyers. It uses the default experience of loans originated in 2007 as a benchmark to quantify how new mortgage loans would perform if they were hit with a market collapse on par with the recent crisis. The index classifies loans as low-risk, medium-risk, and high-risk.)

# Investor share of single-family has trended lower as mortgage rates have increased



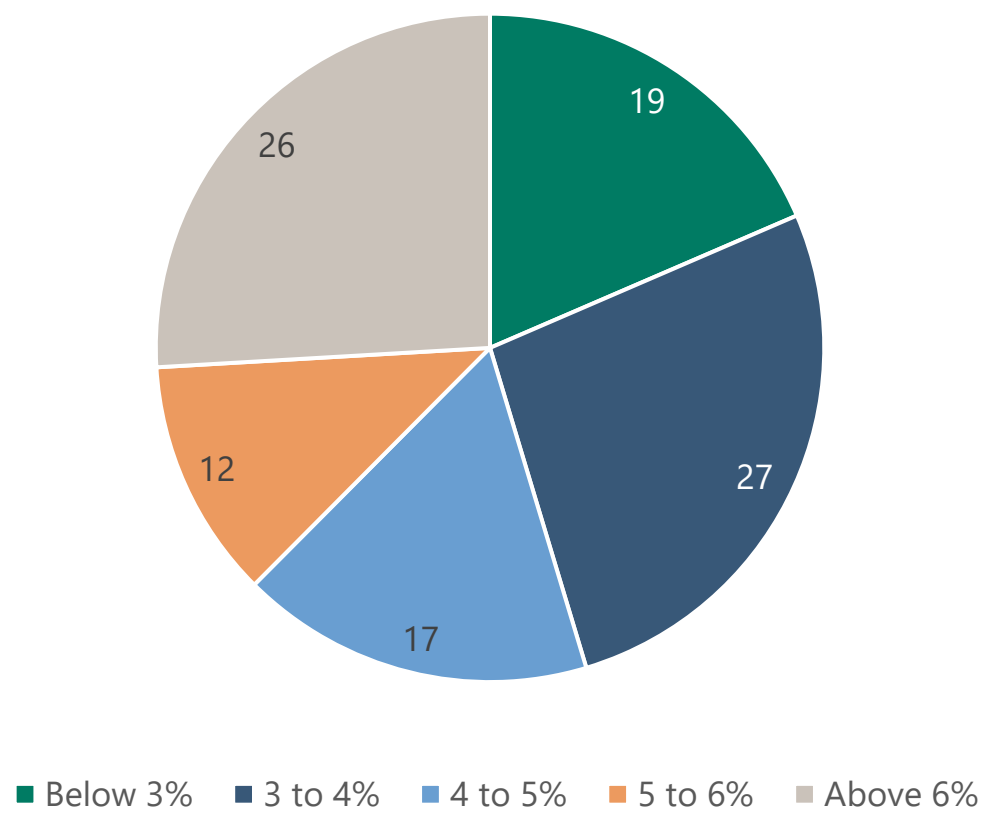
# Migration out of California and migration into Florida during the pandemic



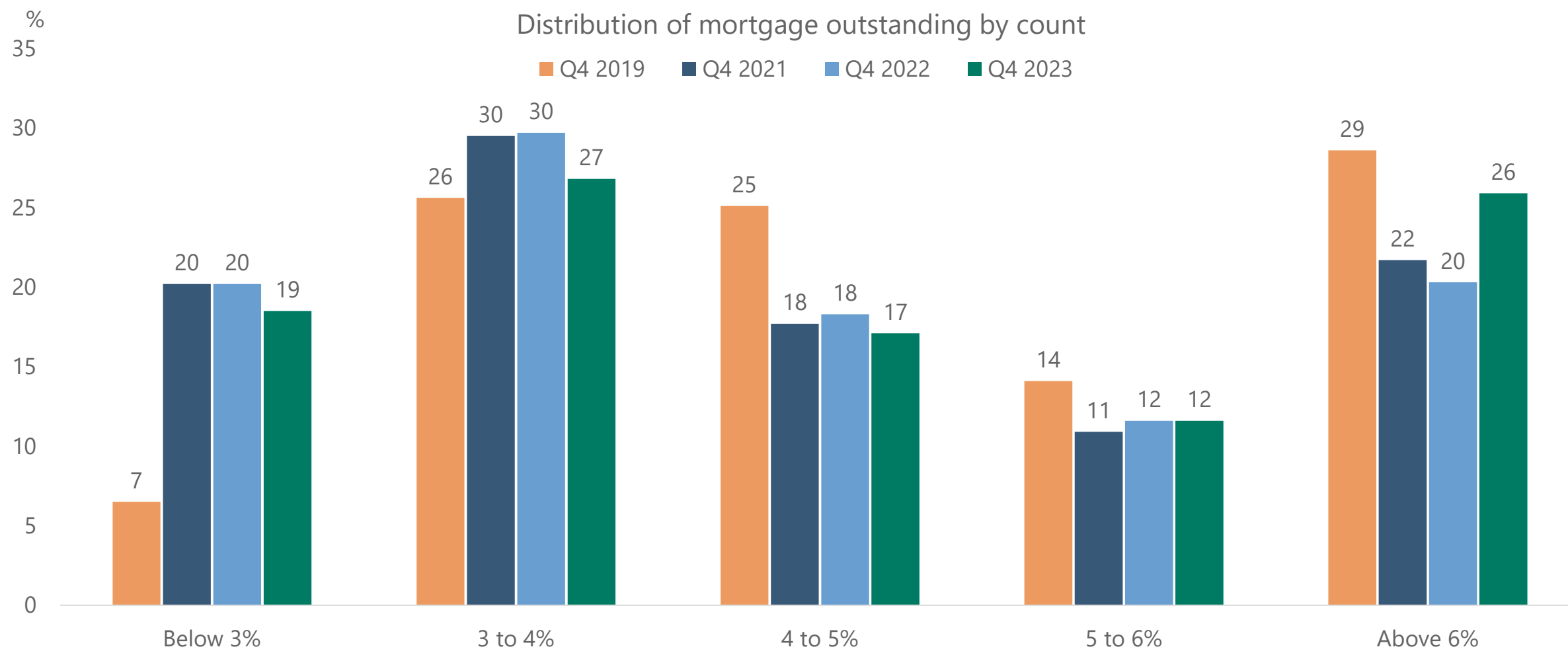


# Share of mortgages outstanding by interest rate

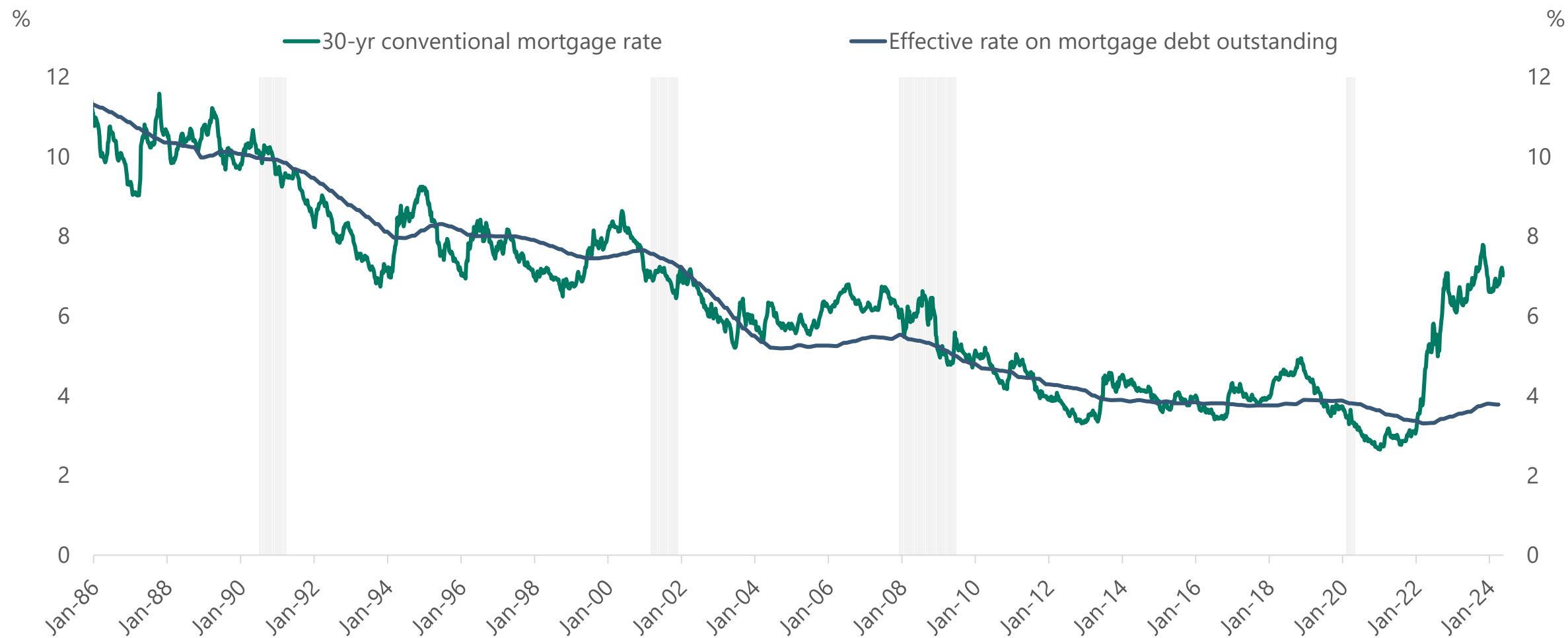
Share of mortgages outstanding by interest rate at origination by count, 2023 Q4



# Distribution of interest rates on outstanding mortgages

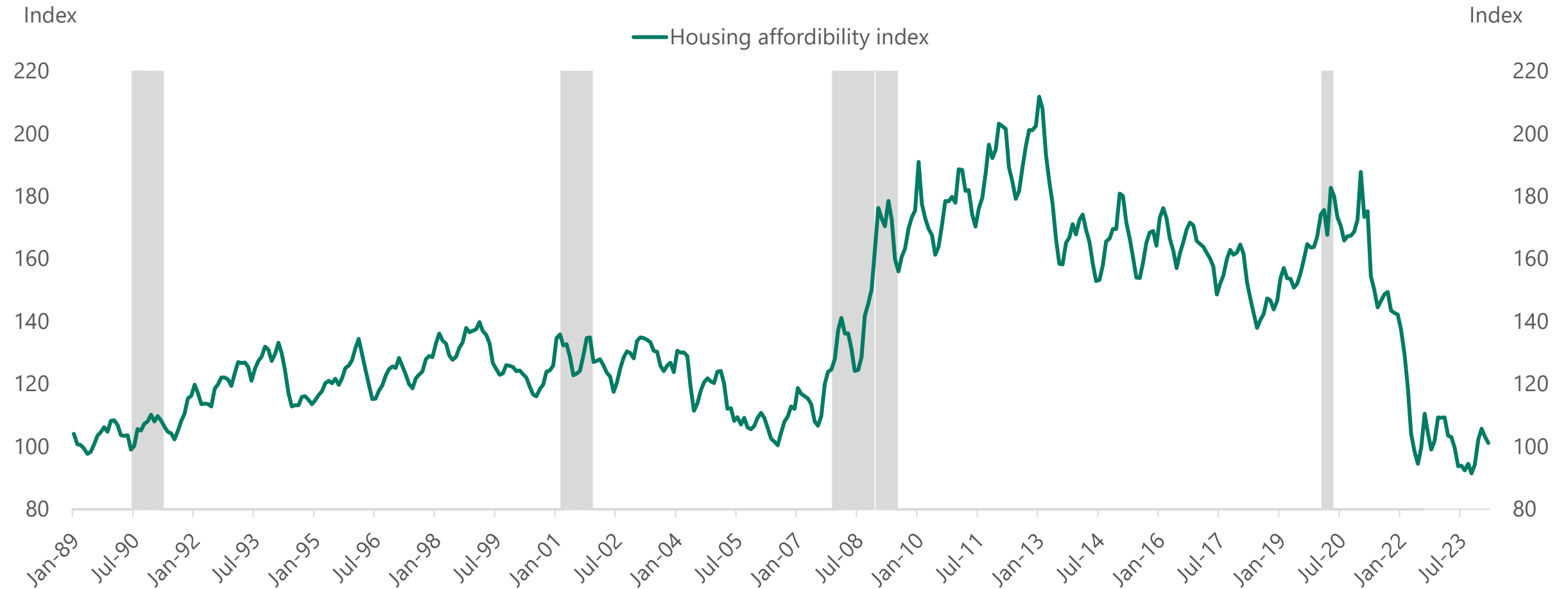


# Effective outstanding mortgage rate is 3.8%

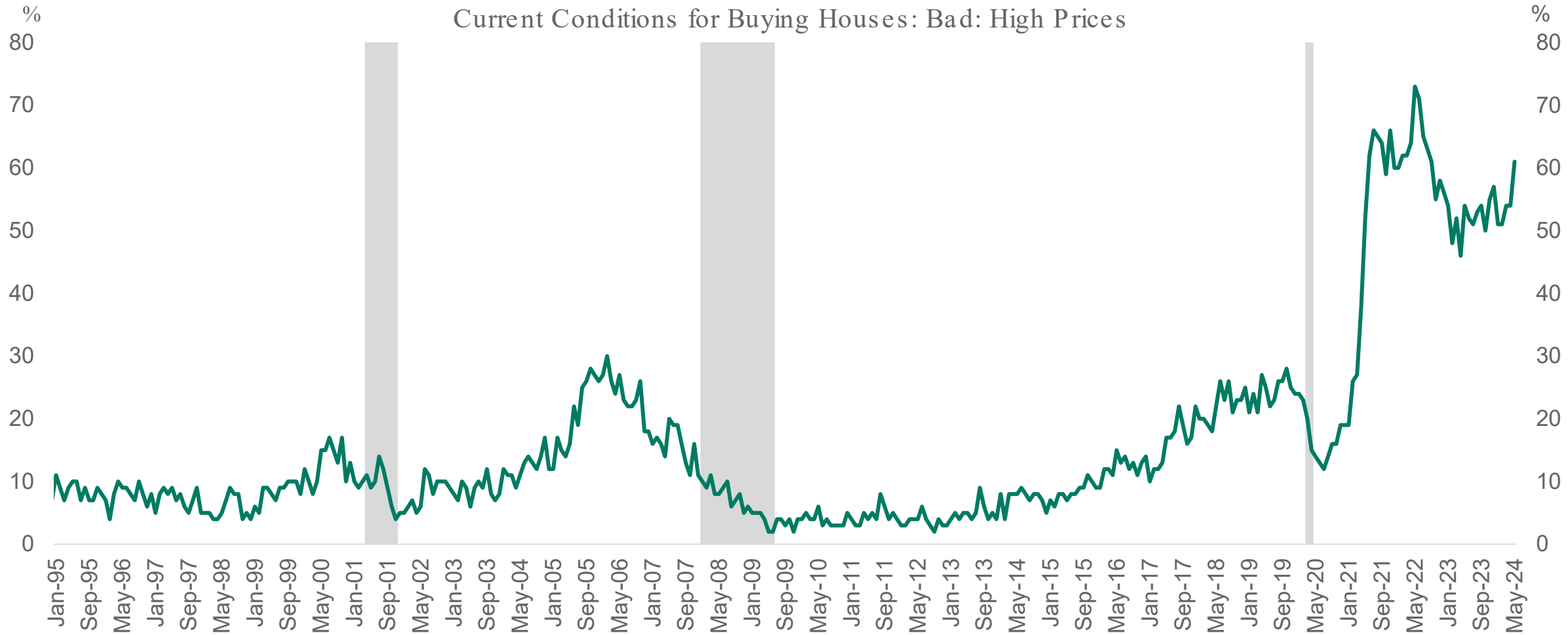


Source: Freddie Mac, BEA, Bloomberg, Apollo Chief Economist. The effective interest rate (%) reflects the amortization of initial fees and charges over a 10-year period, which is the historical assumption of the average life of a mortgage loan.

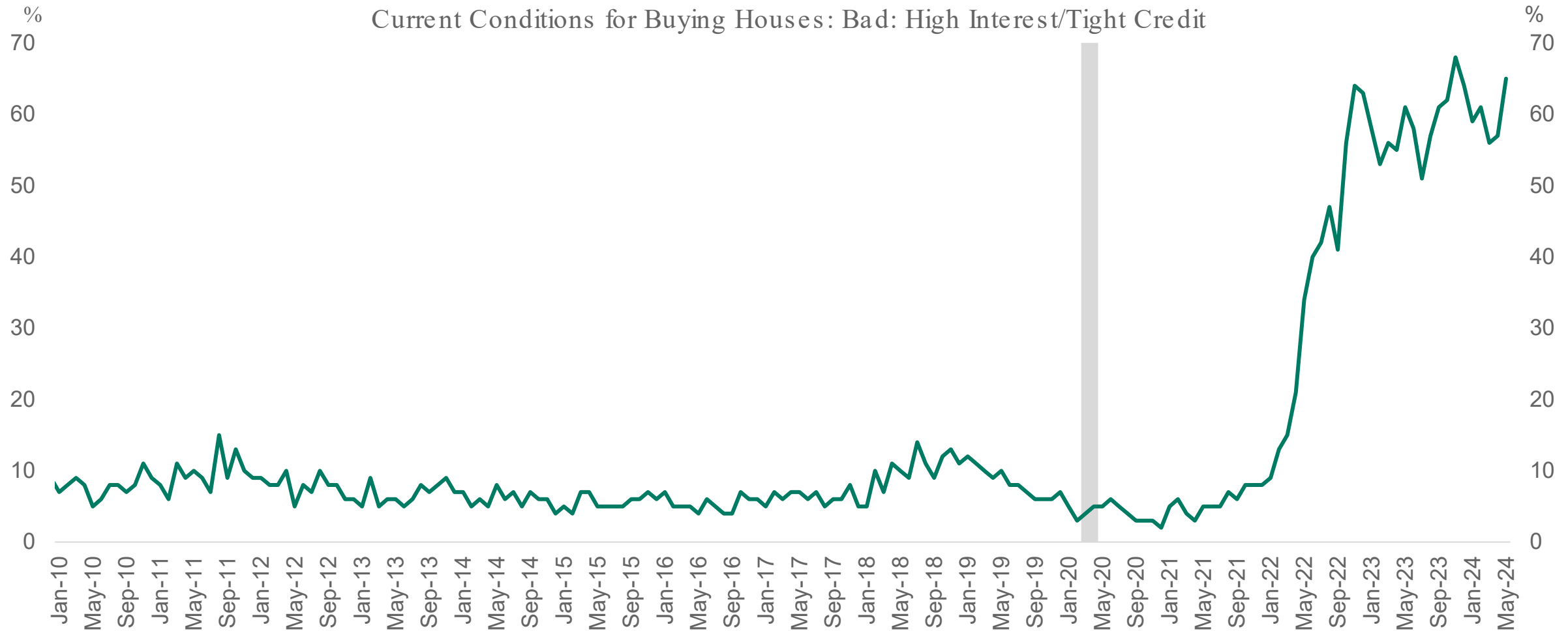
# Housing affordability near record lows



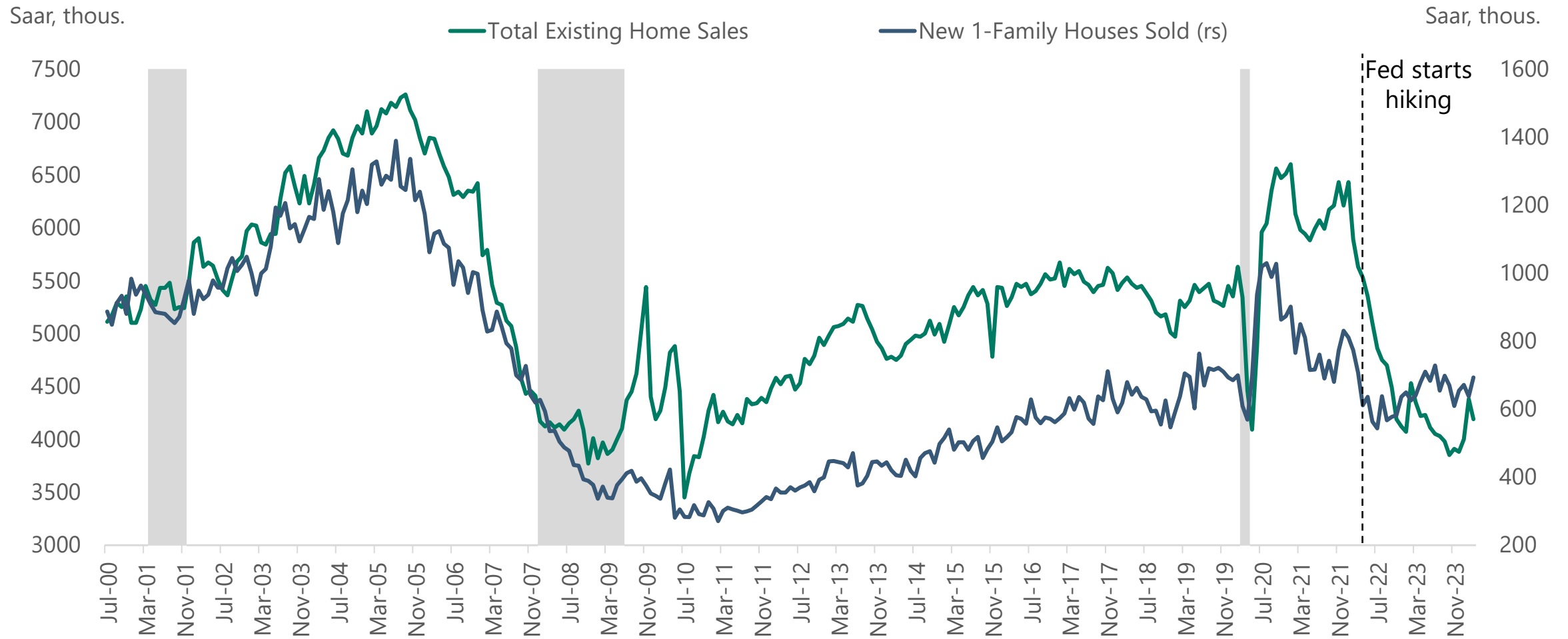
# Homebuyer sentiment negatively impacted by high prices



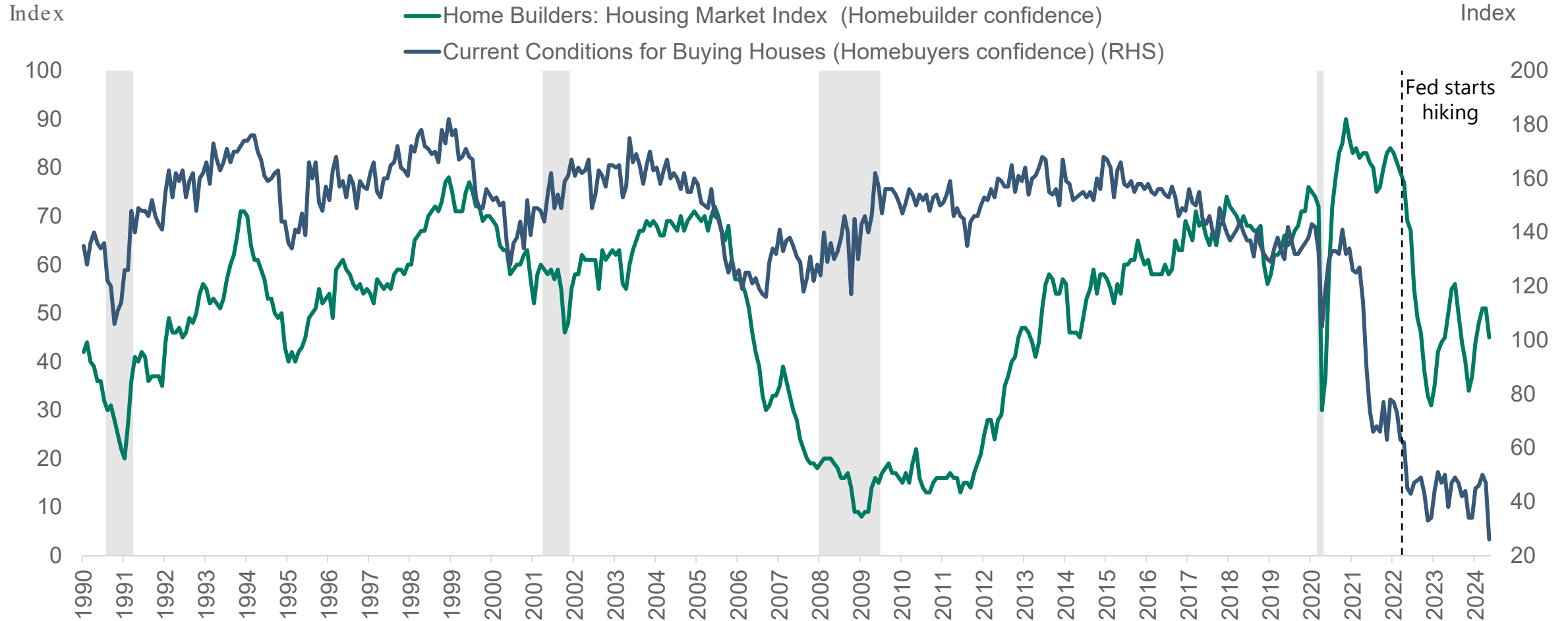
65% of consumers are saying that this is a bad time to buy a house because of high mortgage rates and tight credit



# New and existing home sales lower than normal because of affordability

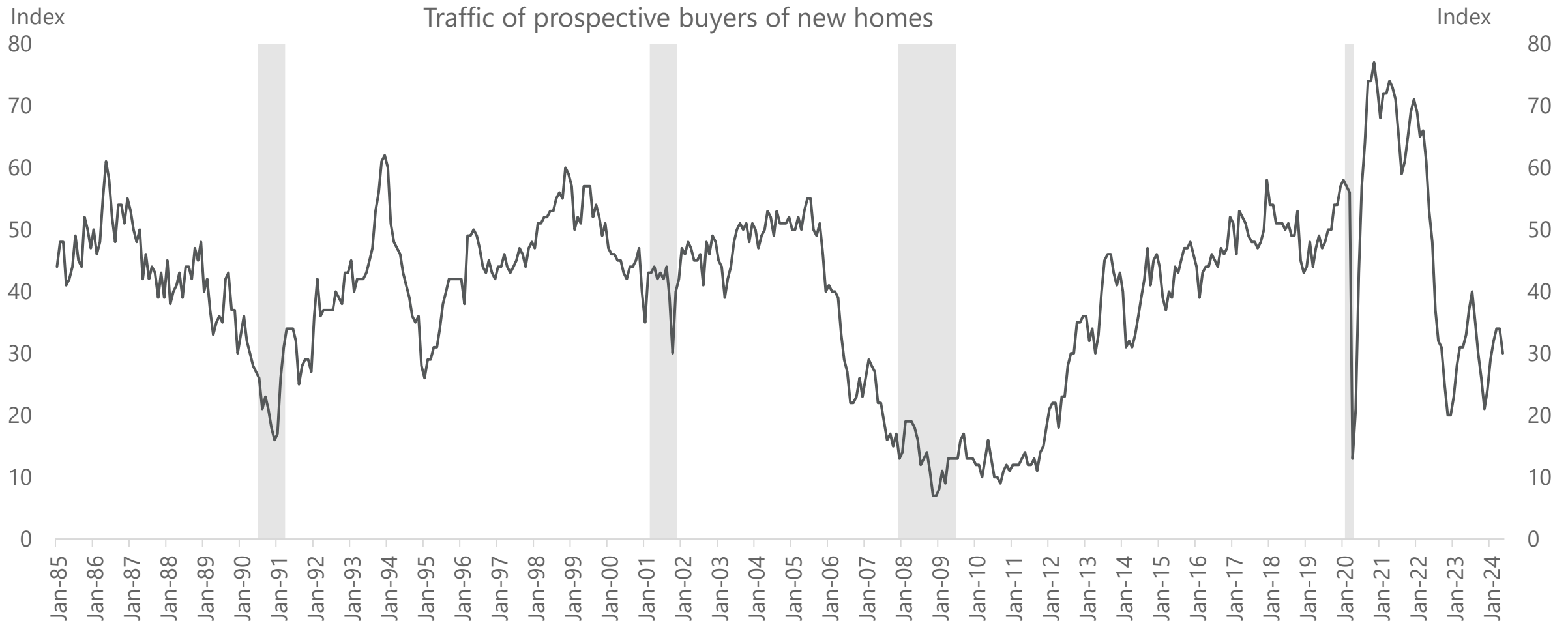


# Homebuyer and homebuilder confidence still depressed because of affordability

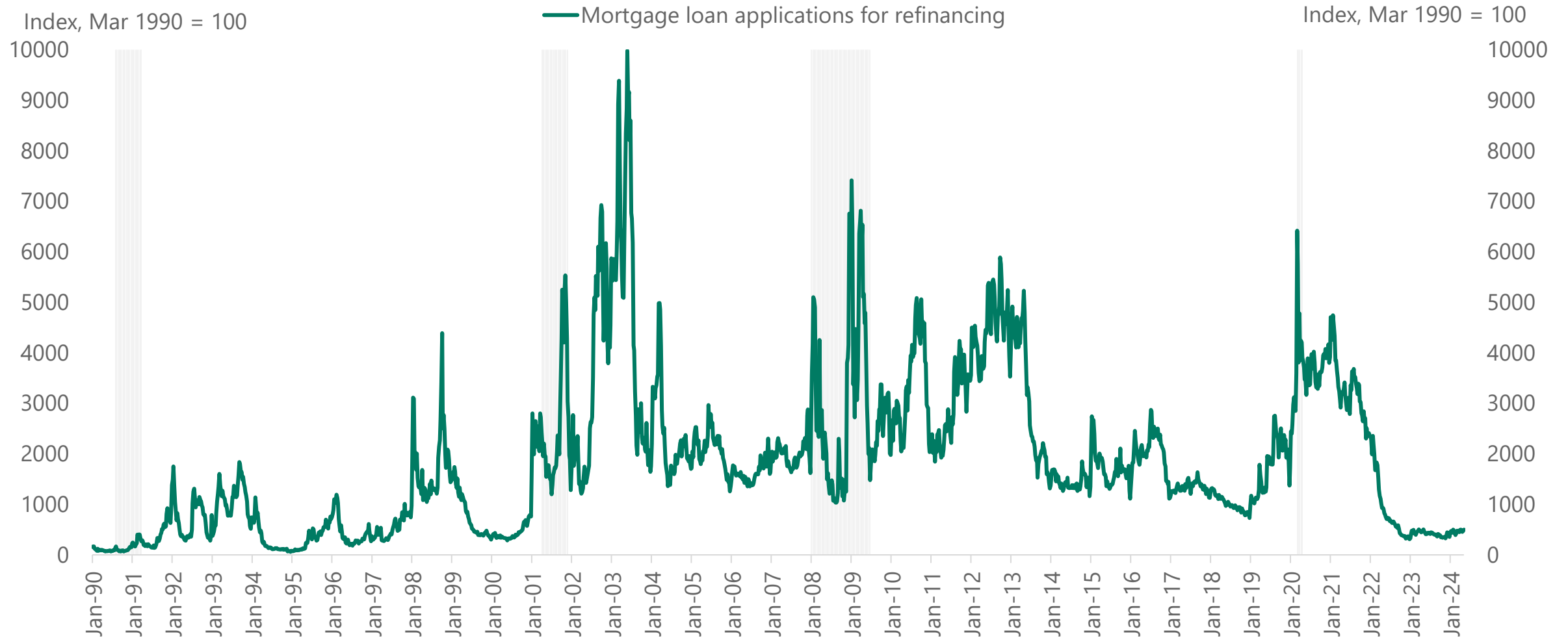




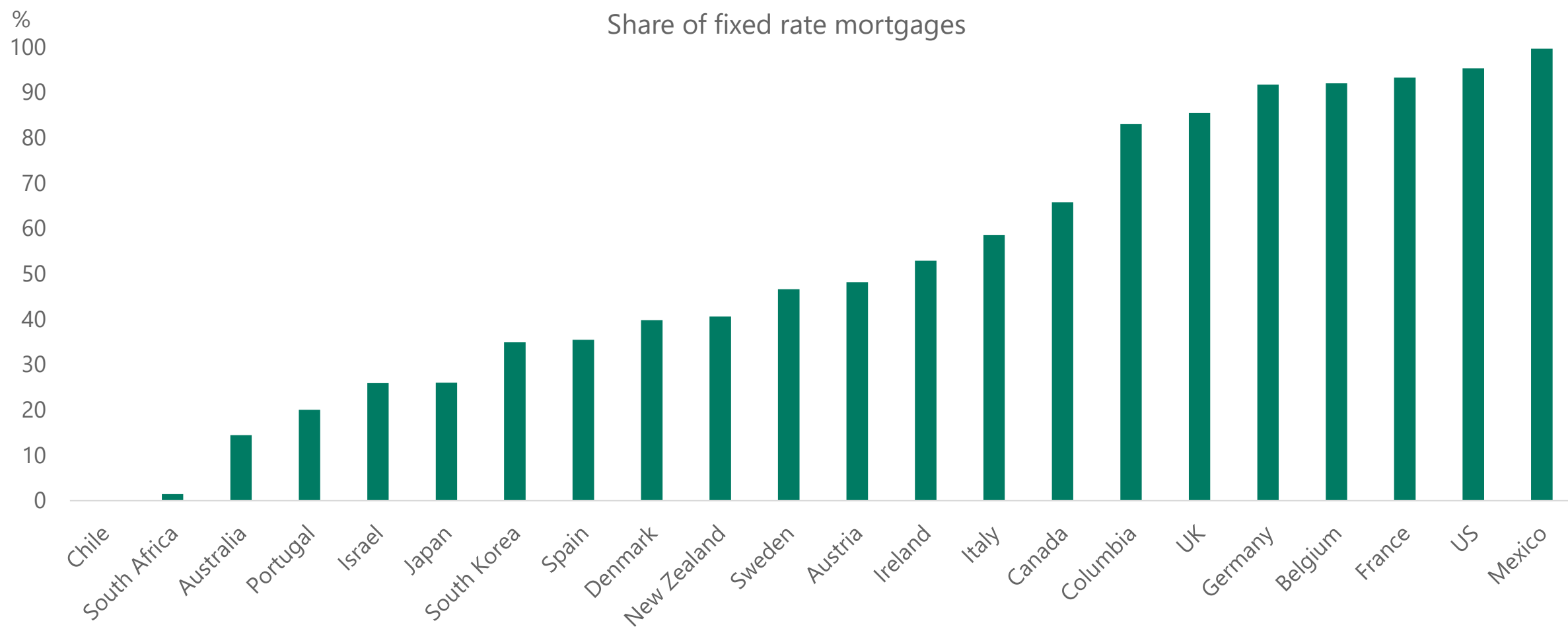
# Traffic of prospective homebuyers lower than normal, likely because of affordability



