

APOLLO GLOBAL MANAGEMENT

# US Housing Outlook

Torsten Slok, Chief Economist

Jyoti Agarwal, Senior Economist

Rajvi Shah, Economist

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Unless otherwise noted, information as of October 2022

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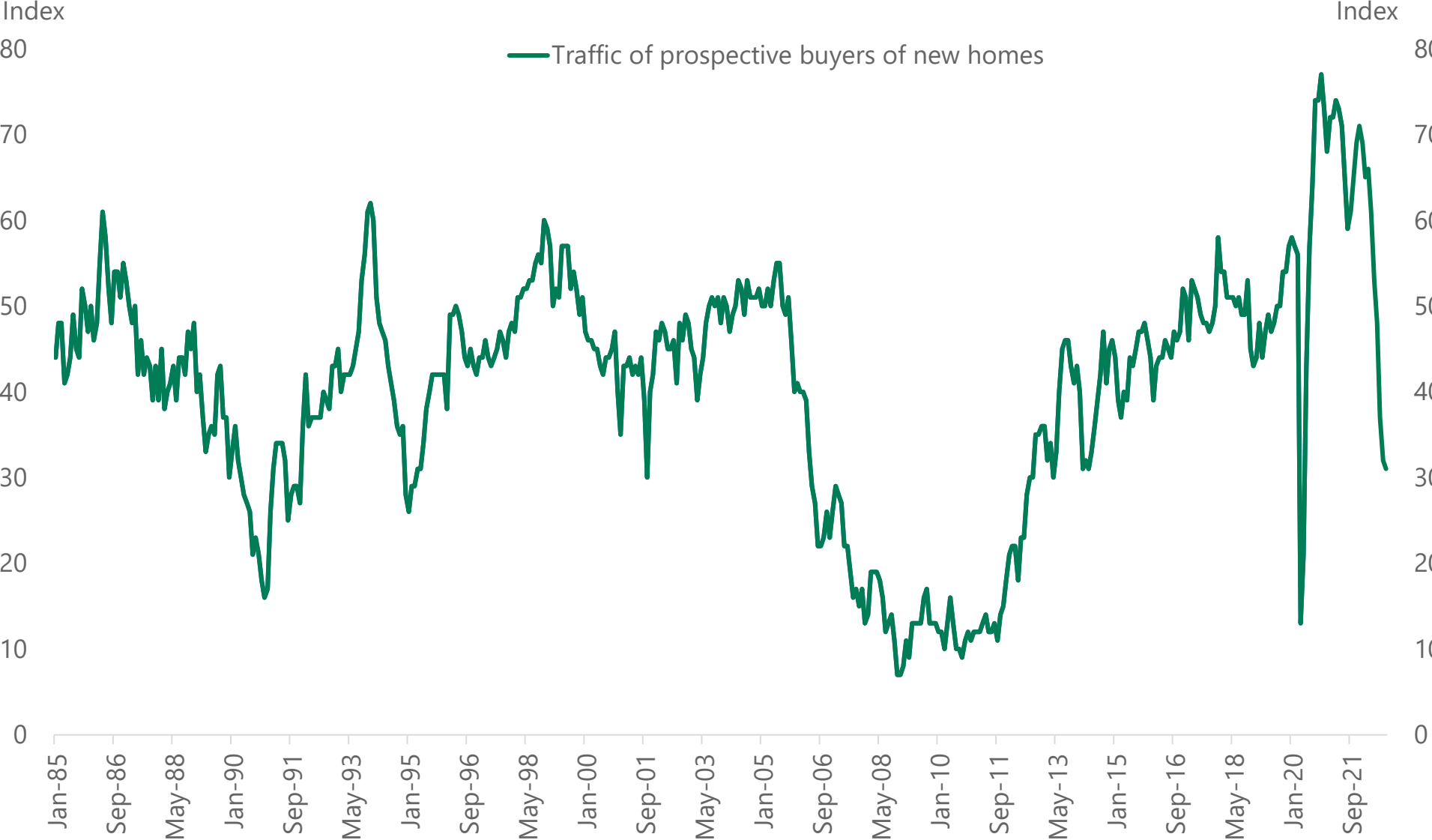
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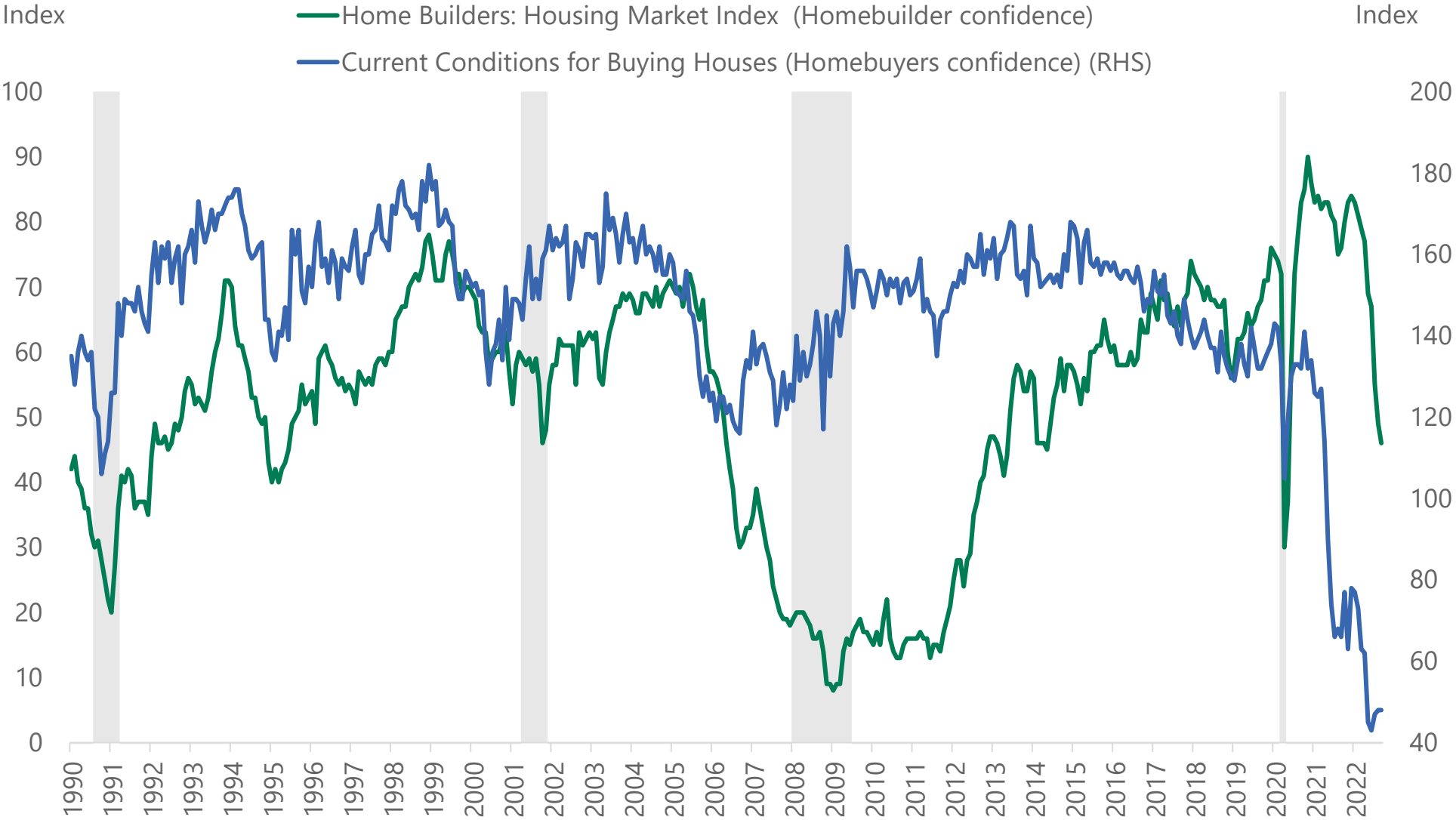
**1) Housing Demand: Higher mortgage rates and high home prices slowing demand**

# Traffic of prospective buyers of new homes

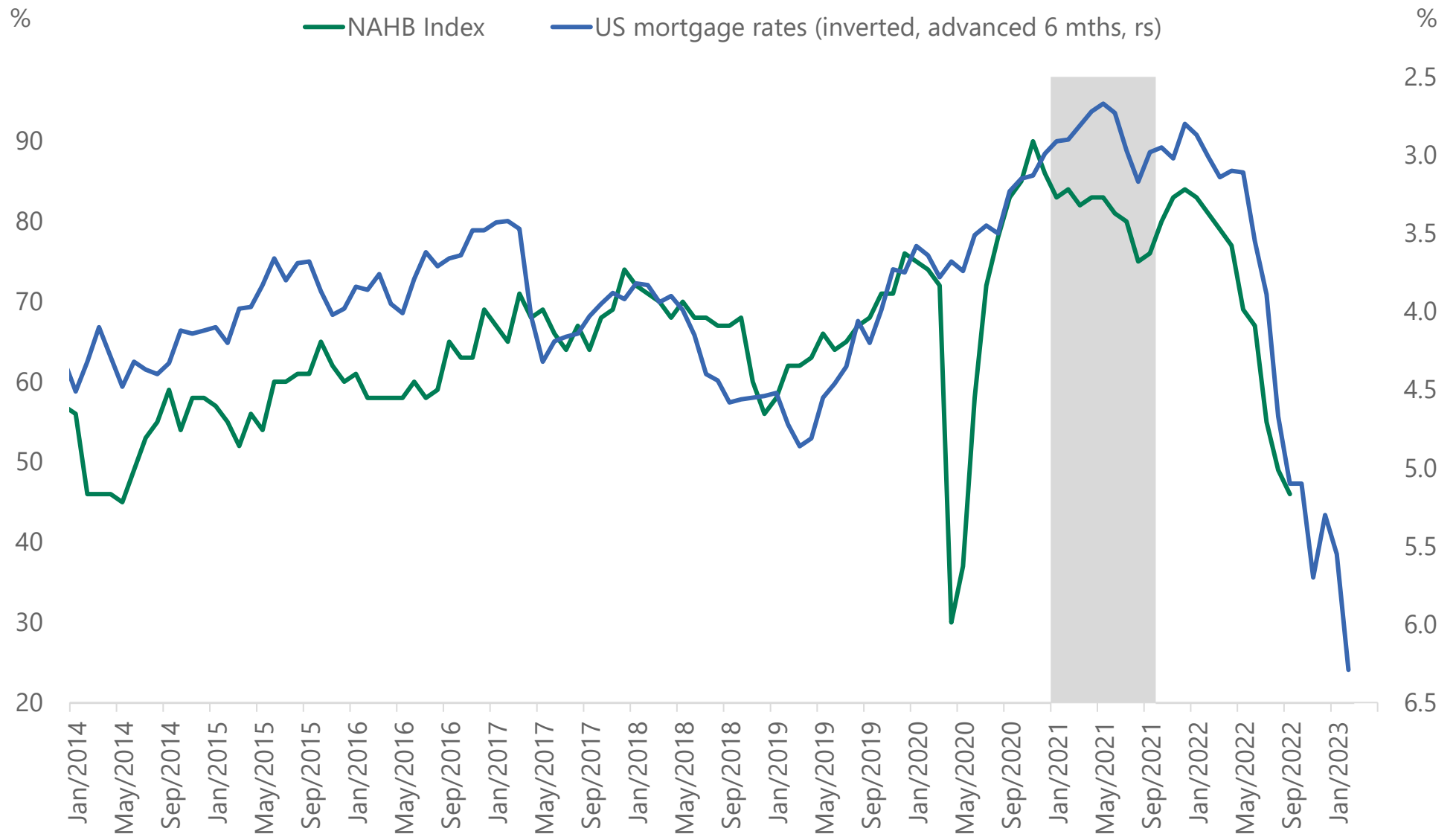


Source: Bloomberg, Apollo Chief Economist

# Confidence declining for buyers and builders

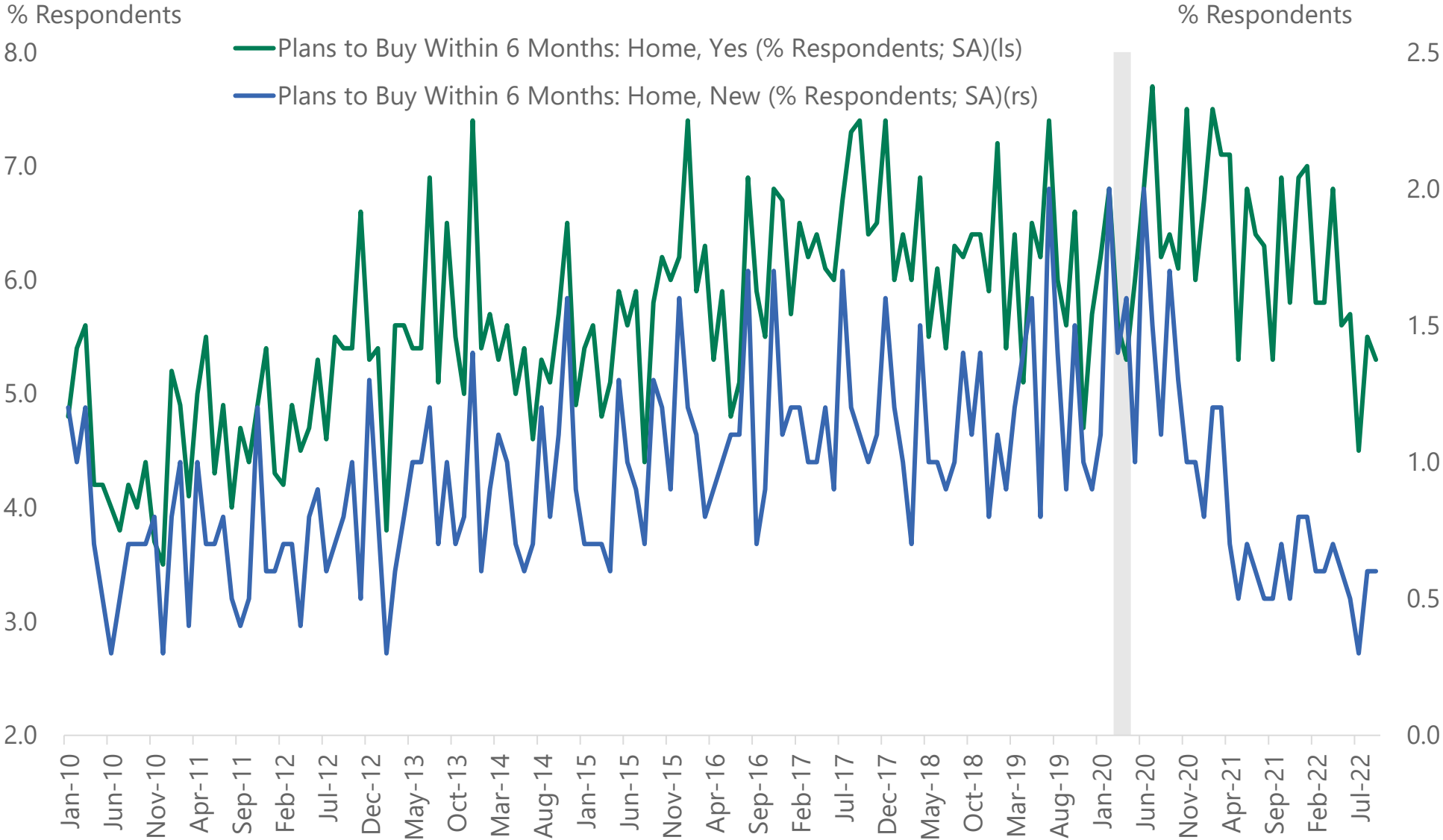


# Downside risks to homebuilder confidence



Source: NAHB, Bloomberg, Apollo Chief Economist

# Plans to buy a home coming down gradually



Source: Conference Board, Apollo Chief Economist

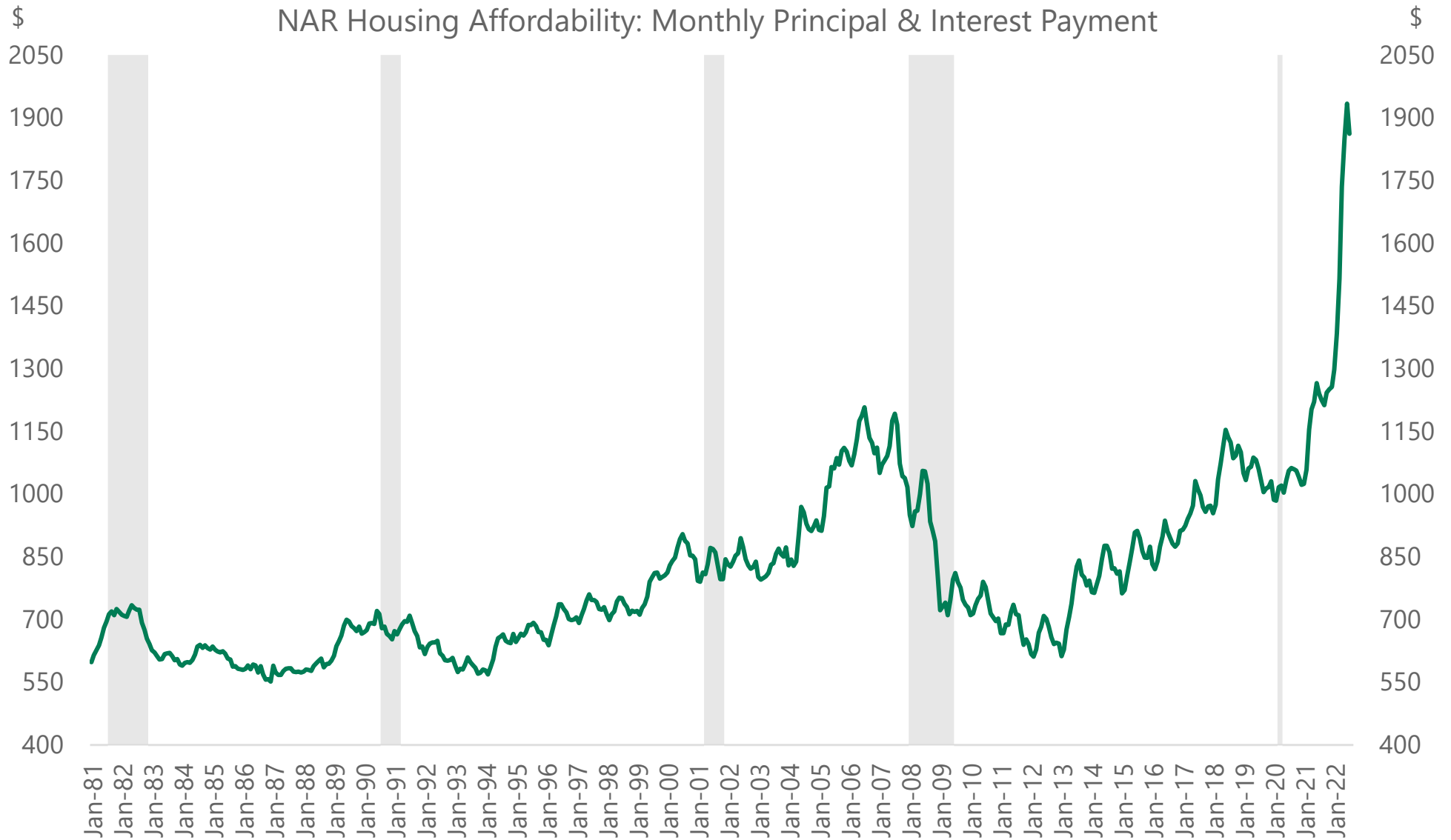
# Mortgage rates approaching historical averages