# Low number of homeowners are refinancing their mortgage at the moment

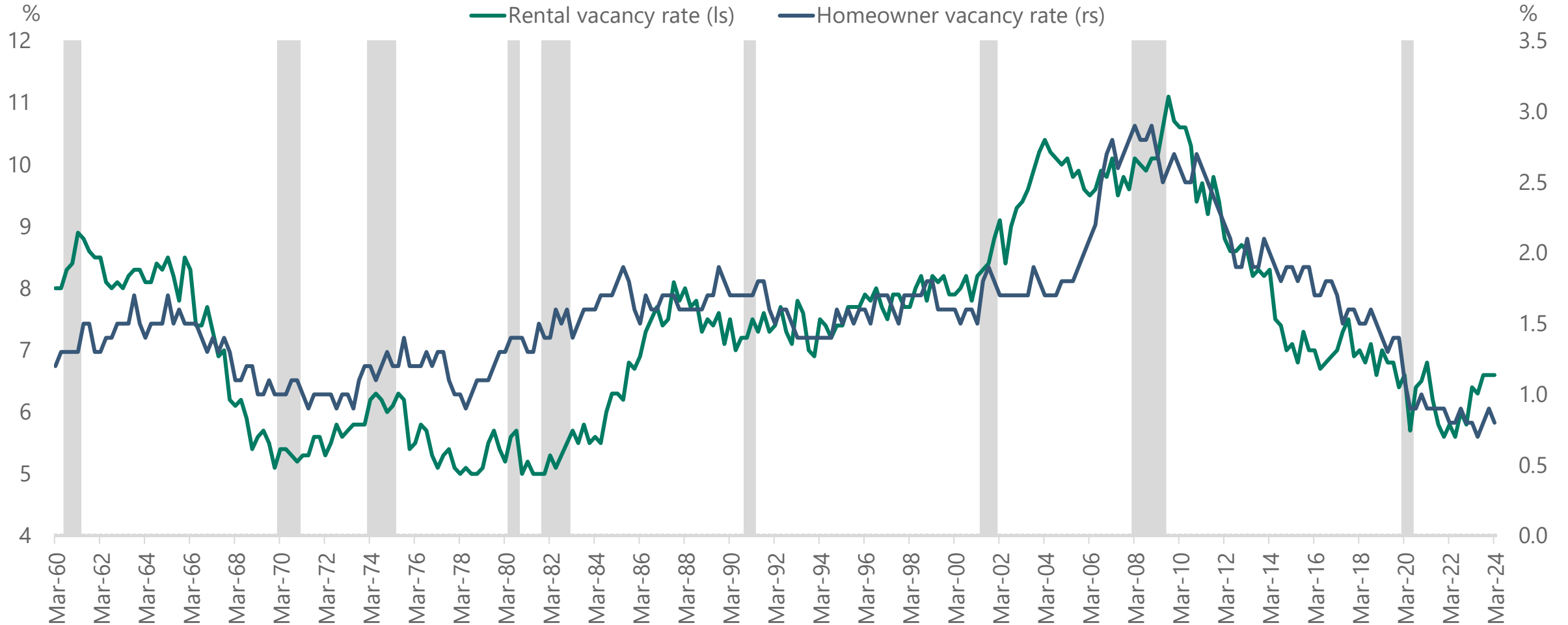


# Share of fixed rate mortgages by country

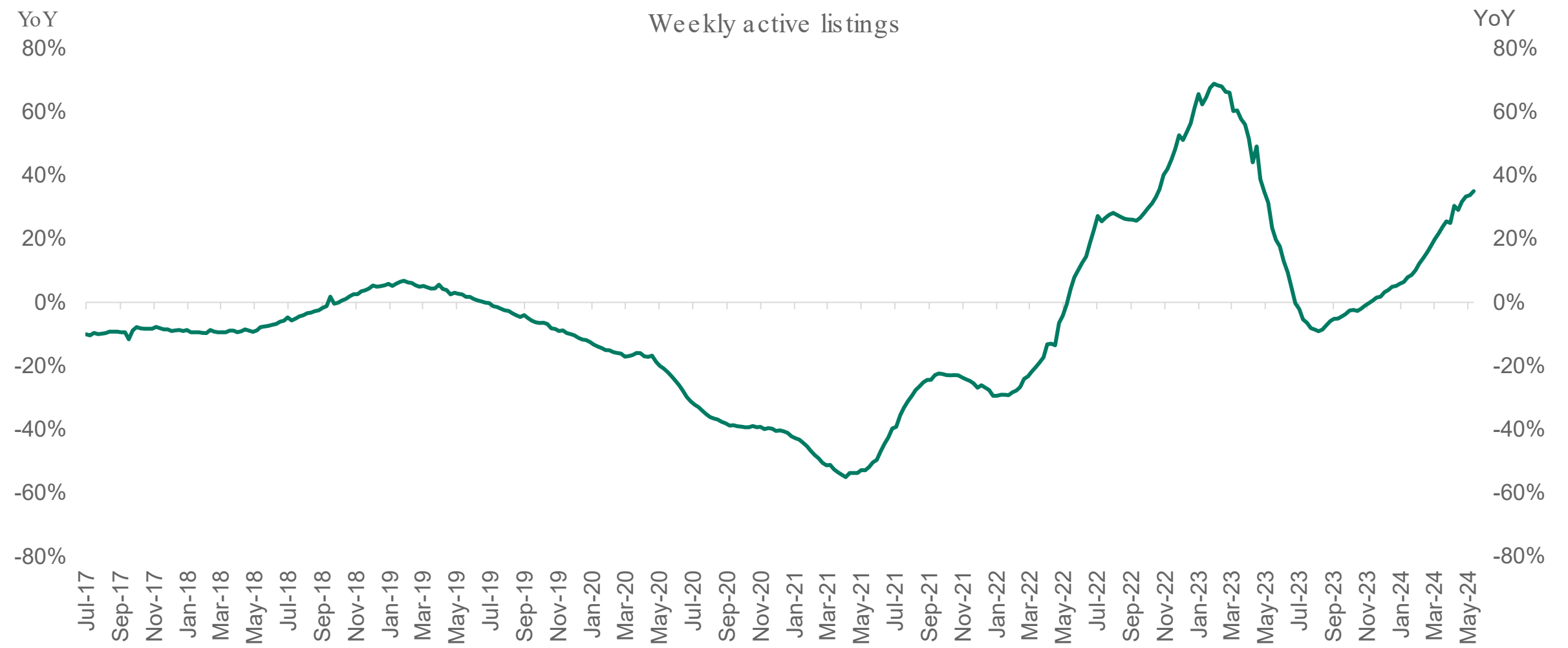


2) Housing Supply: Housing supply is low, construction coming down from record-high levels

# Homeowner and rental vacancy rates at very low levels

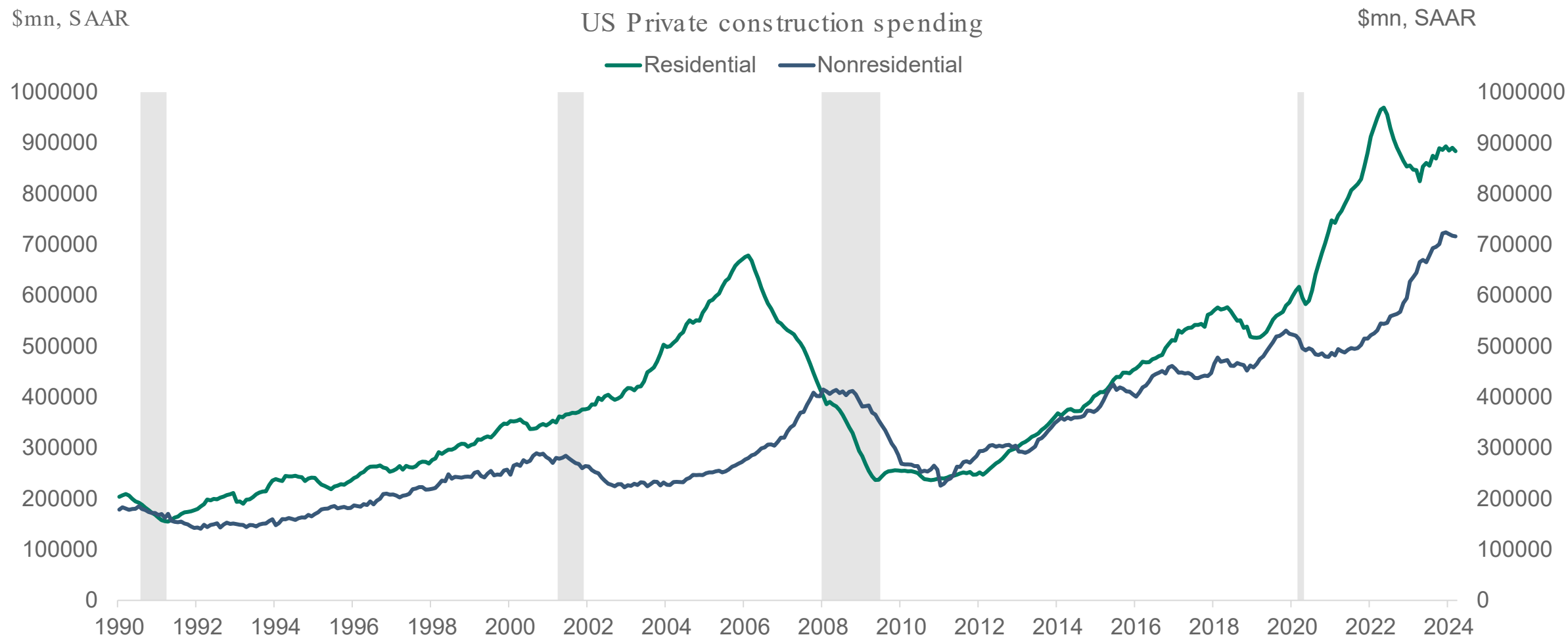


# Listings starting to rise

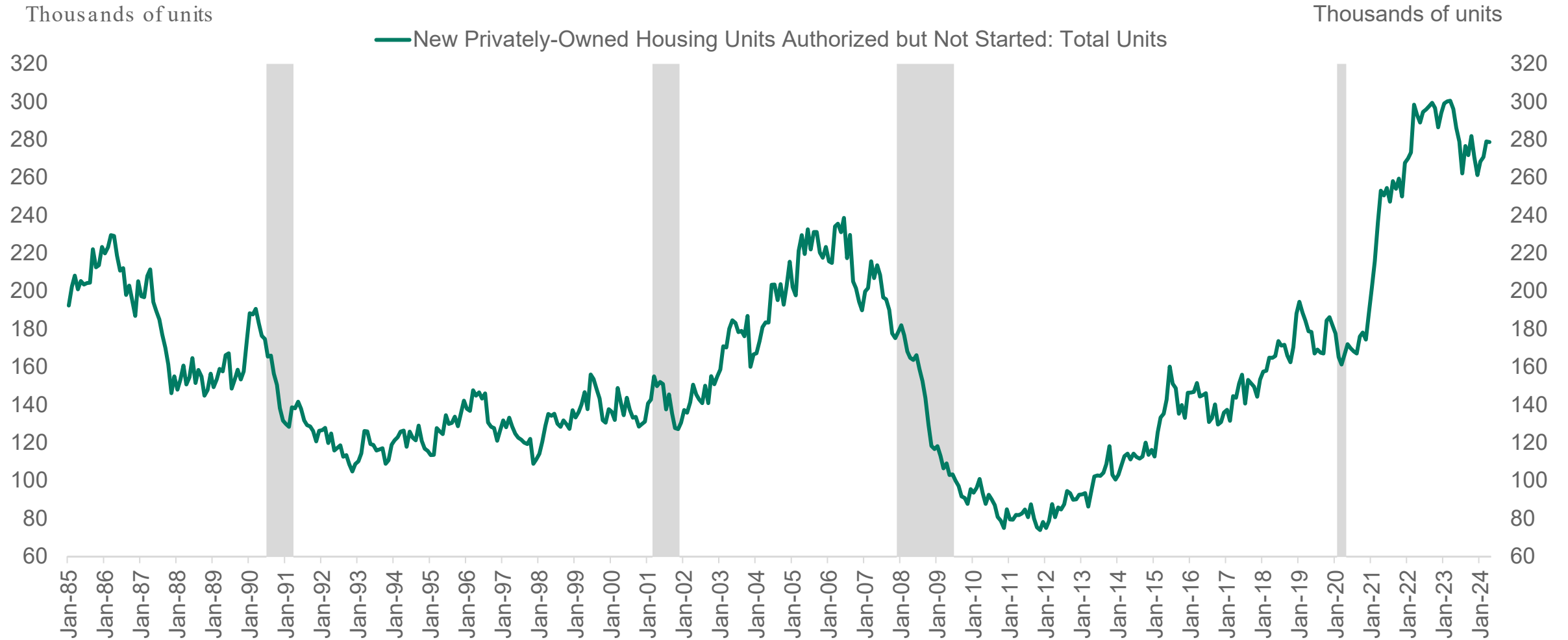


Source: Realtor.com, Apollo Chief Economist

# Residential construction spending starting to rise again

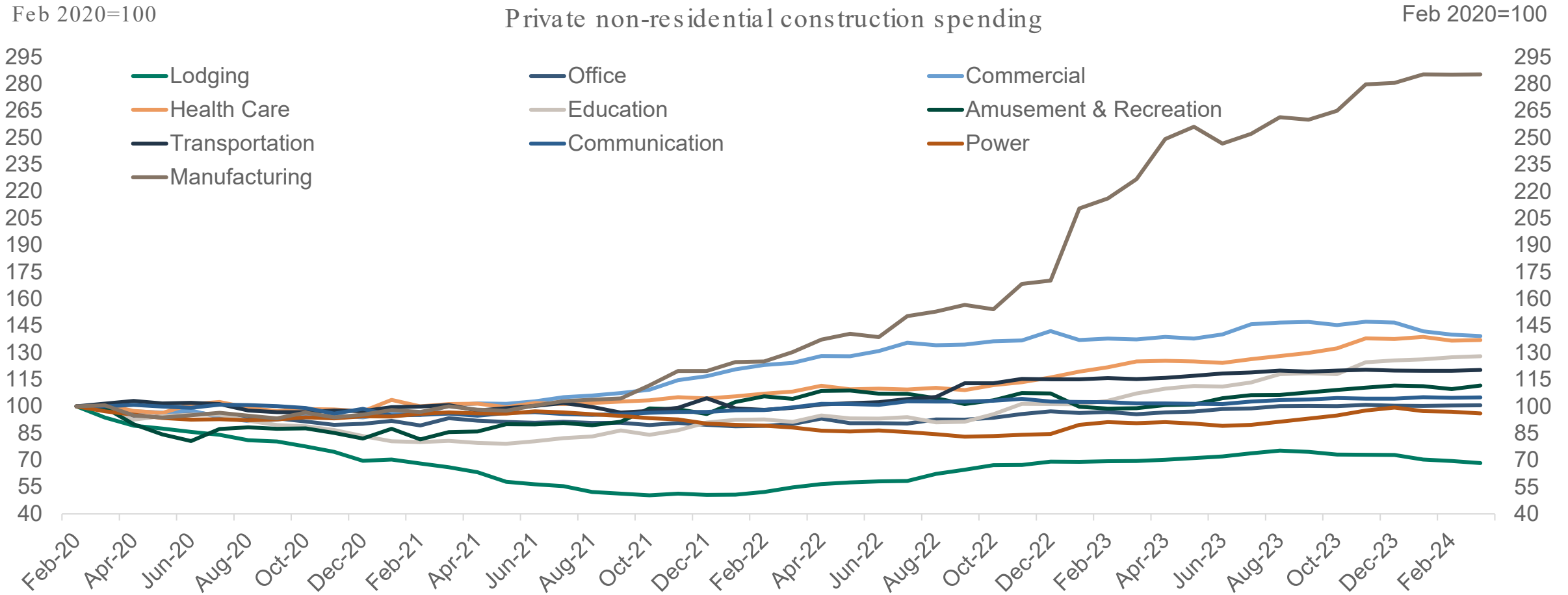


# New housing units authorized but not started

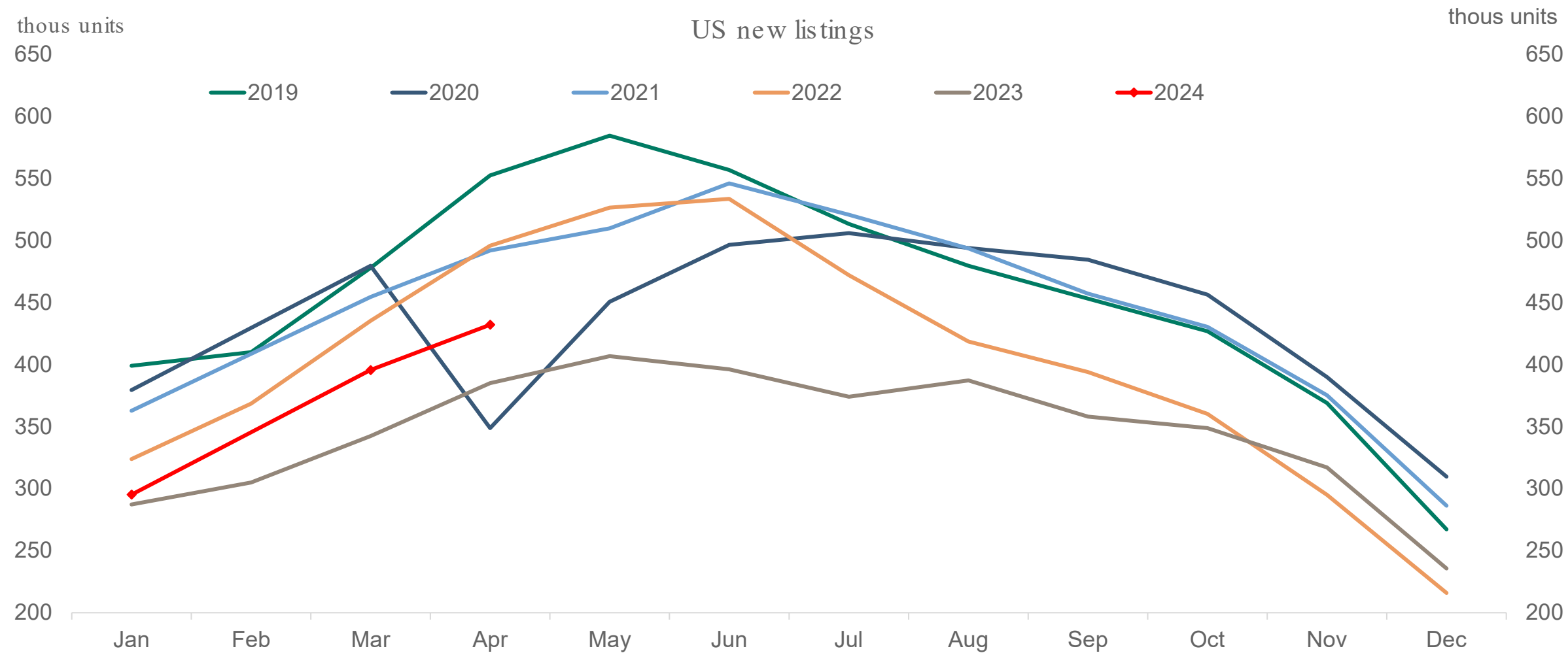




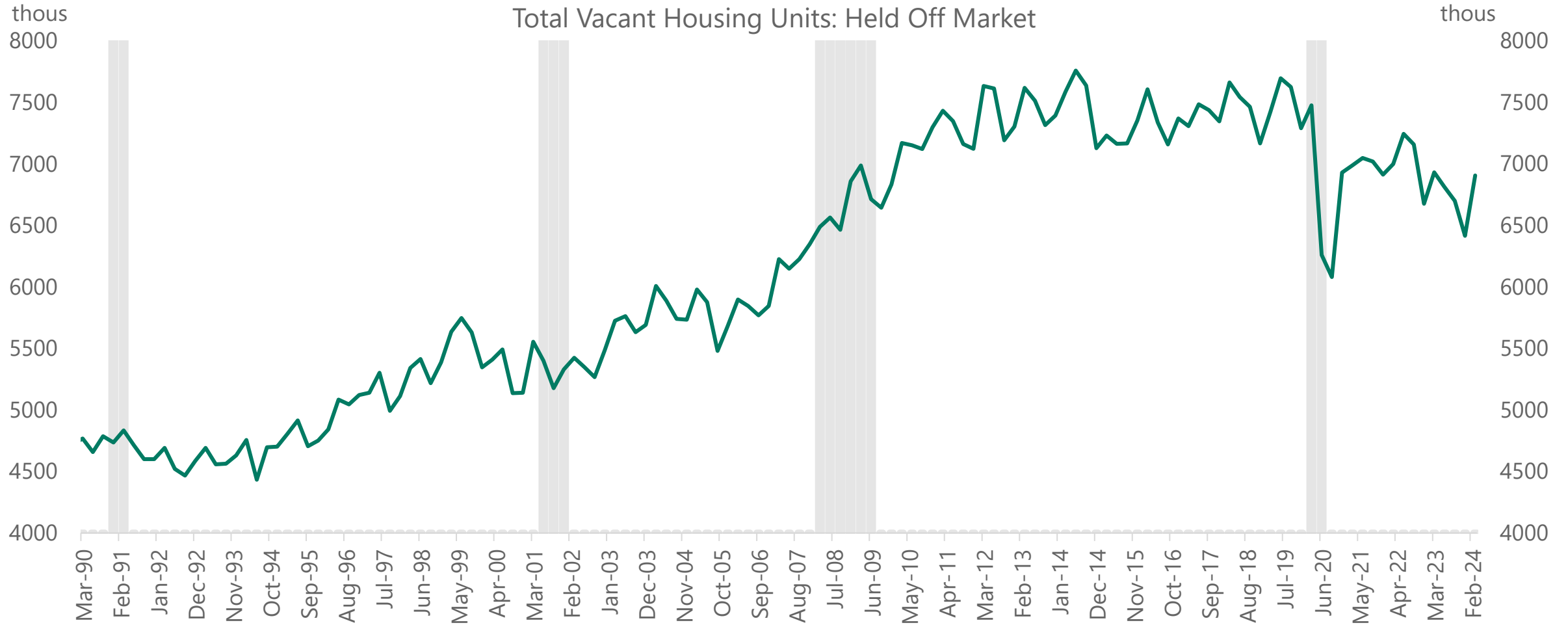
# The biggest increase in non-residential construction has been in manufacturing