Source: Bloomberg, Apollo Chief Economist

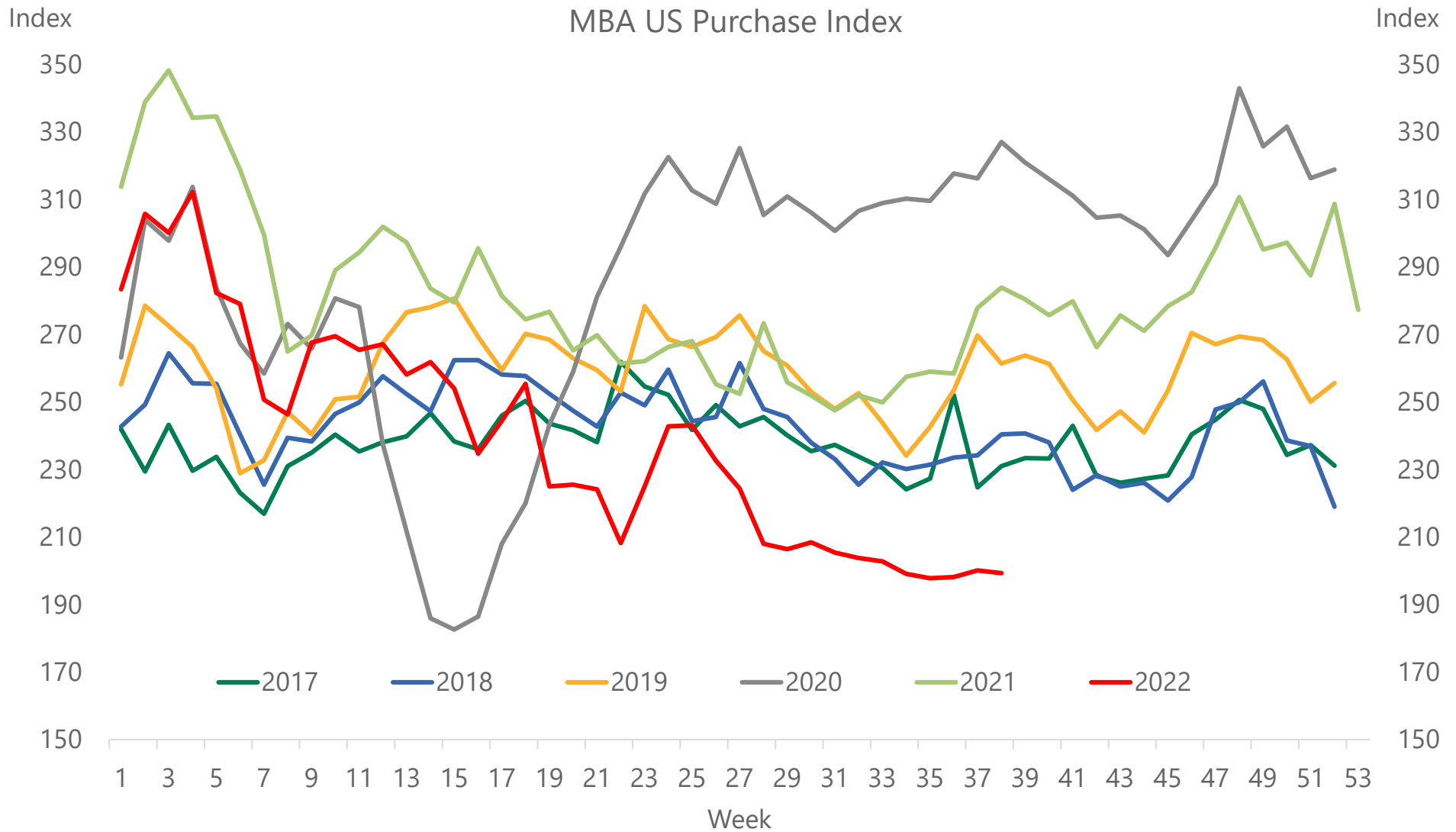


# Monthly mortgage payments rising



Source: NAR, Haver Analytics, Apollo Chief Economist

# Mortgage purchase applications



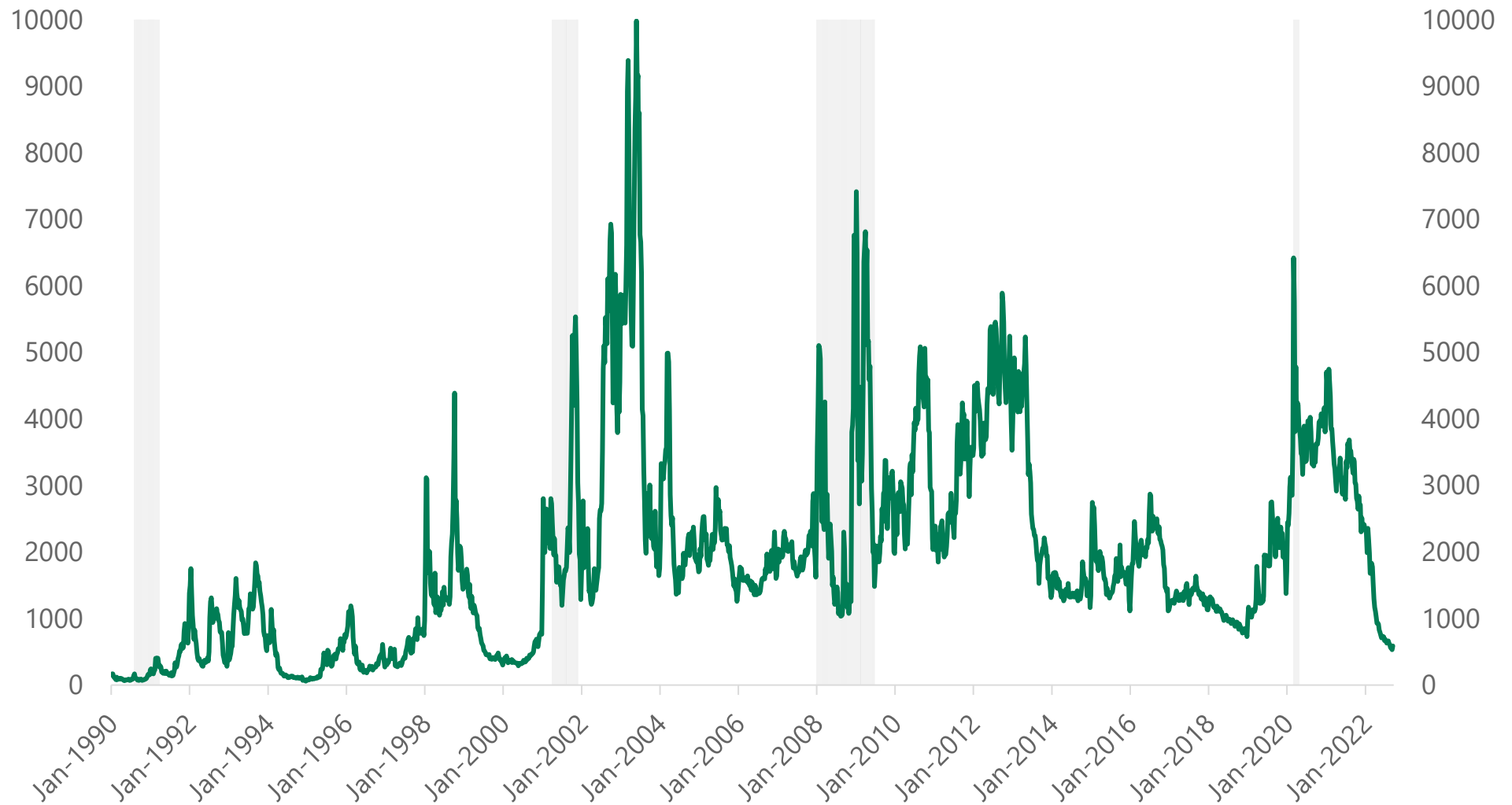
Source: Mortgage Bankers Association, Bloomberg, Apollo Chief Economist

# Mortgage refi applications

Index, Mar 1990 = 100

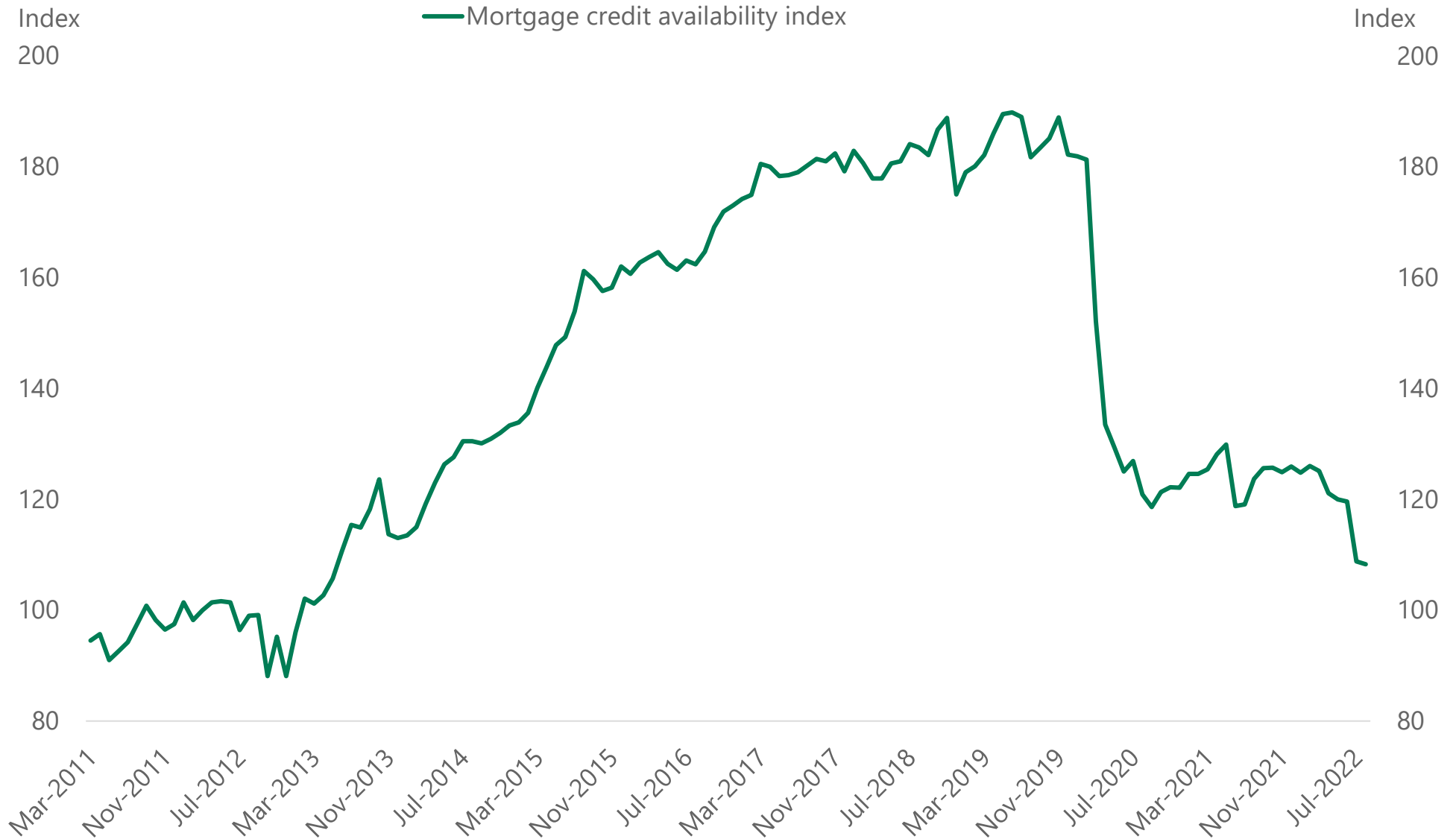
— Mortgage loan applications for refinancing

Index, Mar 1990 = 100



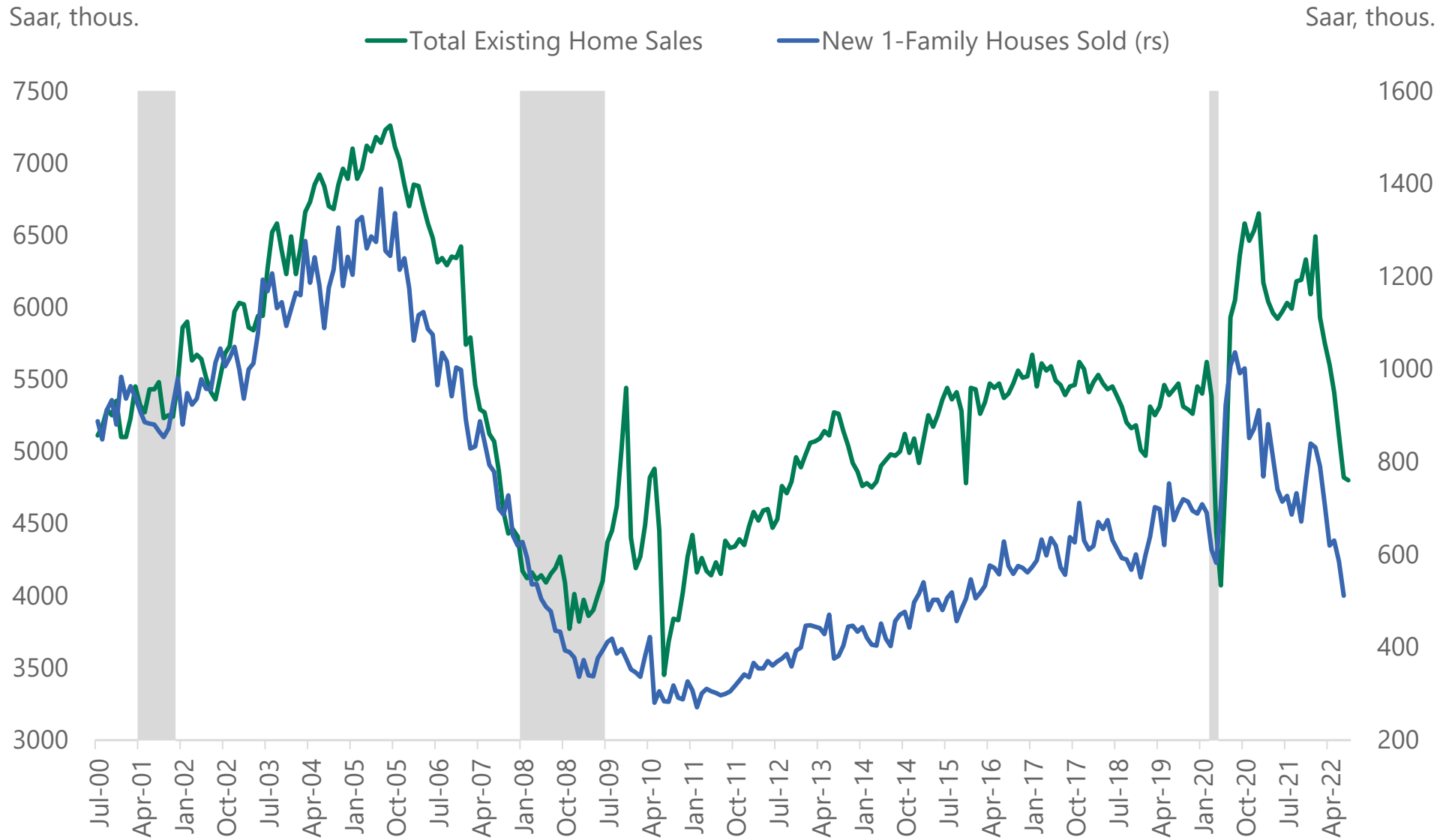
Source: Mortgage Bankers Association, Bloomberg, Apollo Chief Economist

# Availability of mortgage credit continues to tighten



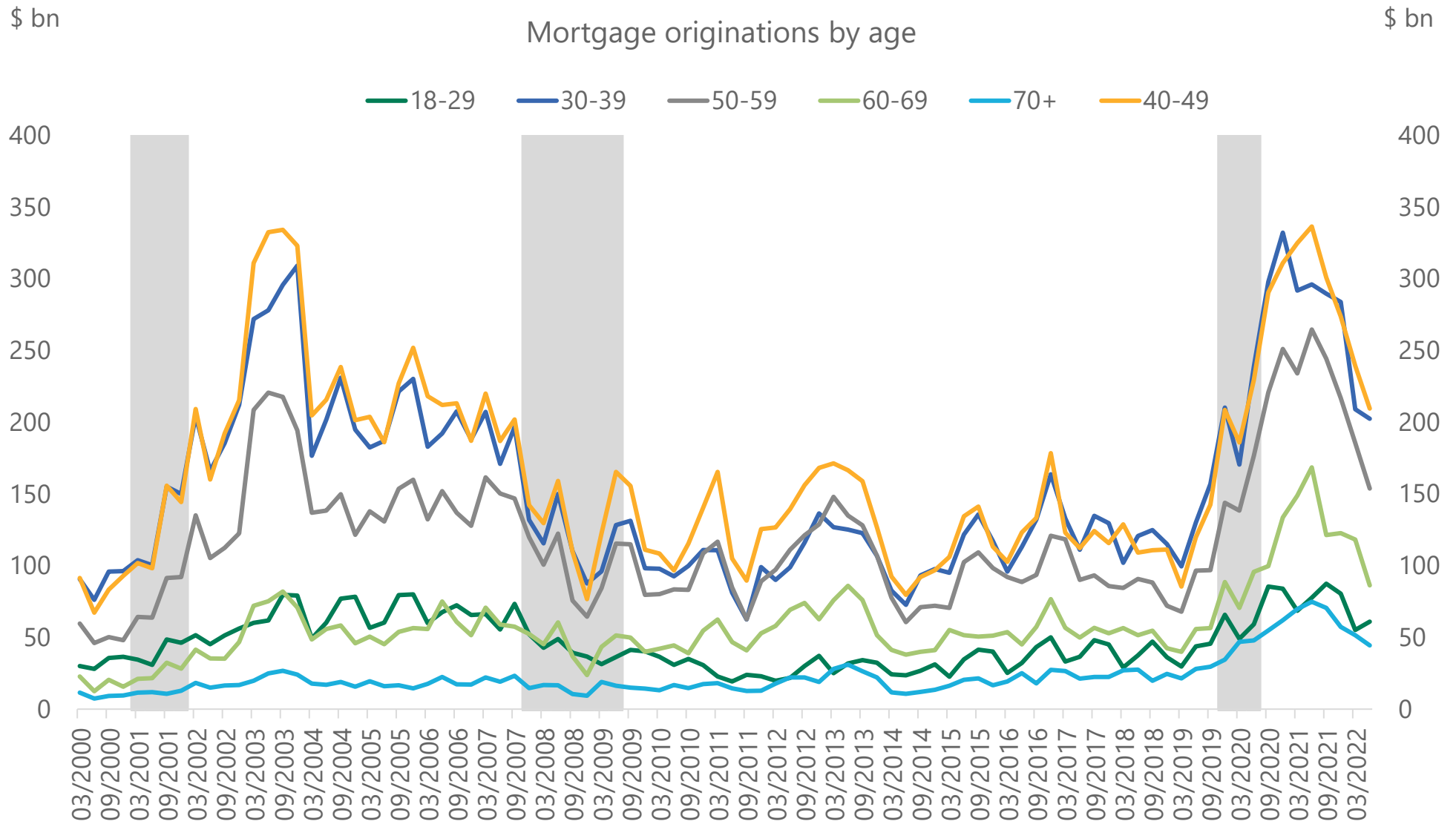
Source: Mortgage Bankers Association, Bloomberg, Apollo Chief Economist

# Home sales starting to decline



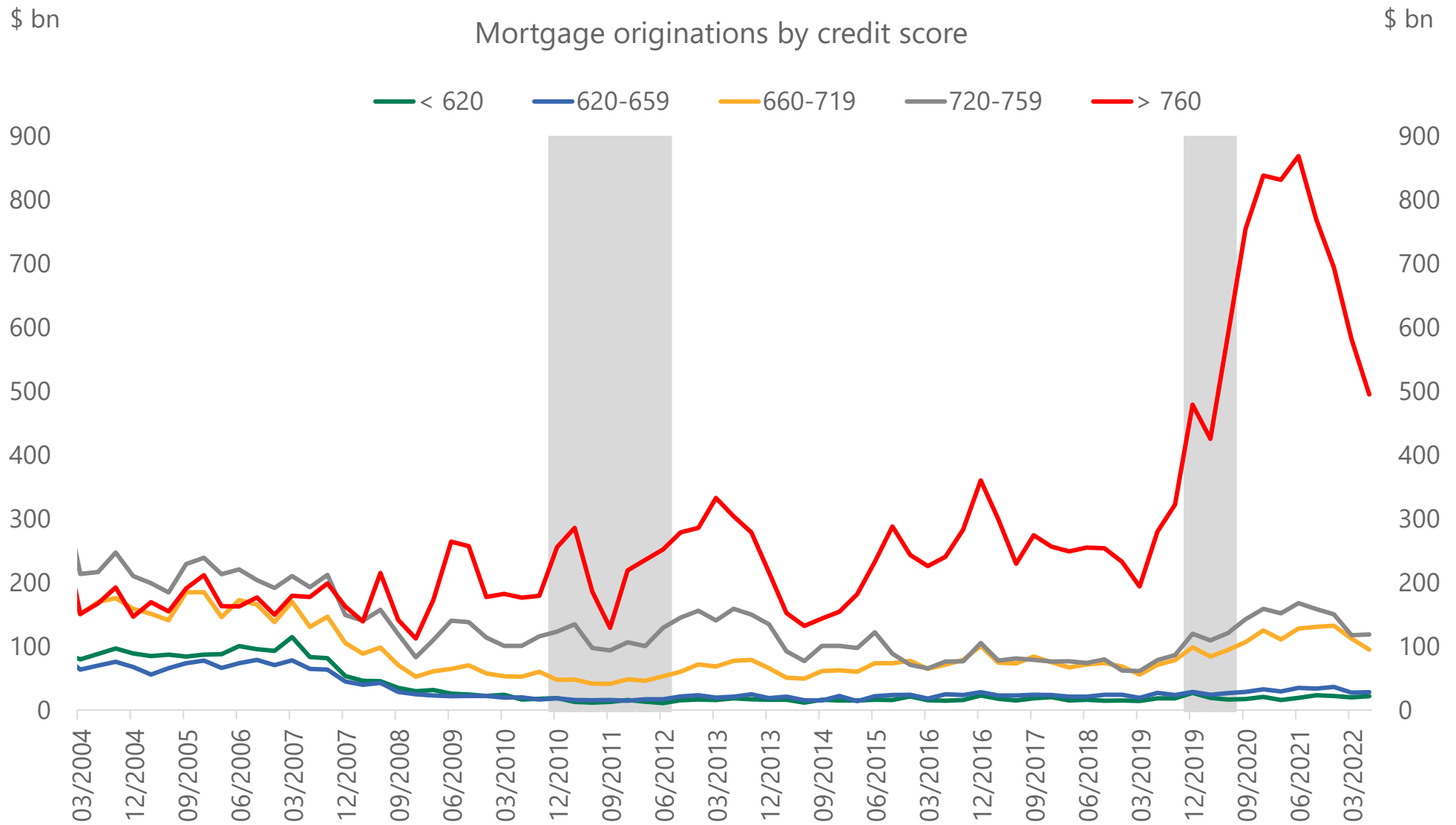
Source: Census Bureau, NAR, Haver, Apollo Chief Economist; Forecast is Bloomberg consensus

# Mortgage originations coming down to pre-pandemic levels



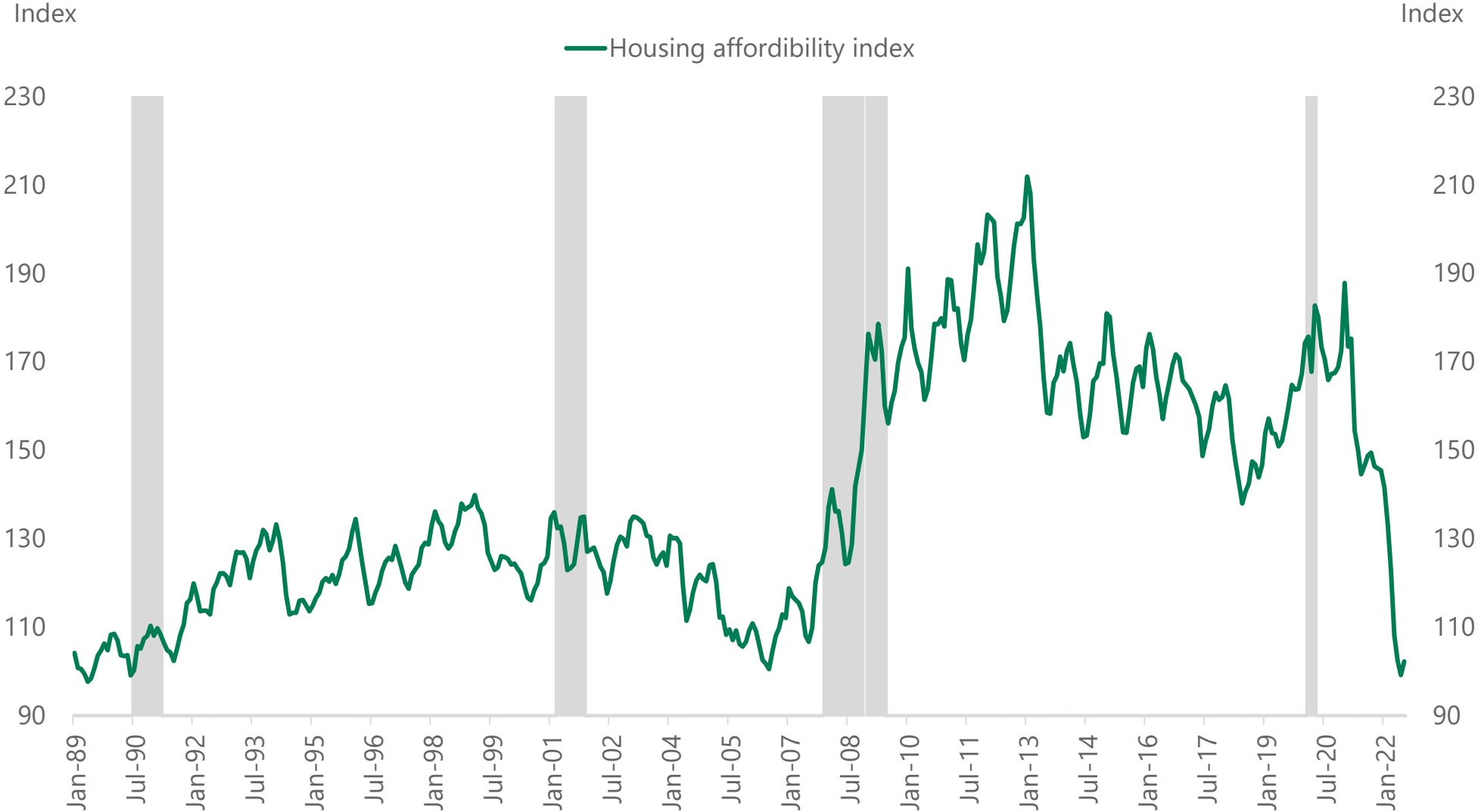
Source: NY Fed, Bloomberg, Apollo Chief Economist