# Newly listed homes lower than normal



# Vacant housing units held off market

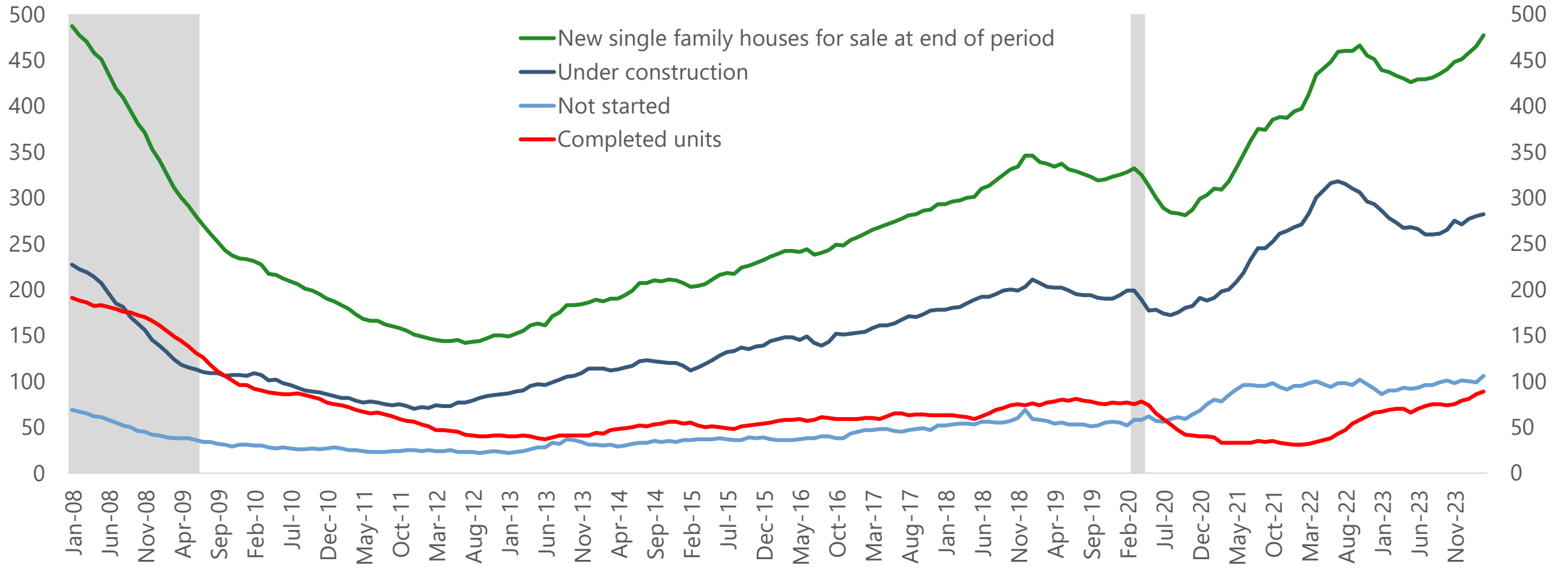


# Number of new houses for sale

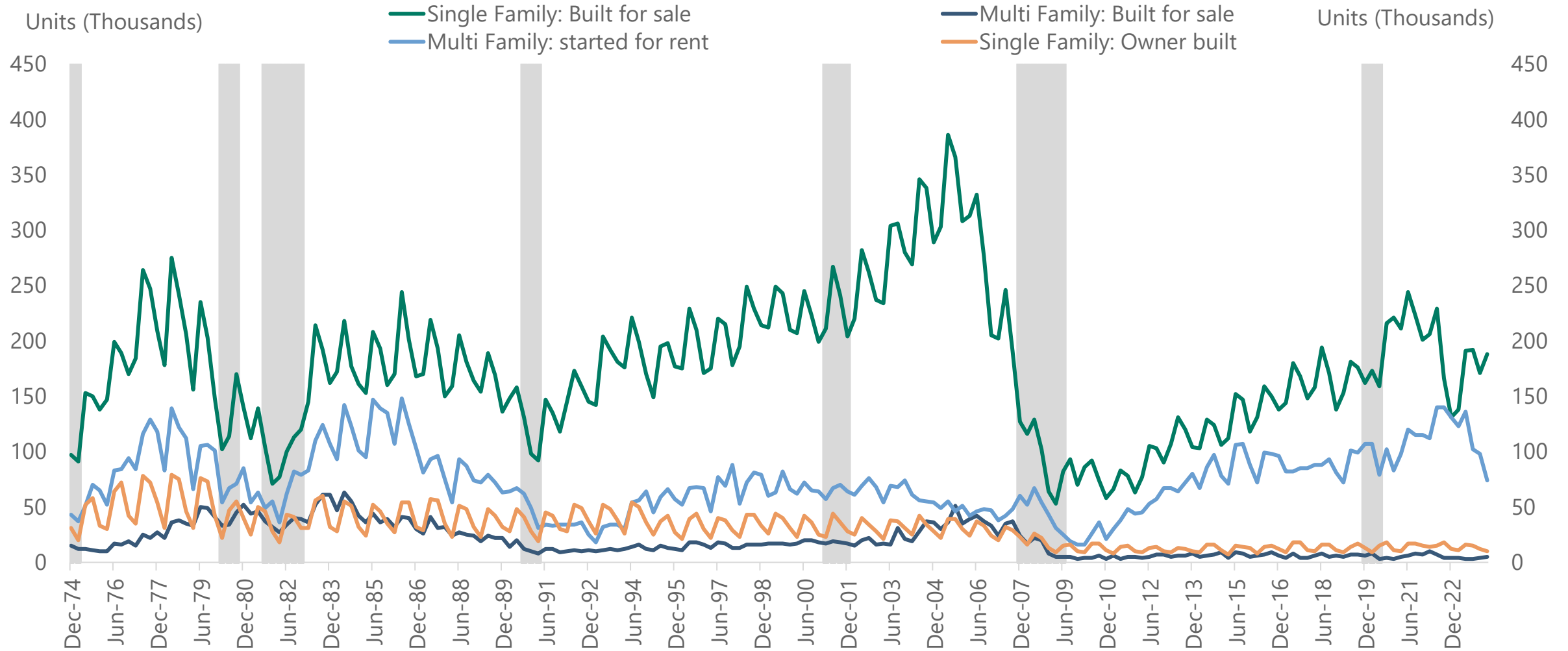
Thousands of units

Number of new houses for sale

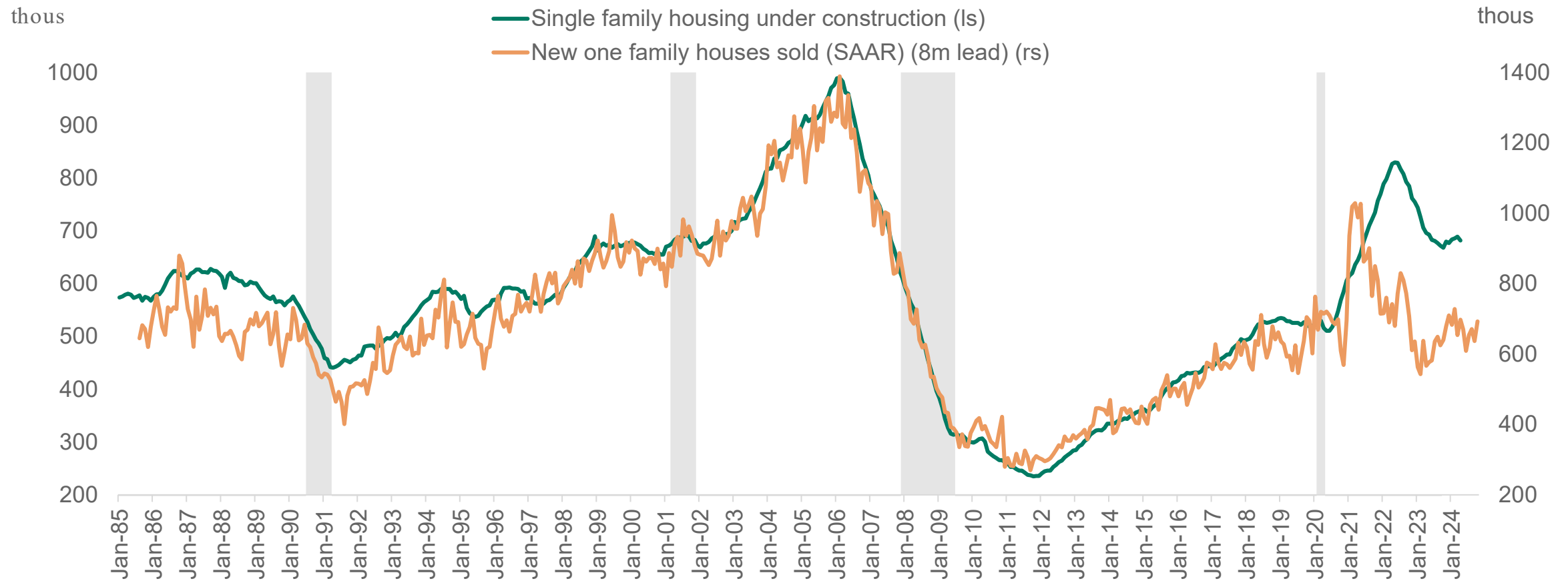
Thousands of units



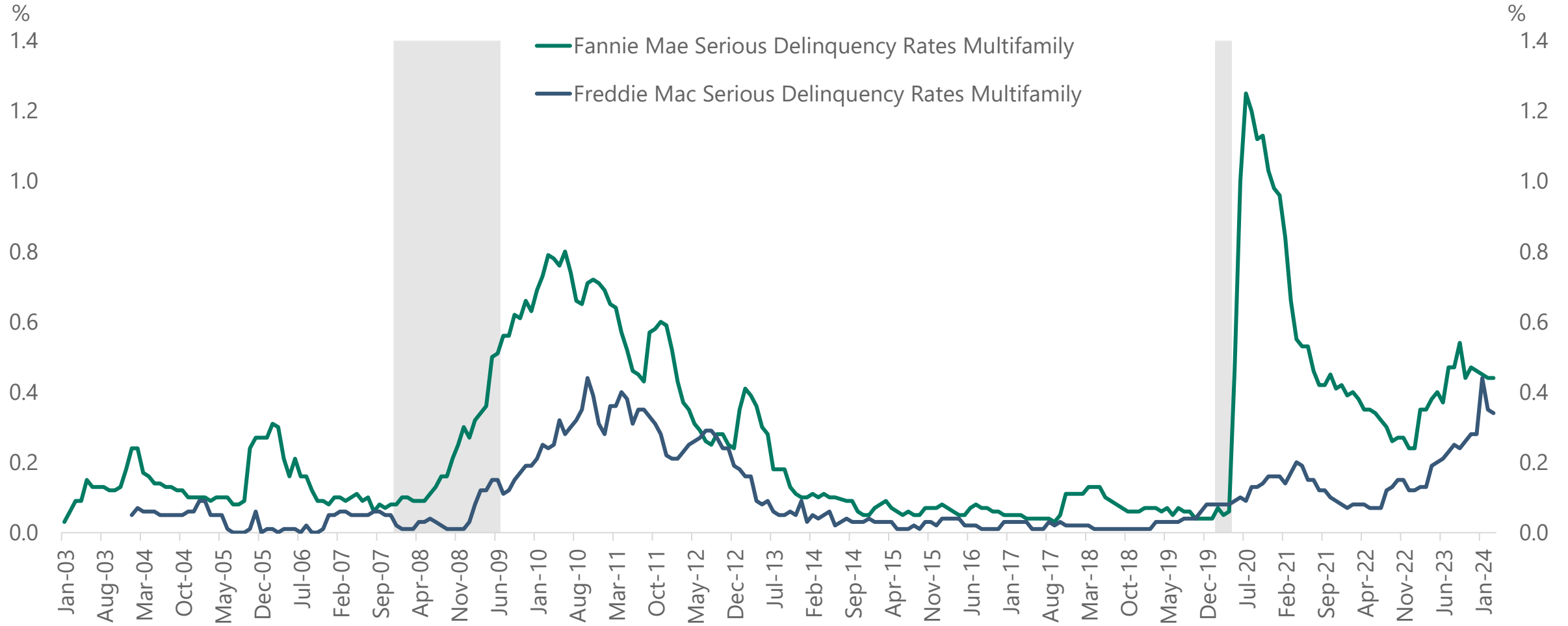
# Intent of housing starts



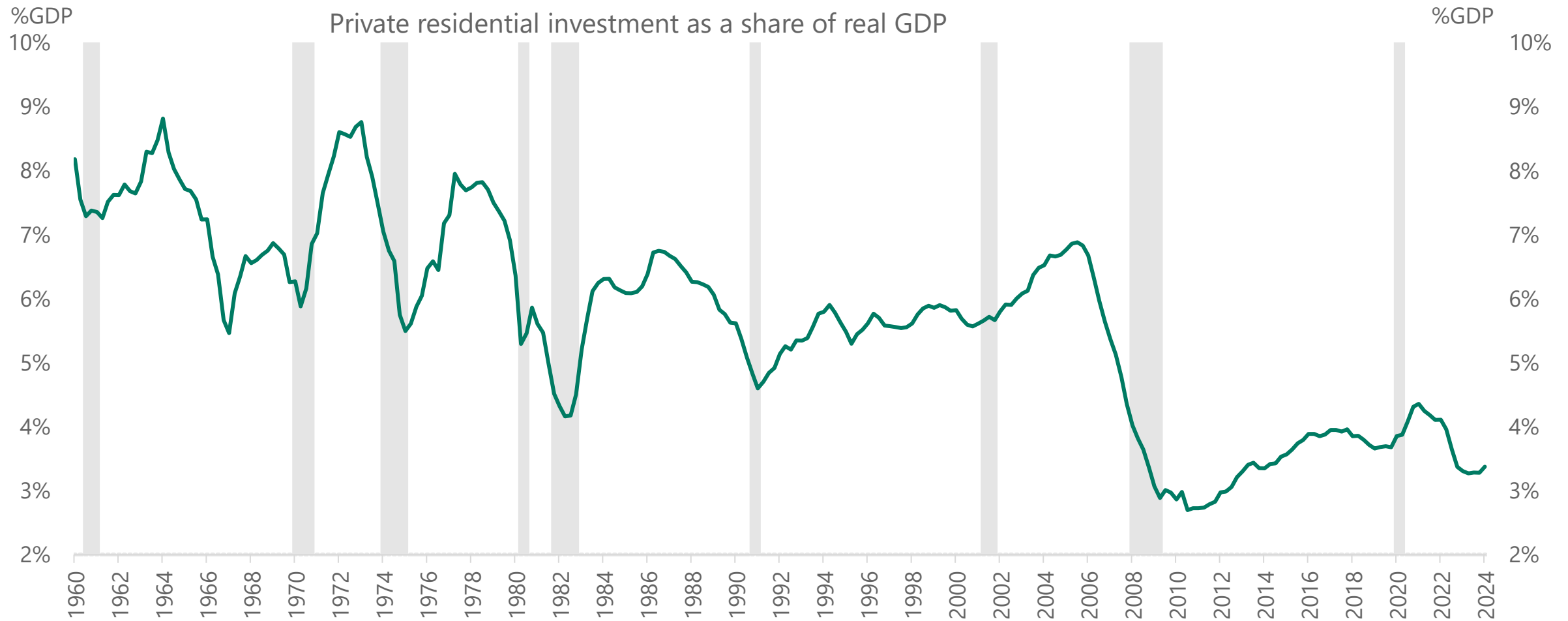
# Some disconnect between housing under construction and new homes sold



# Multifamily delinquencies rising

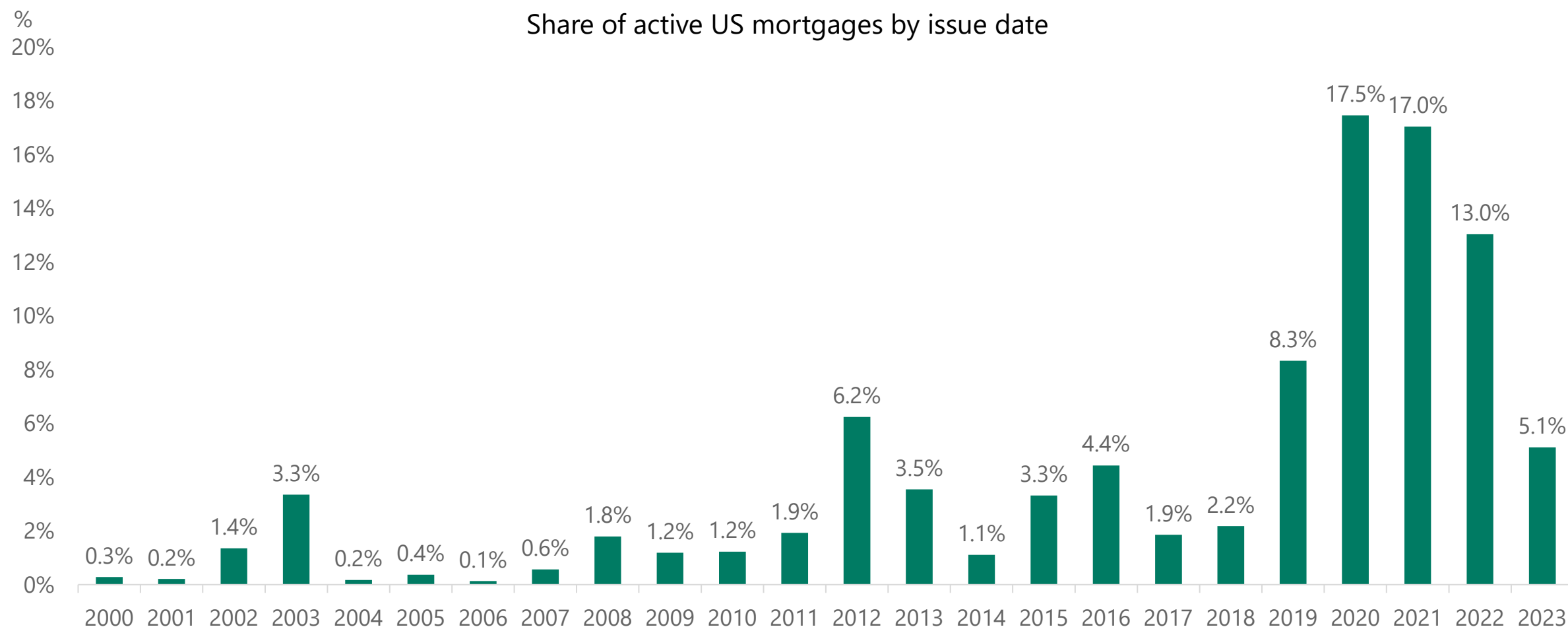


Residential investment as a share of real GDP declined to 3.3% from 9% in 1964

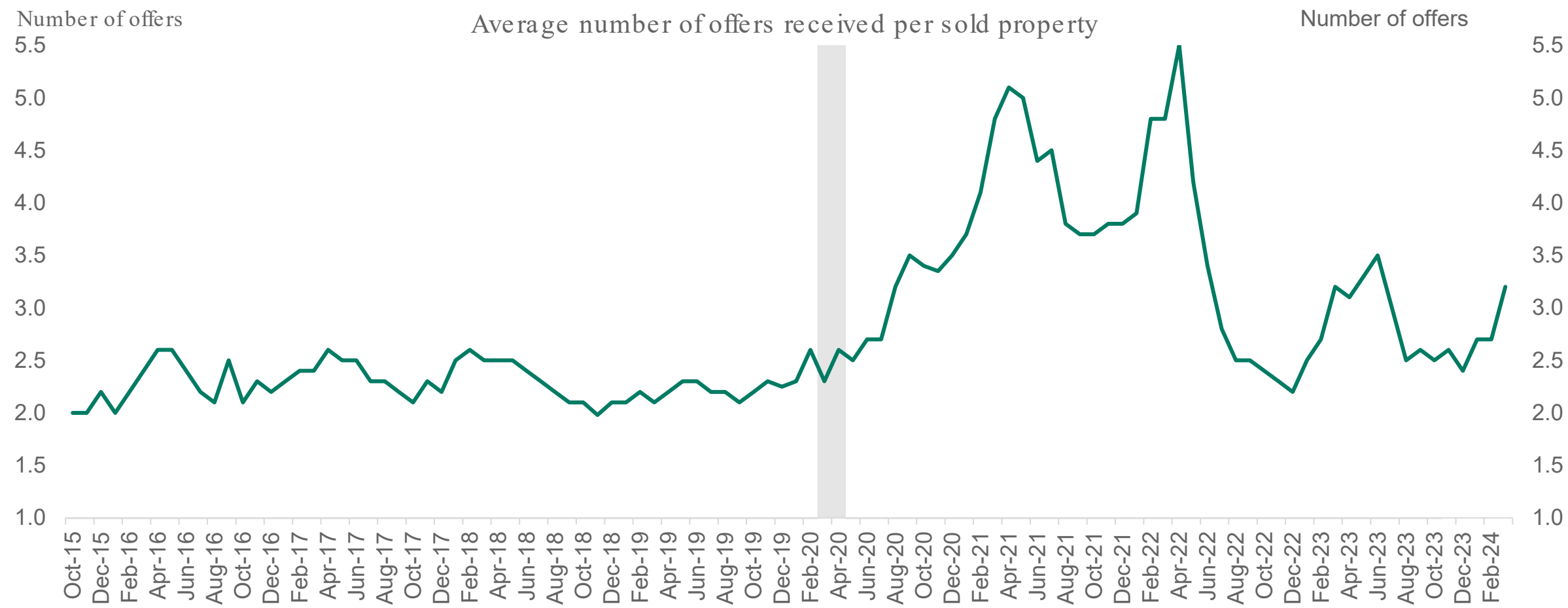




# 63% of all mortgages outstanding were issued after 2018

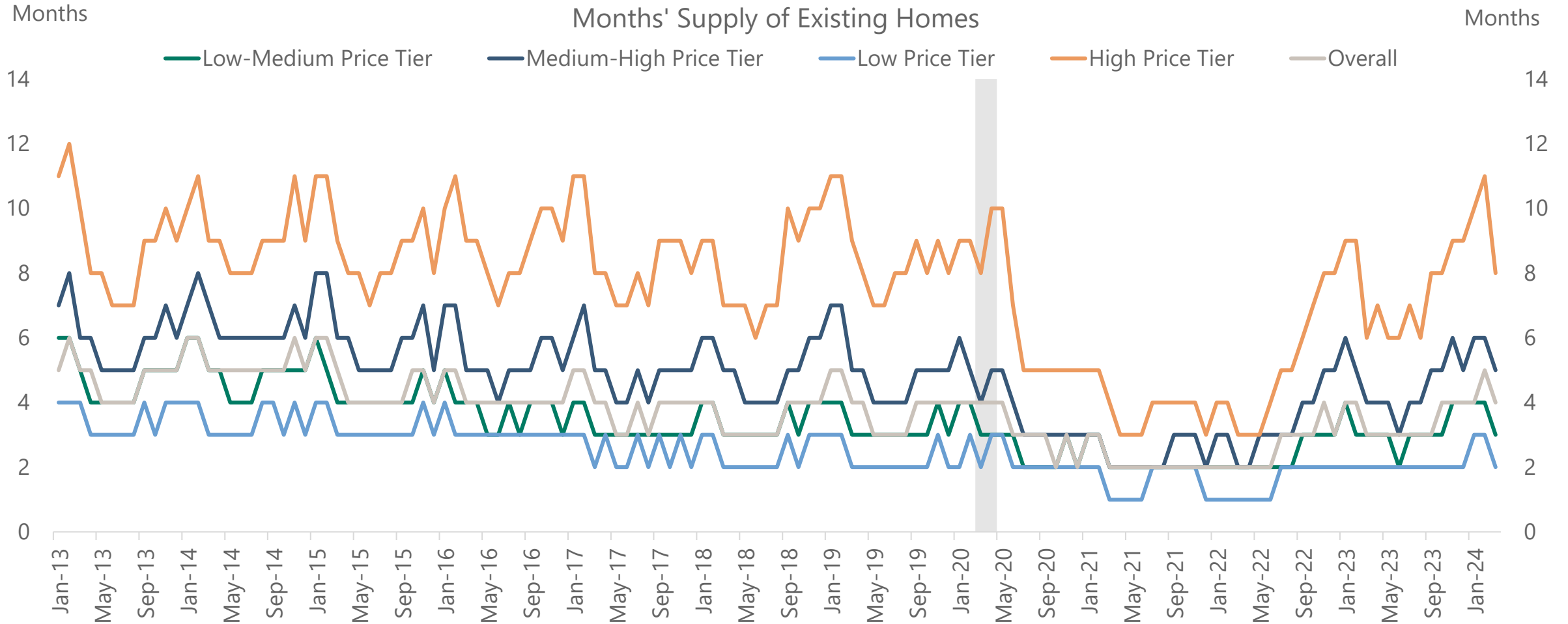


# Fewer bidding wars recently

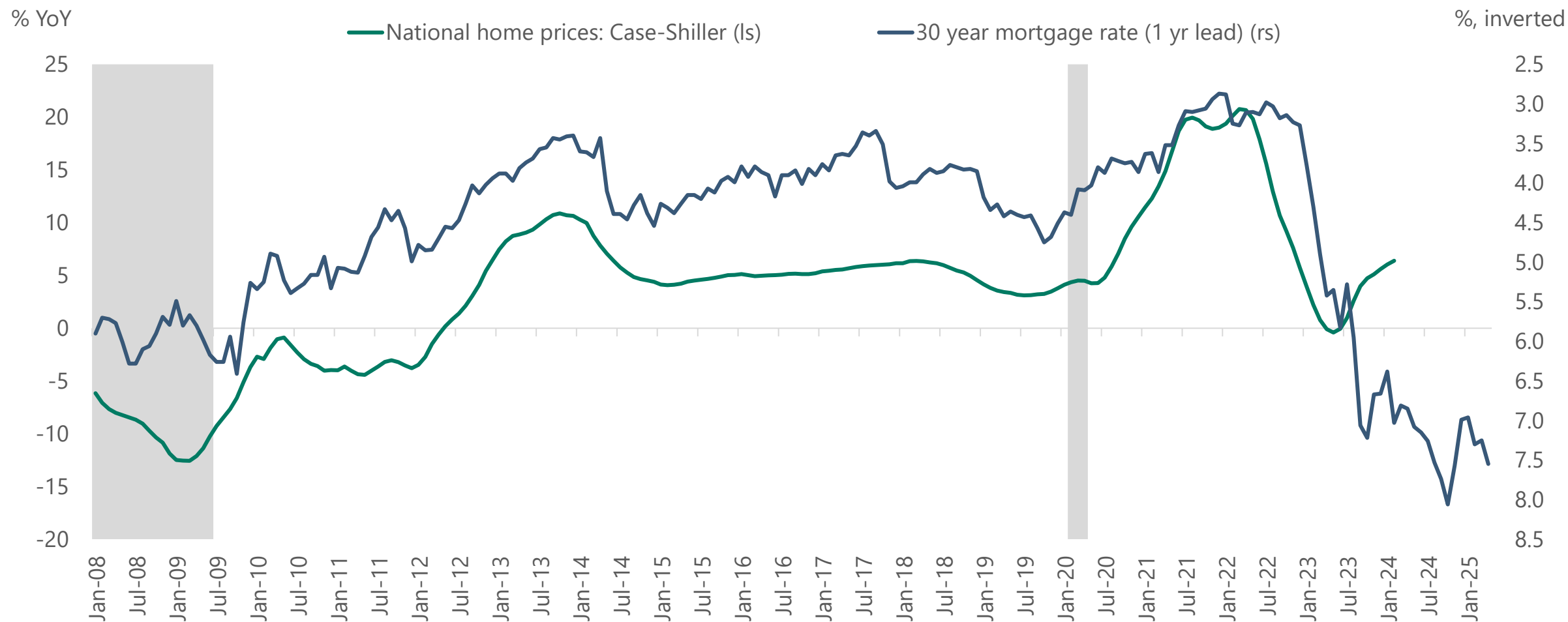


Source: NAR, Apollo Chief Economist

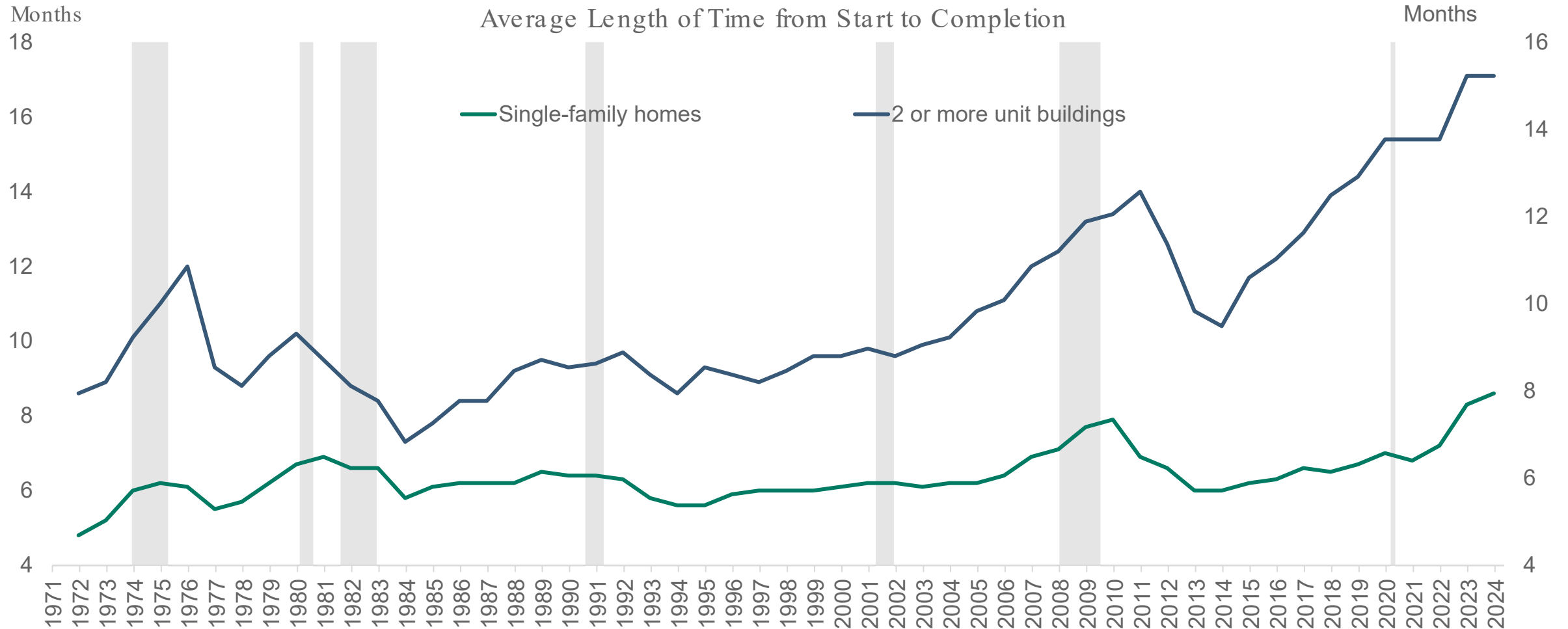
# Seasonal increase in the inventory of homes for sale



# Disconnect between mortgage rates and home prices

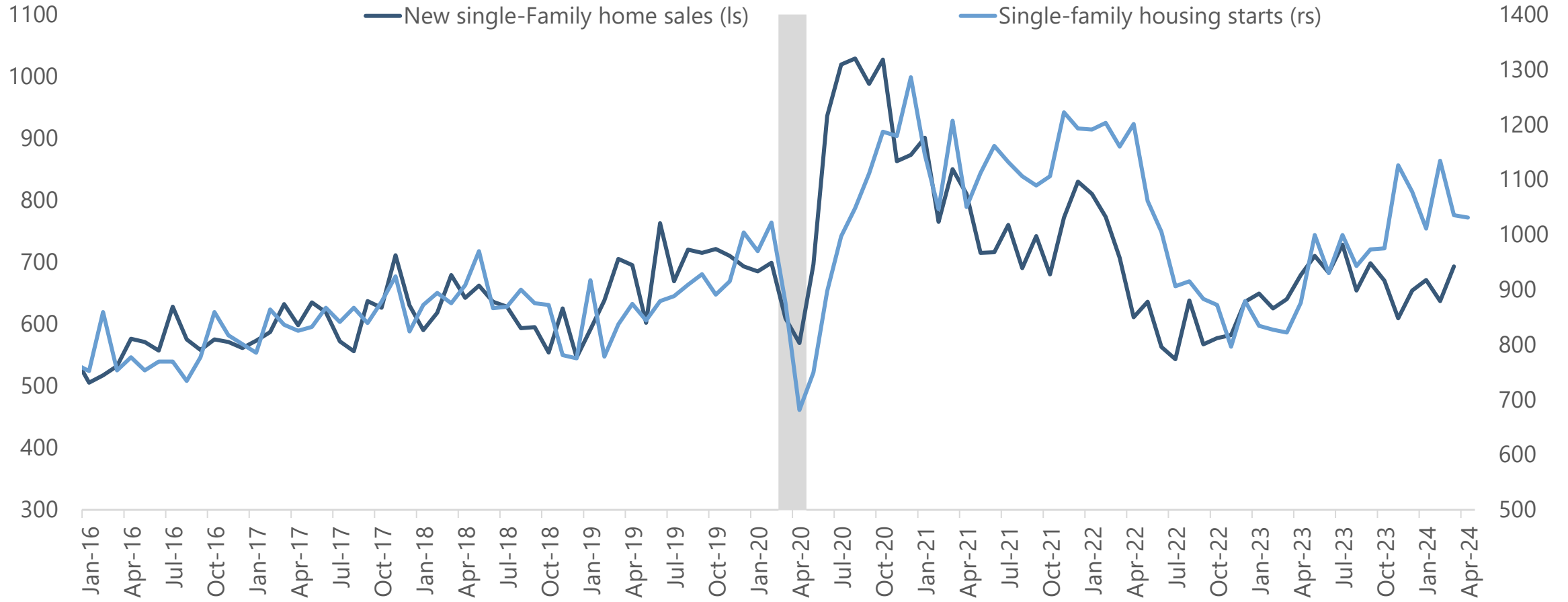


# It currently takes 8 months on average to build a single-family house



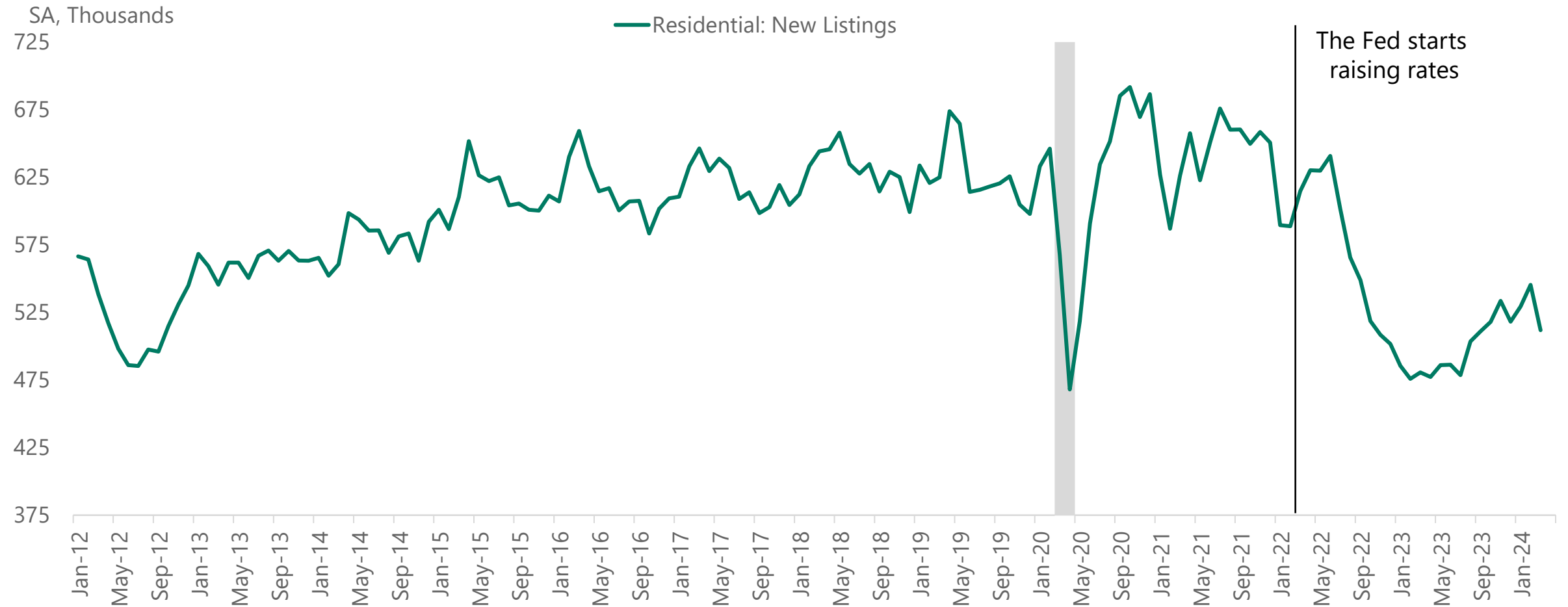
# Rising housing starts points to a rise in new home sales

SAAR, Thous.