# Mortgage originations normalizing for households with high credit scores



Source: NY Fed, Bloomberg, Apollo Chief Economist

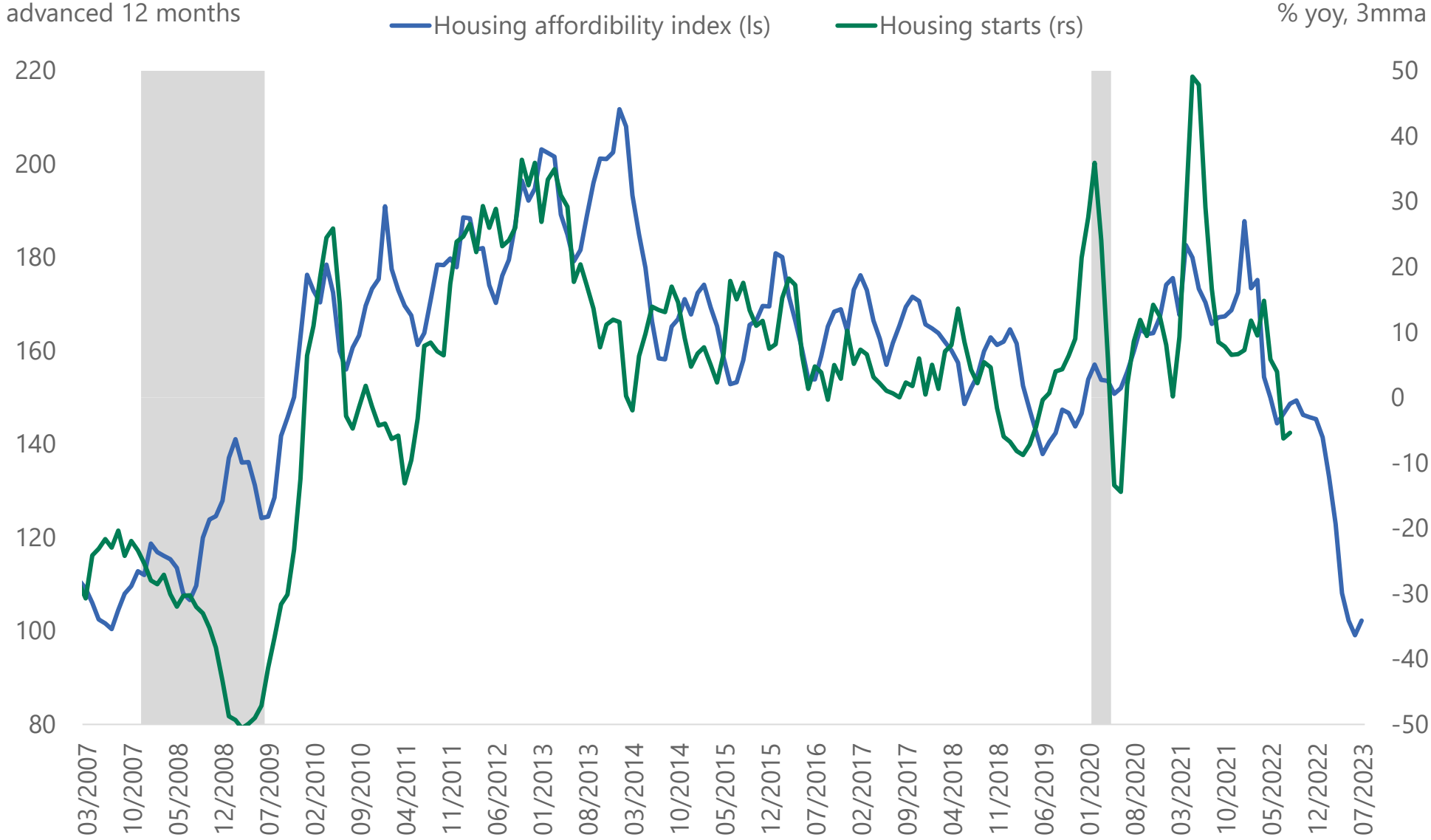
# Housing affordability approaching 2007 levels



Source: Bloomberg, Apollo Chief Economist

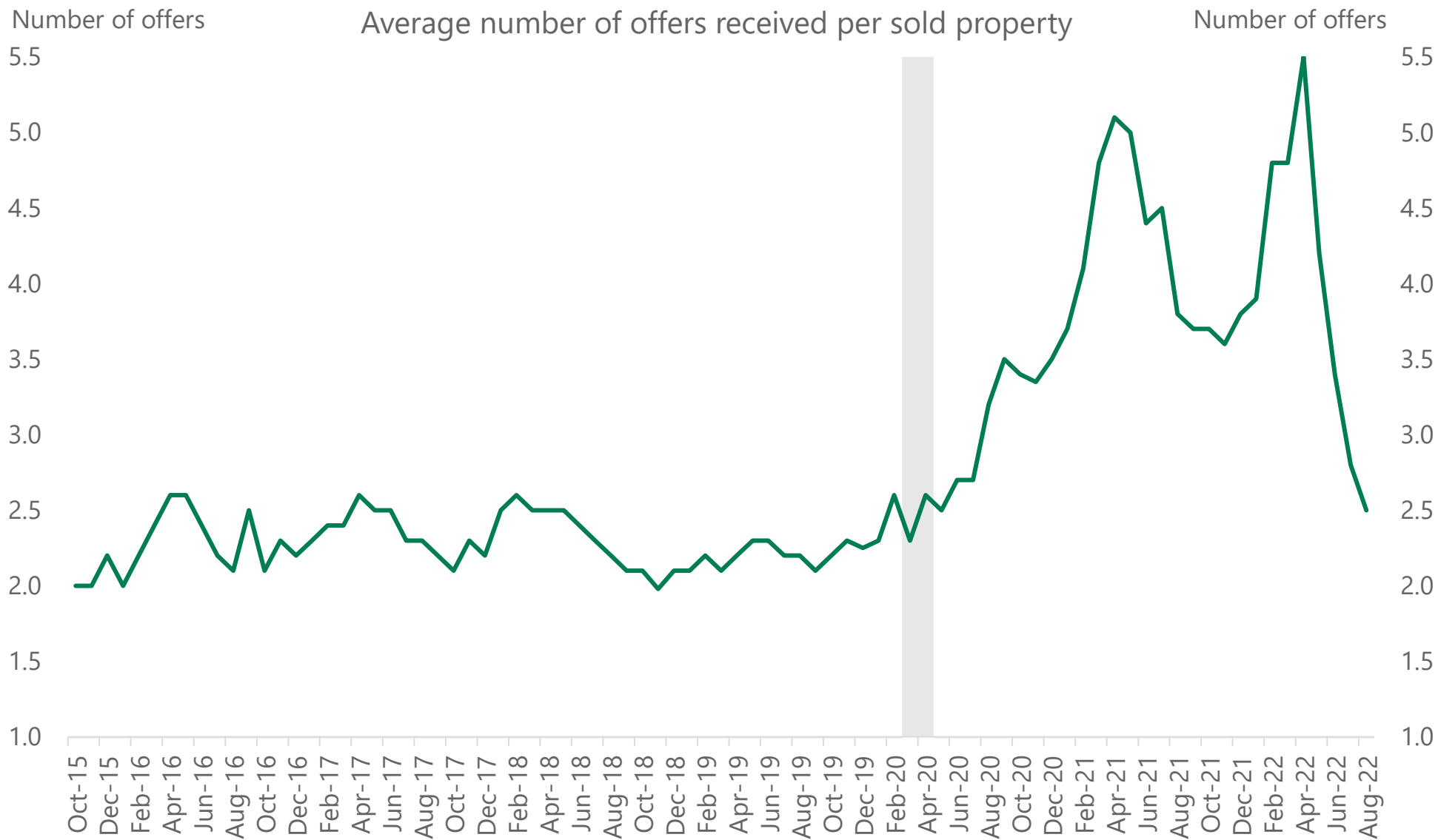


# Housing starts likely to moderate further



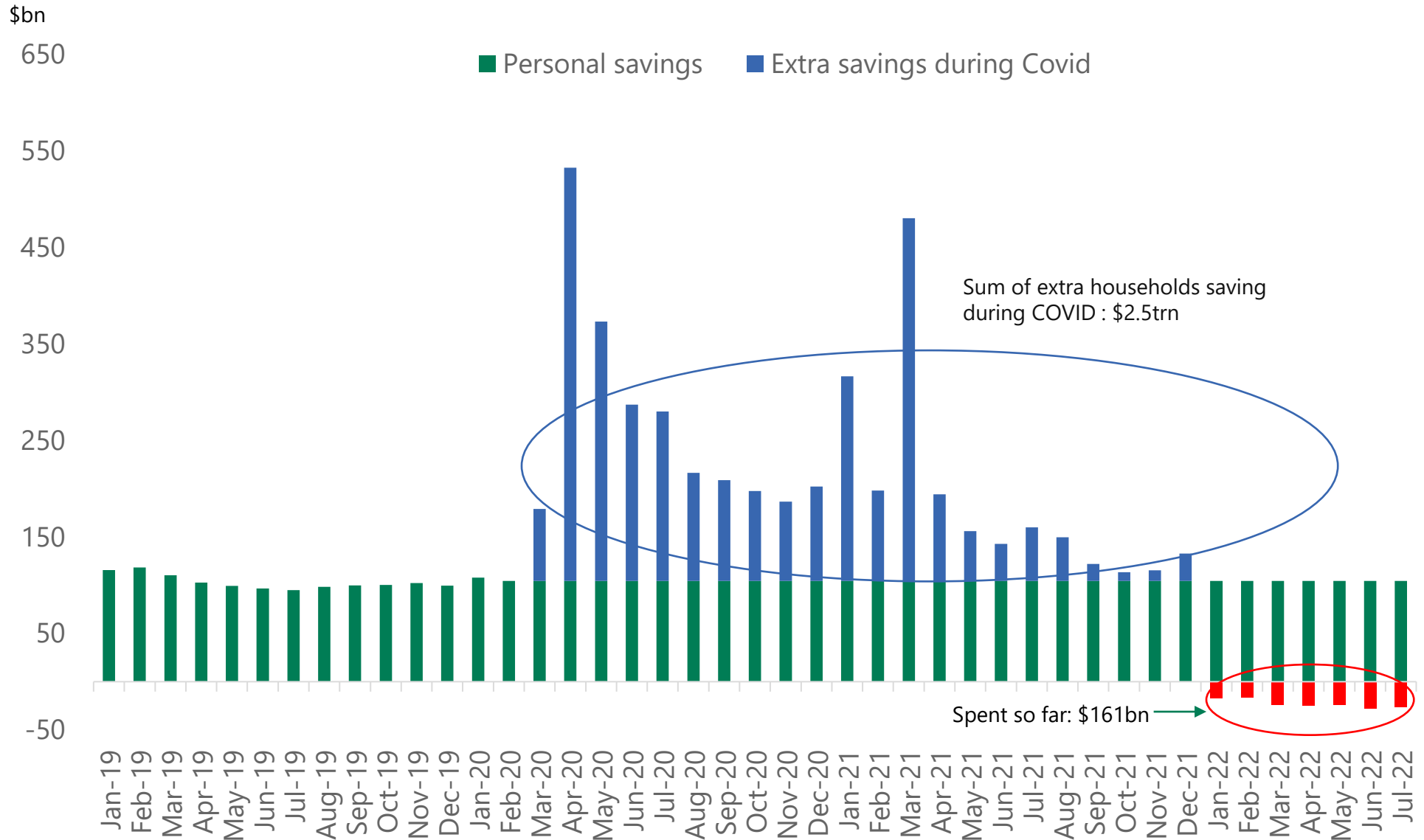
Source: Bloomberg, Apollo Chief Economist

# Average number of offers received per sold property



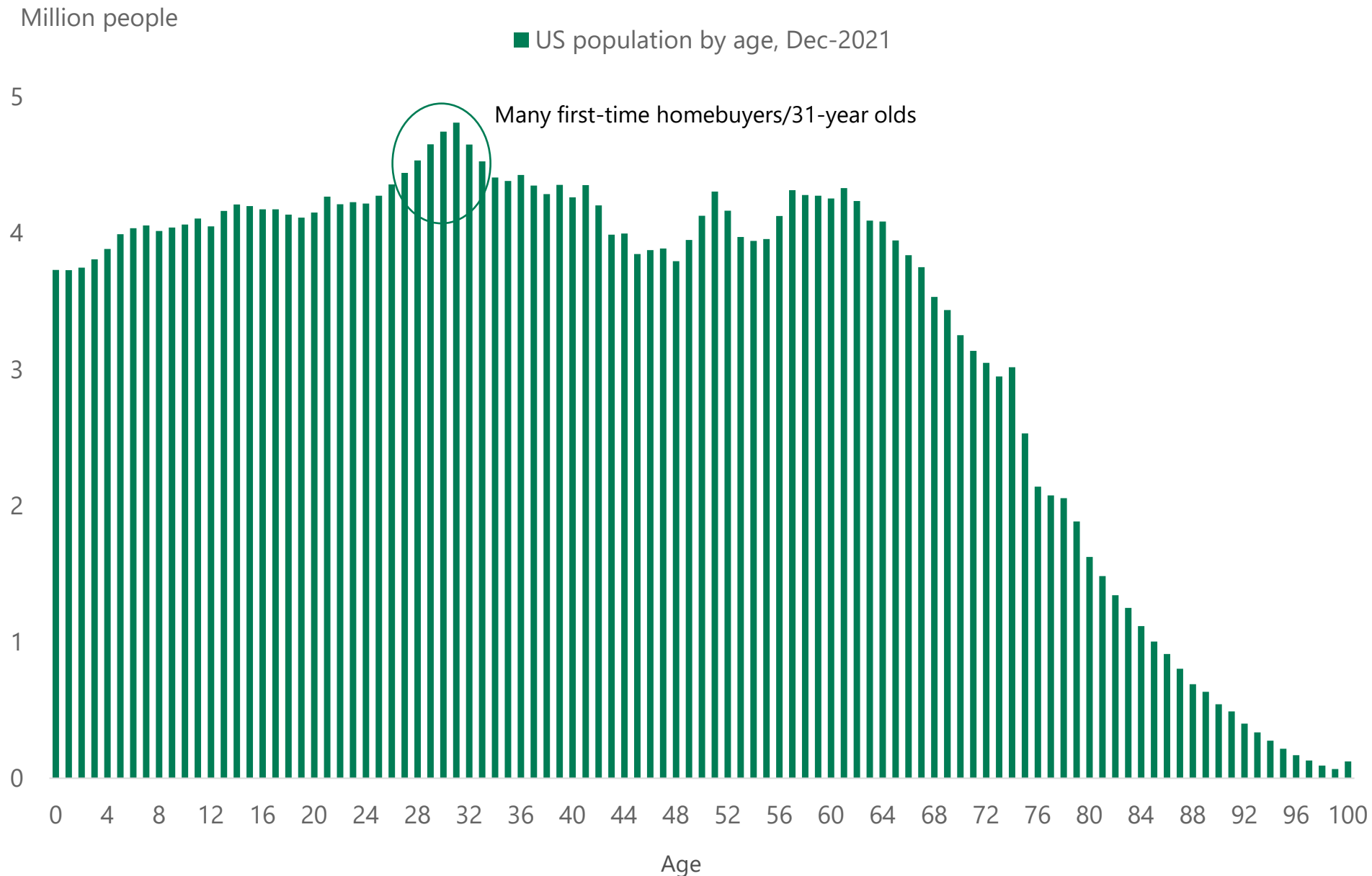
Source: NAR, Apollo Chief Economist

# Households have \$2.3trn in excess dry powder, saved during the pandemic



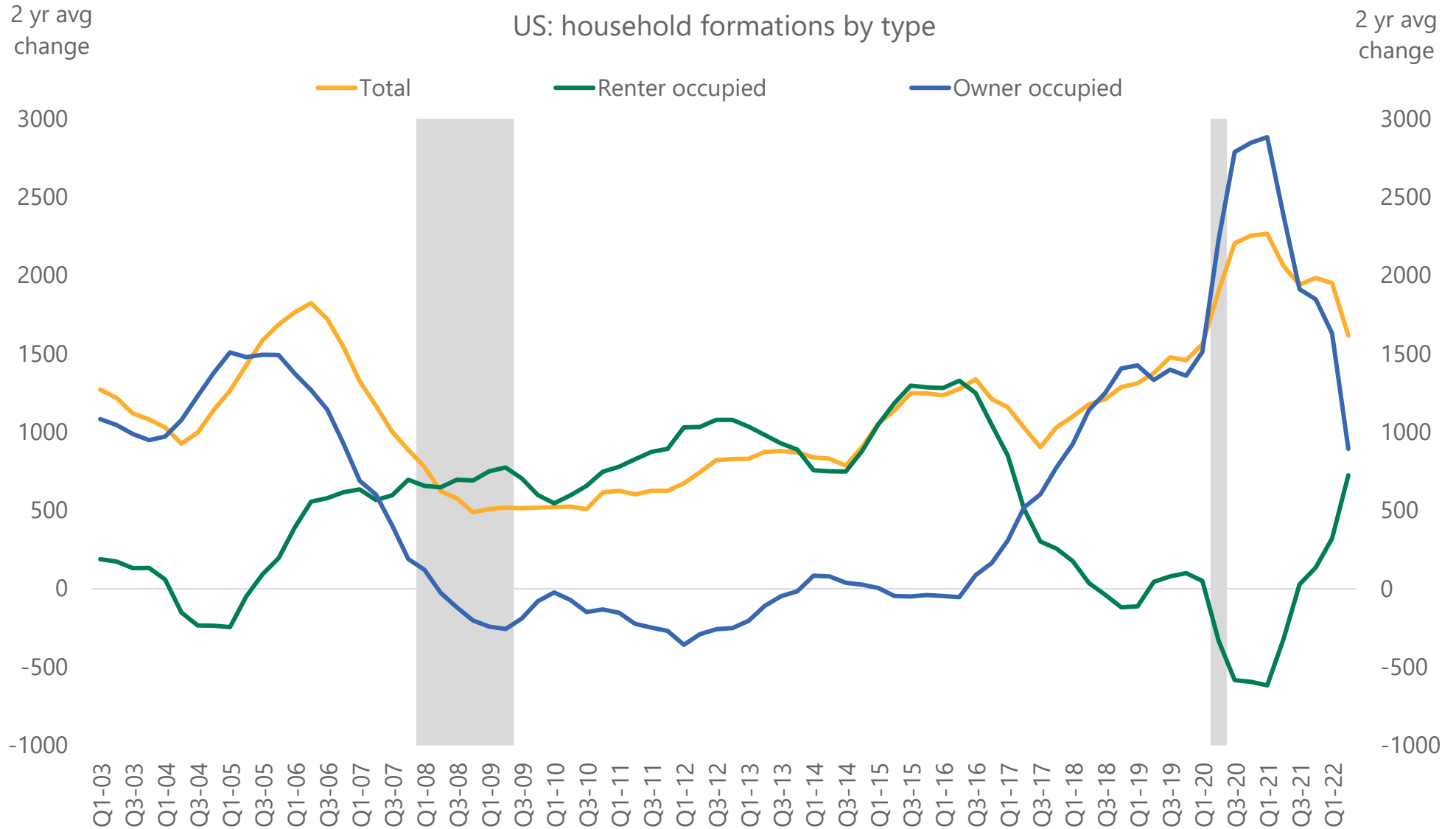
Note: Bloomberg, Apollo Chief Economist

# Demographics are a tailwind to housing demand



Source: UN, Haver, Apollo Chief Economist

# Household formation returning to normal



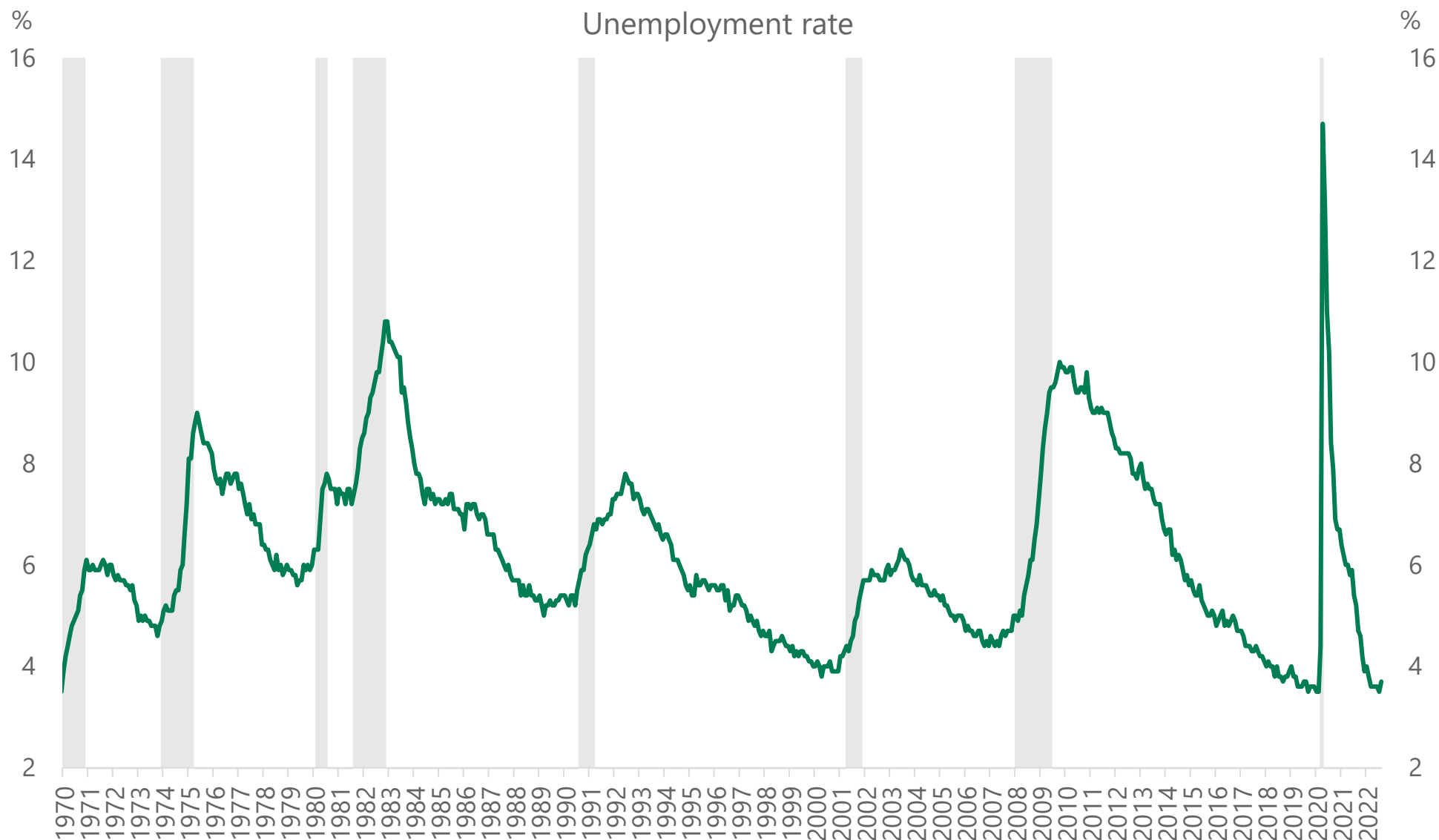
Source: Census Bureau, Haver, Apollo Chief Economist