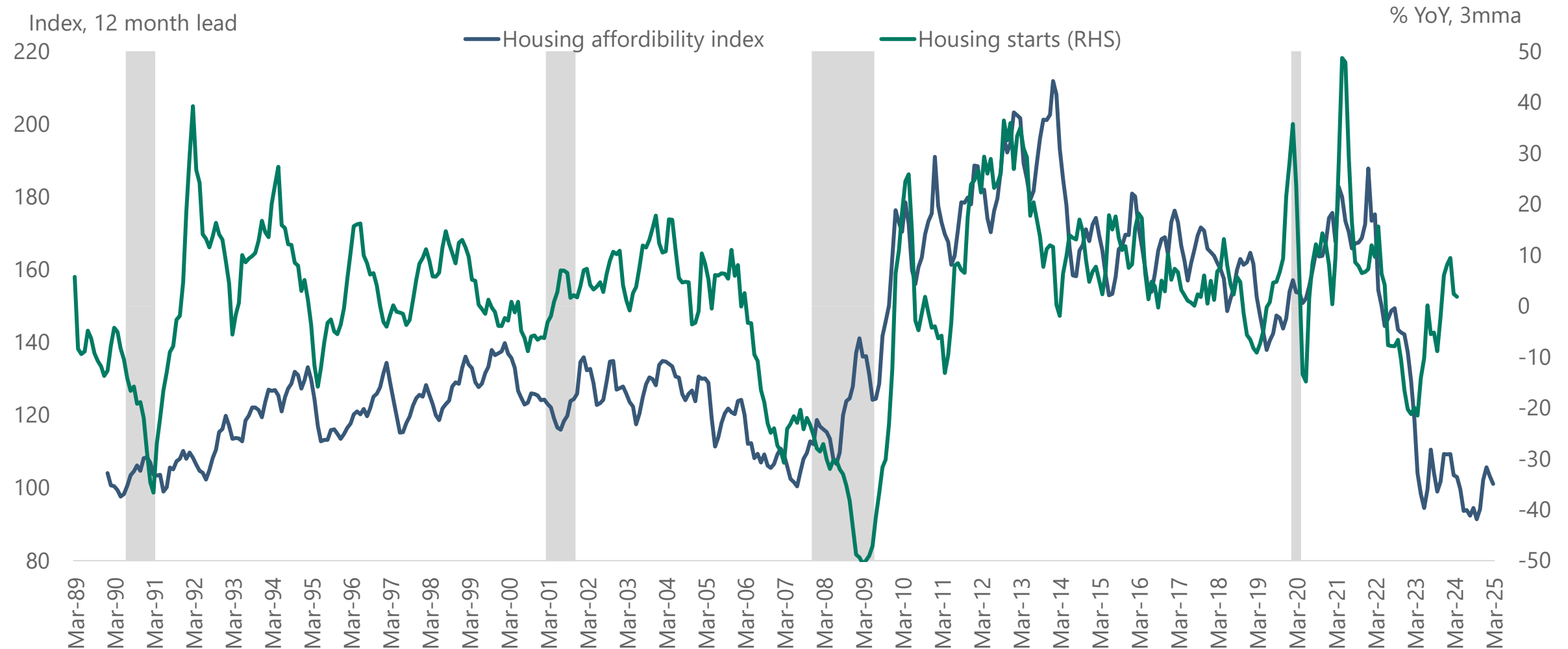


SAAR, Thous.

# Housing supply is low: Residential new listings remains low

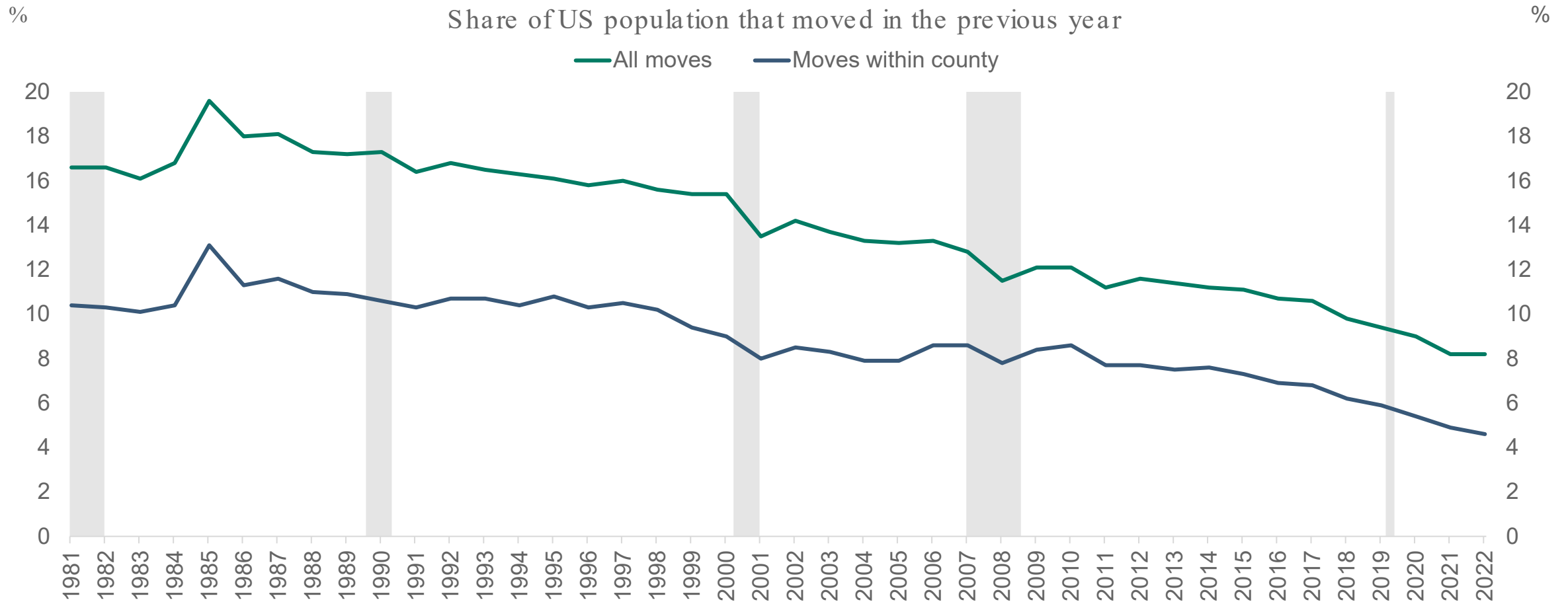


# Low inventory of homes for sale boosting housing starts despite low affordability

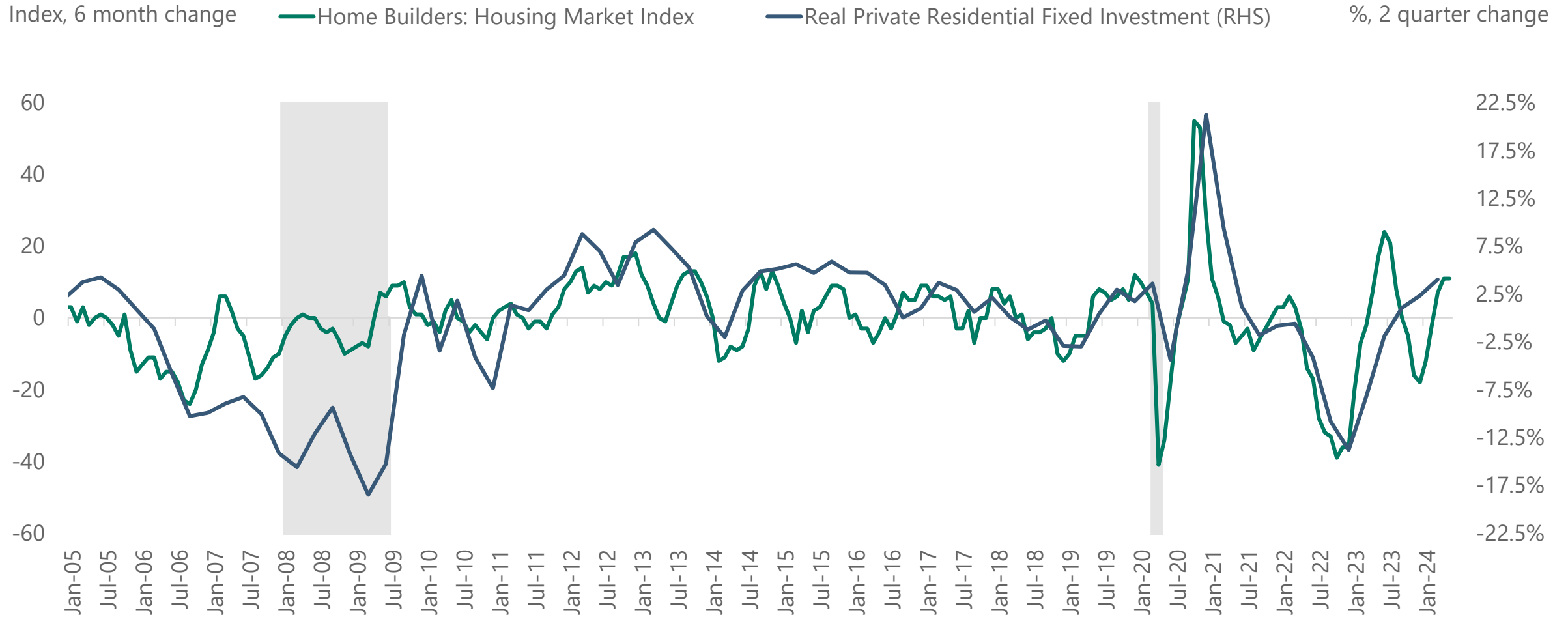




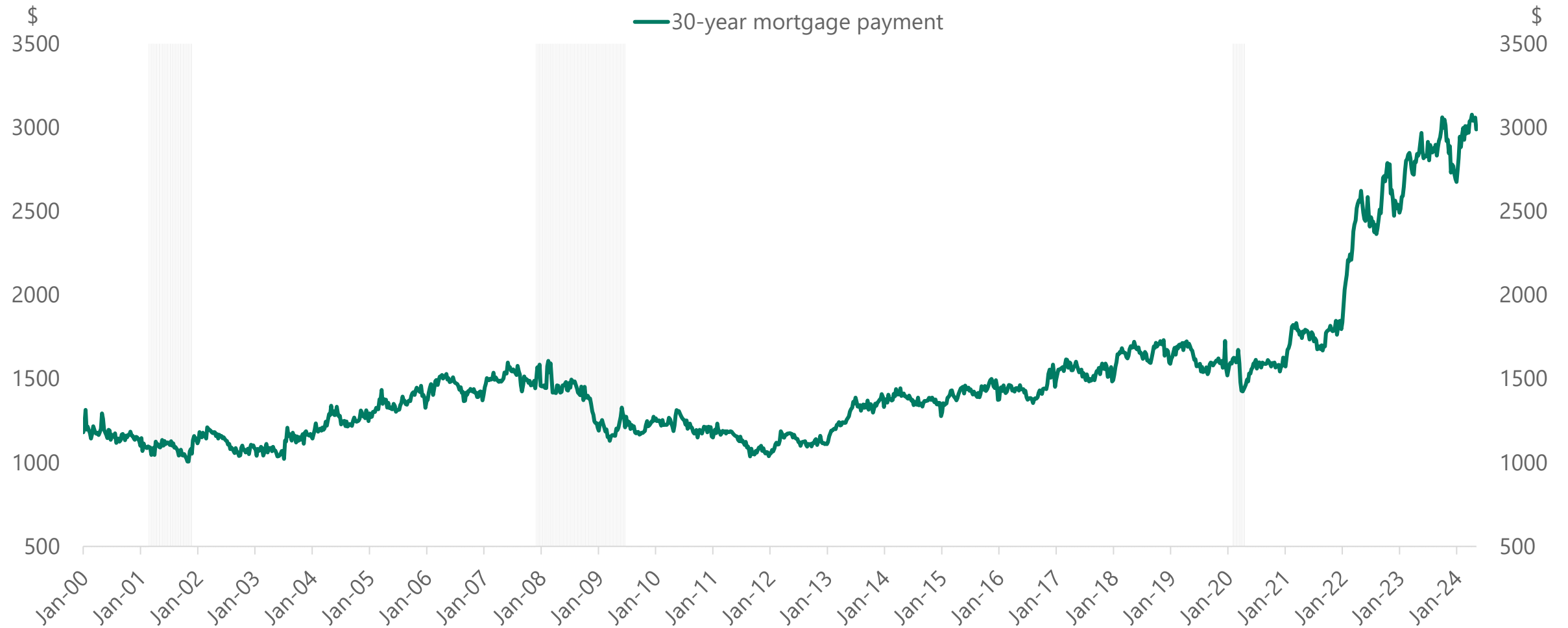
# Structural decline in the share of the US population moving to a new address



If homebuilder confidence rebounds over the coming months because of the Fed pivot, residential investment will also rebound

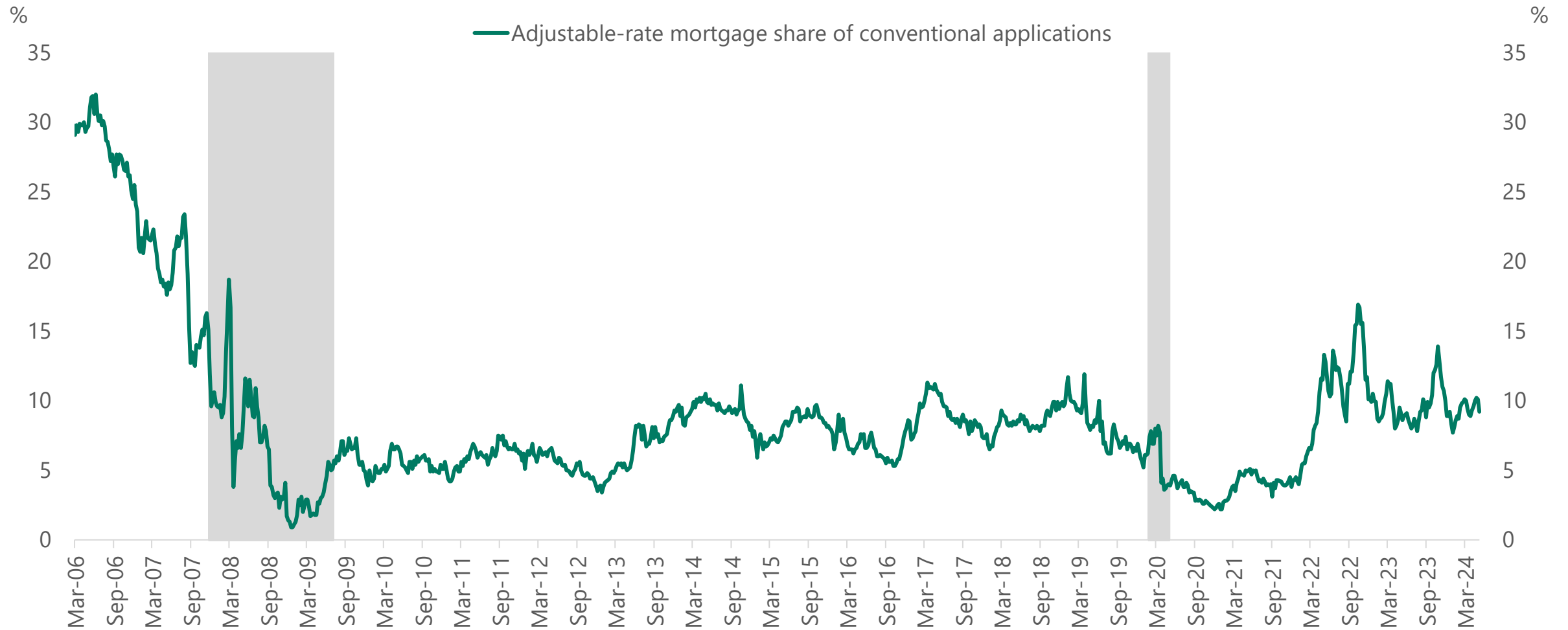


# Monthly mortgage payment on a new mortgage is around \$3000



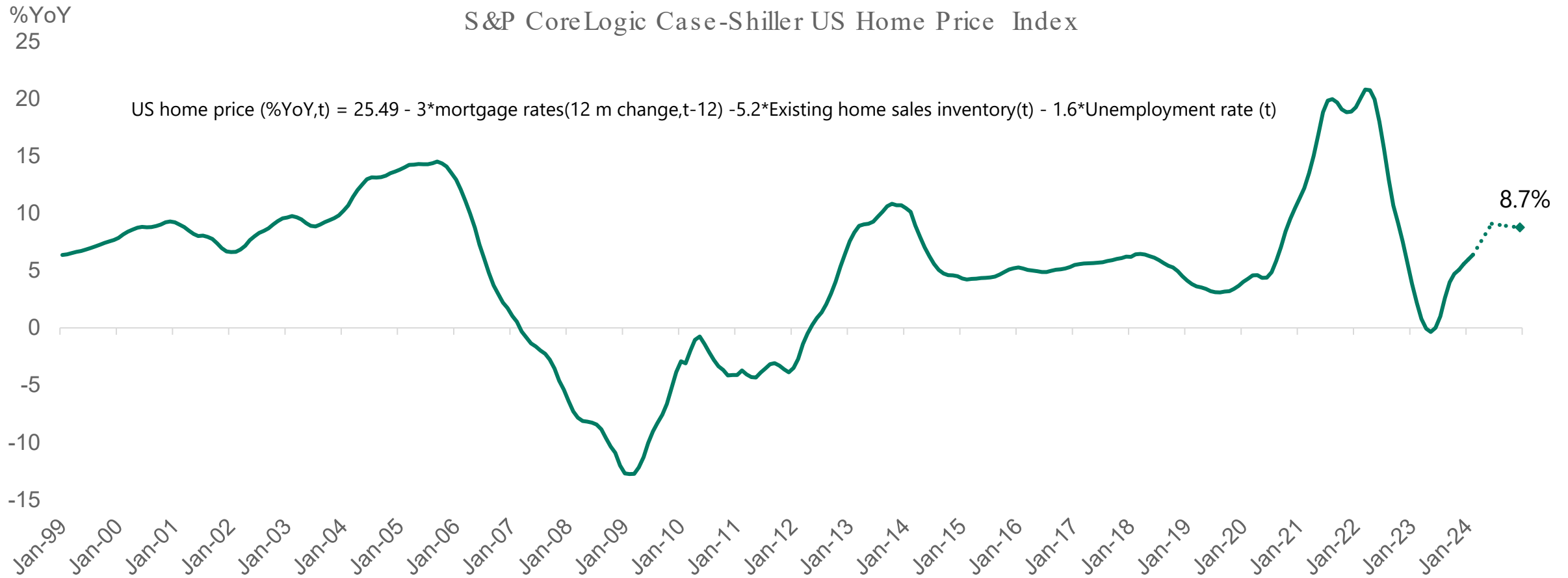
Source: Bloomberg L.P., Apollo Chief Economist (Note: Calculation of monthly payment using the 30-year purchase loan application size and the 30-yr effective rate.)

# ARM share of total mortgage applications steady at 10%

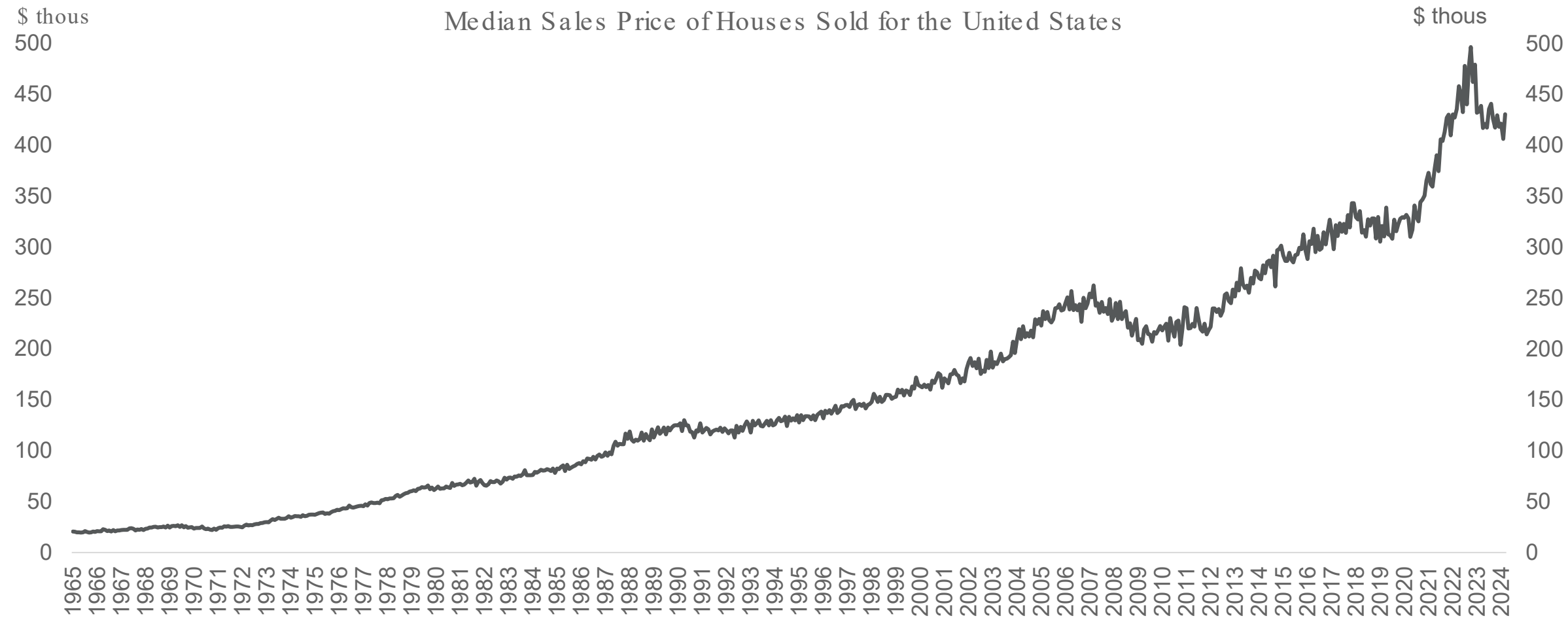


3) House Prices: Home price inflation not yet impacted by higher mortgage rates

US house price model: Declining mortgage rates pushing home prices higher.  
Low inventory pushing home prices higher.

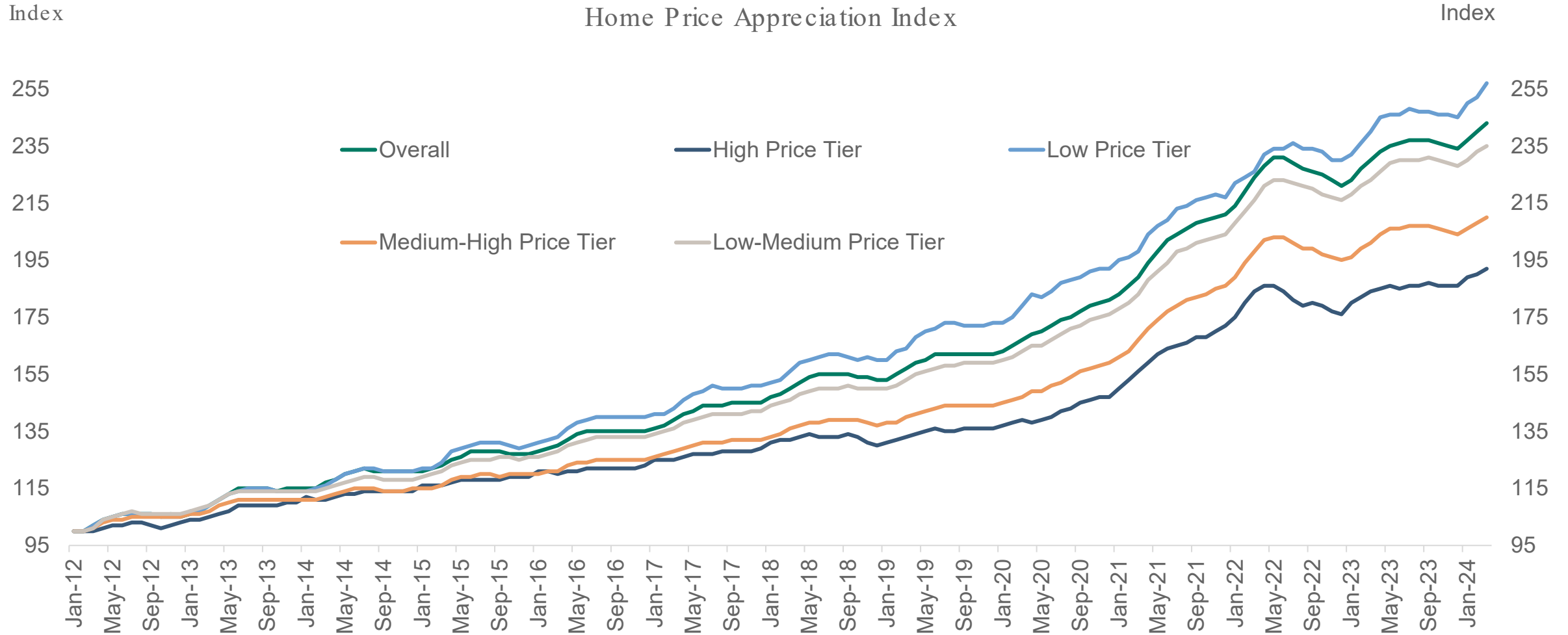


Median home sales price now \$430.7K



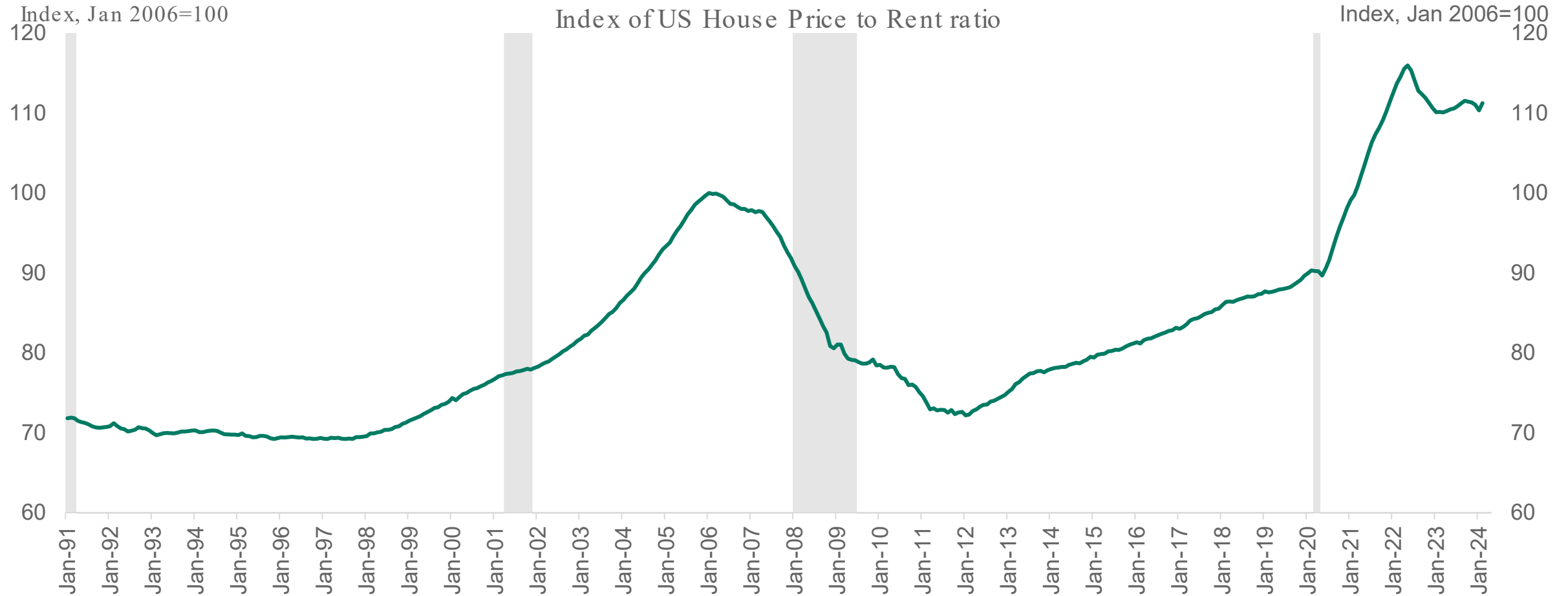
Source: Census Bureau, Apollo Chief Economist

# House price inflation stabilizing across price tiers

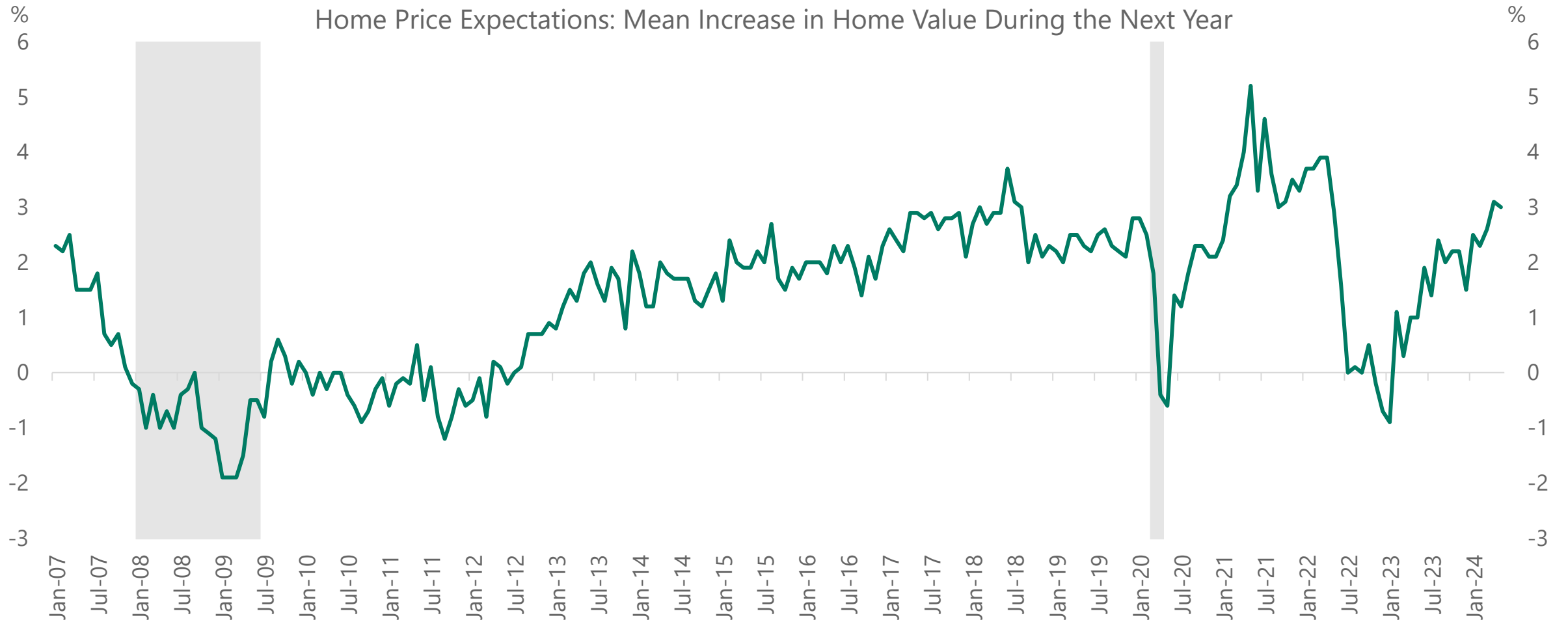




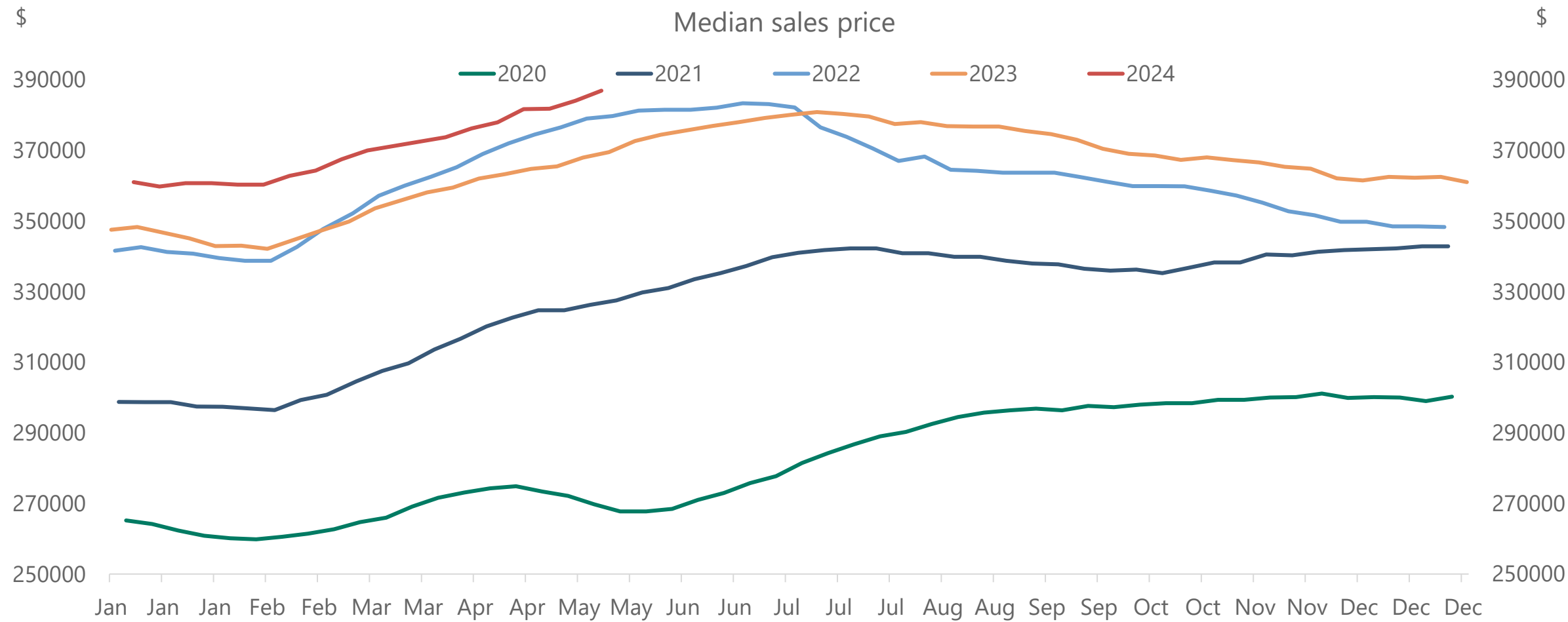
# Home price to rent ratio significantly above 2006 levels



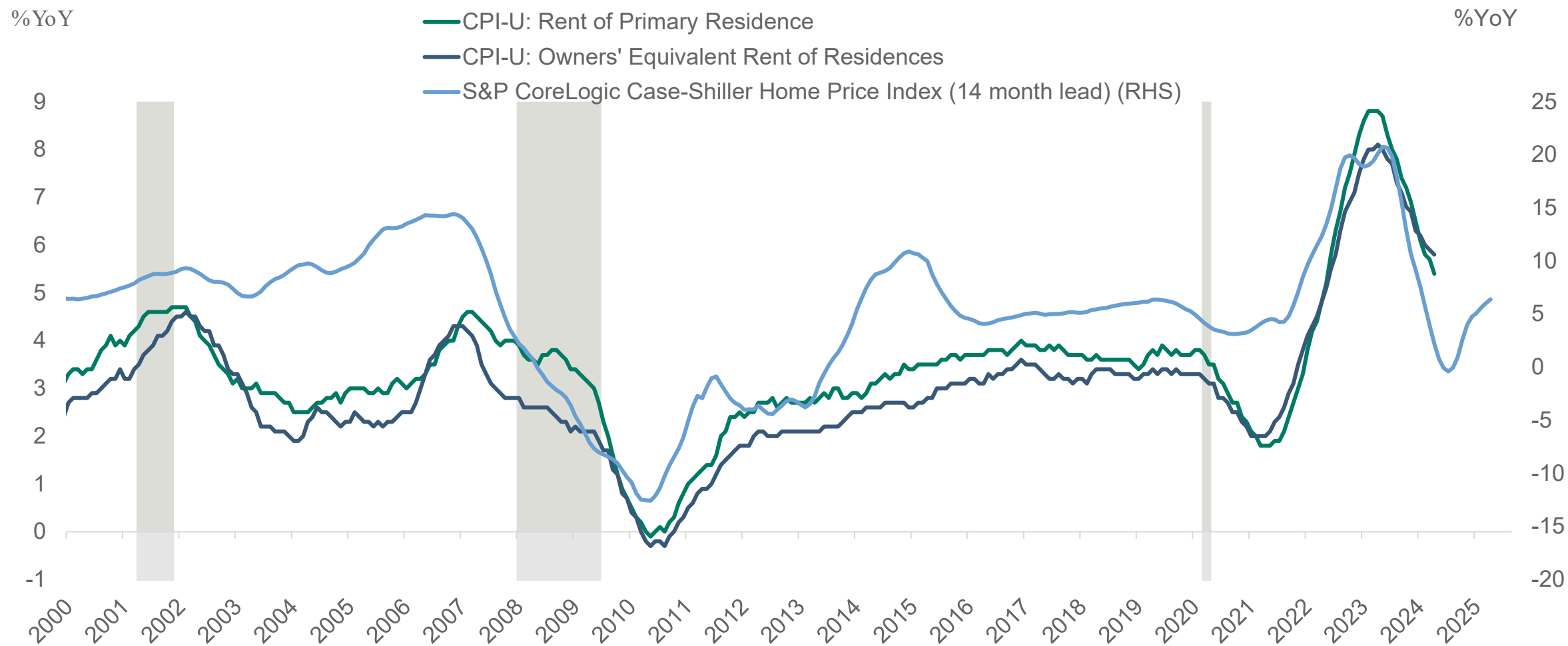
# Consumers' expectations of home price inflation



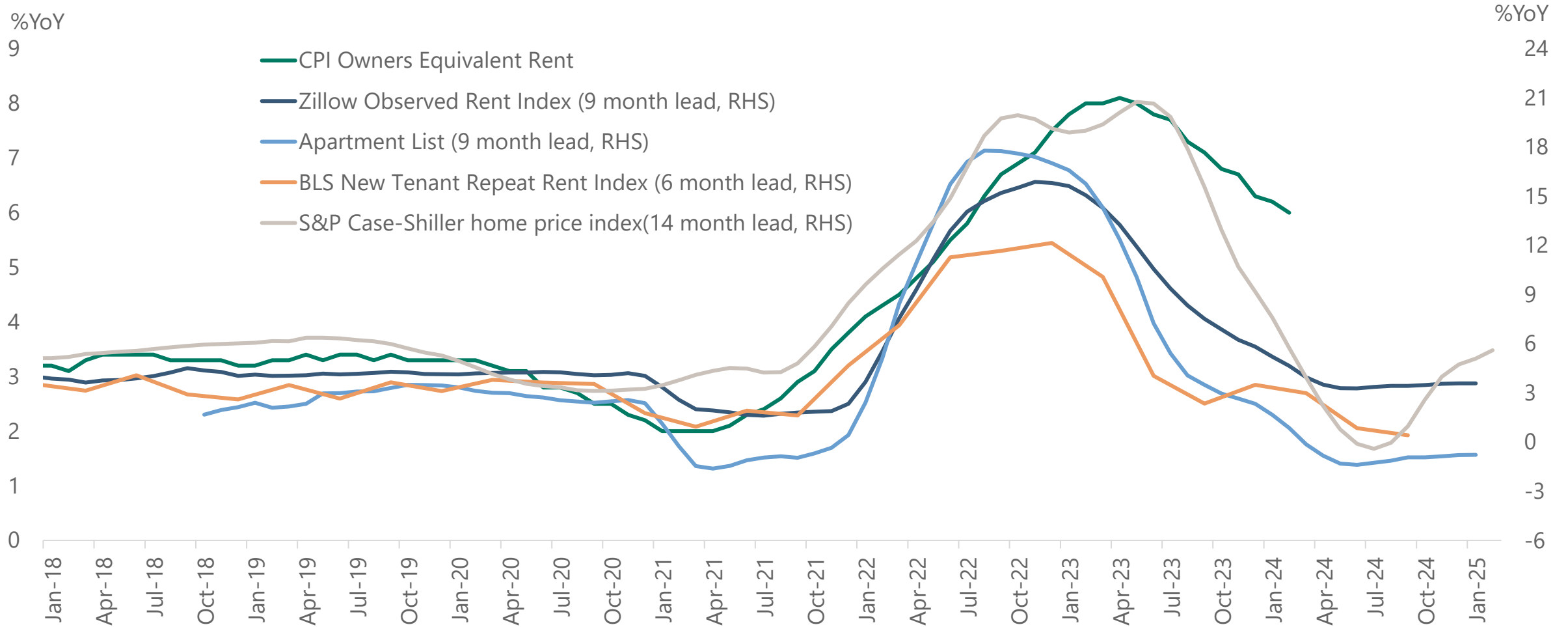
# Median sales price well above last year's levels



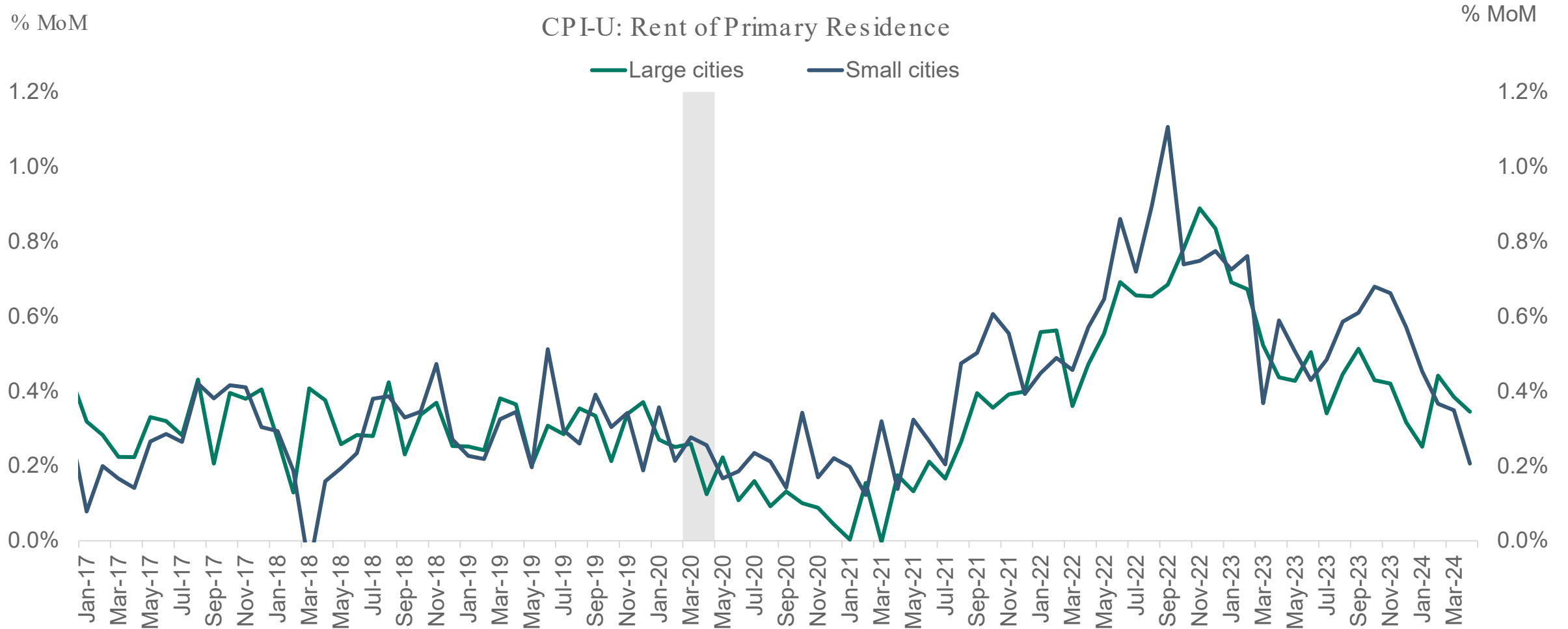
# Home price inflation rebounding



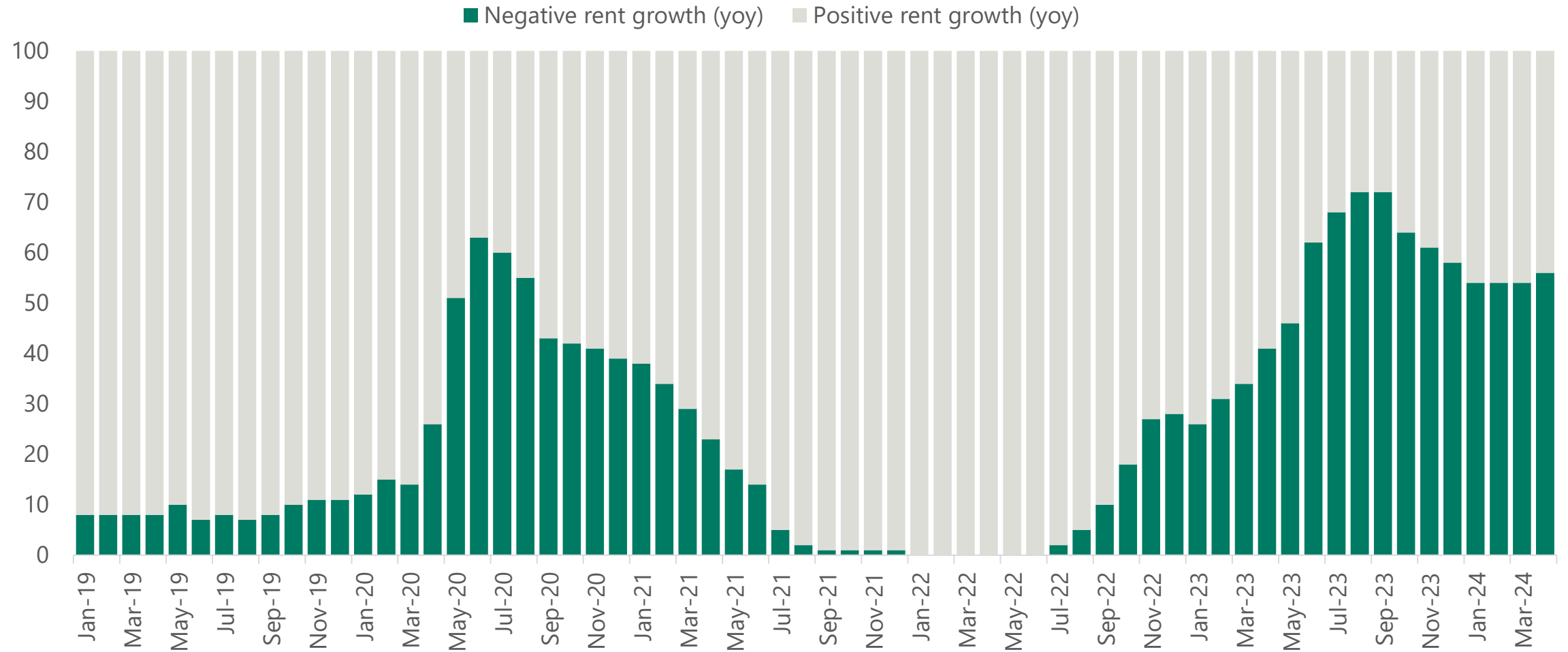
# Rebound coming in housing inflation



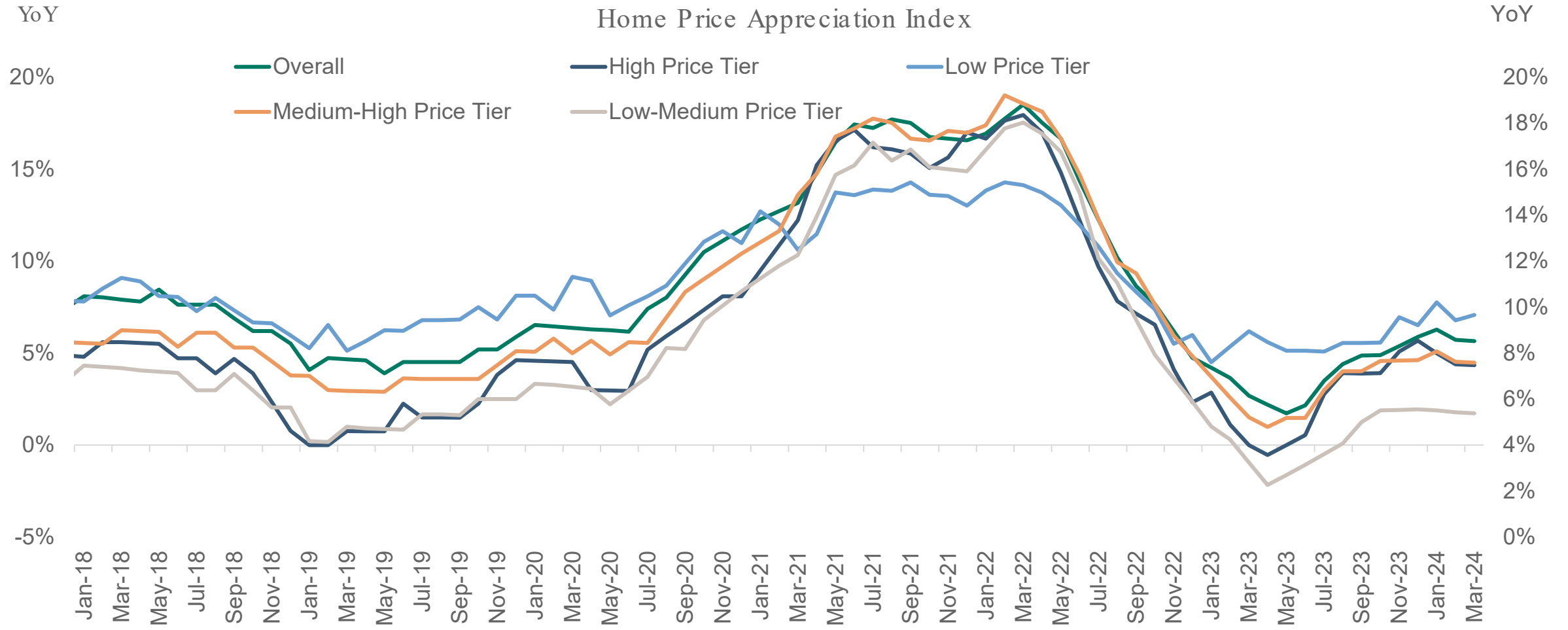
# But rent inflation still trending lower in both small cities and large cities



# 100 largest US cities: Share of cities with positive rent growth high

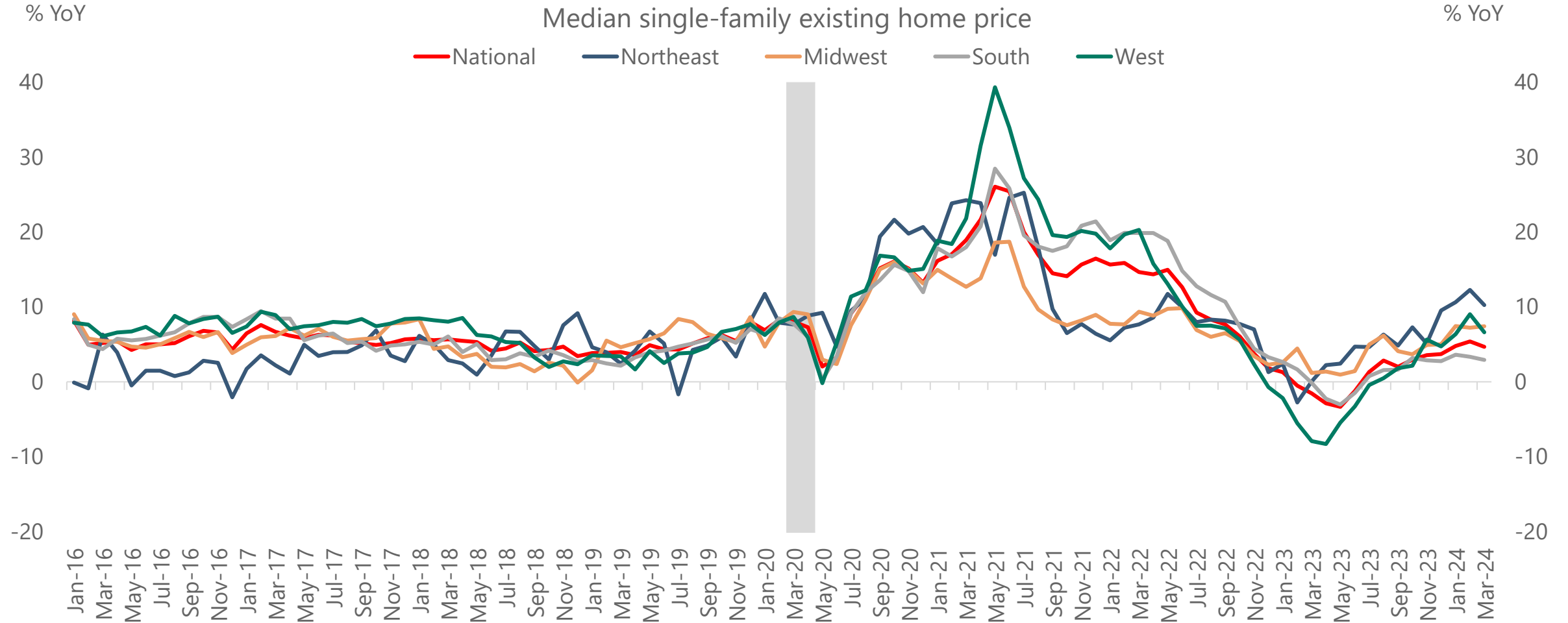


# Home price inflation solid because of low inventory of homes for sale

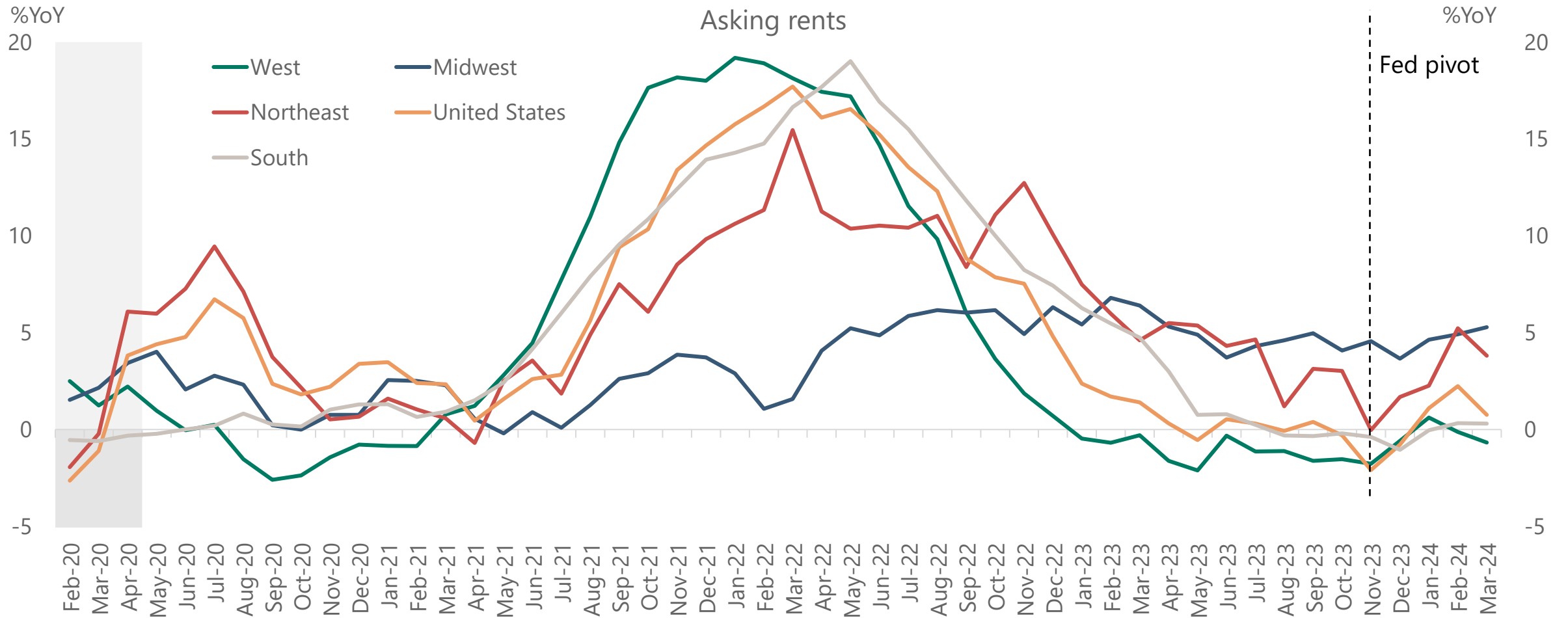




# Home price inflation solid because of low inventory of homes for sale



# Asking rents rising across regions



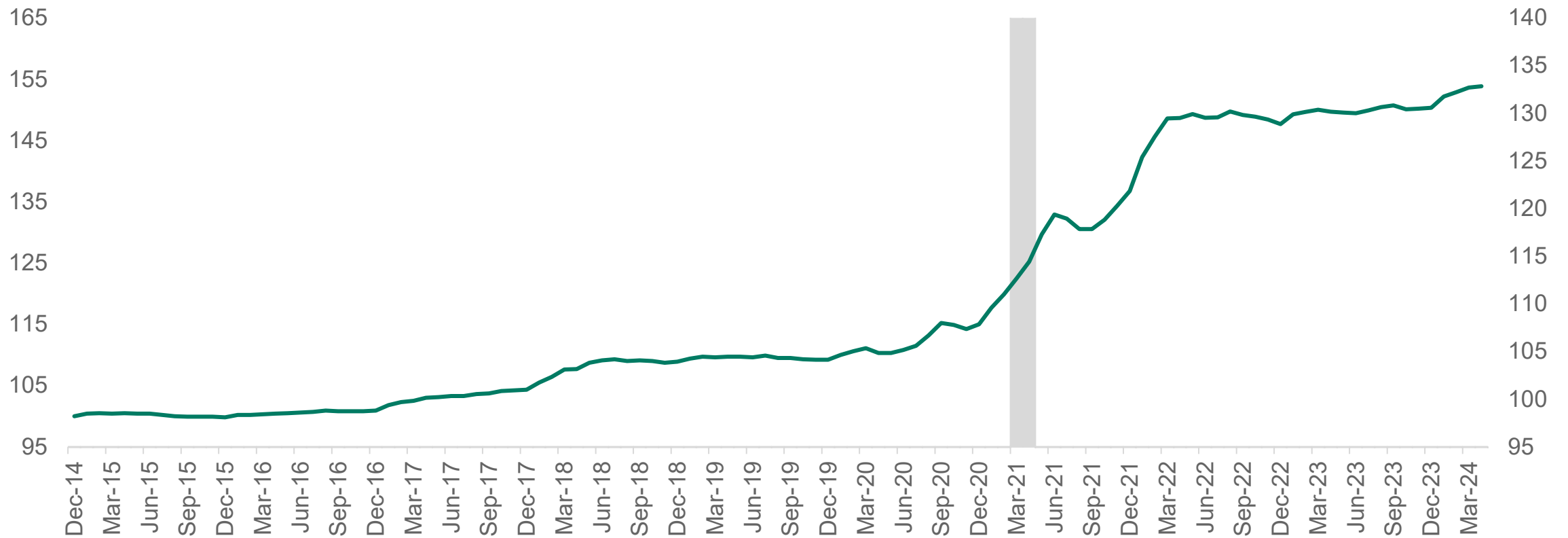
4) Housing Outlook: **High mortgage rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle**