# The homeownership rate gradually moving higher



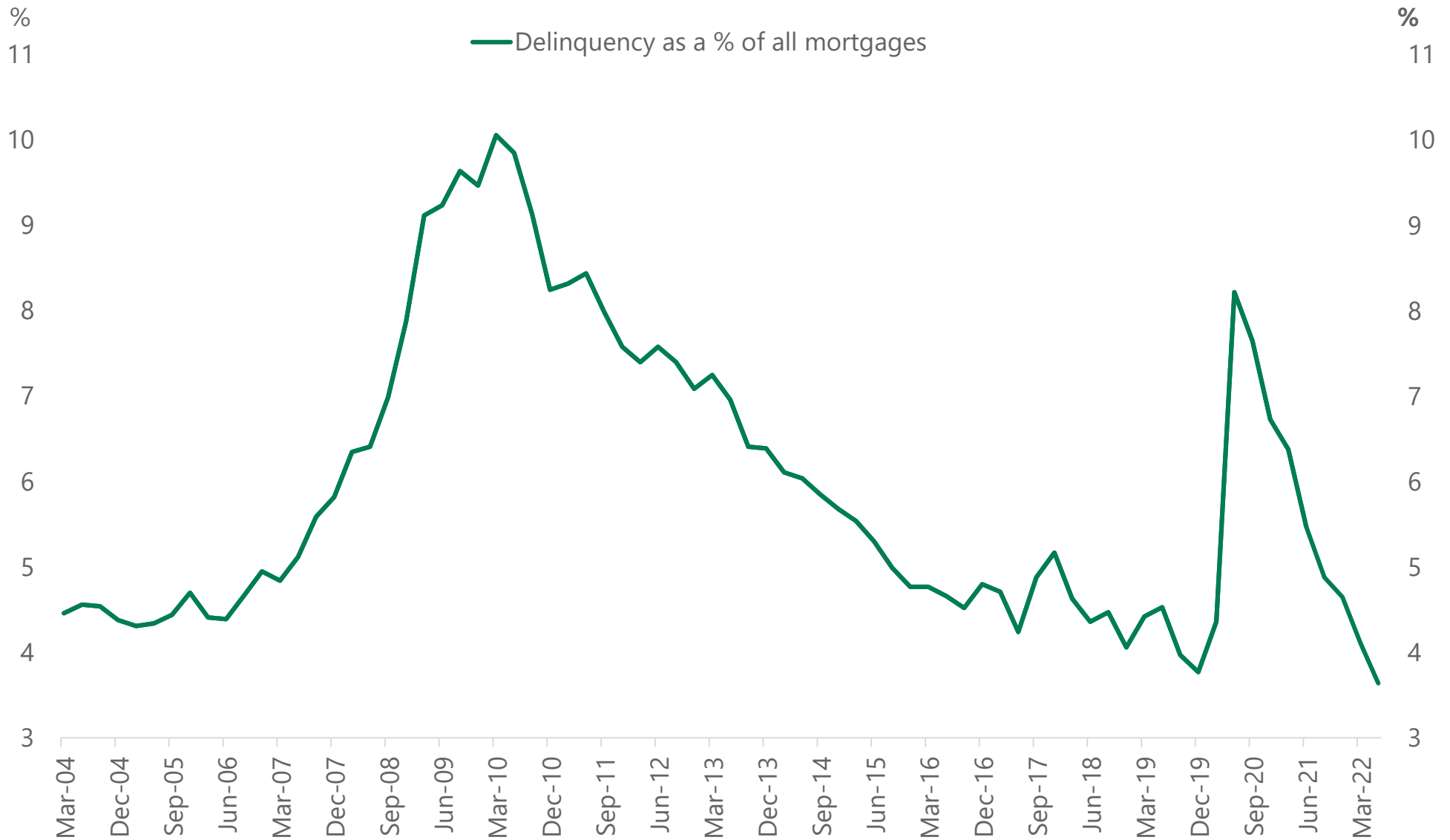
Source: Bloomberg, Apollo Chief Economist

# Low unemployment is a tailwind to housing demand



Source: BLS, Haver Analytics, Apollo Chief Economist

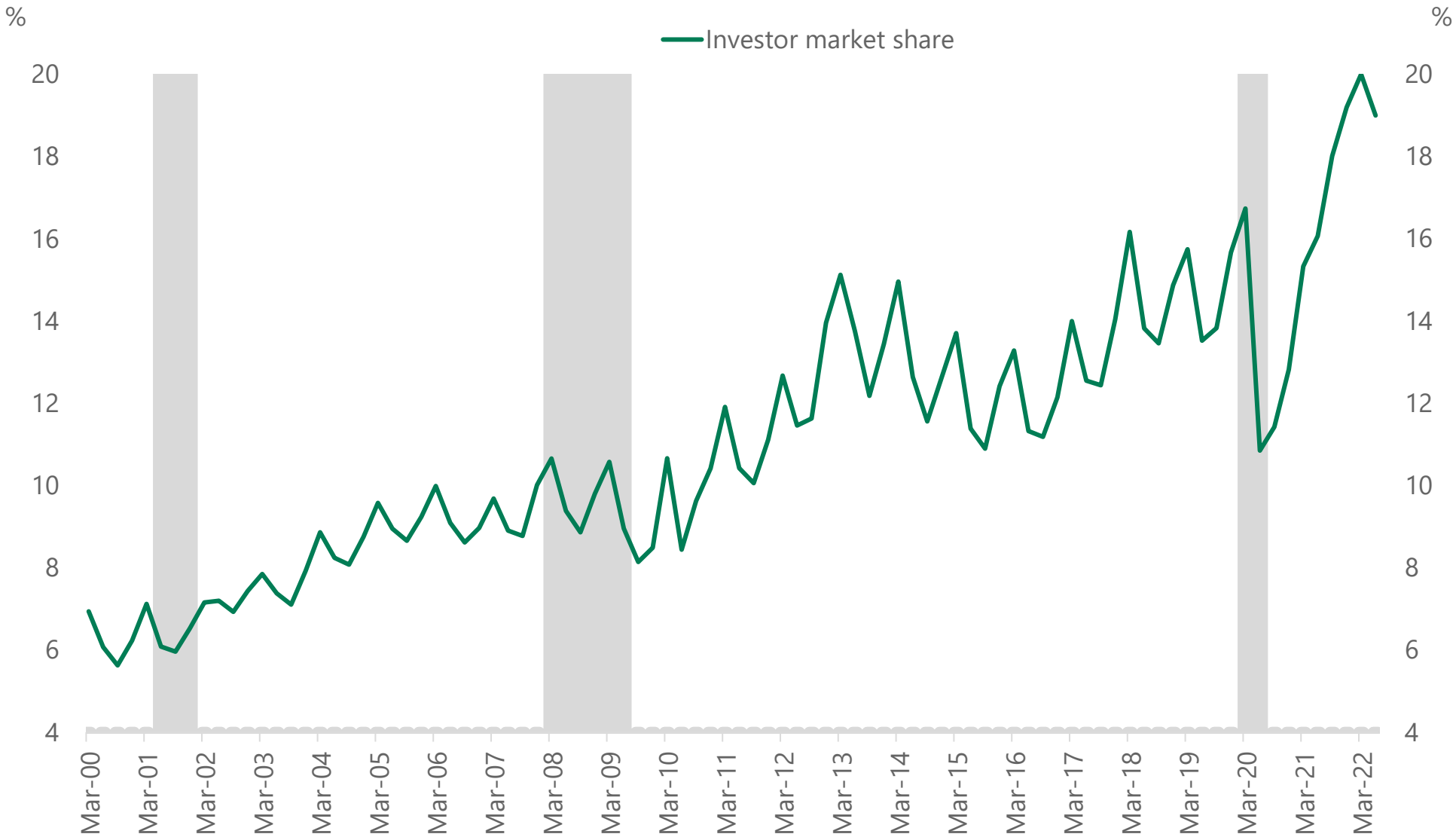
# Delinquent mortgages still low



Source: Bloomberg, Apollo Chief Economist

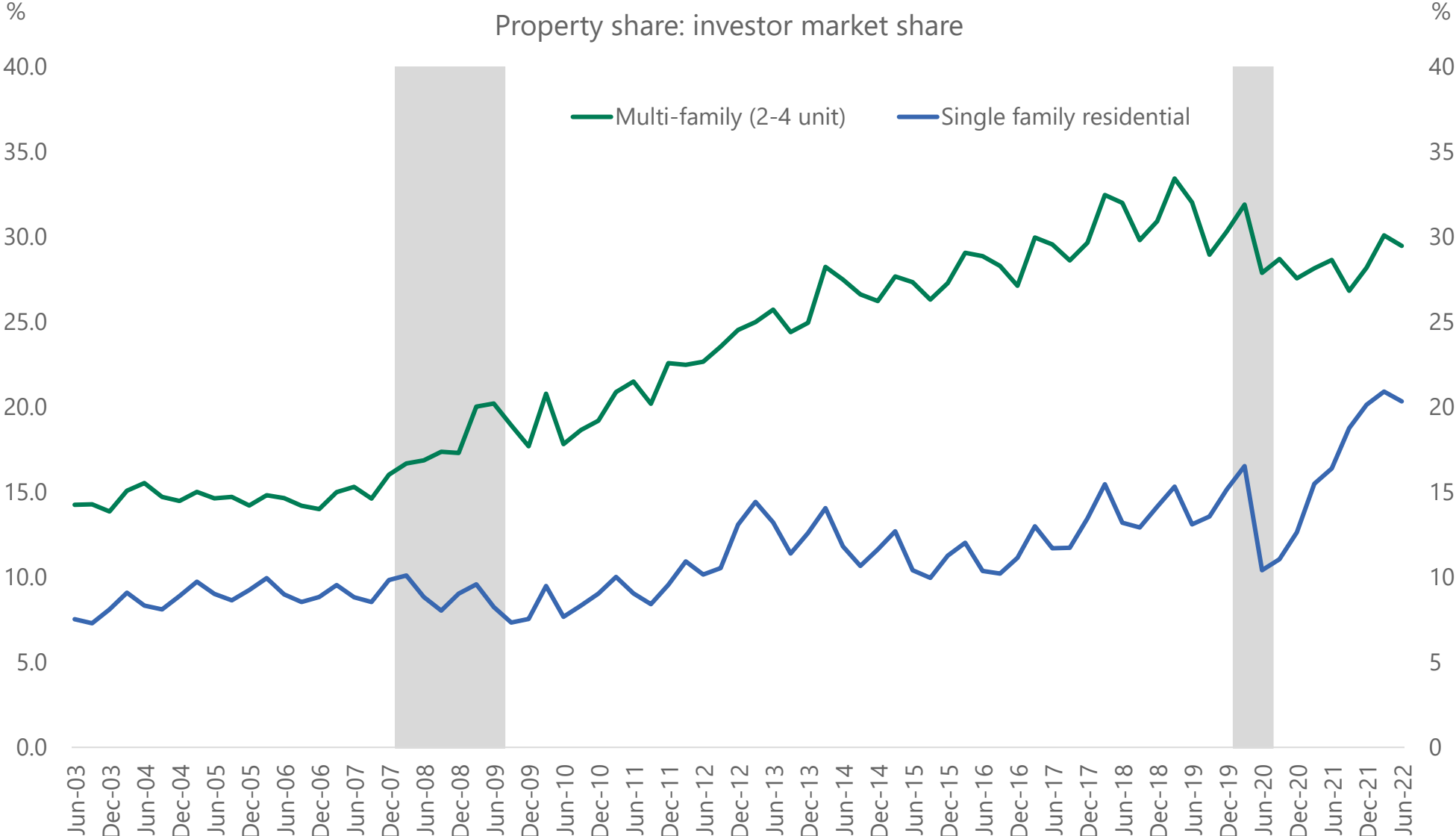


# Investors accounting for 19% of all home purchases



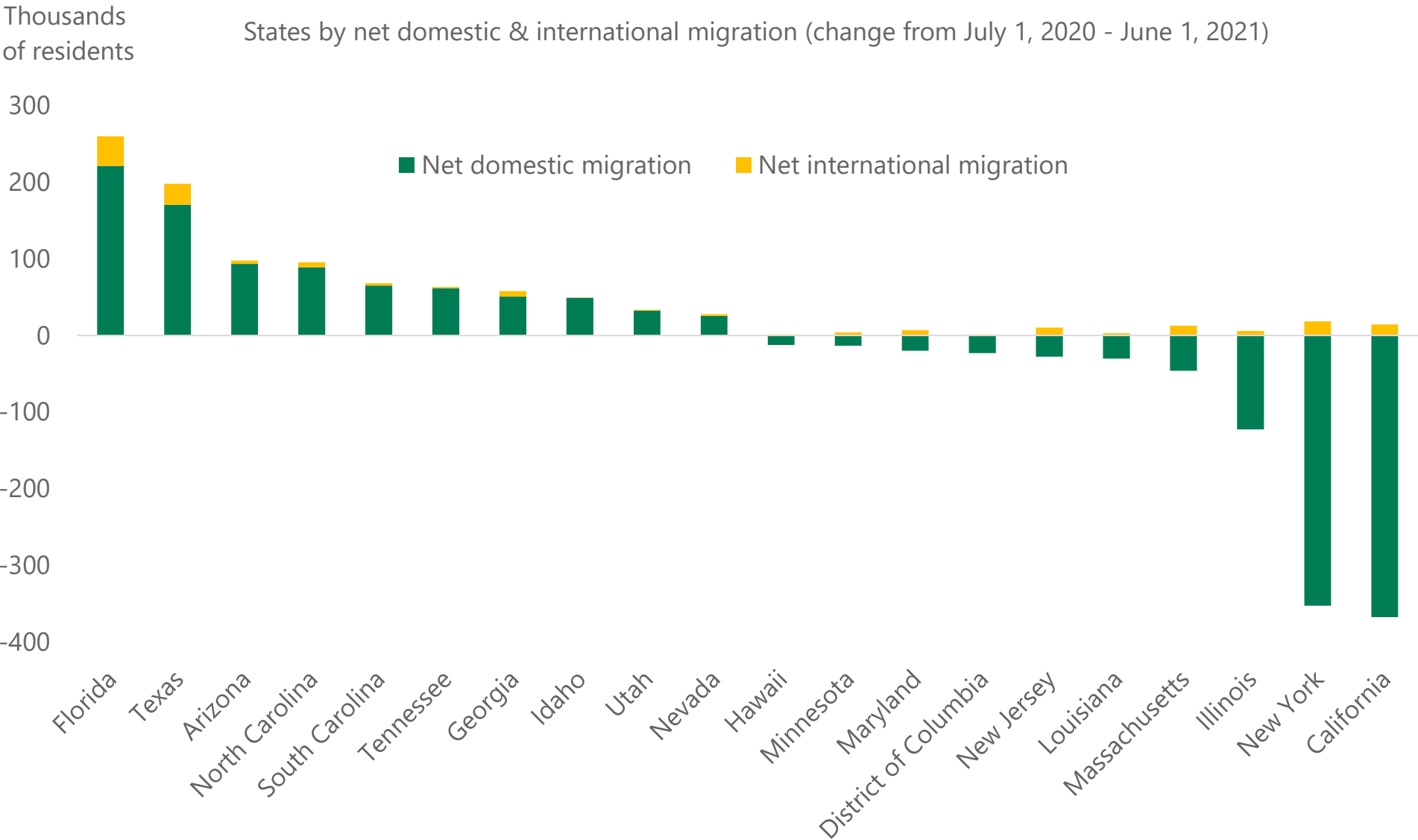
Source: Redfin, Apollo Chief Economist (Definition of Investor market share: the percentage of total home sales in which an investor was the buyer)

# Investors buying a rising share of single-family homes sold



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

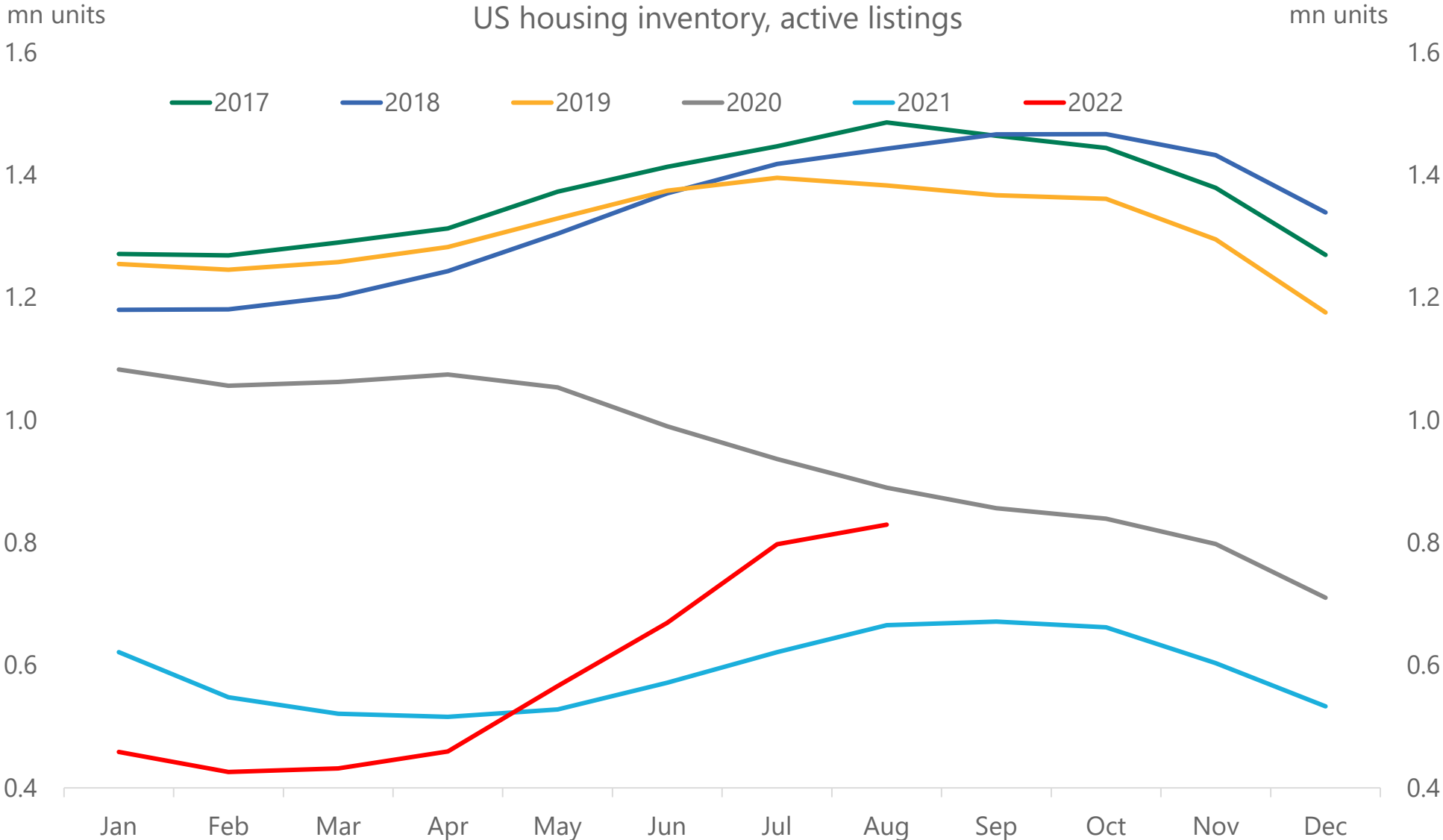
# Migration out of California and migration into Florida during the pandemic



Source: Census Bureau, Apollo Chief Economist

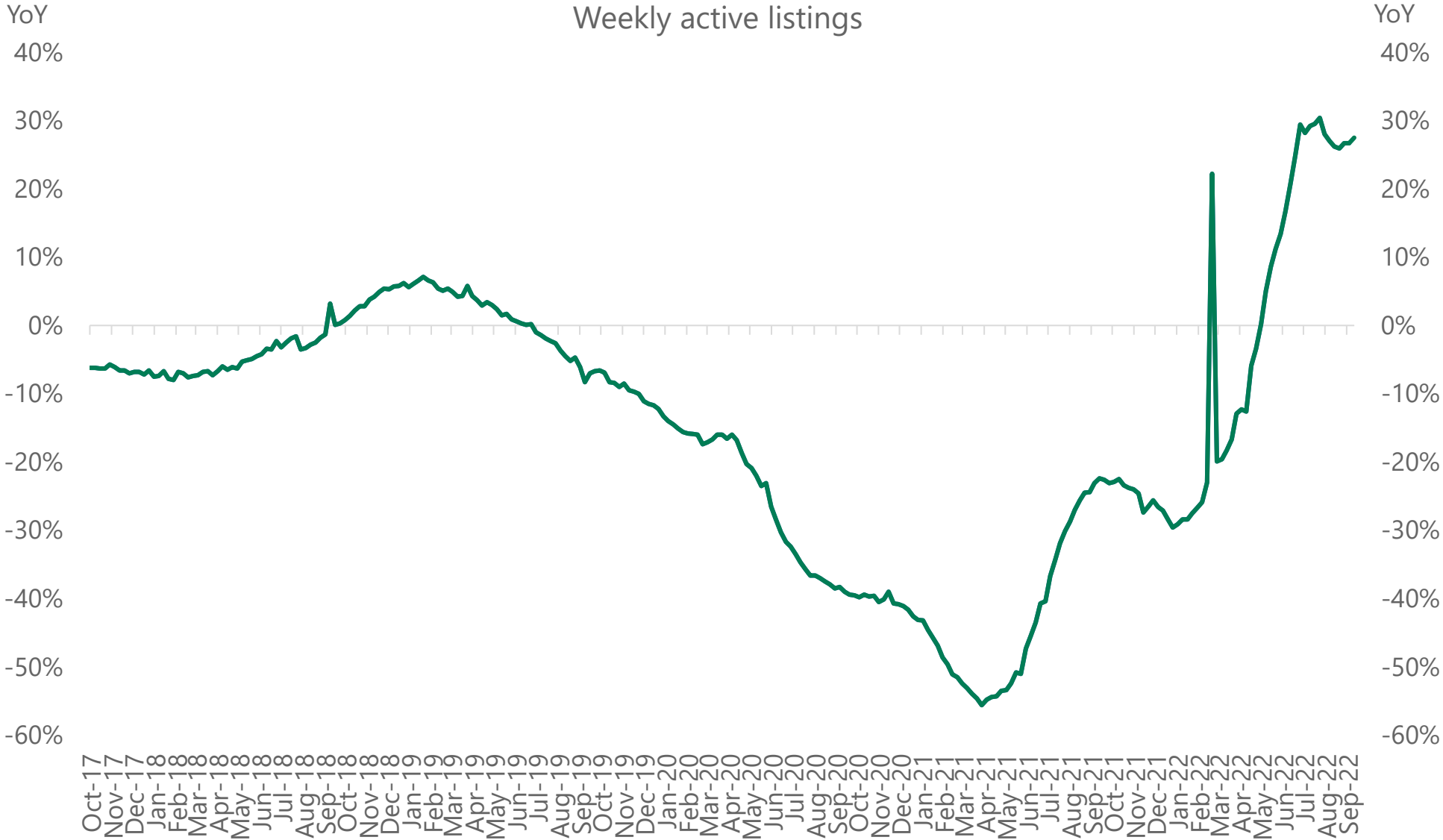
**2) Housing Supply: Housing supply is low, but construction is near record-high levels**

# US housing inventory rising from low levels



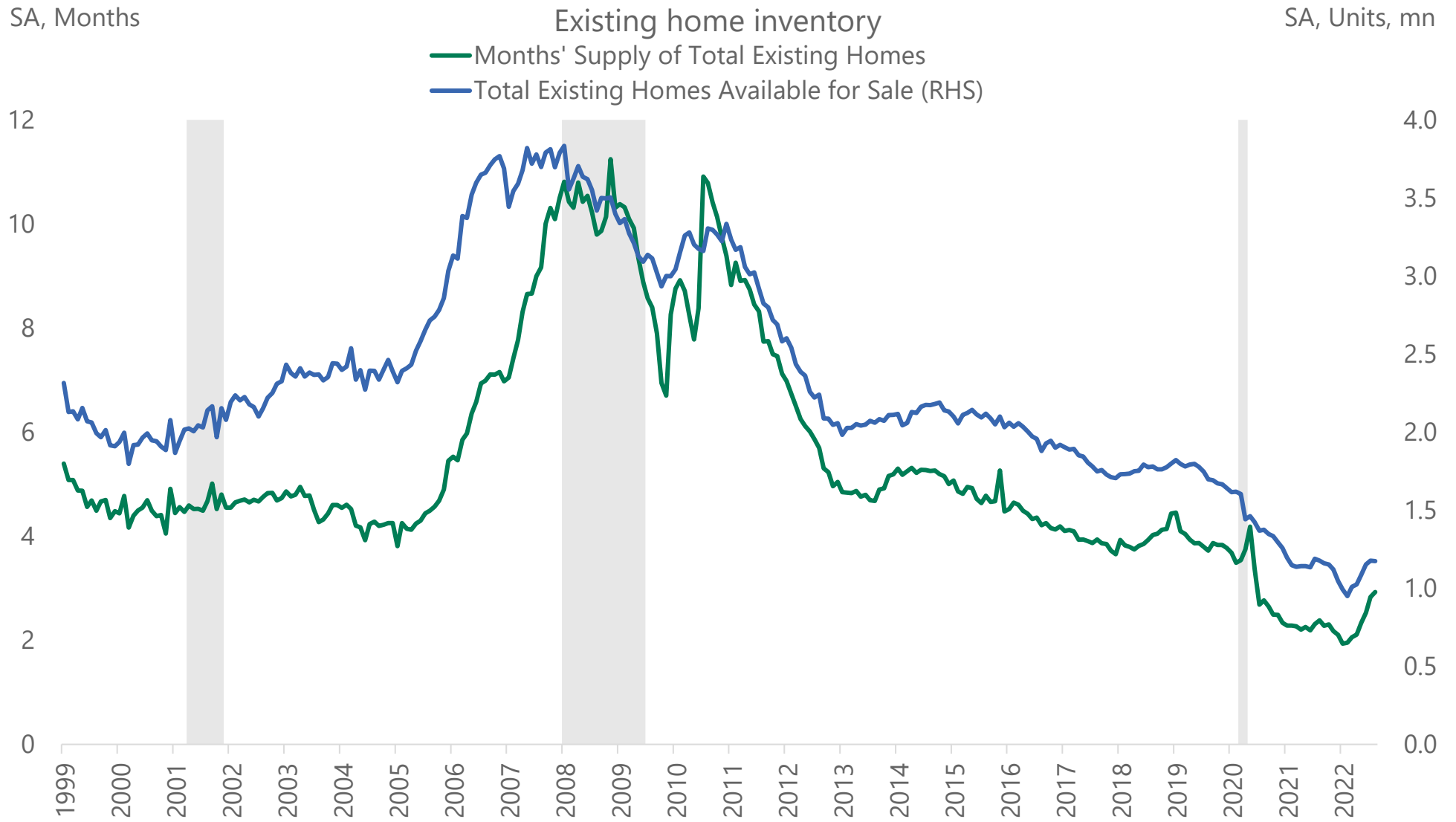
Source: Realtor.com, Apollo Chief Economist

# US housing inventory



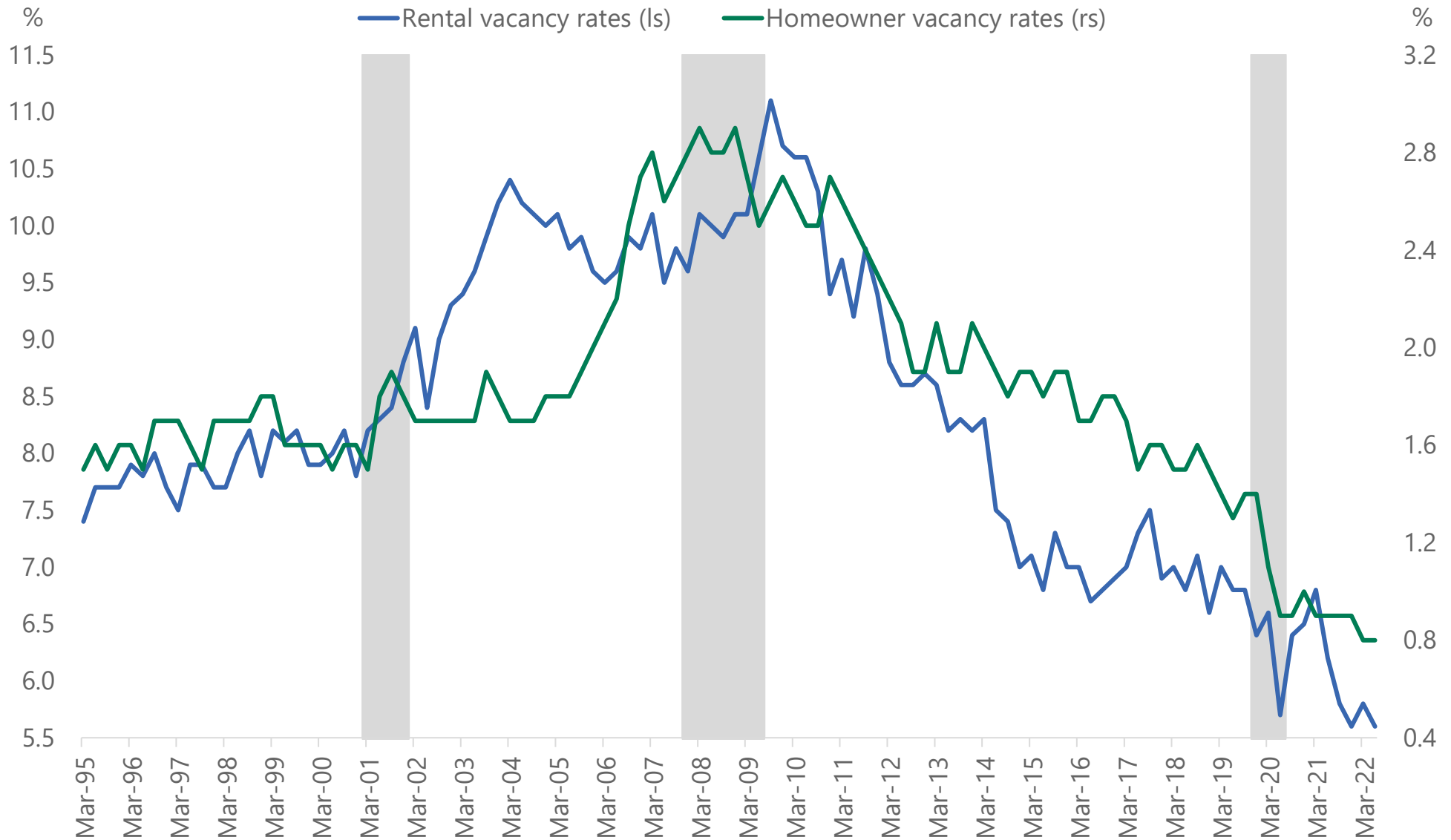
Source: Realtor.com, Apollo Chief Economist

# Very low inventory of homes for sale



Source: NAR, Apollo Chief Economist

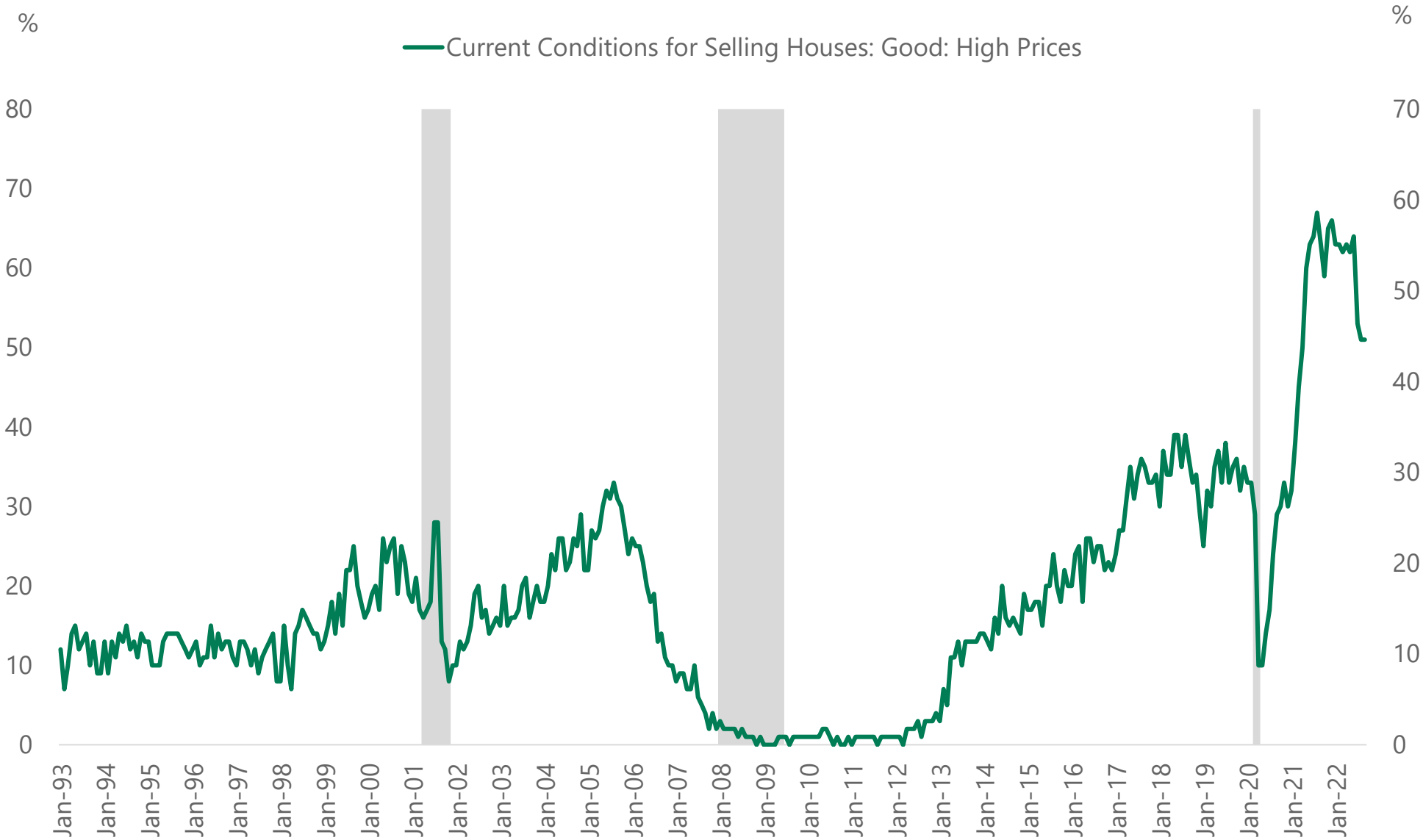
# Vacancy rates at record-low levels



Source: Bloomberg, Apollo Chief Economist

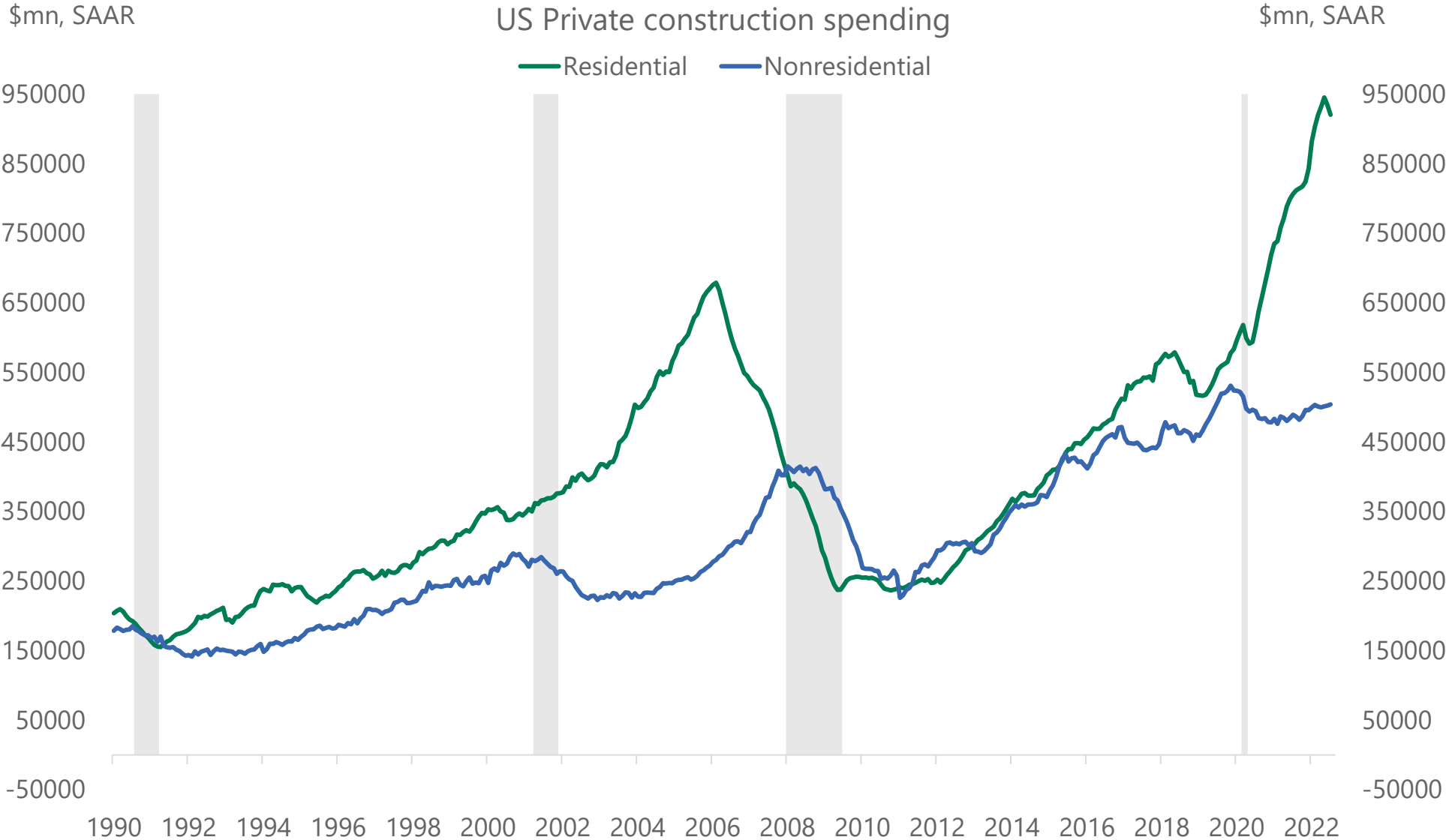


# Consumers saying this is a good time to sell a house



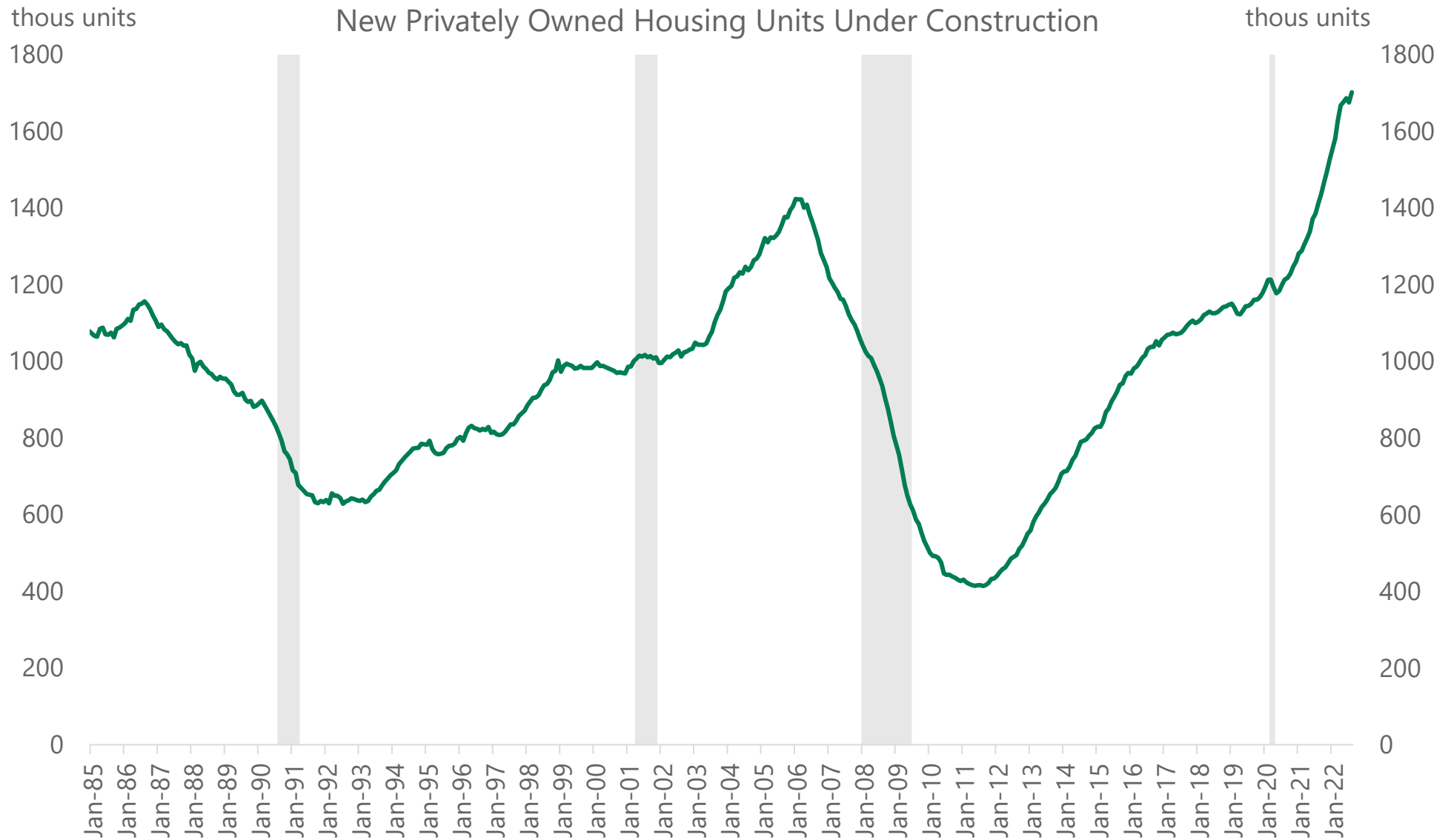
Source: University of Michigan, Apollo Chief Economist

# Residential construction spending very strong



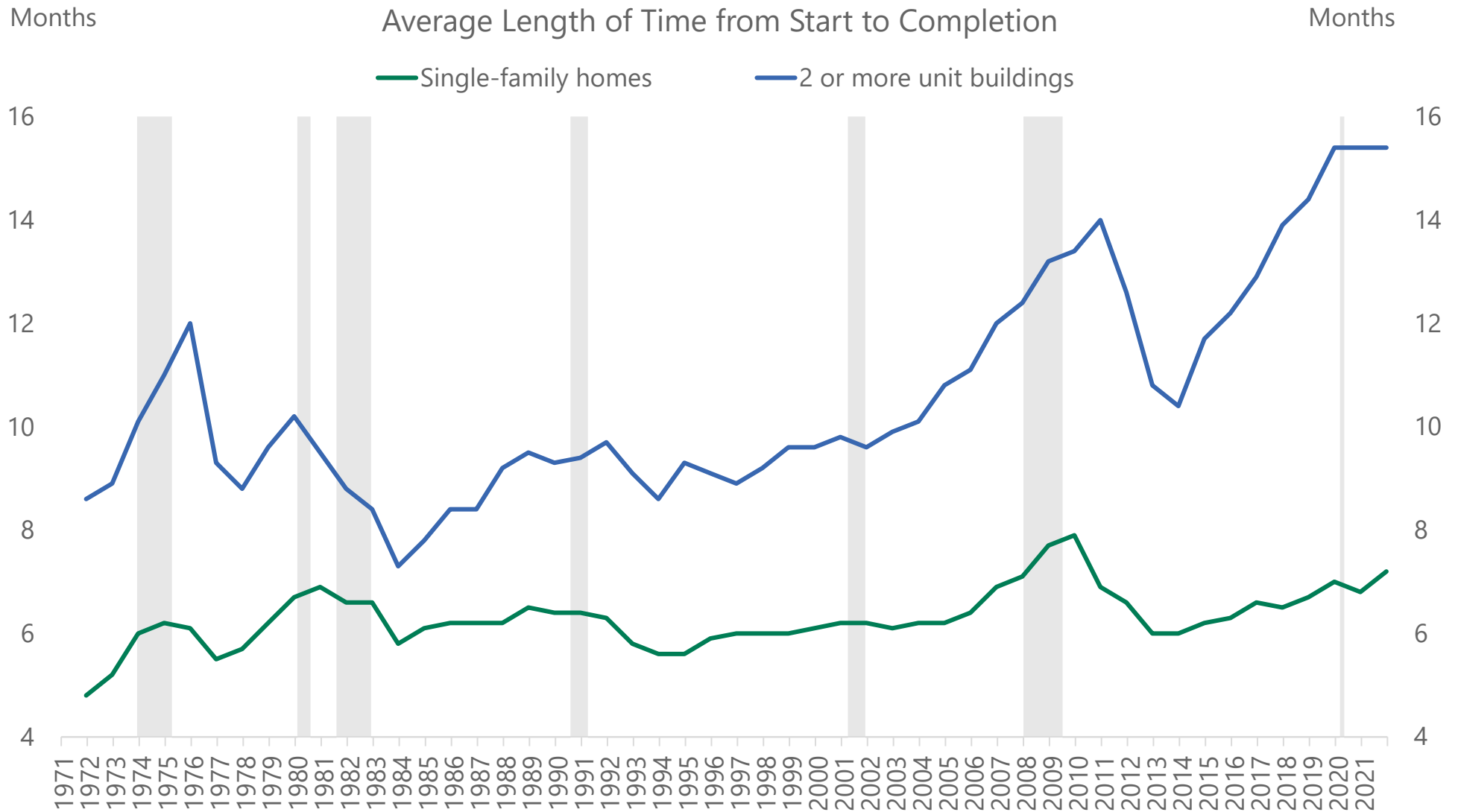
Source: Census, Apollo Chief Economist

# New privately owned housing units under construction at record highs



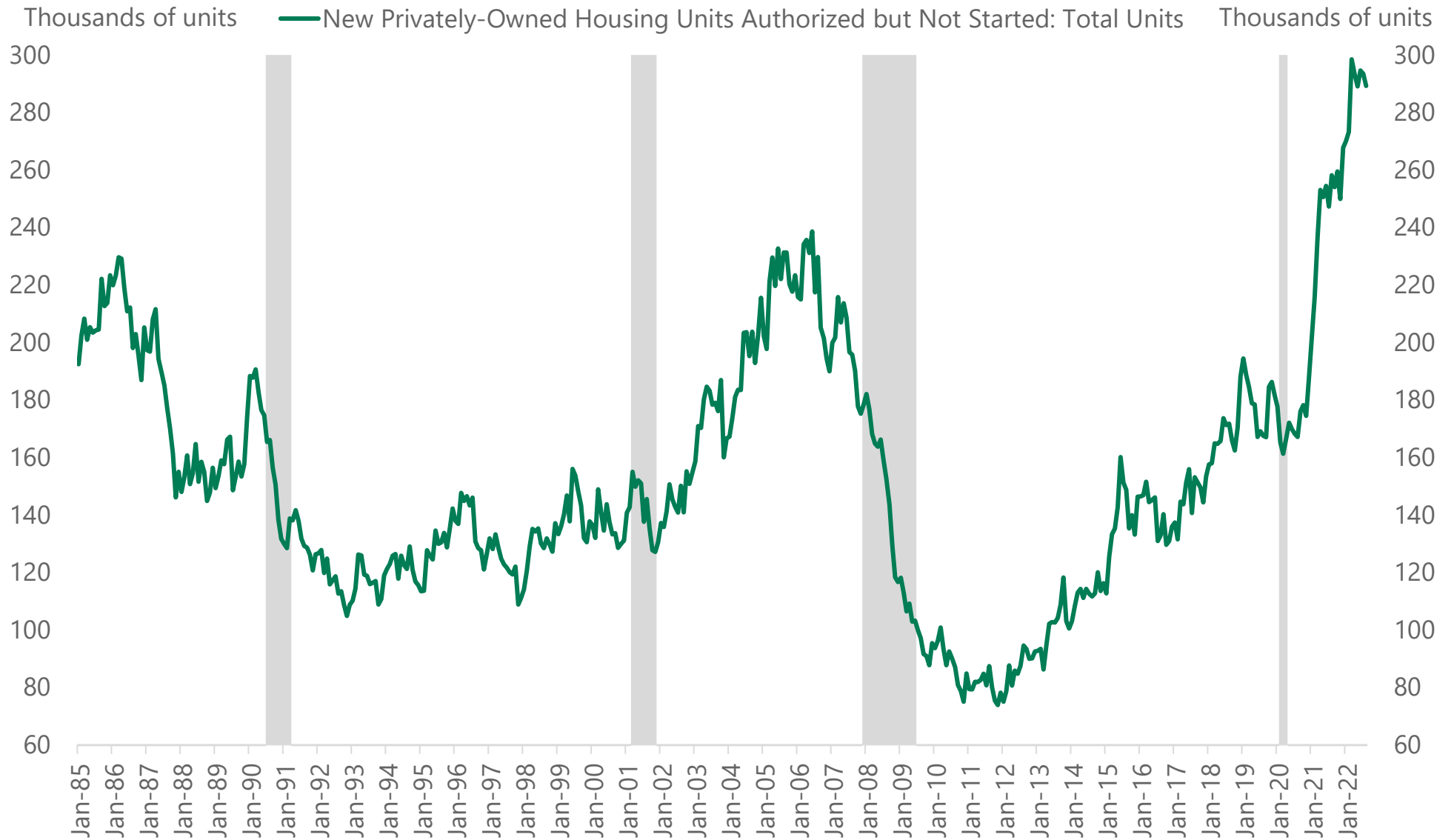
Source: Census Bureau, Haver Analytics, Apollo Chief Economist