# Housing construction costs are high

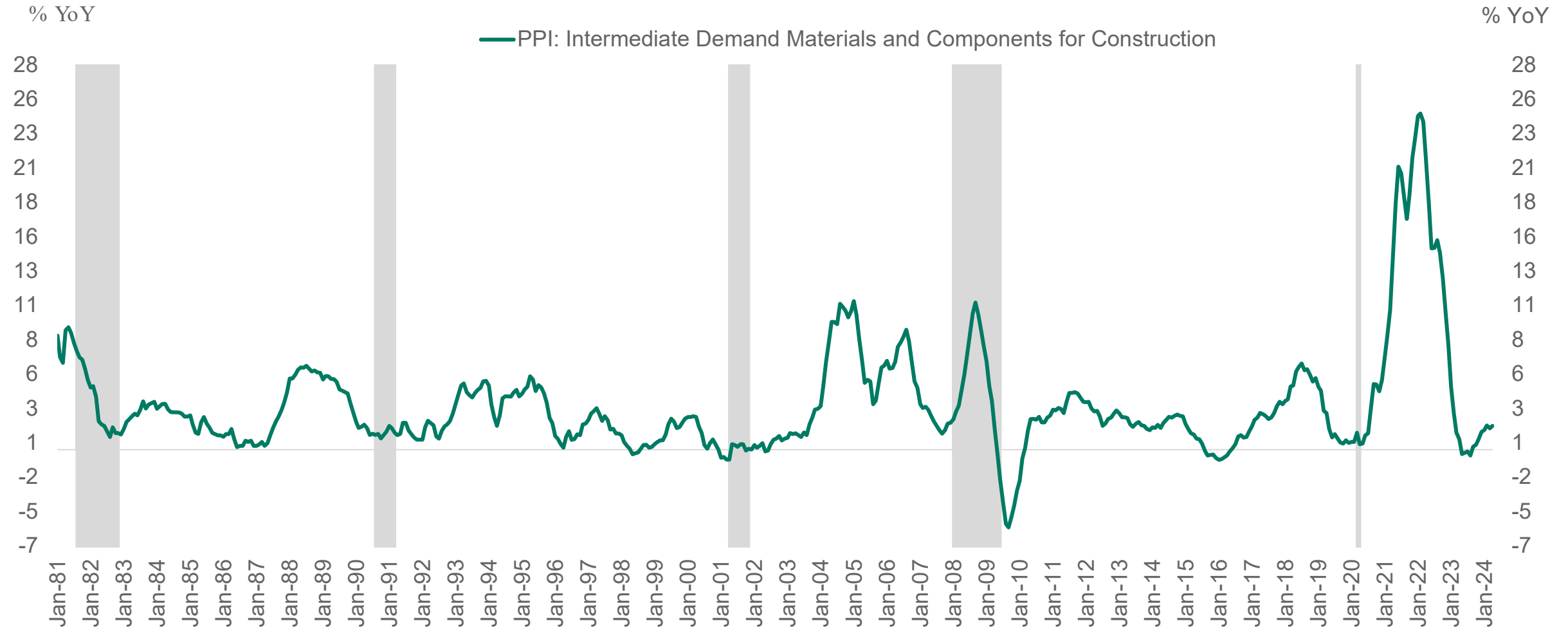
1986 = 100, NSA

PPI: inputs to residential construction, goods less foods & energy inputs

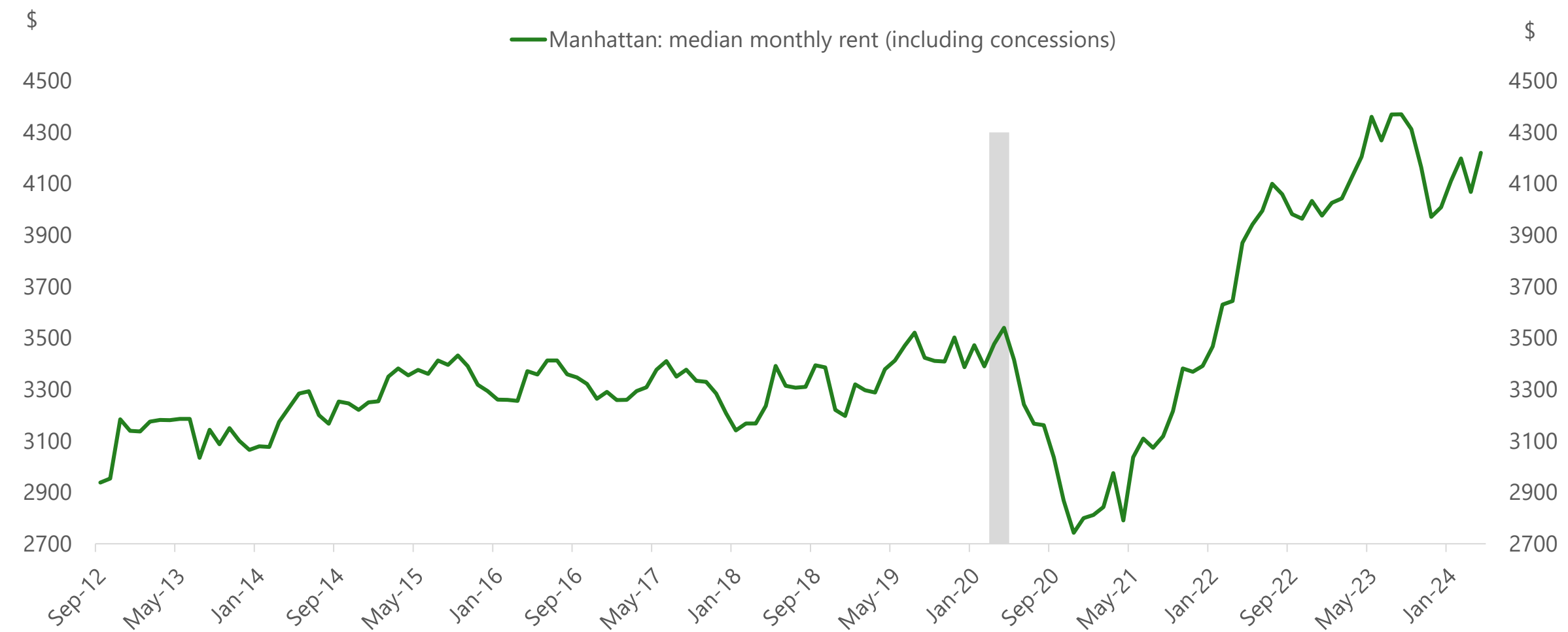
1986 = 100, NSA



# Inflation in input costs for home builders rising

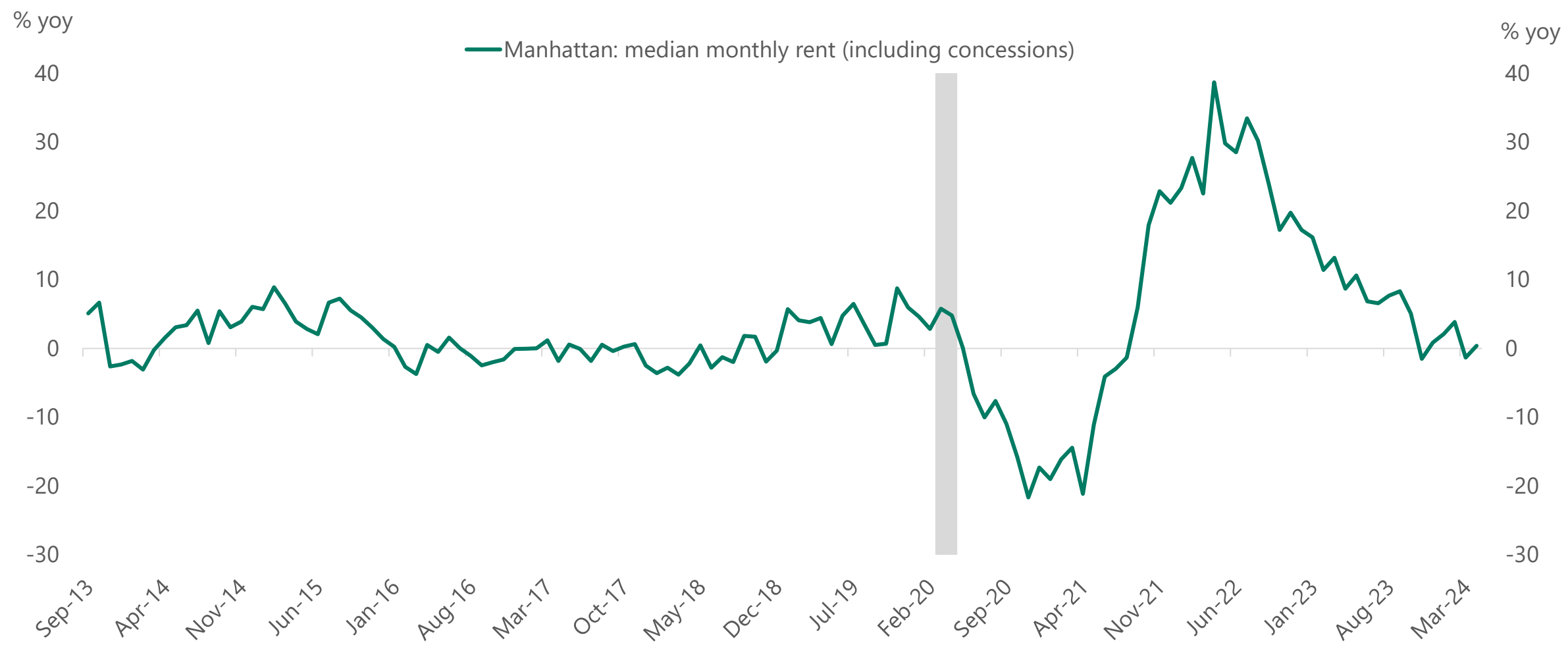


# Manhattan median rent rose to \$4220 in April 2024



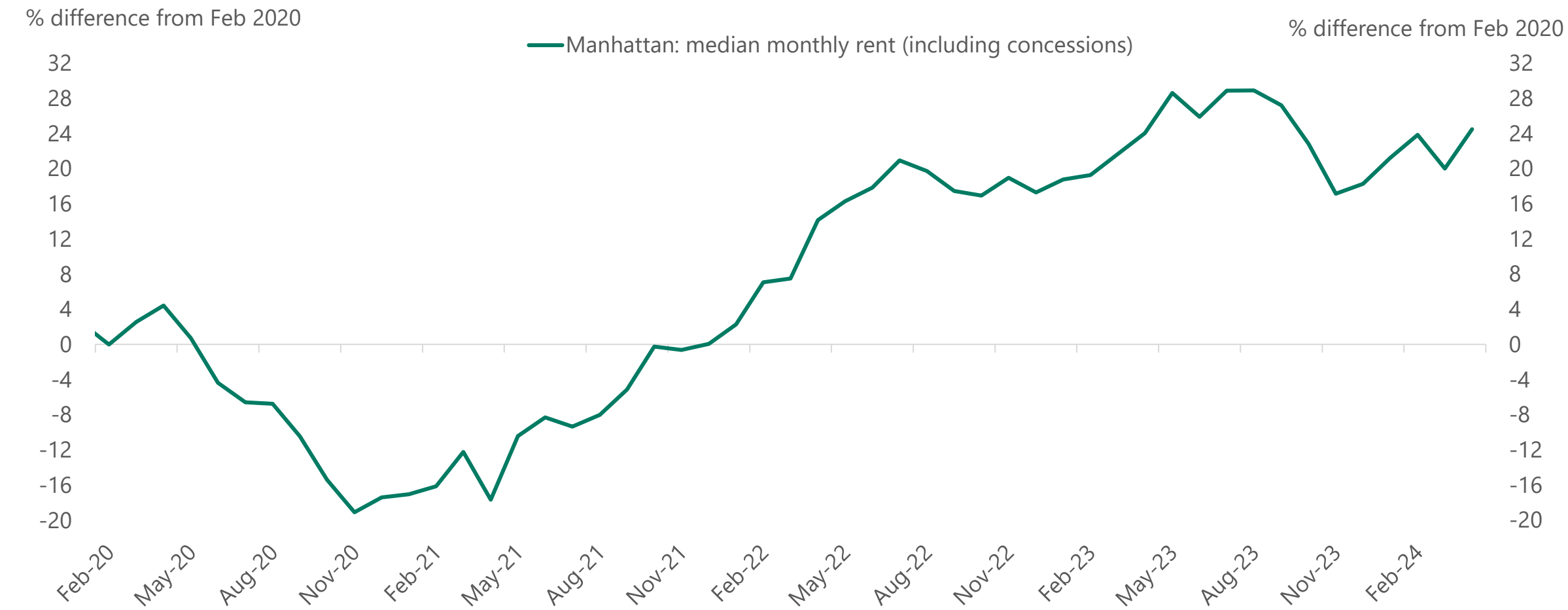
Source: Elliman, Apollo Chief Economist

# Manhattan rent growth slowing



Source: Elliman, Apollo Chief Economist

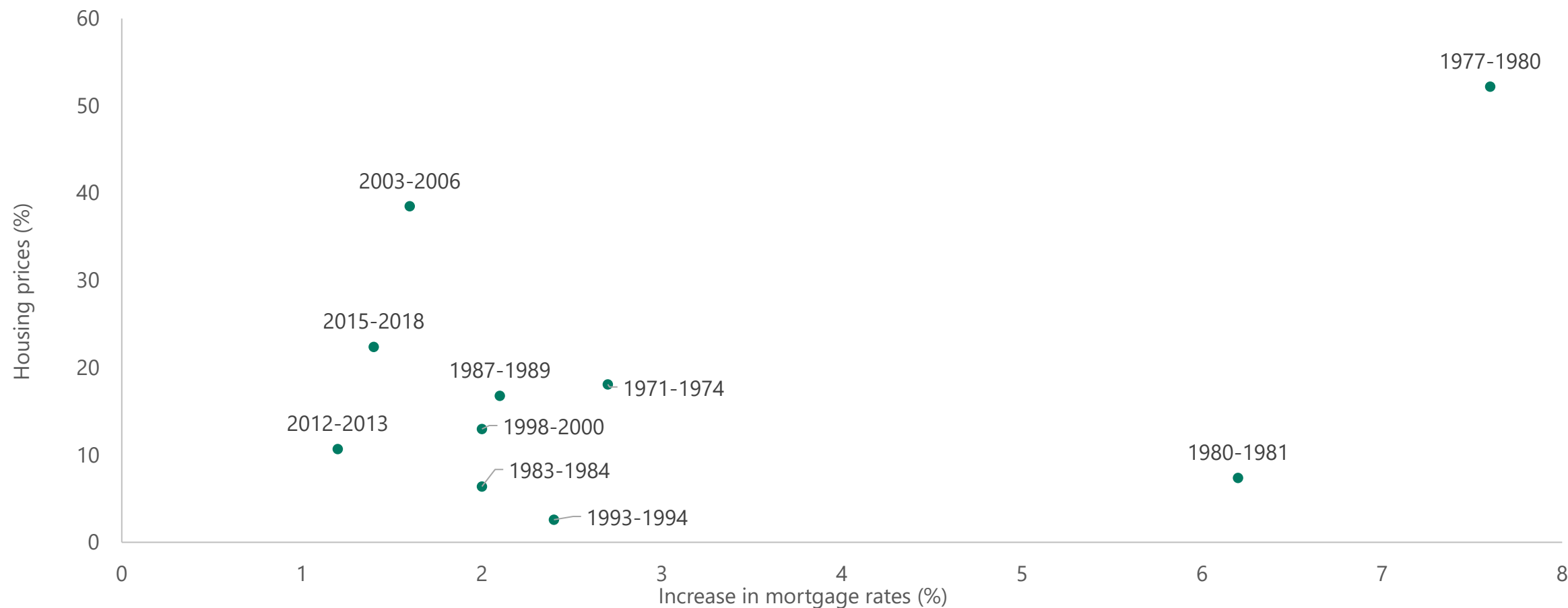
# Manhattan rents still above pre-pandemic levels



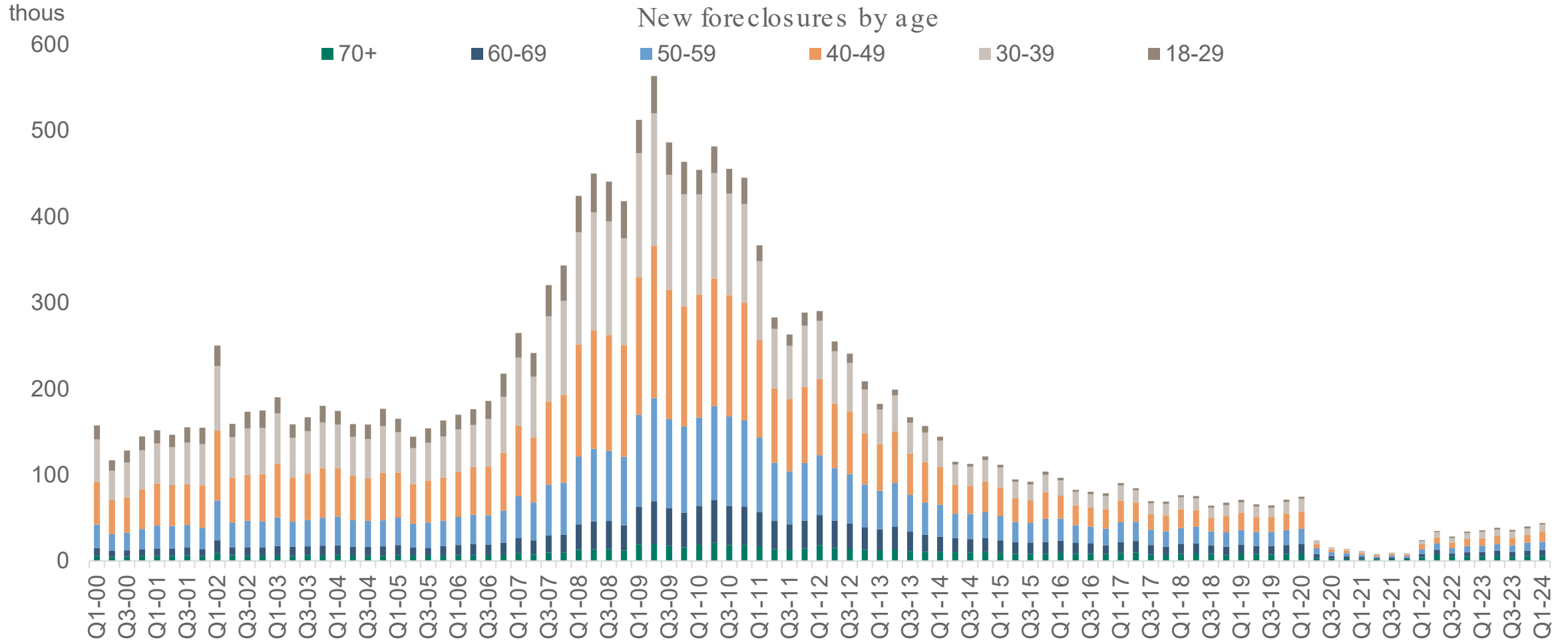
Source: Elliman, Apollo Chief Economist



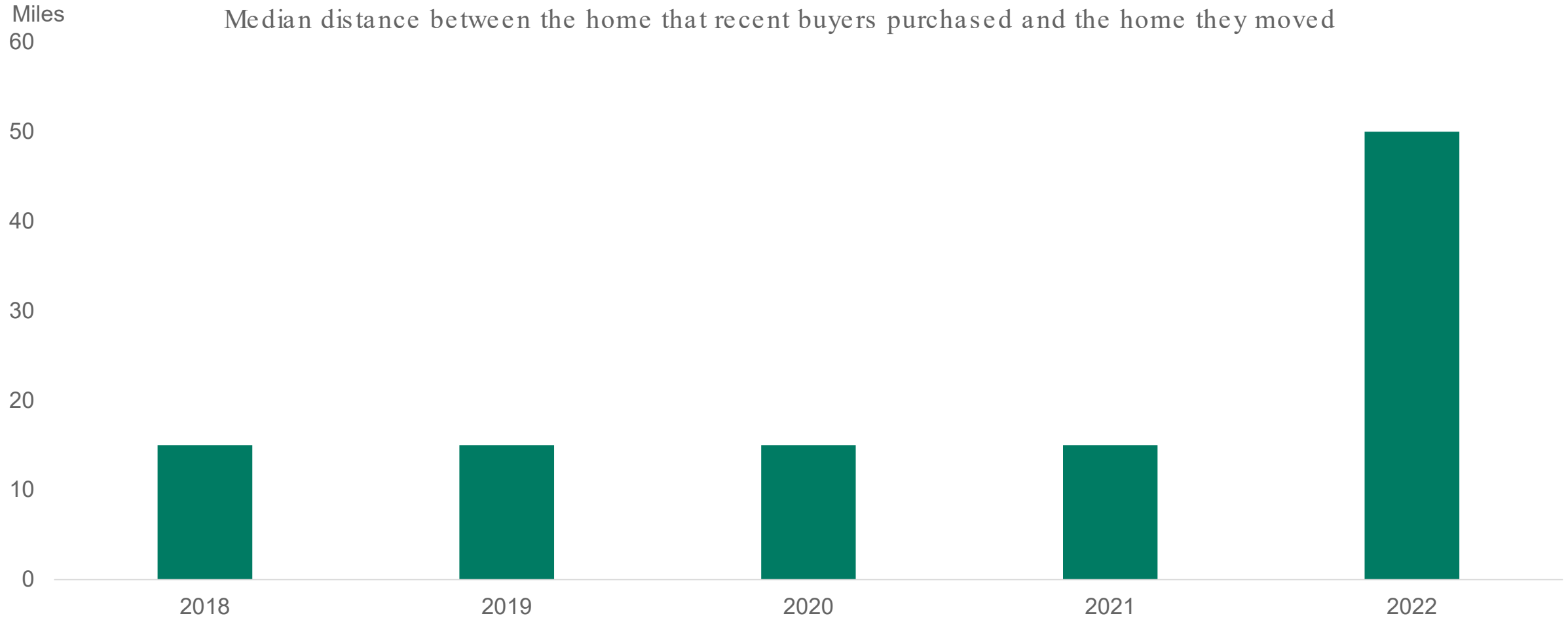
# Rising mortgage rates generally associated with lower home price inflation



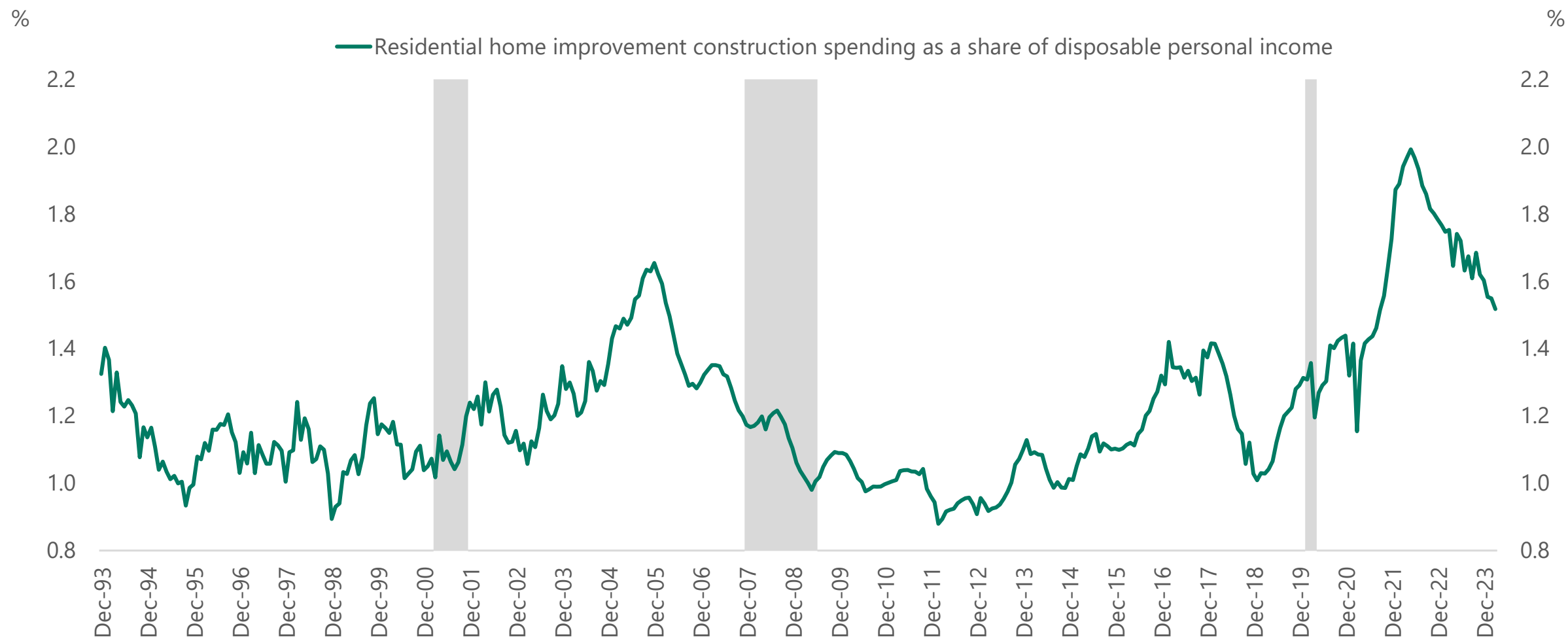
# New foreclosures, by age of homeowner



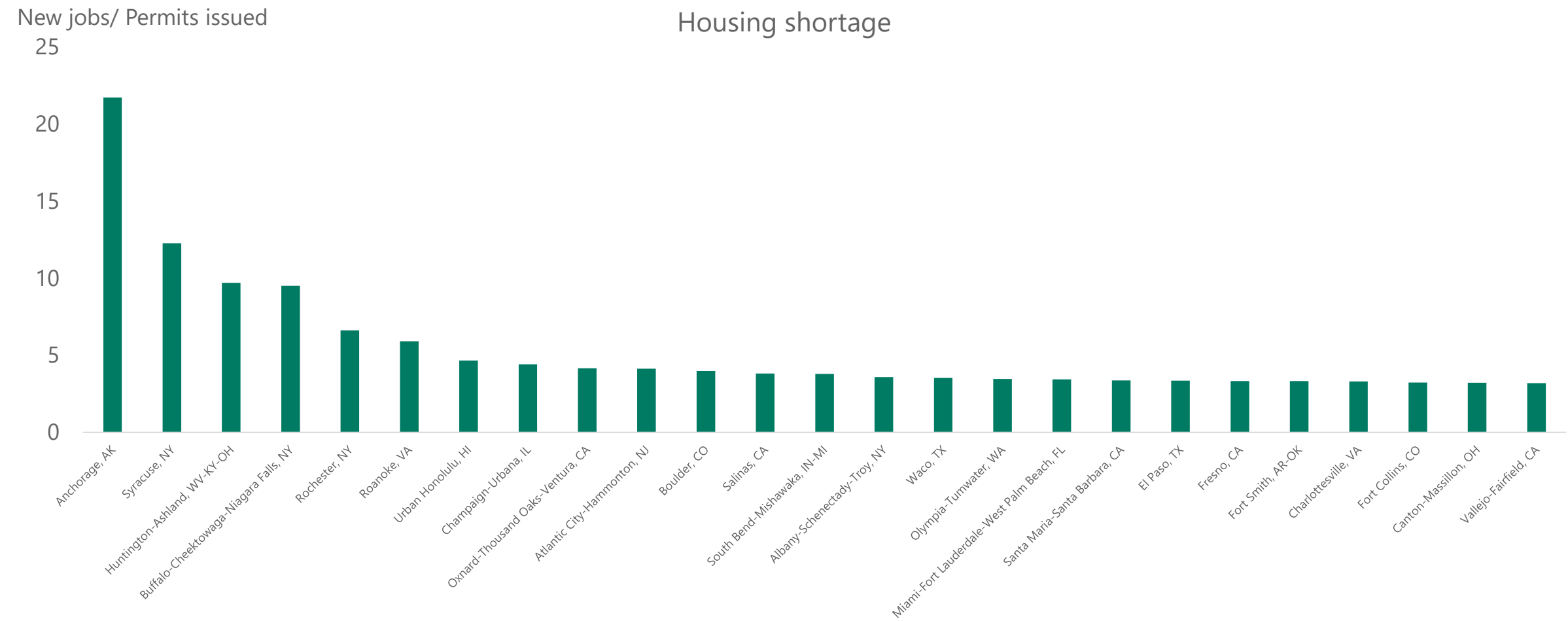
# Median distance between the home that recent buyers purchased and the home they moved from at 50 miles in 2022