# It currently takes 7 months on average to build a single-family house



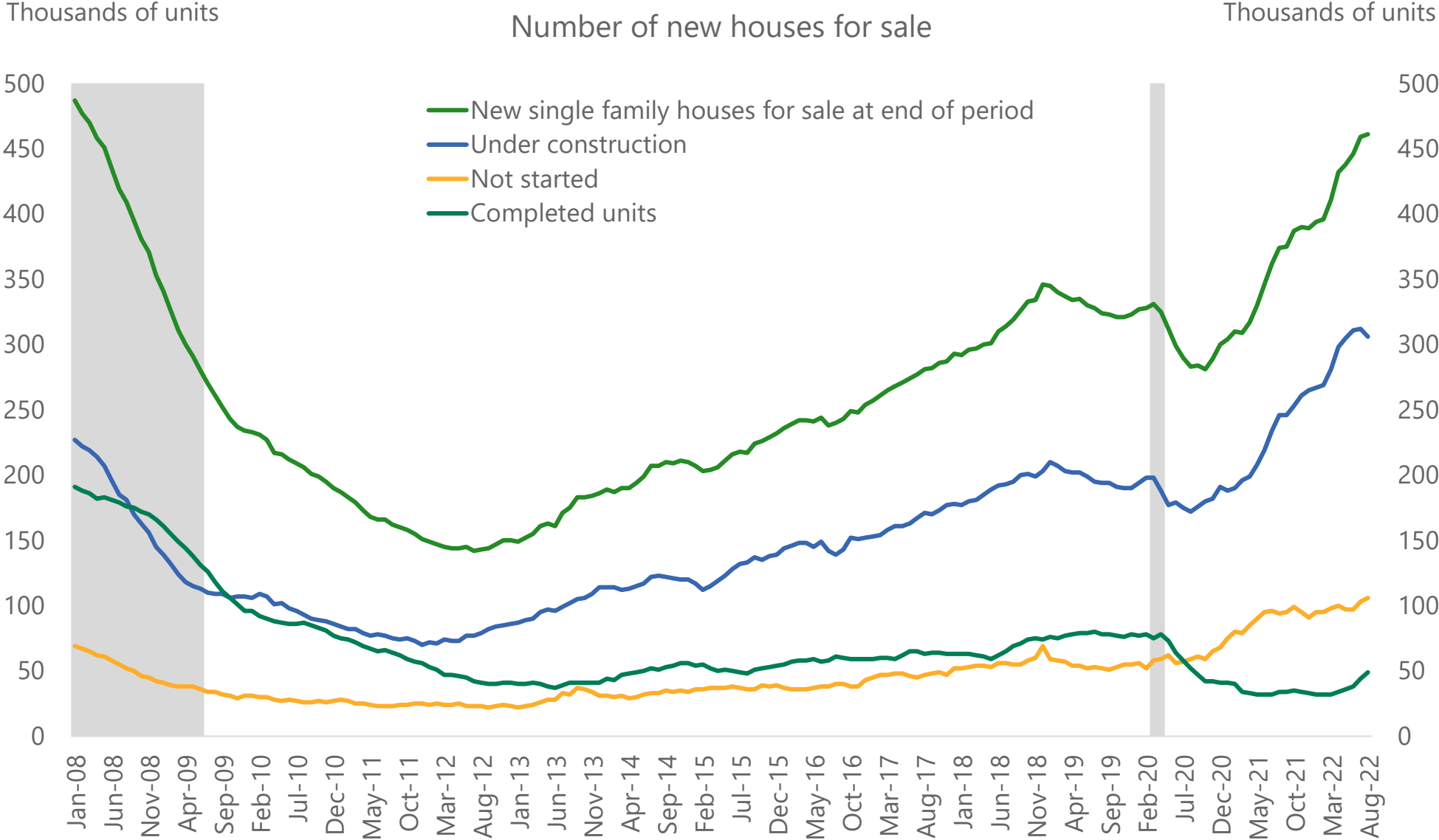
Source: Census, Haver Analytics, Apollo Chief Economist. Note: Single family homes are 1 unit buildings

# New housing units authorized



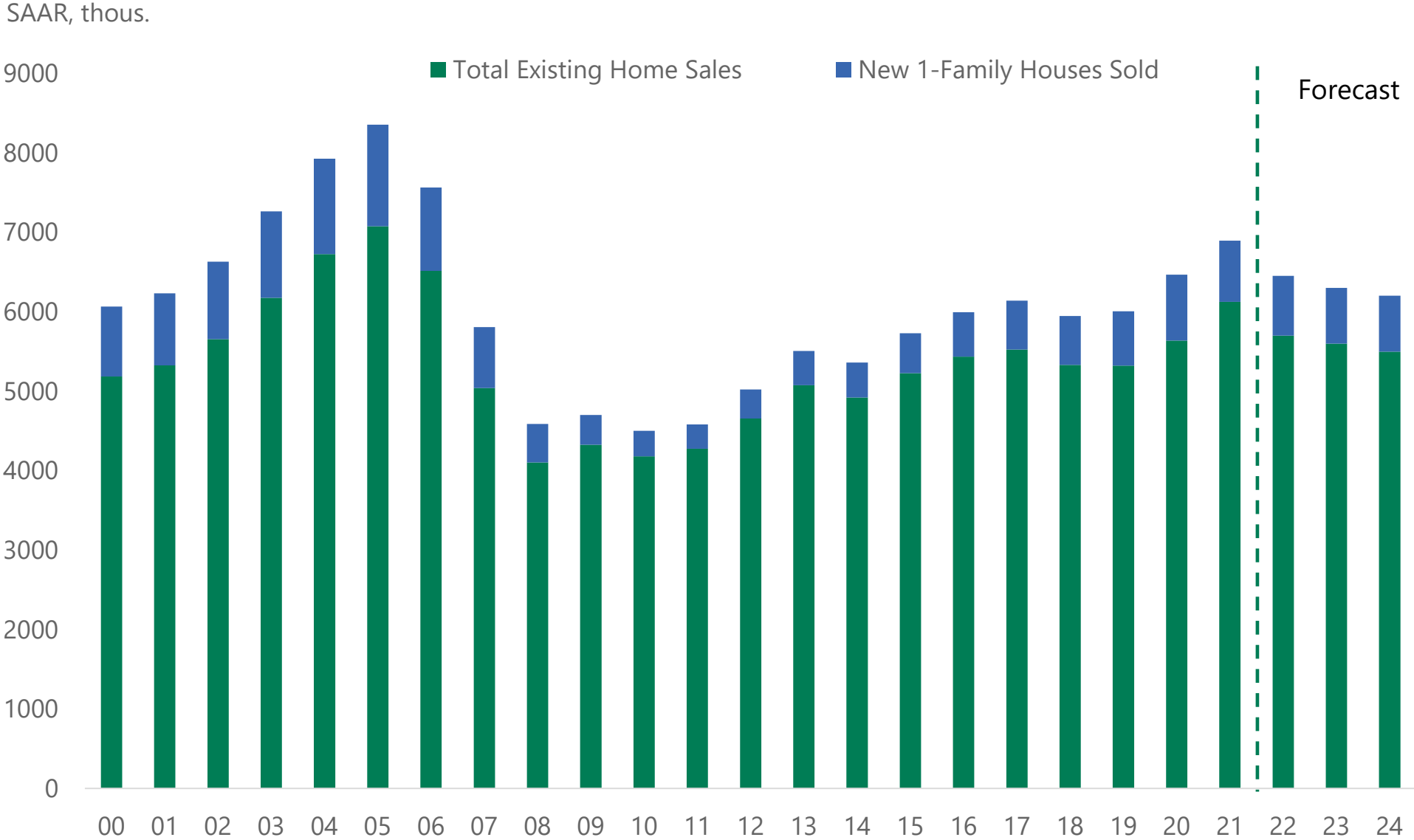
Source: FRED, Apollo Chief Economist

# More new houses for sale where construction has not yet started



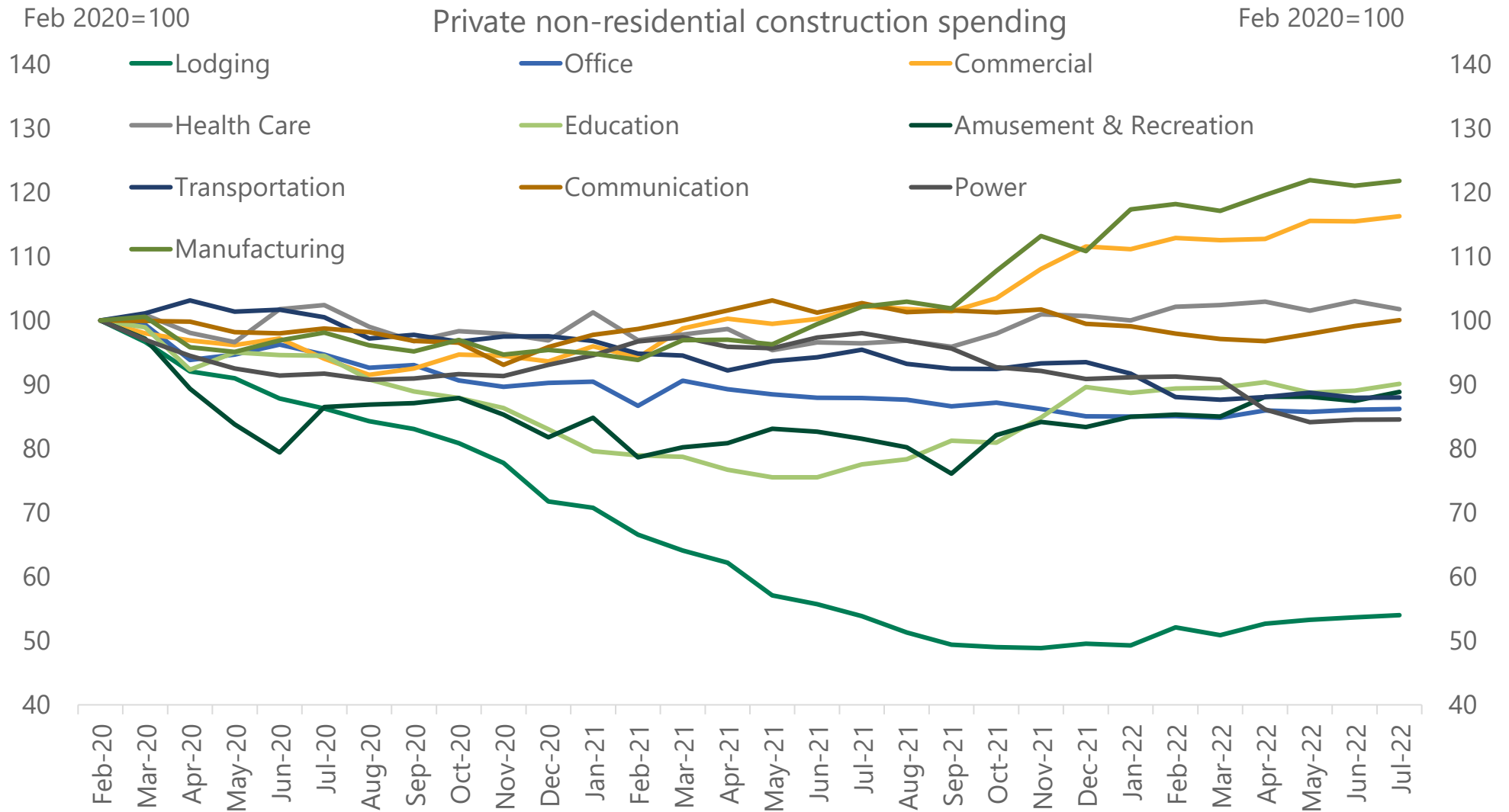
Source: Census Bureau, Apollo Chief Economist

# Consensus forecasting a soft landing in home sales



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

# Lodging has seen the biggest decline in non-residential construction

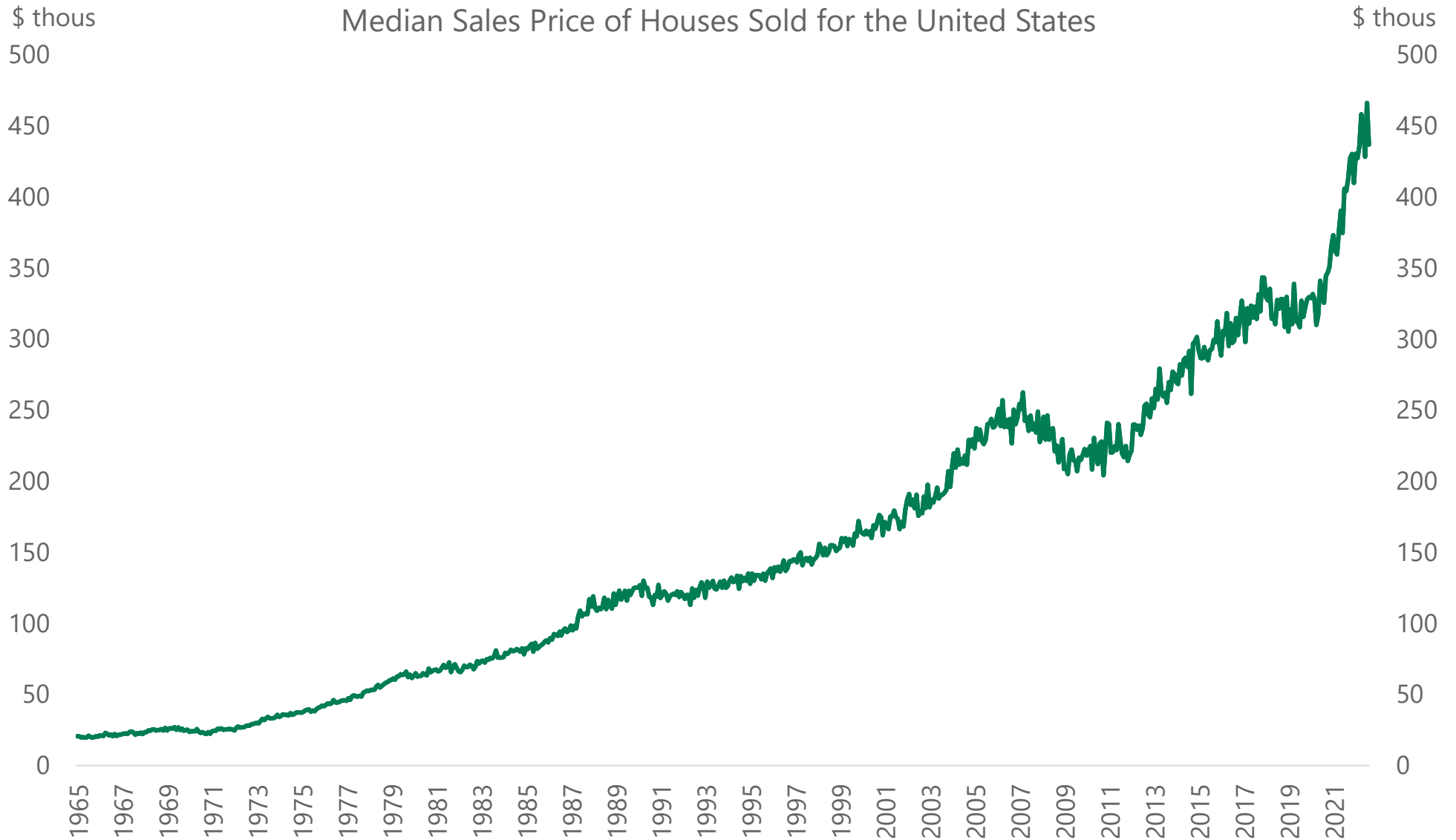


Source: Census, Haver Analytics, Apollo Chief Economist



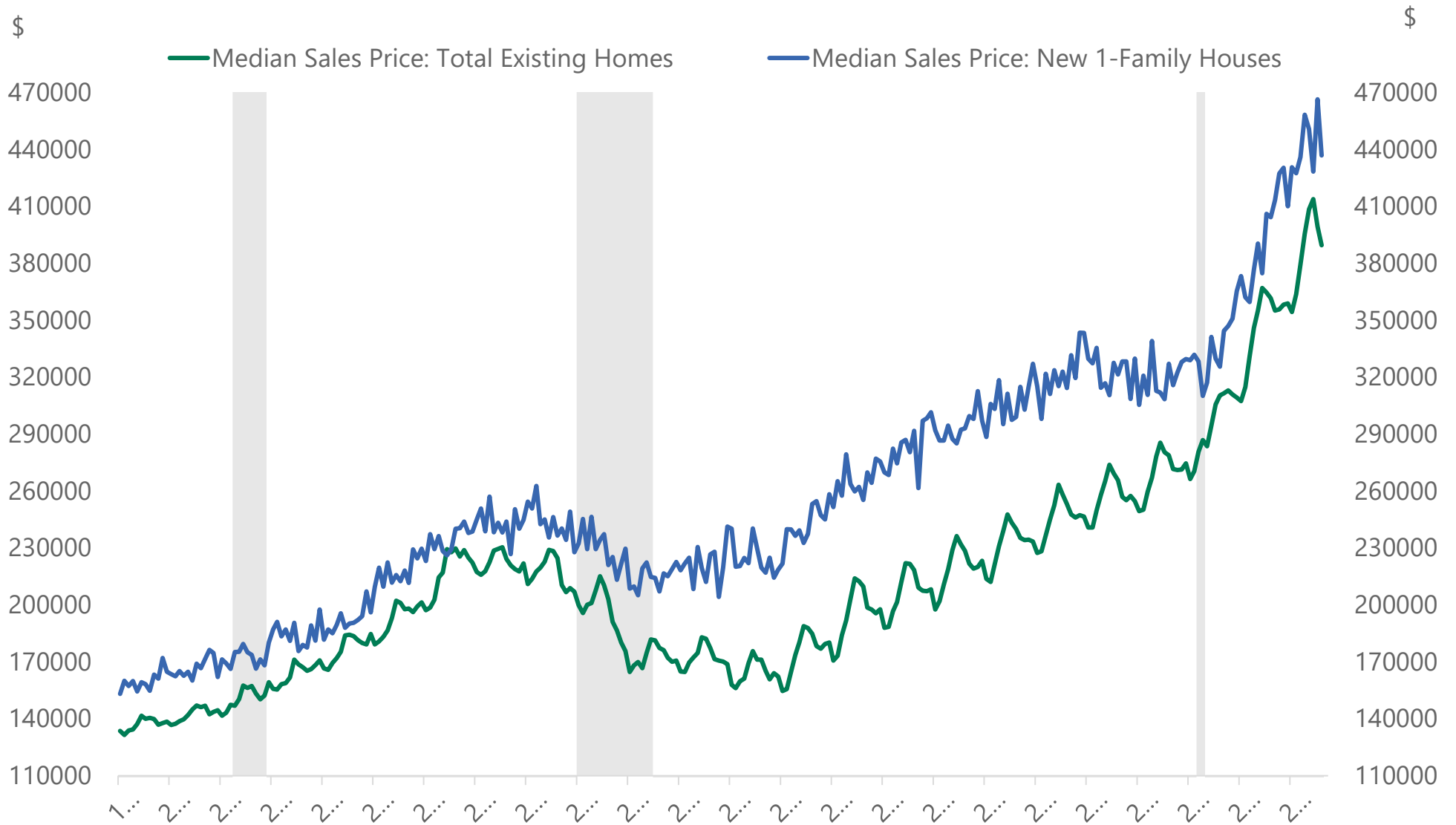
### 3) House Prices: Home price inflation slowing down

# Median home sales price now around \$450K



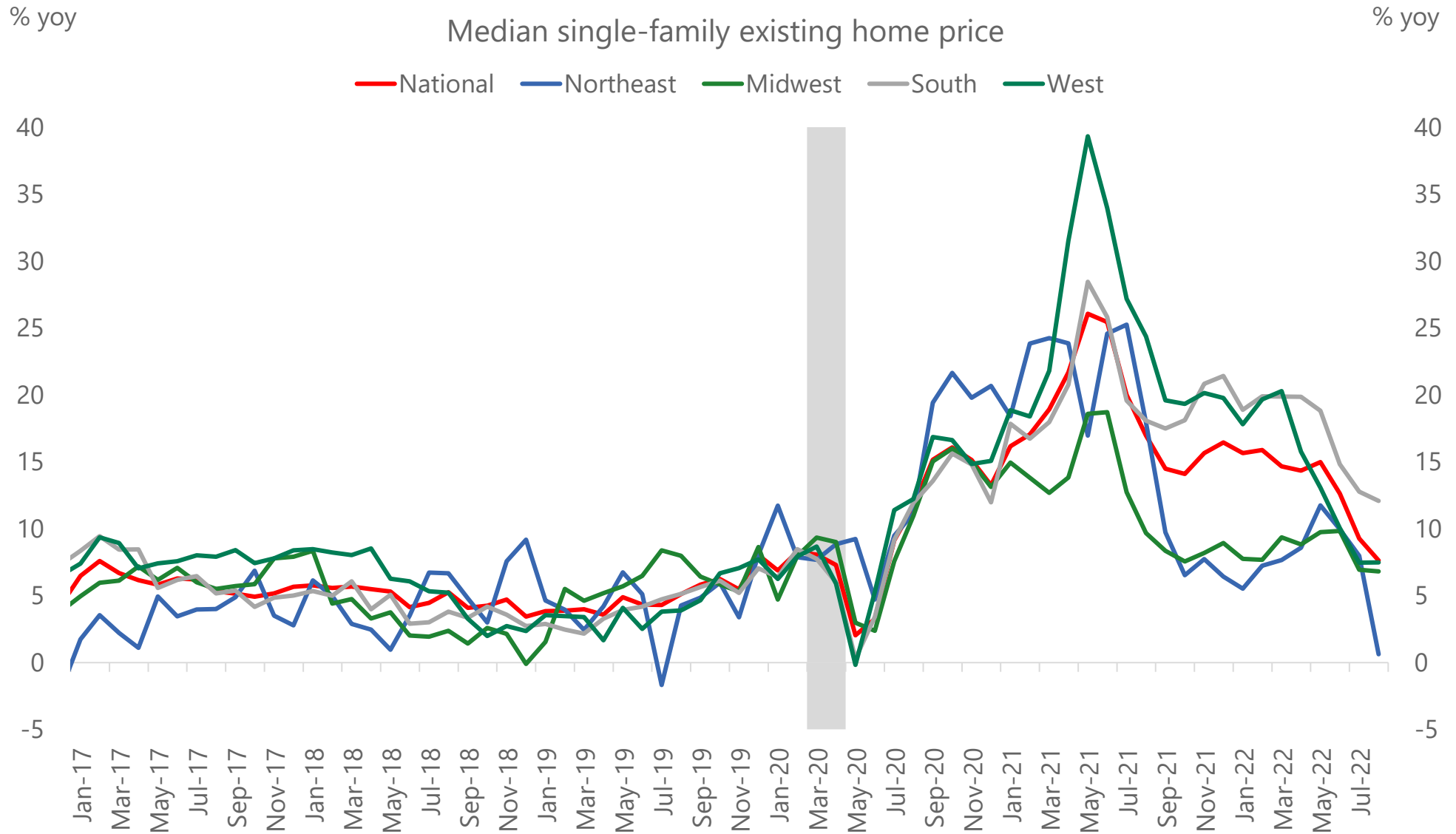
Source: Census Bureau, Apollo Chief Economist

# House prices rising during the pandemic



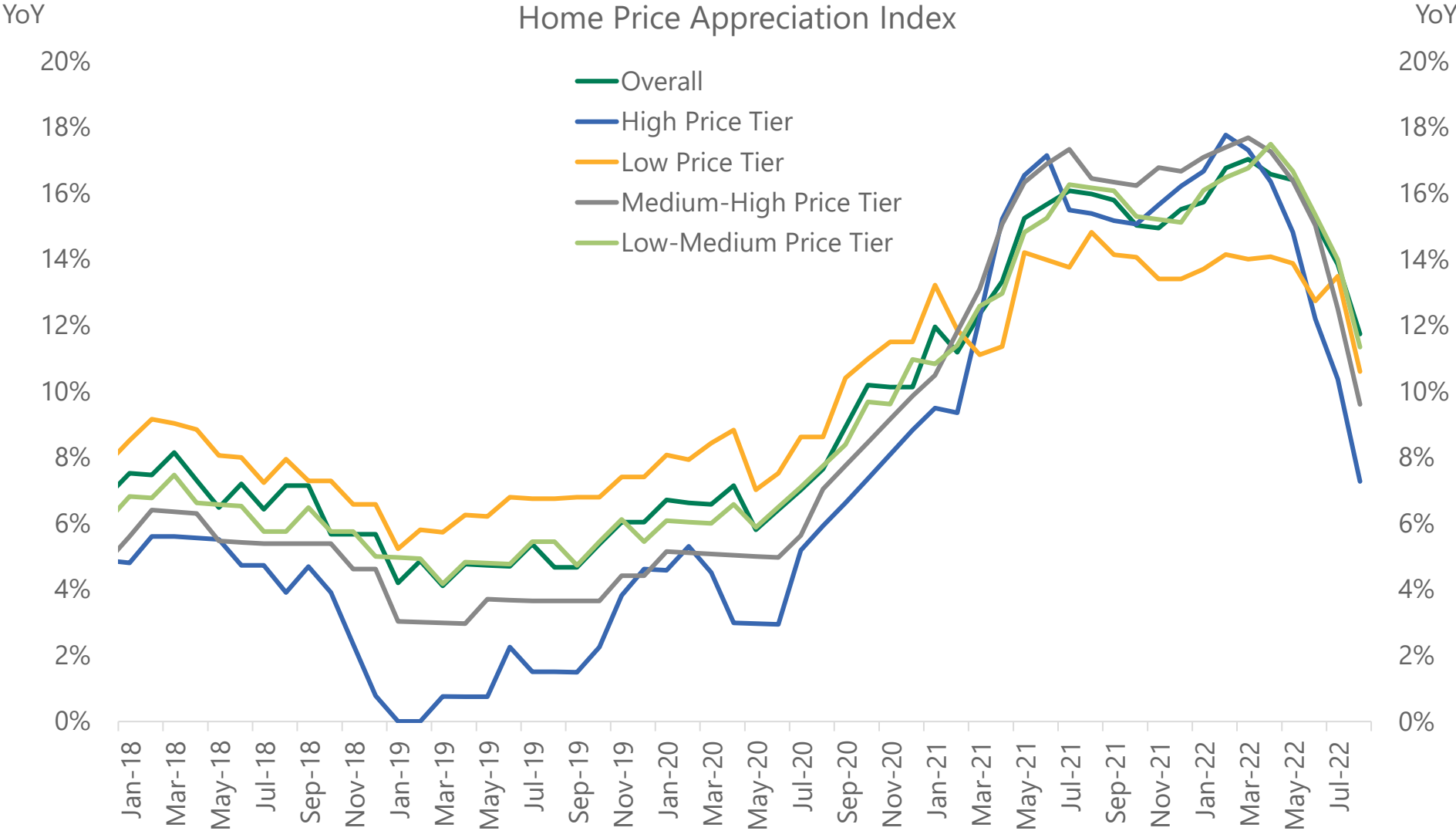
Source: Census, Apollo Chief Economist

# Home price inflation coming down



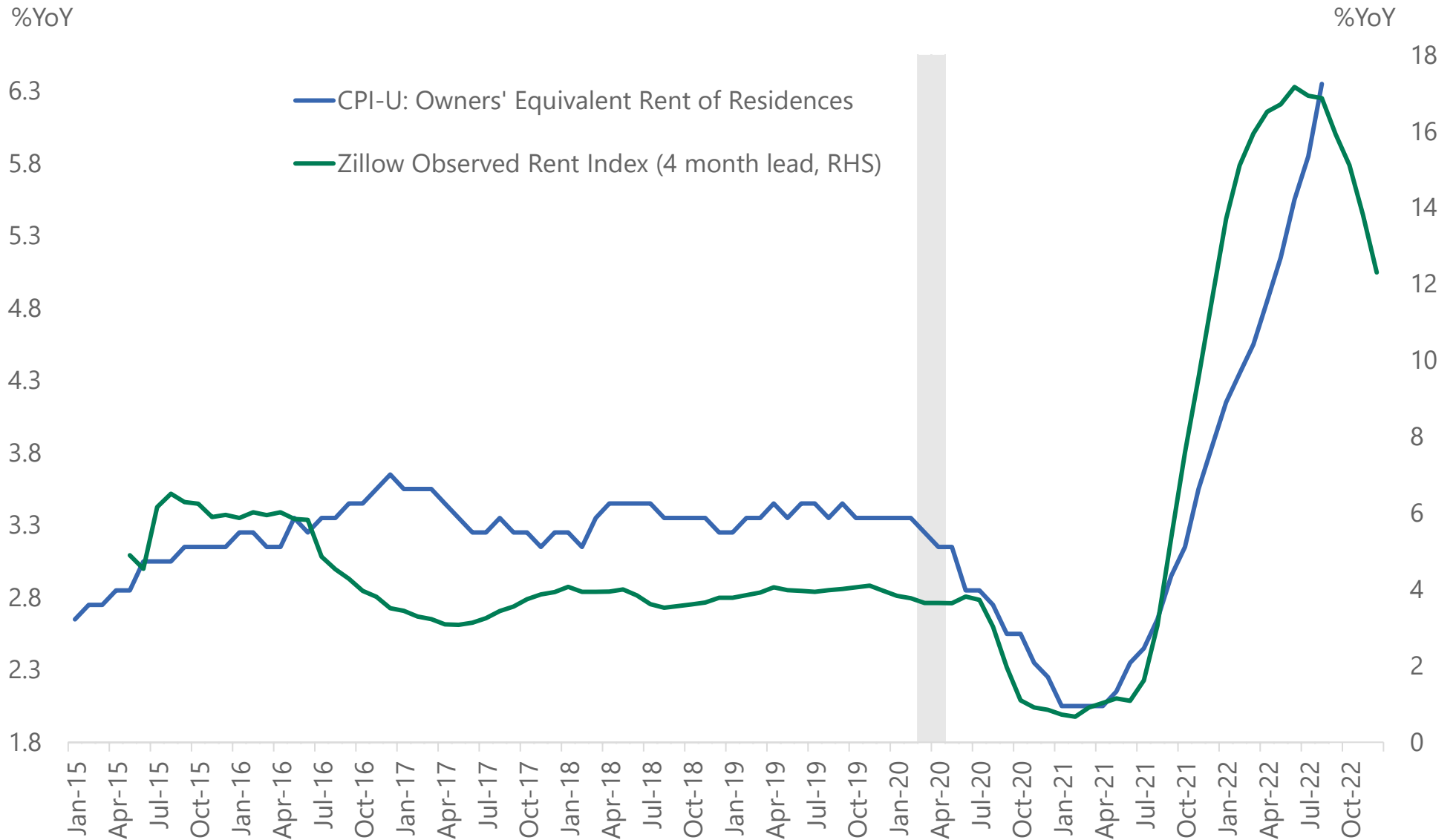
Source: NAR, Haver, Apollo Chief Economist

# House price inflation slowing across price tiers



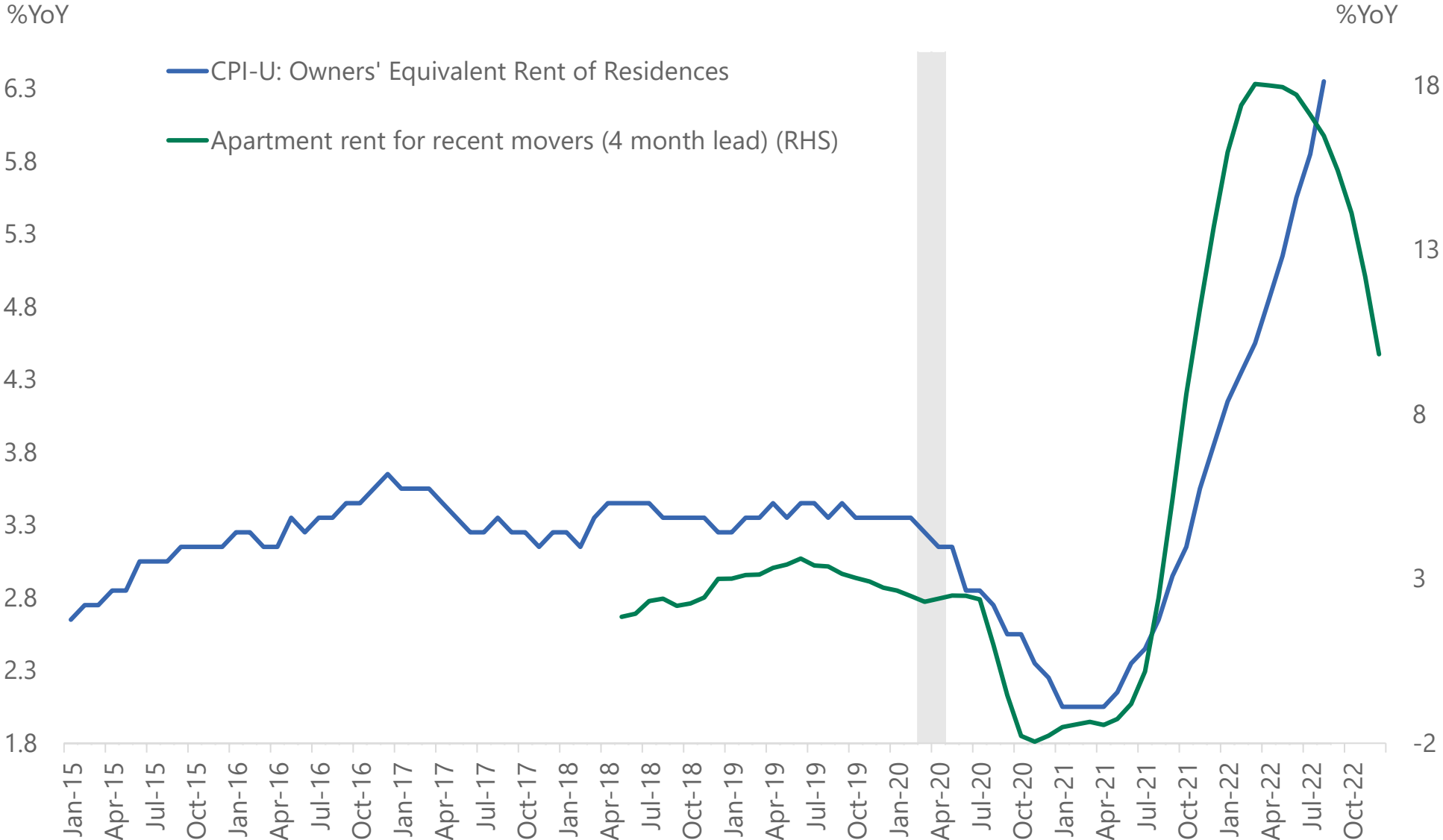
Source: American Enterprise Institute, Haver, Apollo Chief Economist

# Home price inflation has likely peaked



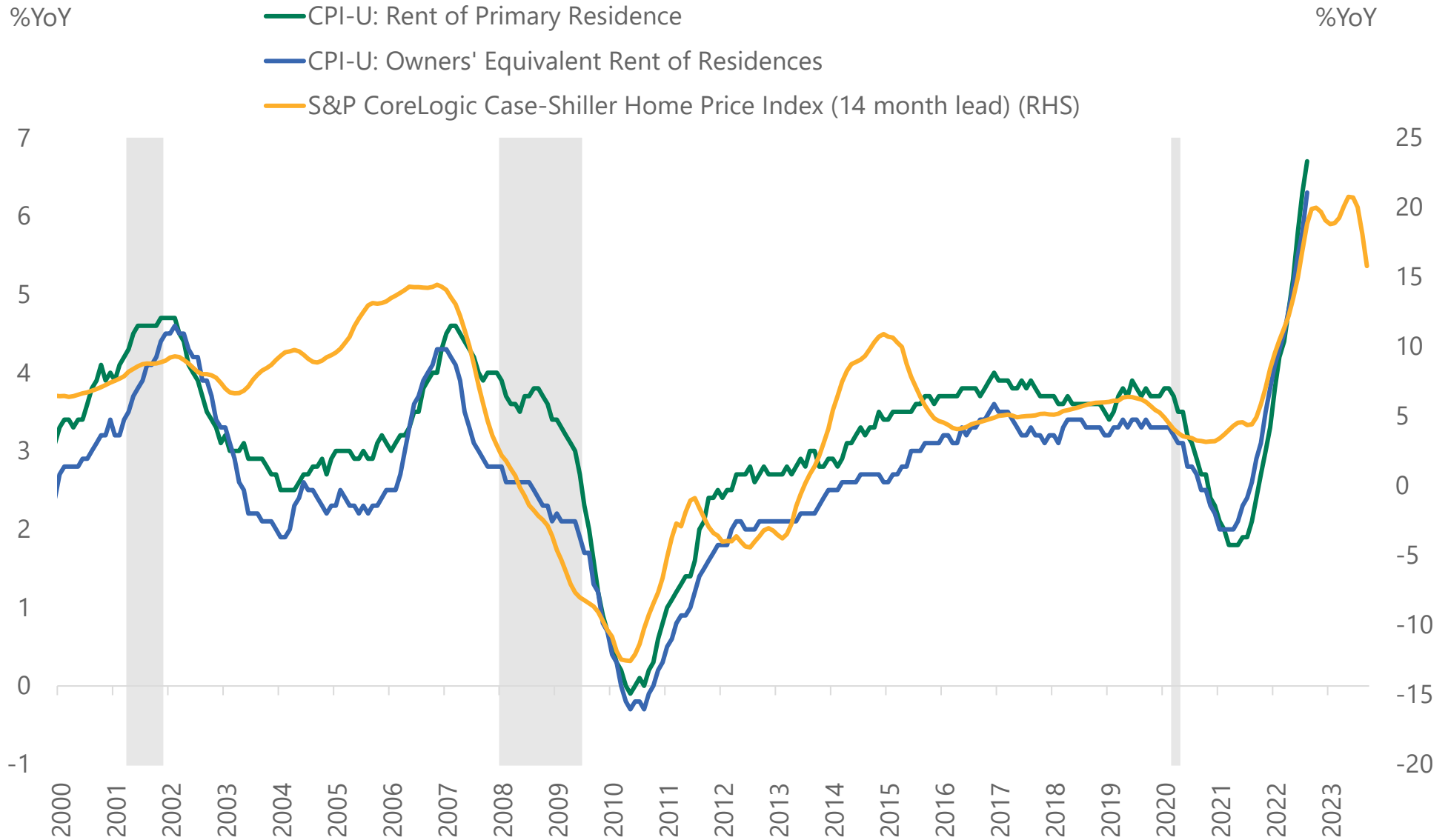
Source: Haver Analytics, BLS, Zillow, Apollo Chief Economist

# Home price inflation has likely peaked



Source: Haver Analytics, BLS, Apartment list, Apollo Chief Economist

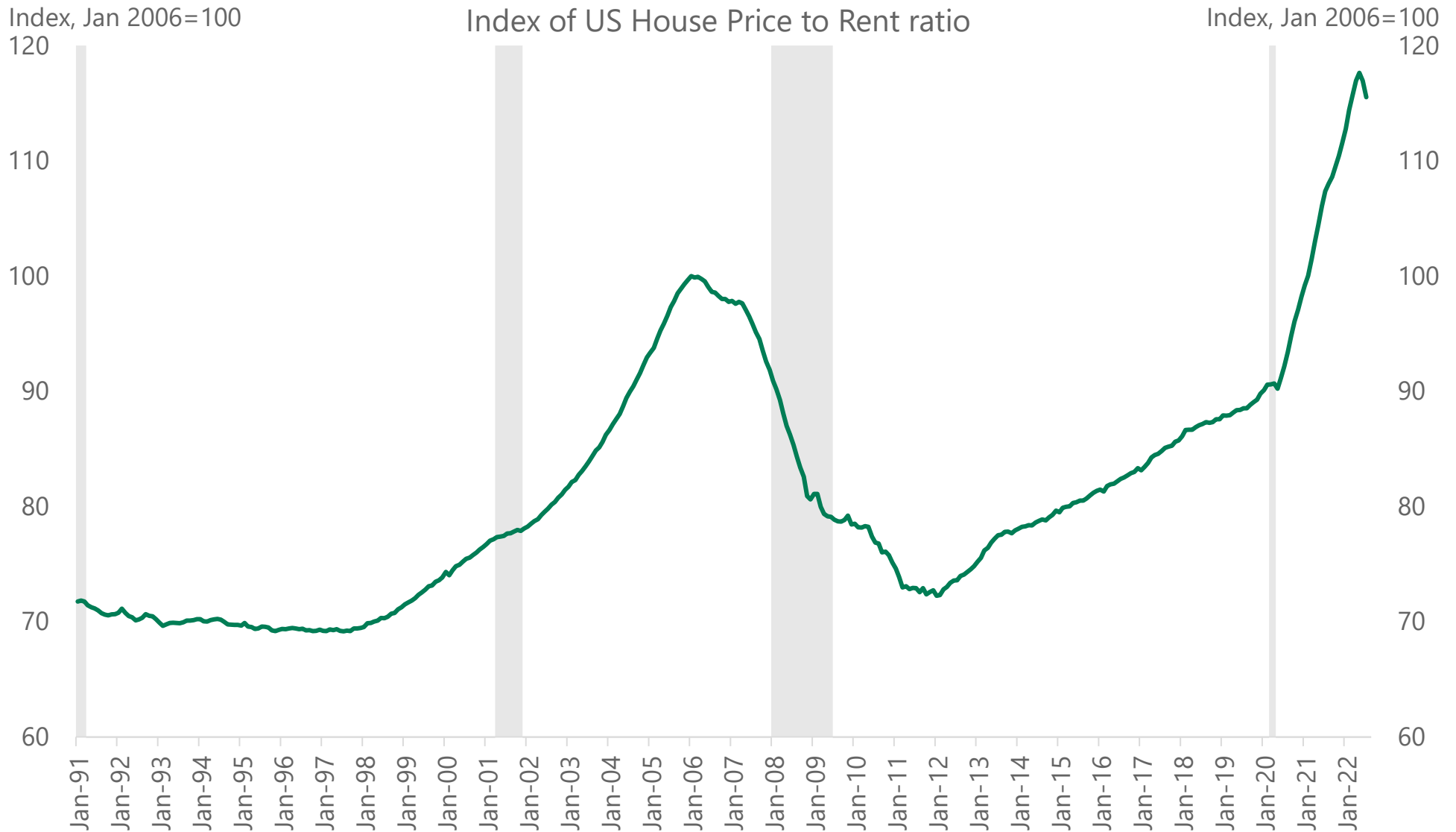
# Housing inflation expected to peak



Source: Haver Analytics, BLS, S&P, Apollo Chief Economist



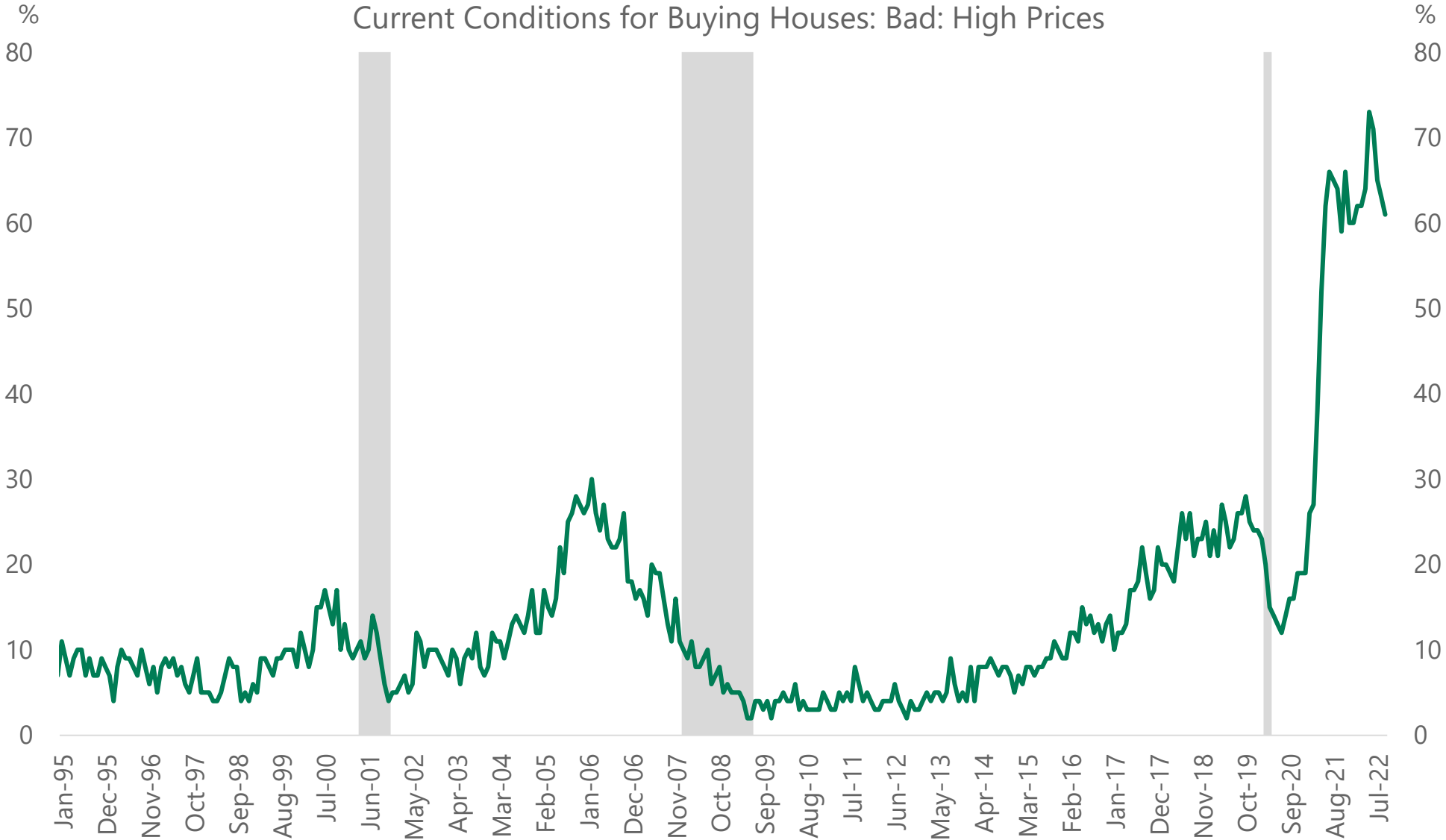
# Home price to rent ratio is above 2006 levels



Source: FHFA, BLS, Apollo Chief Economist. Note: the series is indexed ratio of FHFA monthly purchase only house price index divided by the OER component of the CPI.