# Home improvement spending declining

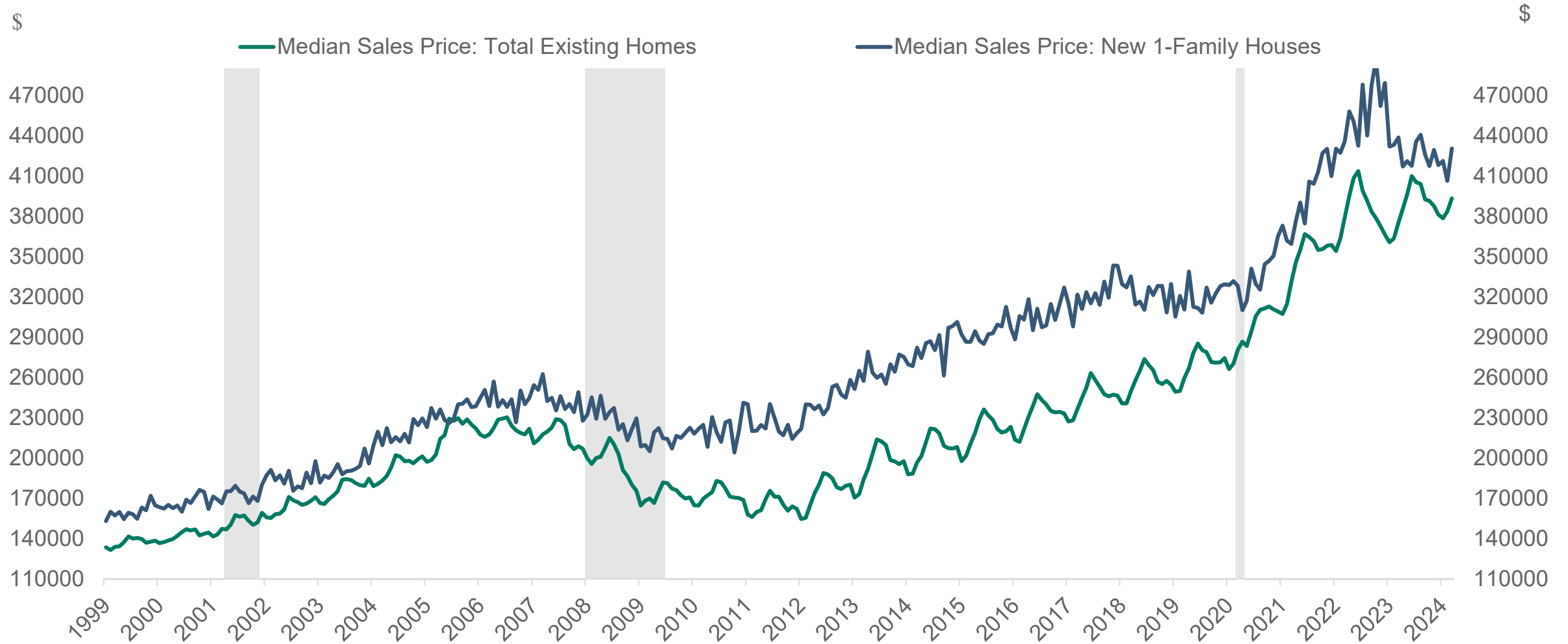


# Areas that need to build more houses to keep up with the increased demand

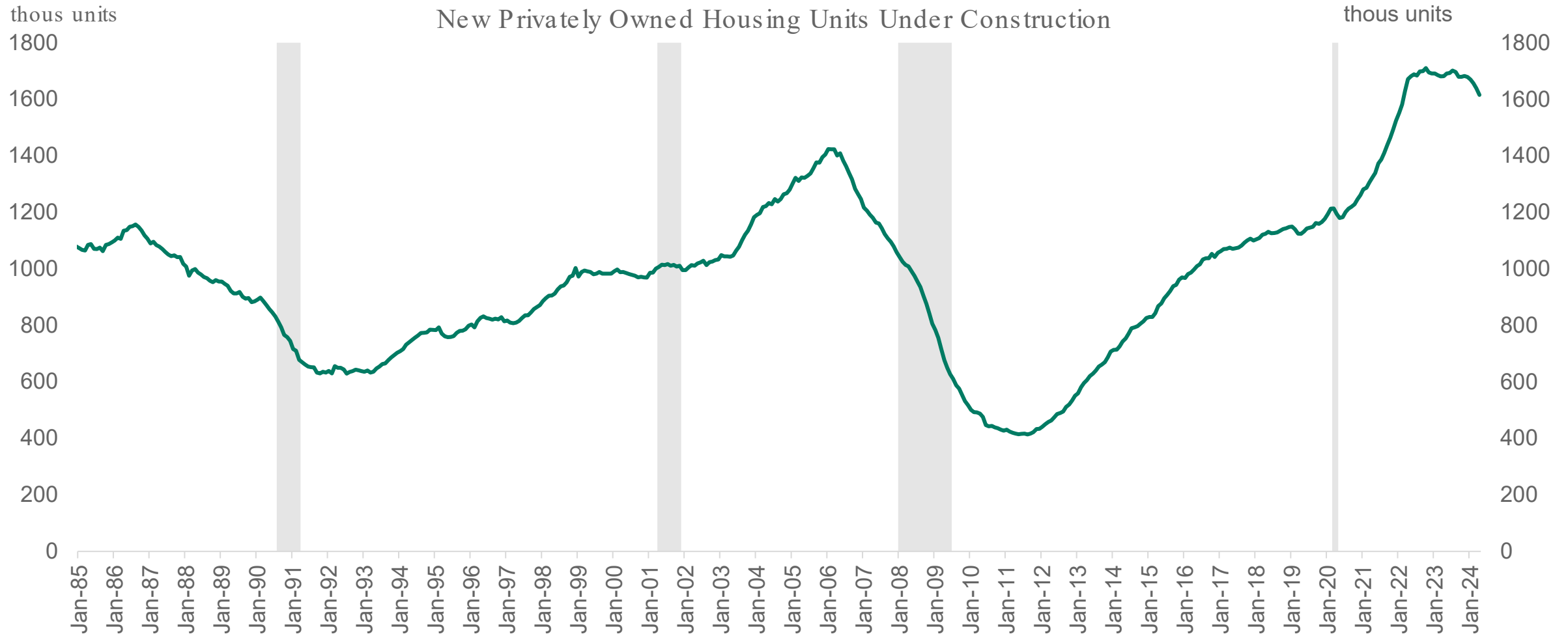


New versus existing homes

# House prices for new homes and existing homes

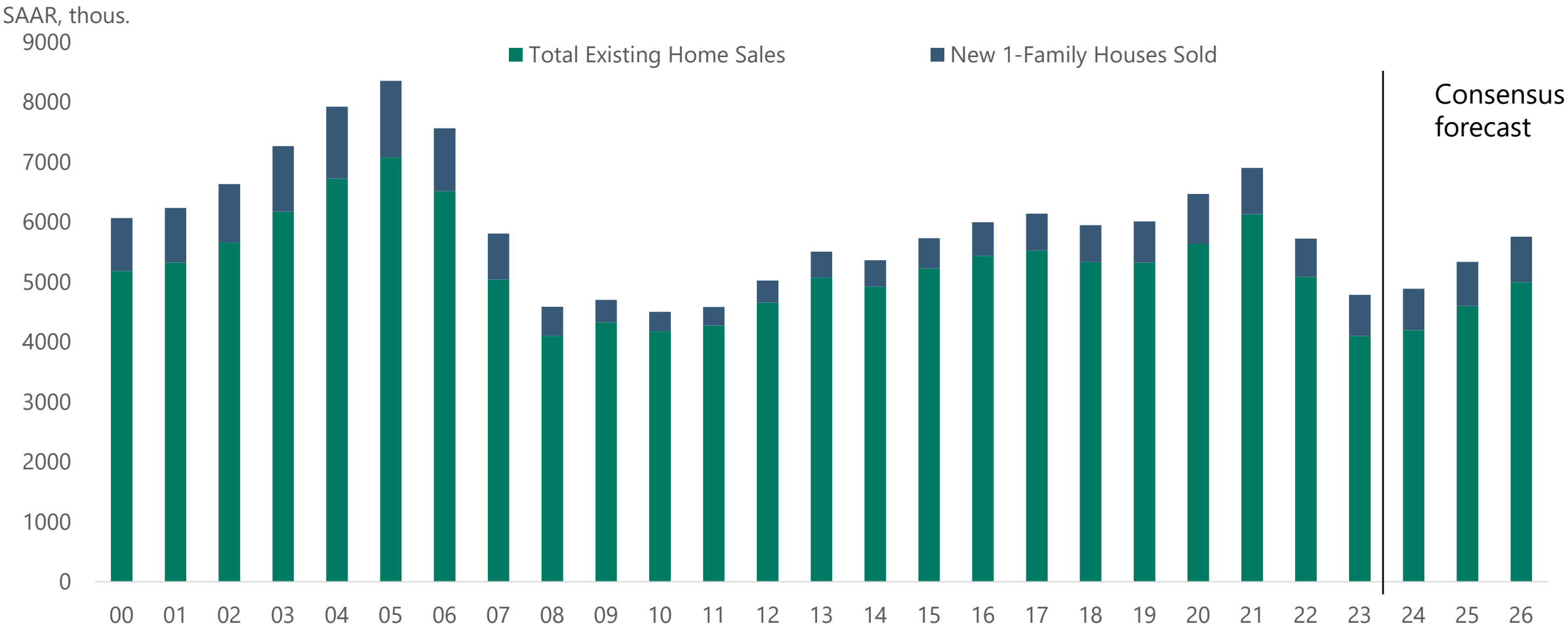


# New privately owned housing units under construction starting to peak



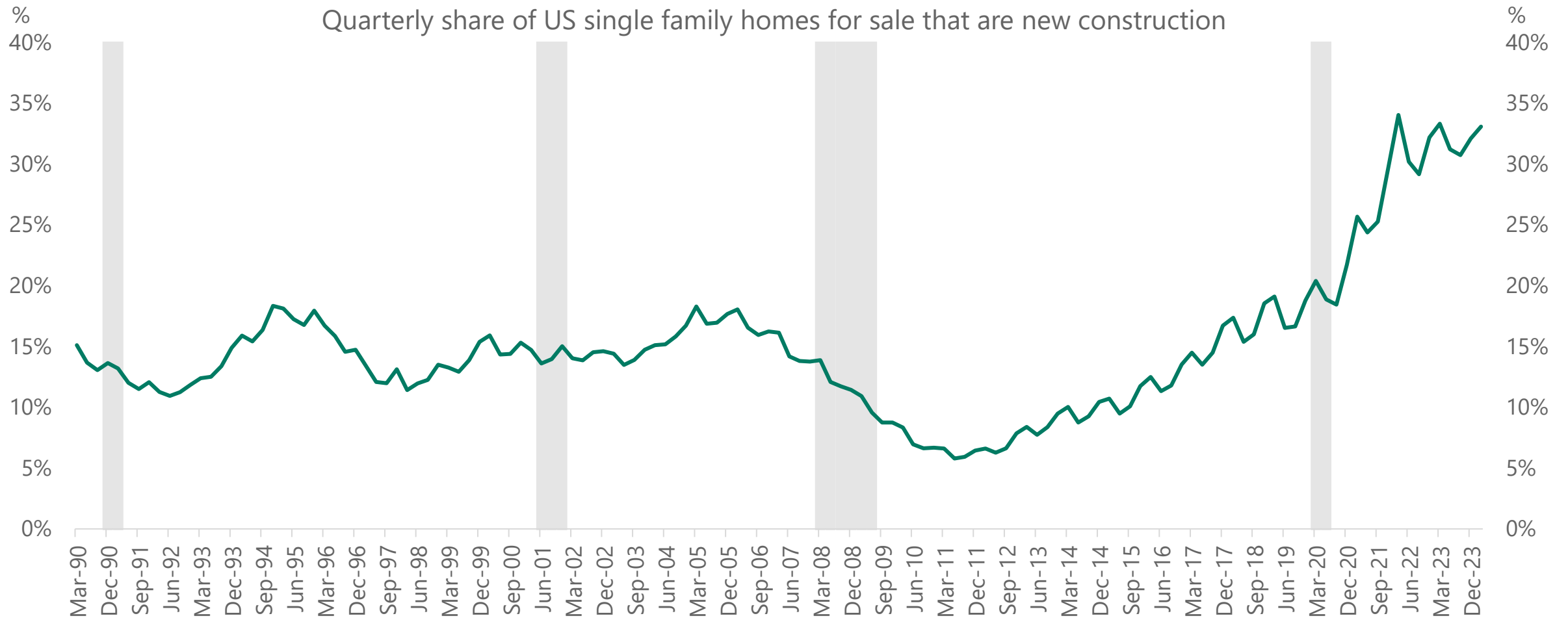


# Consensus is forecasting a modest rebound in home sales

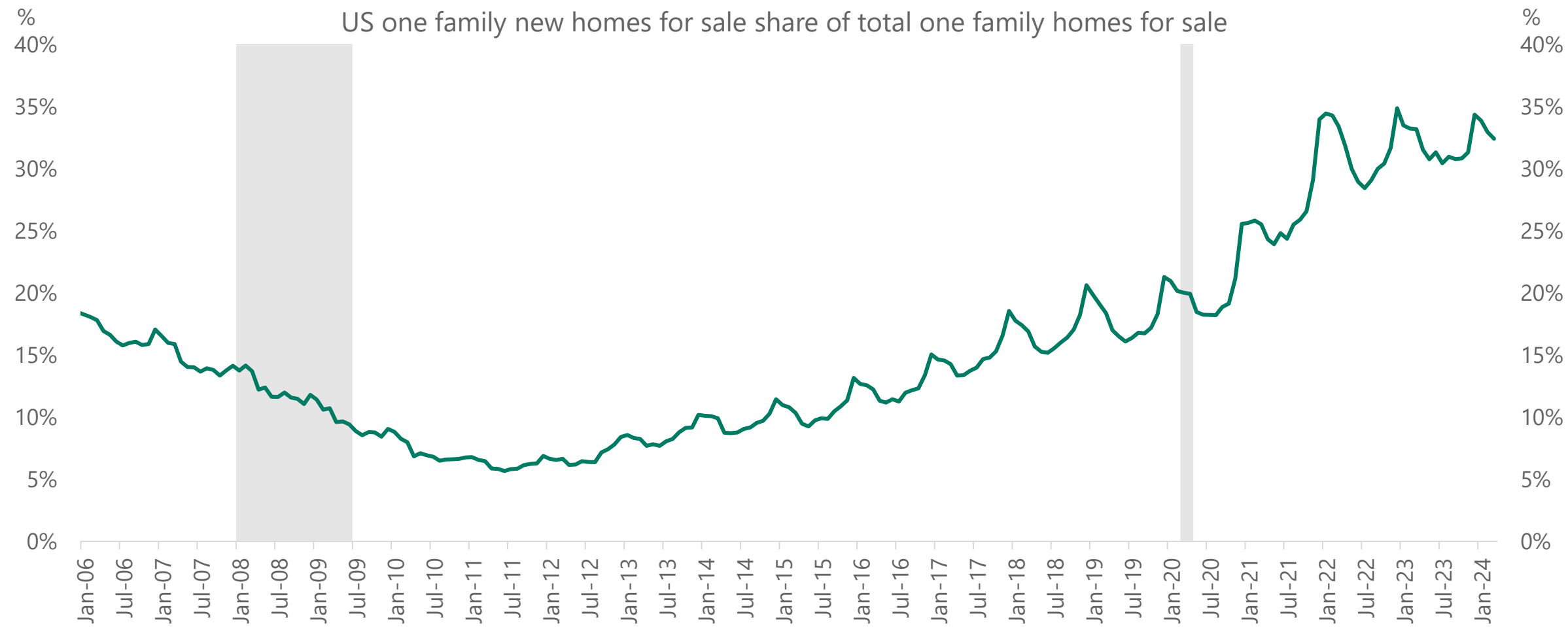


Source: Census Bureau, NAR, Haver, Apollo Chief Economist; Forecast is Bloomberg consensus

# Share of newly built homes for sale rising

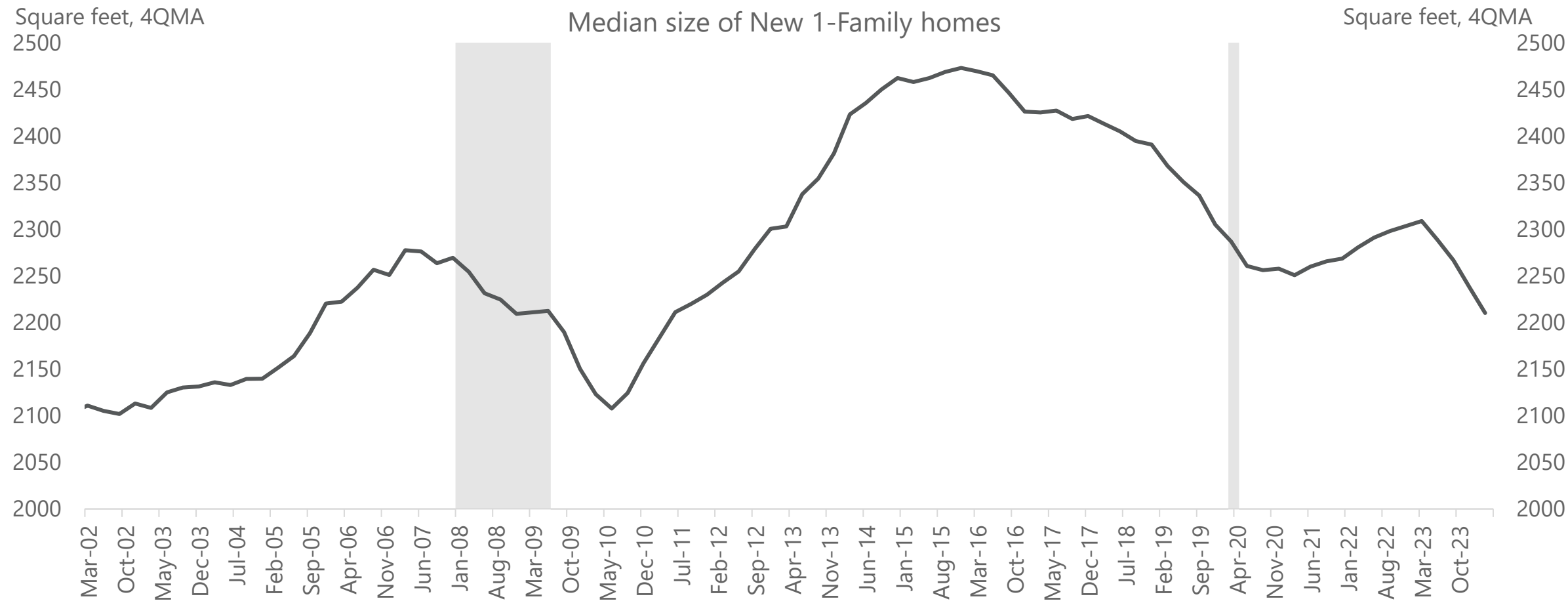


# Share of new homes for sale rising



Source: NAR, Census, Haver Analytics, Apollo Chief Economist

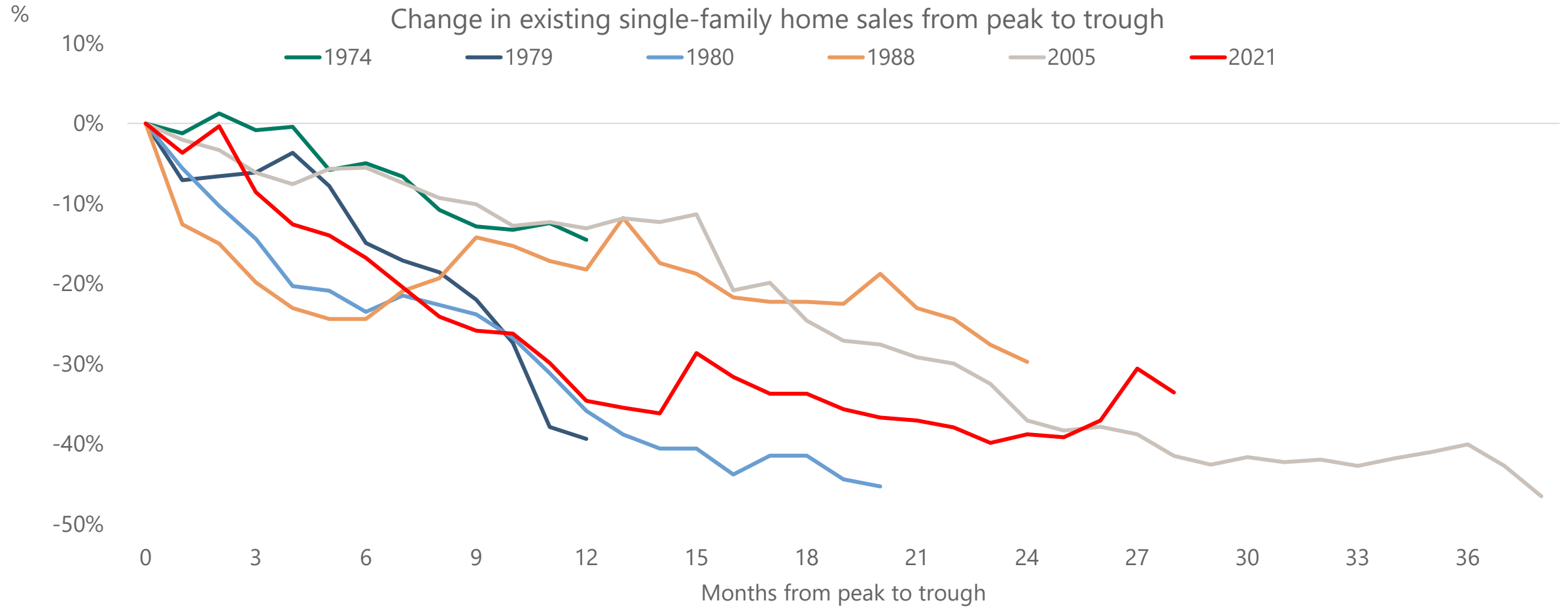
# US homes are getting smaller



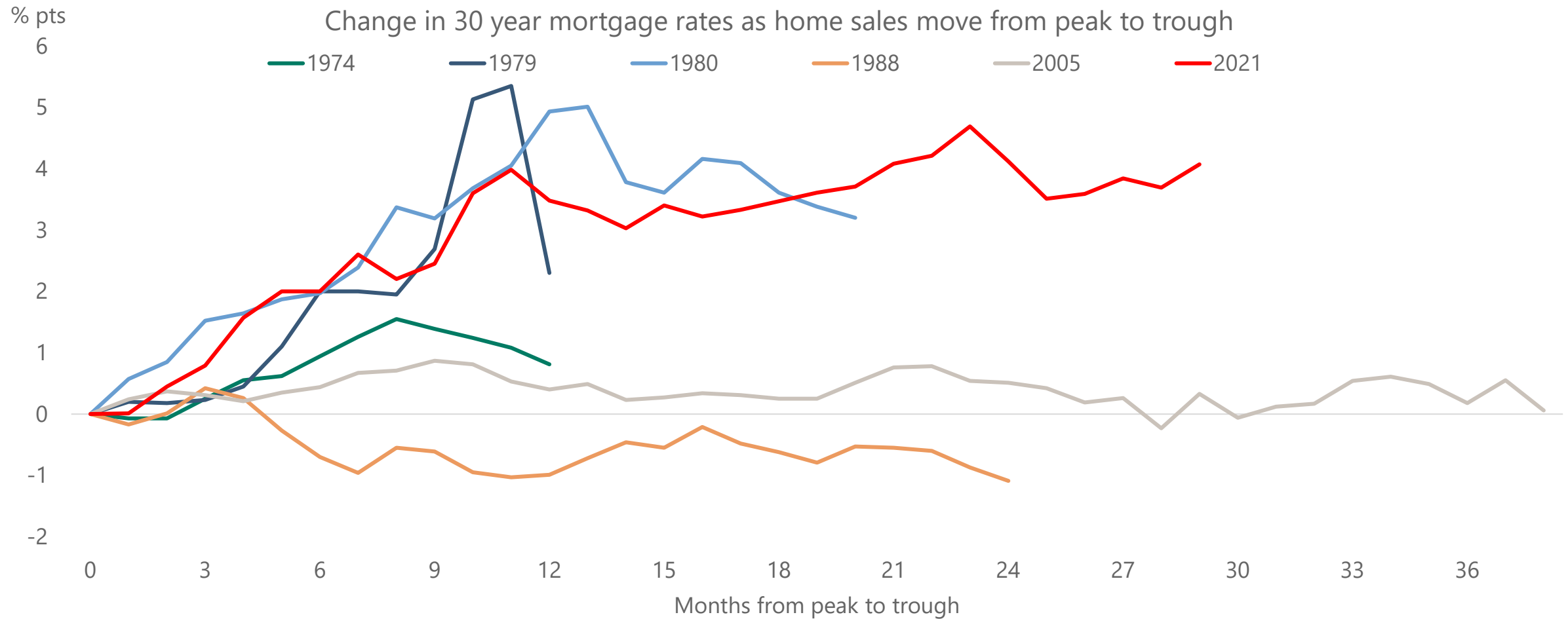
Source: Census Bureau, Haver Analytics, Apollo Chief Economist

Comparing the current housing slowdown to previous housing slowdowns

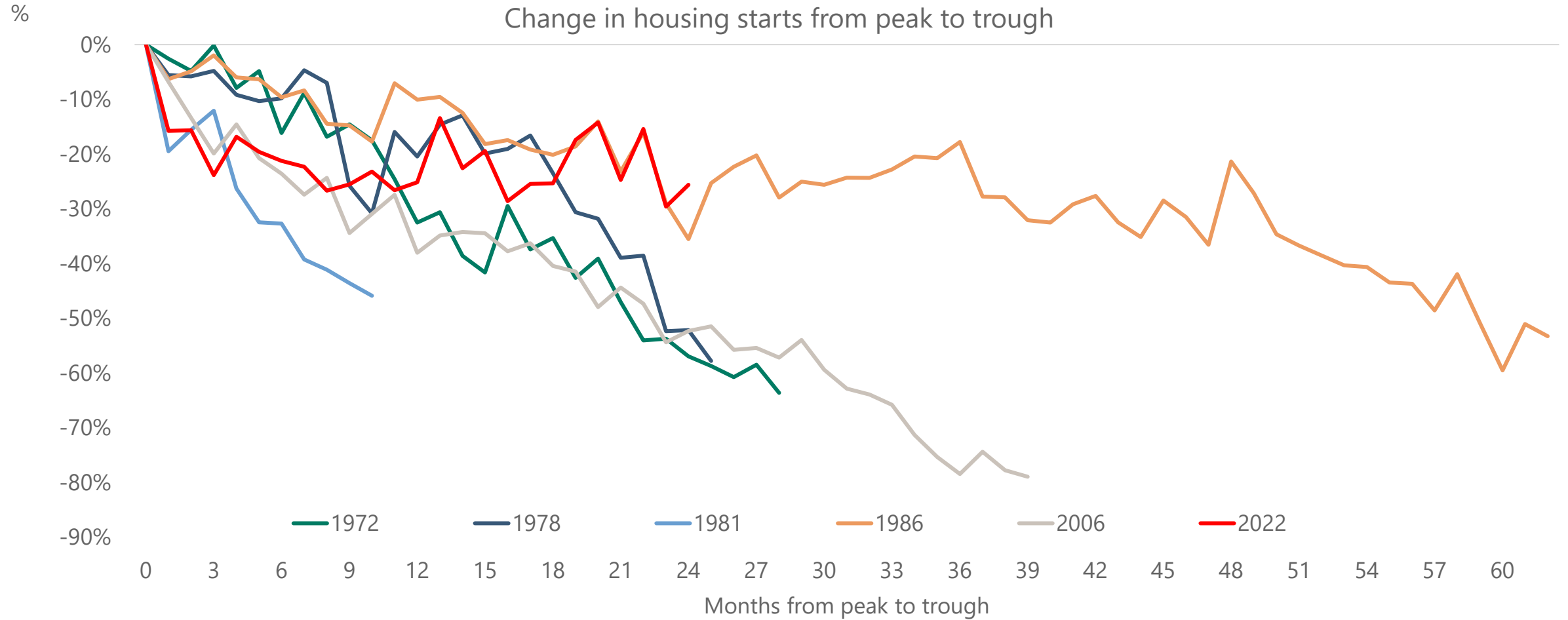
# The current decline in existing home sales is in line with previous housing slowdowns



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

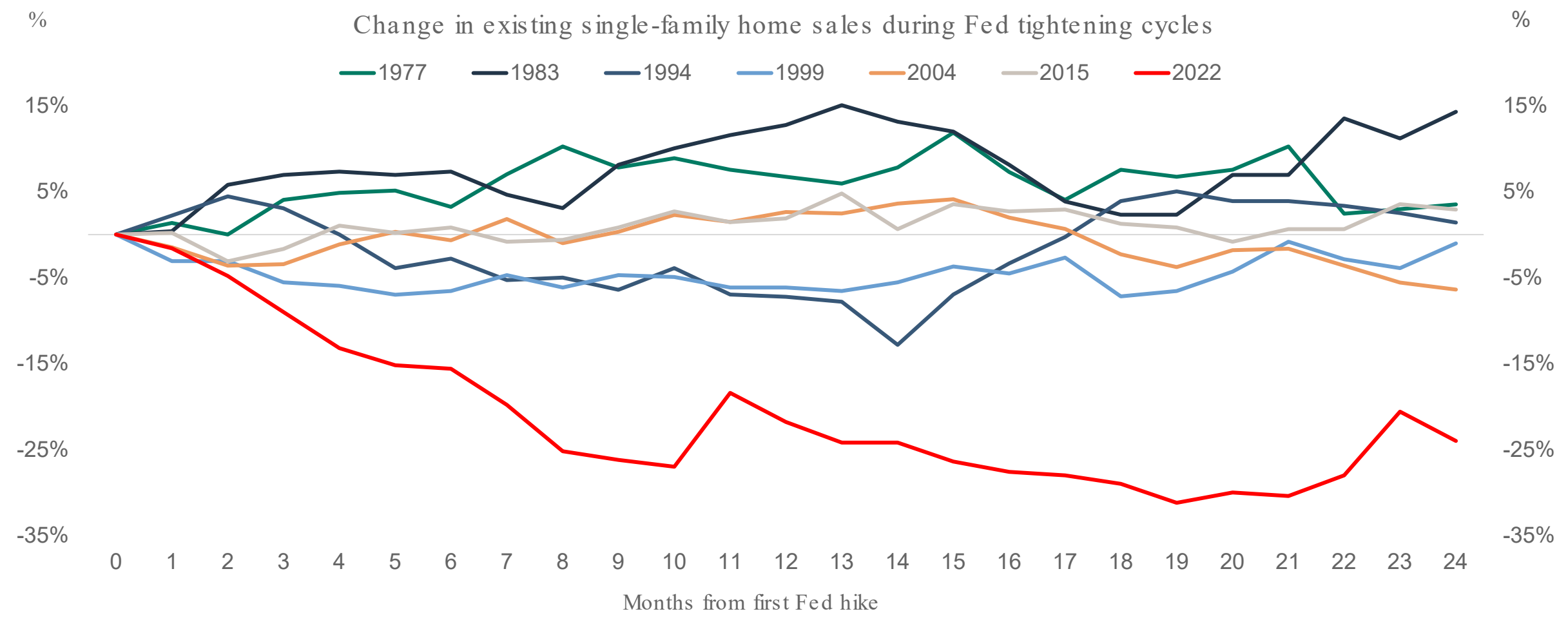


# The current decline in housing starts follows the pattern of previous slowdowns

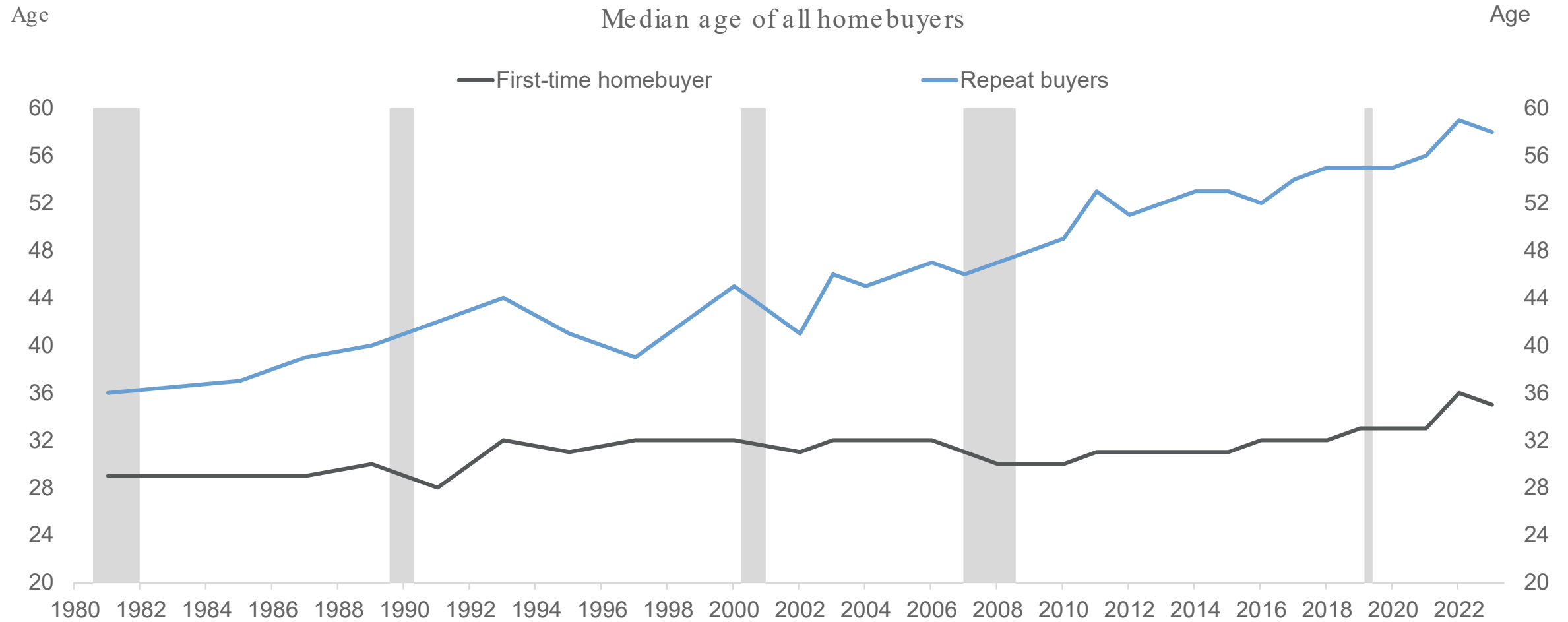




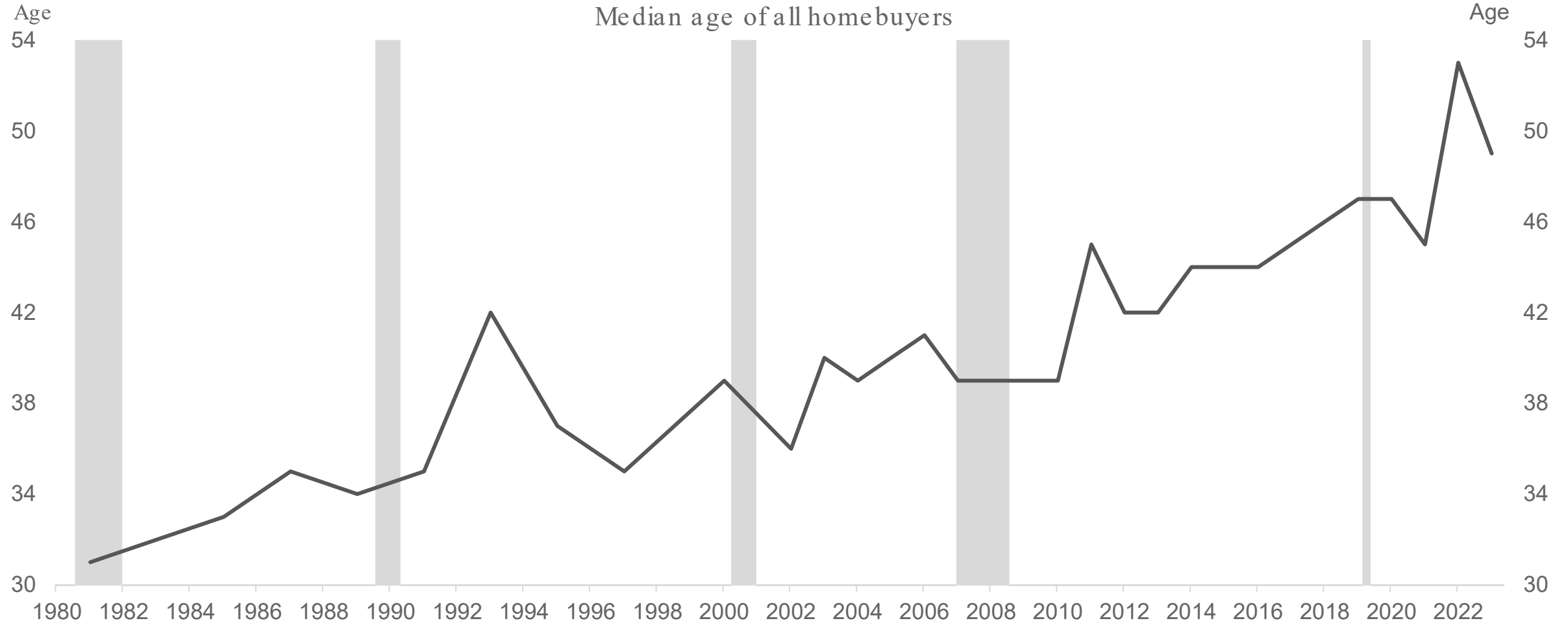
# This is the fastest Fed-driven housing slowdown on record



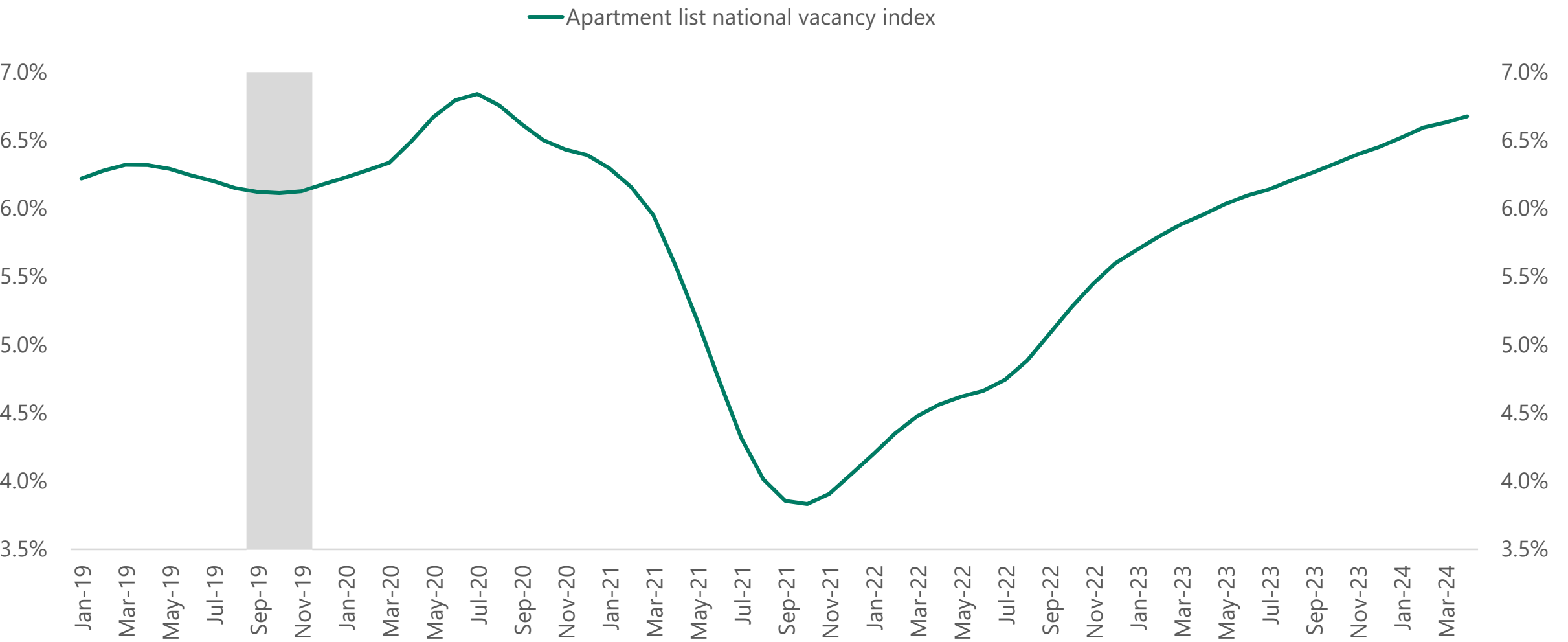
# Homebuyers are getting older



The median age of all homebuyers is now 49 years old, up from 31 in 1981

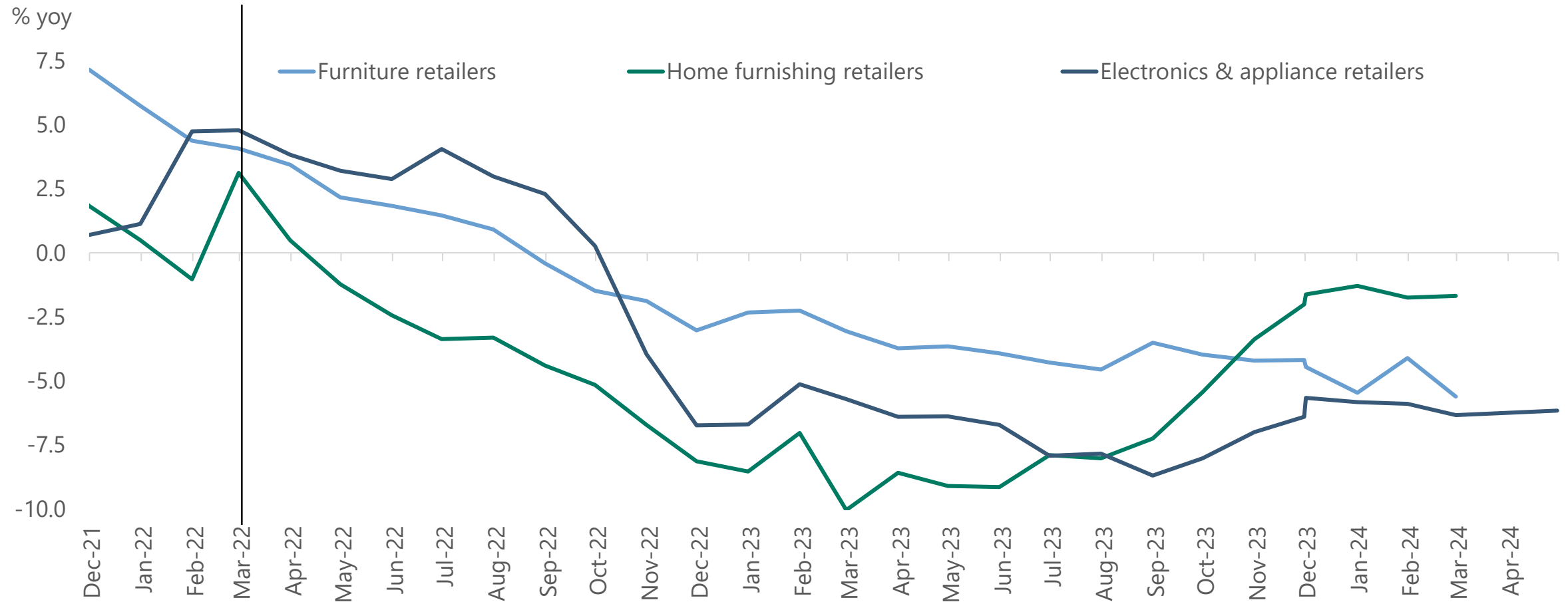


# Apartment vacancies are back above pre-pandemic levels

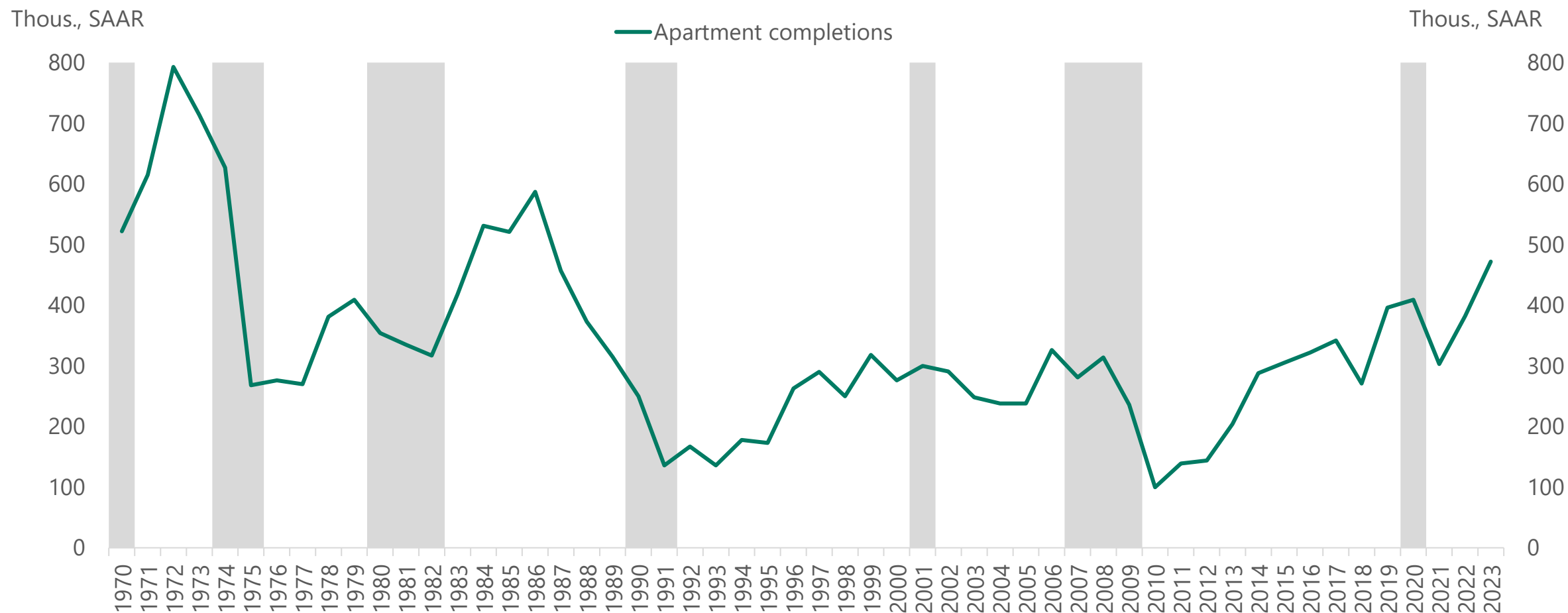


Source: Apartmentlist.com, Apollo Chief Economist

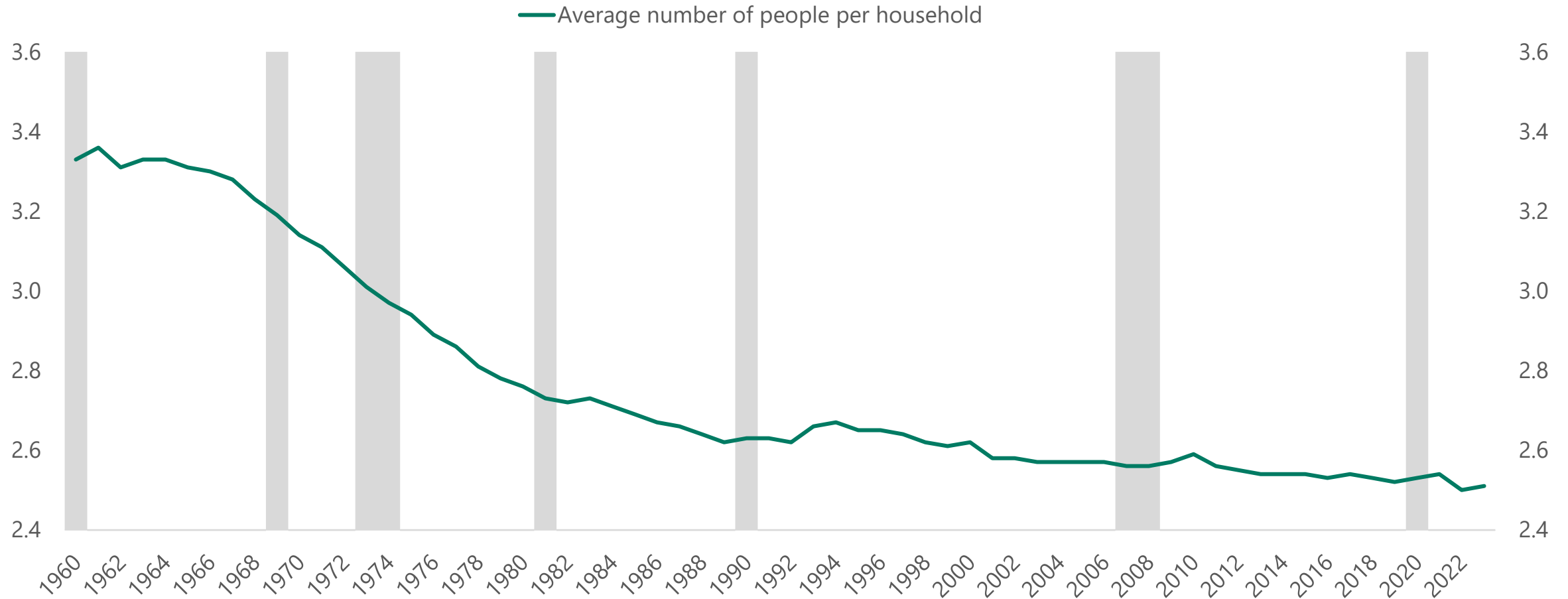
# When the Fed raised interest rates employment in retail trade declined



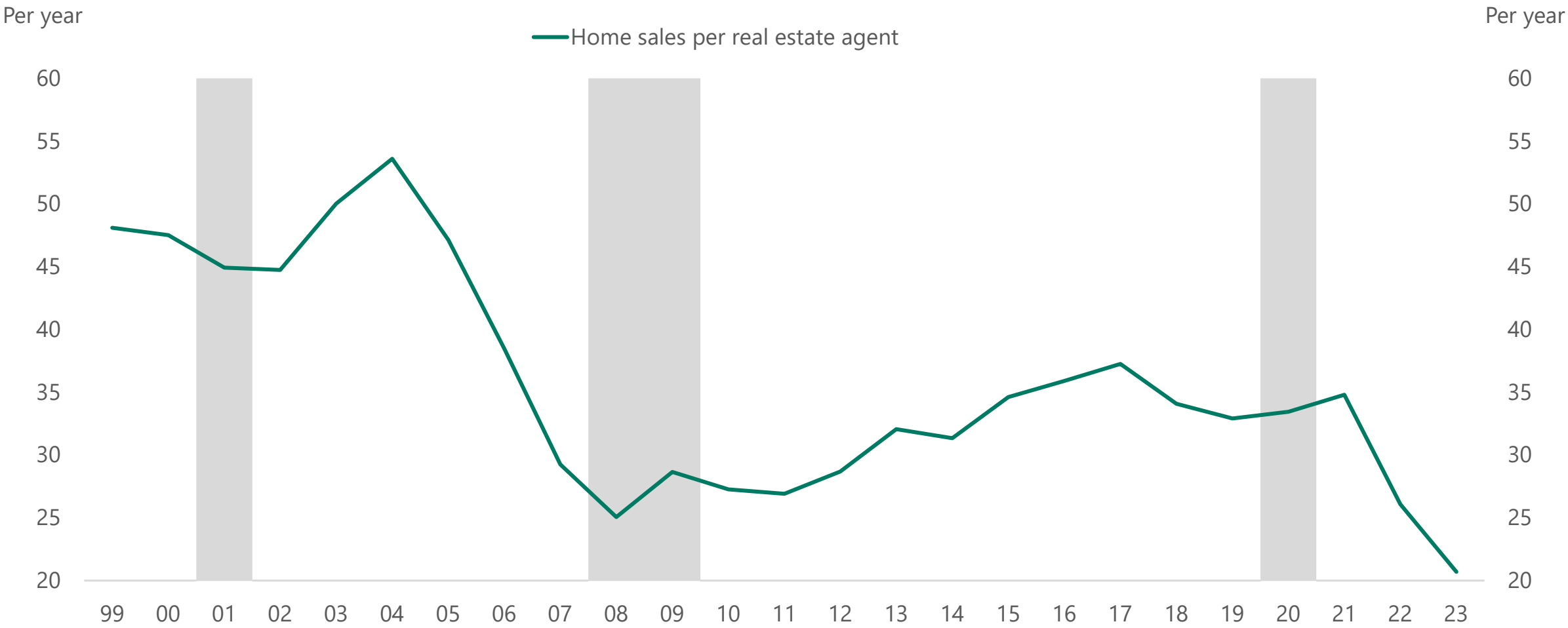
# US apartment supply increasing



The average family size in the US has declined from 3.3 in 1960 to 2.5 by 2023.



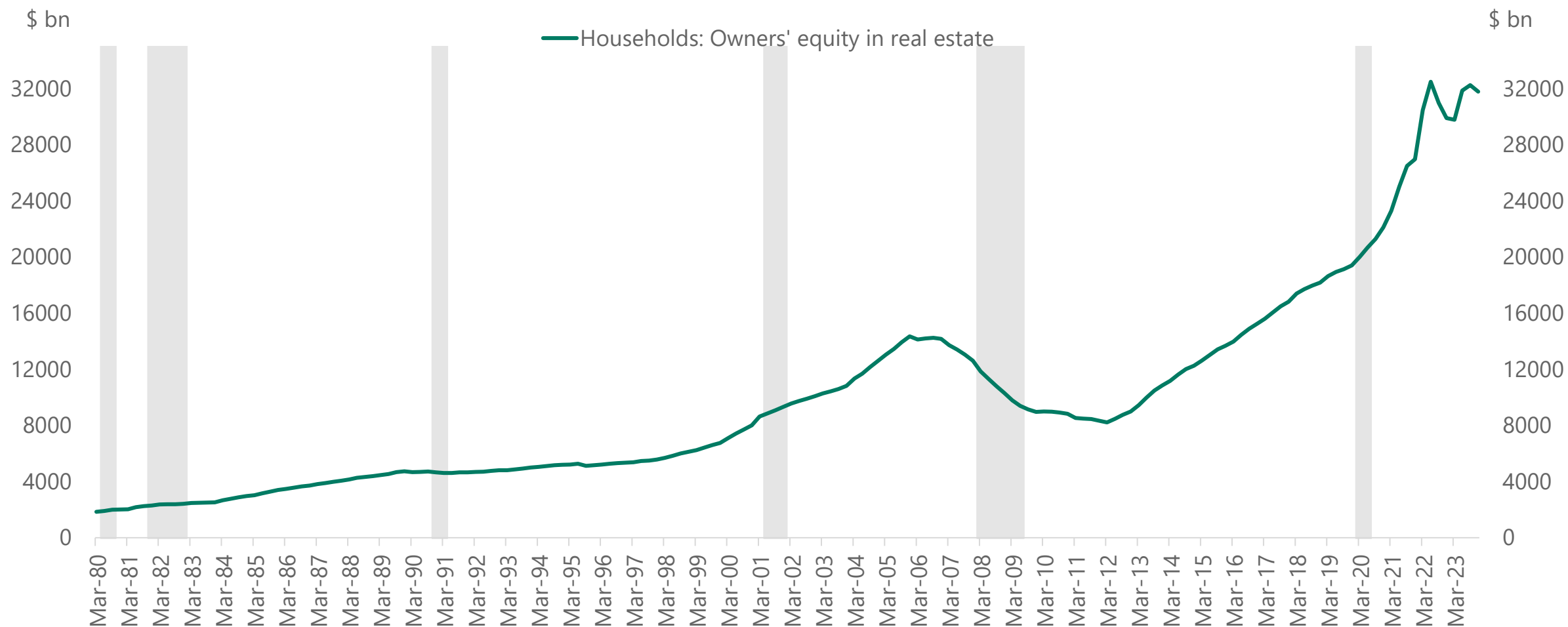
# Real estate sales agents now face challenges



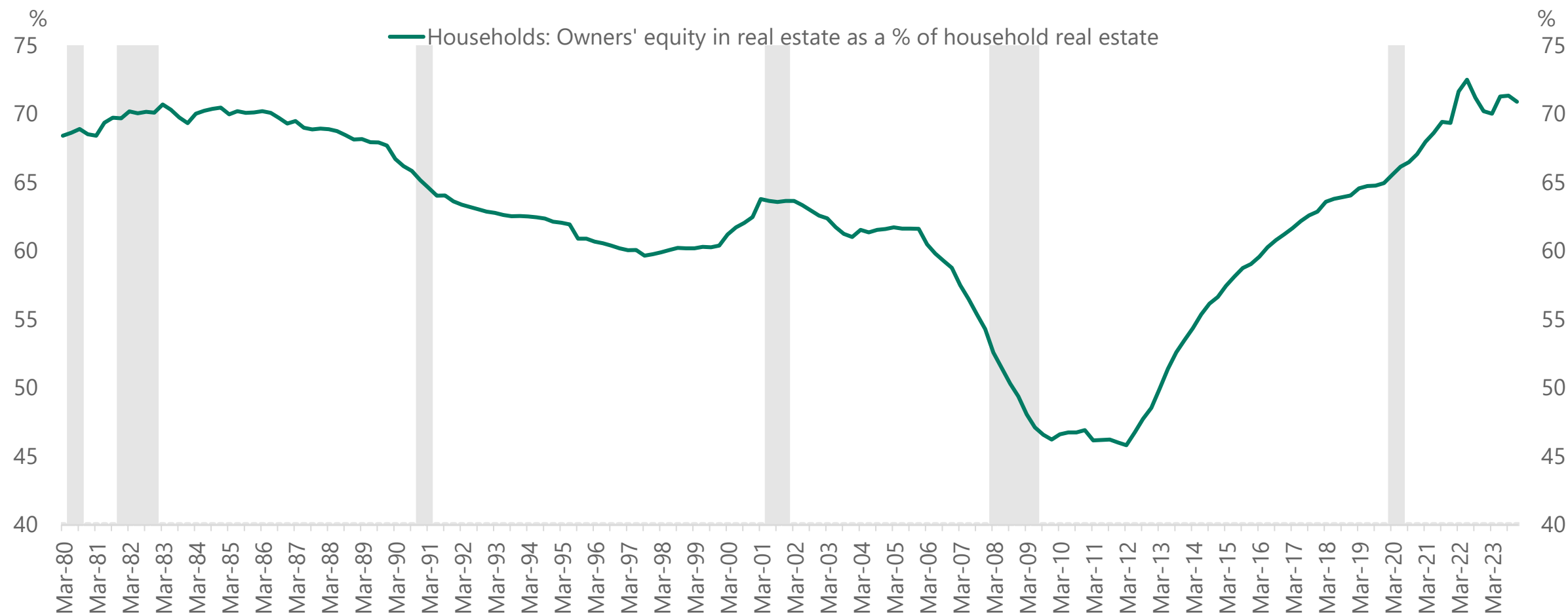
Source: NAR, BLS, Haver Analytics Apollo Chief Economist



# Households equity in real estate rising



# Households equity share in real estate rising





# Torsten Slok, Ph.D.

## Chief Economist

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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.