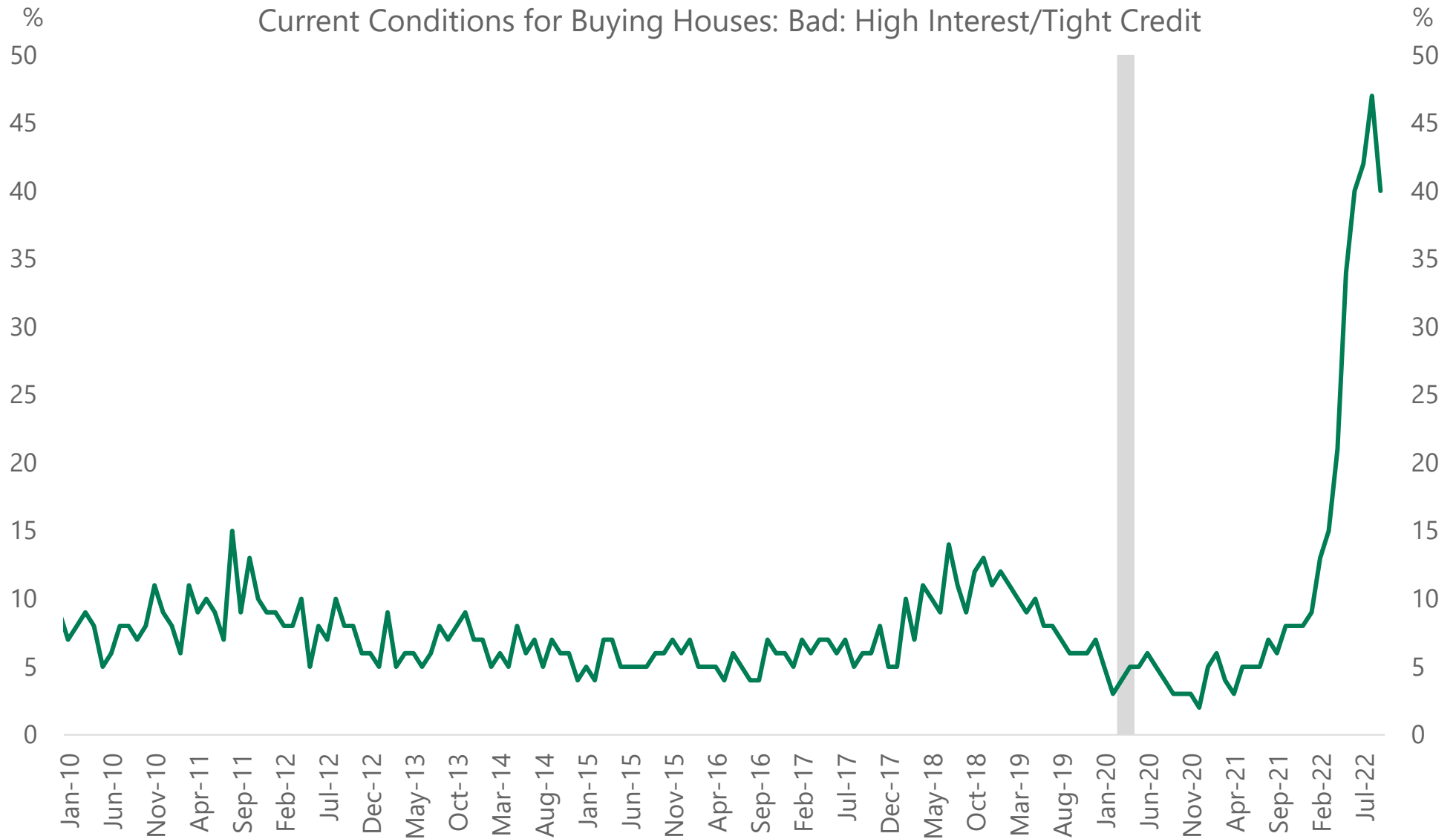
**4) Housing Outlook: Rising rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle**

# High home prices having negative impact on homebuyer sentiment



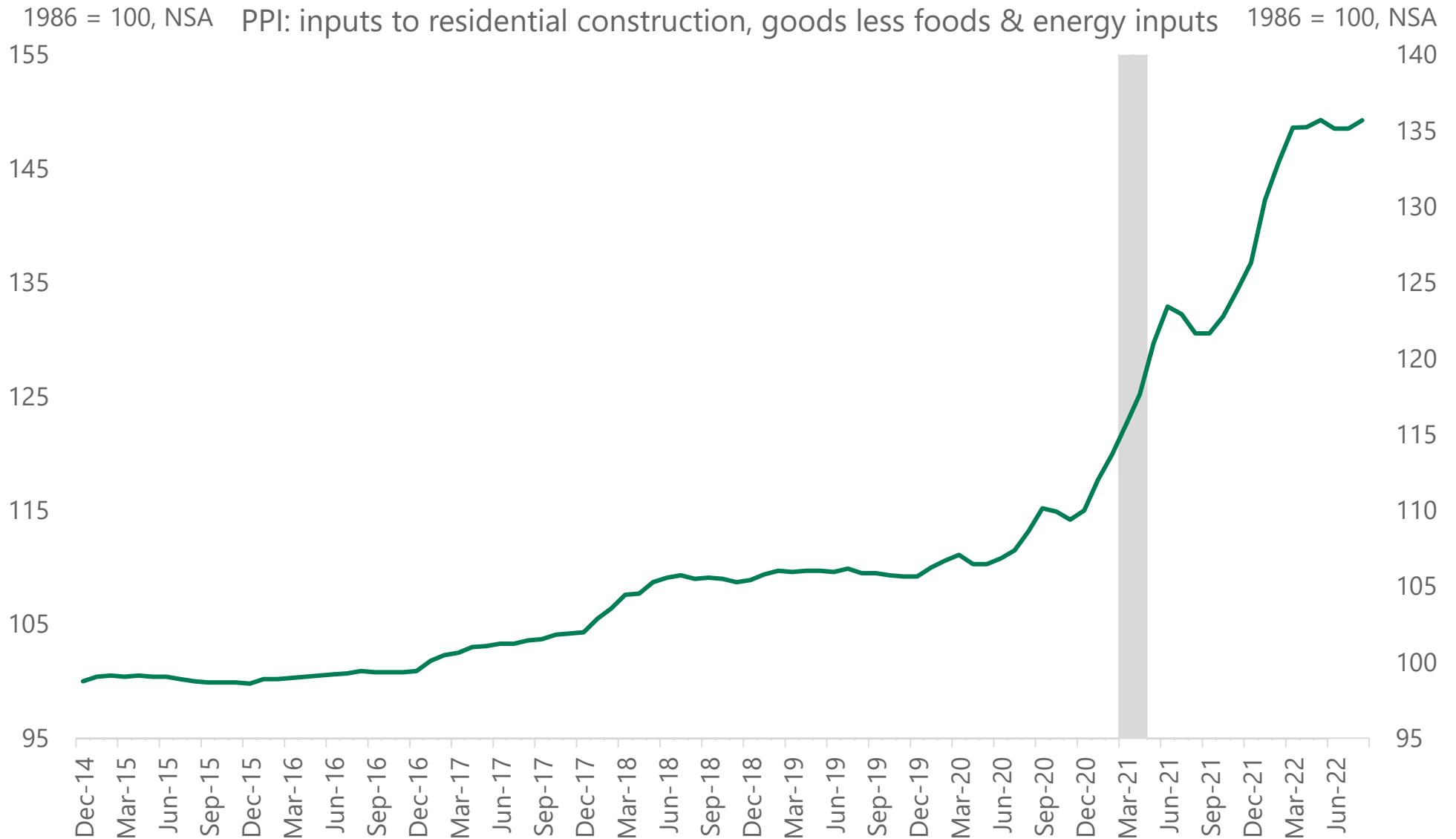
Source: University of Michigan, Apollo Chief Economist

# Tighter credit also having negative impact on homebuyer sentiment



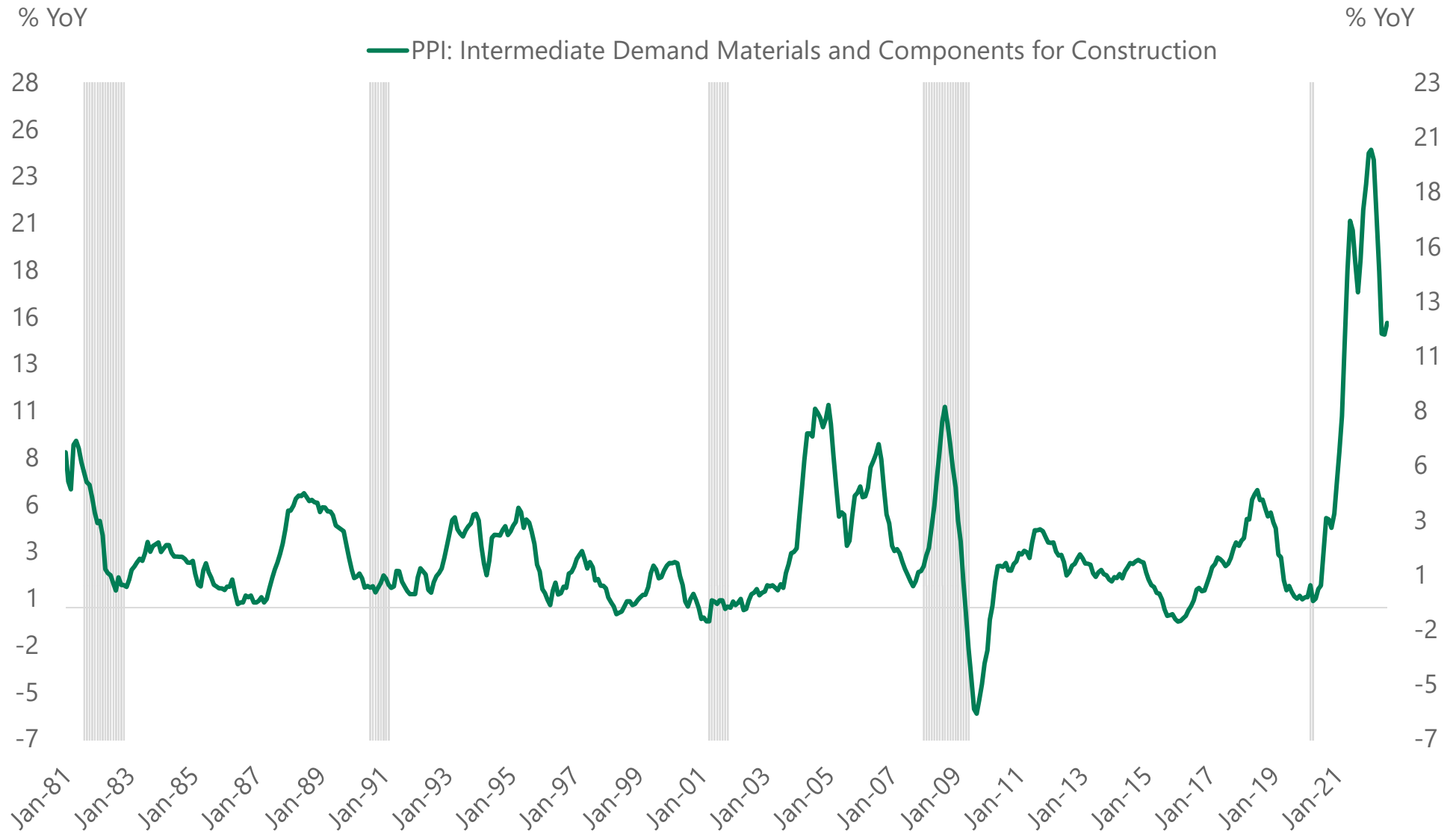
Source: University of Michigan, Apollo Chief Economist

# Housing construction costs rising



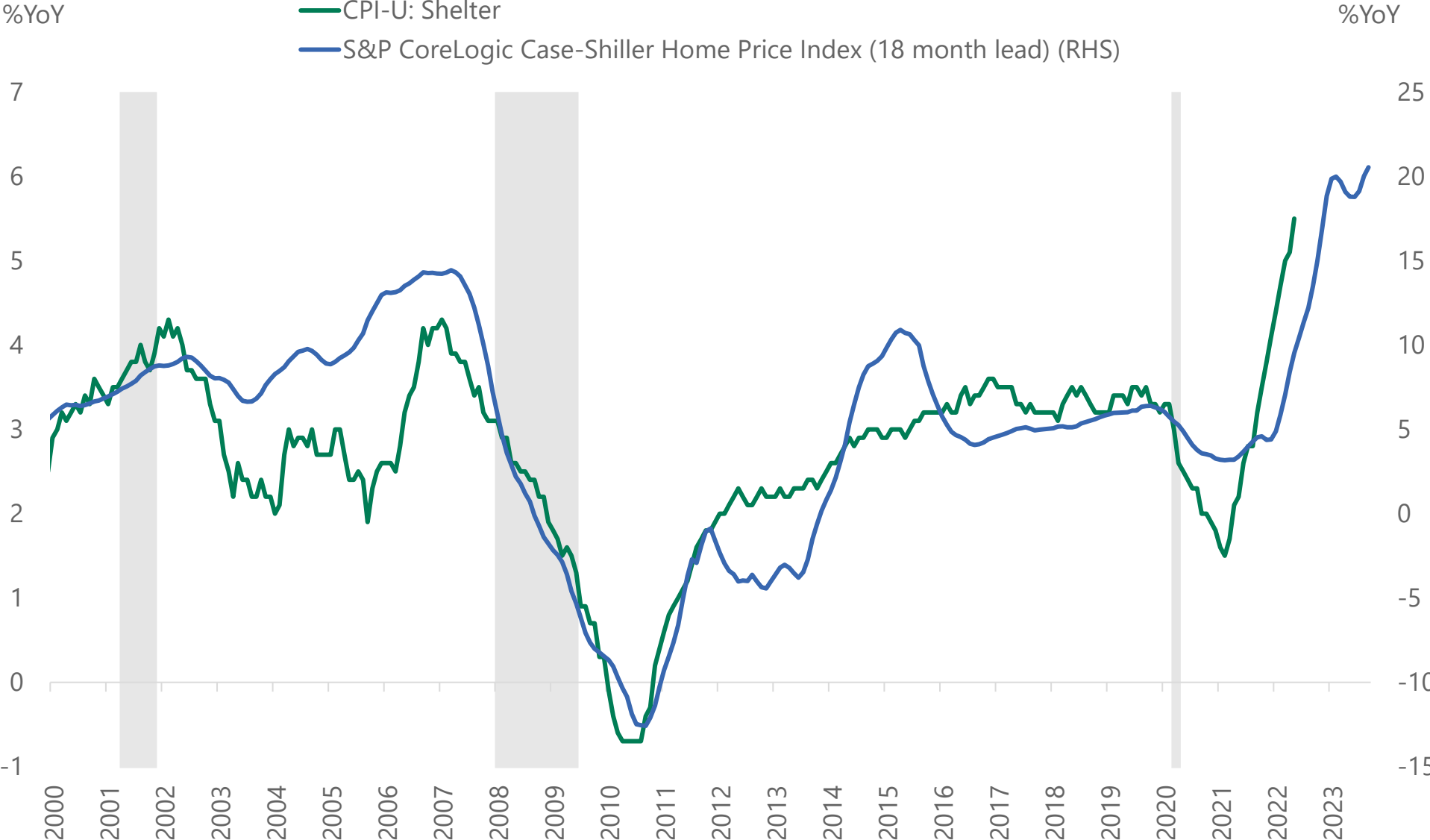
Source: Bureau of Labor Statistics, Apollo Chief Economist

# High inflation in input costs



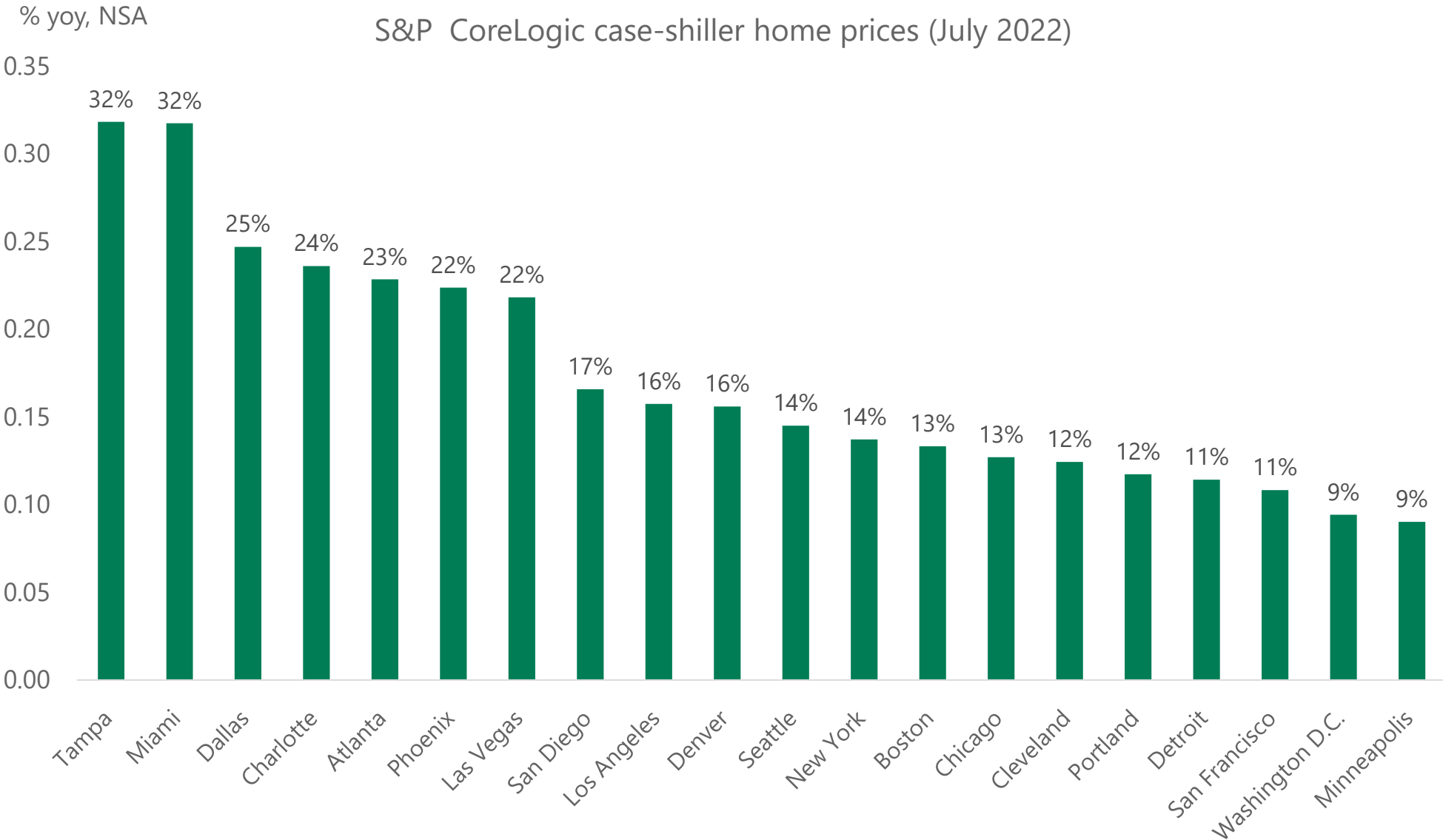
Source: Bureau of Labor Statistics, Apollo Chief Economist

# Rising home prices is a problem for the Fed



Source: S&P case-shiller, BLS, Bloomberg, Apollo Chief Economist

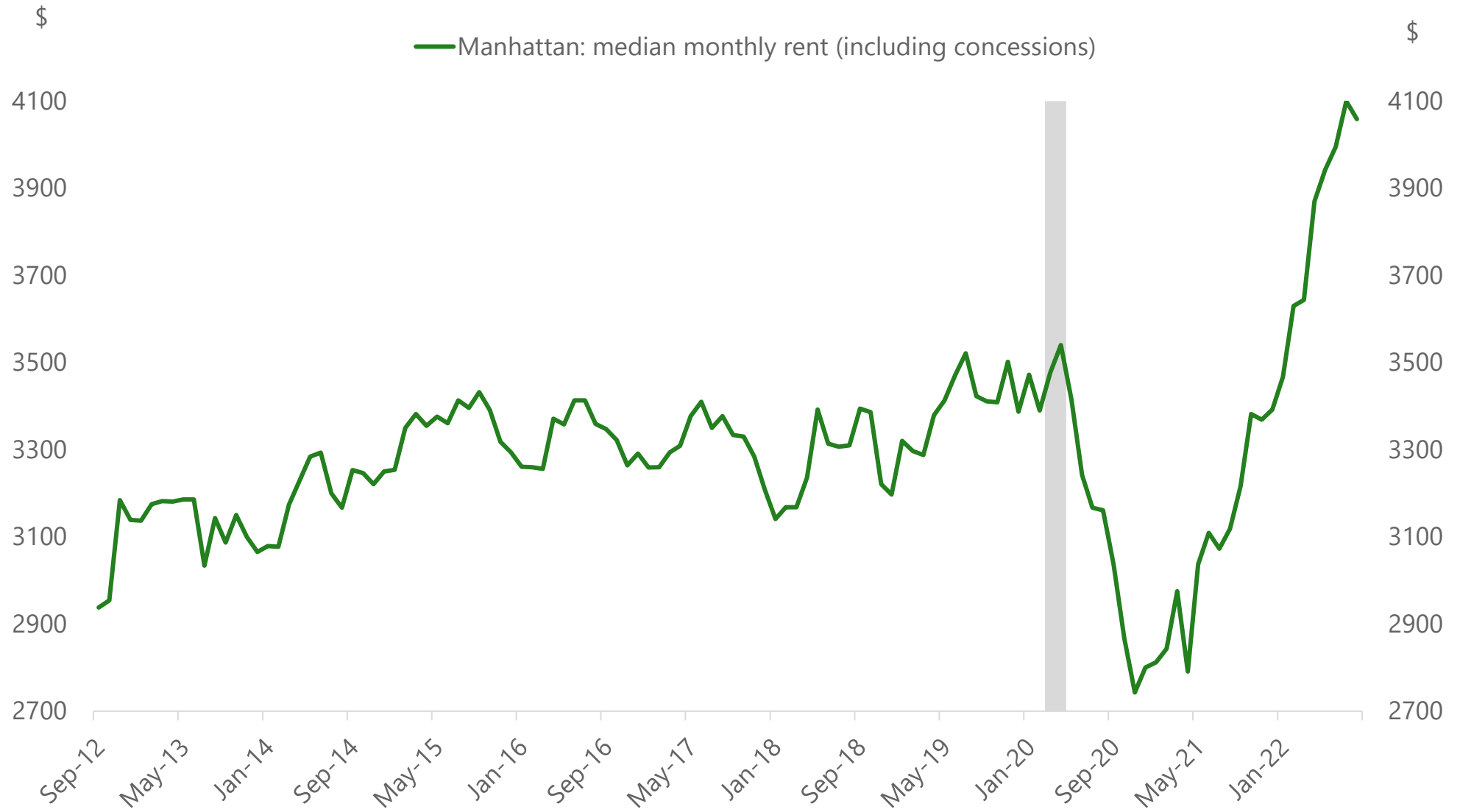
# Home prices up 32% in Tampa and Miami



Source: S&P Case-shiller, Bloomberg, Apollo Chief Economist

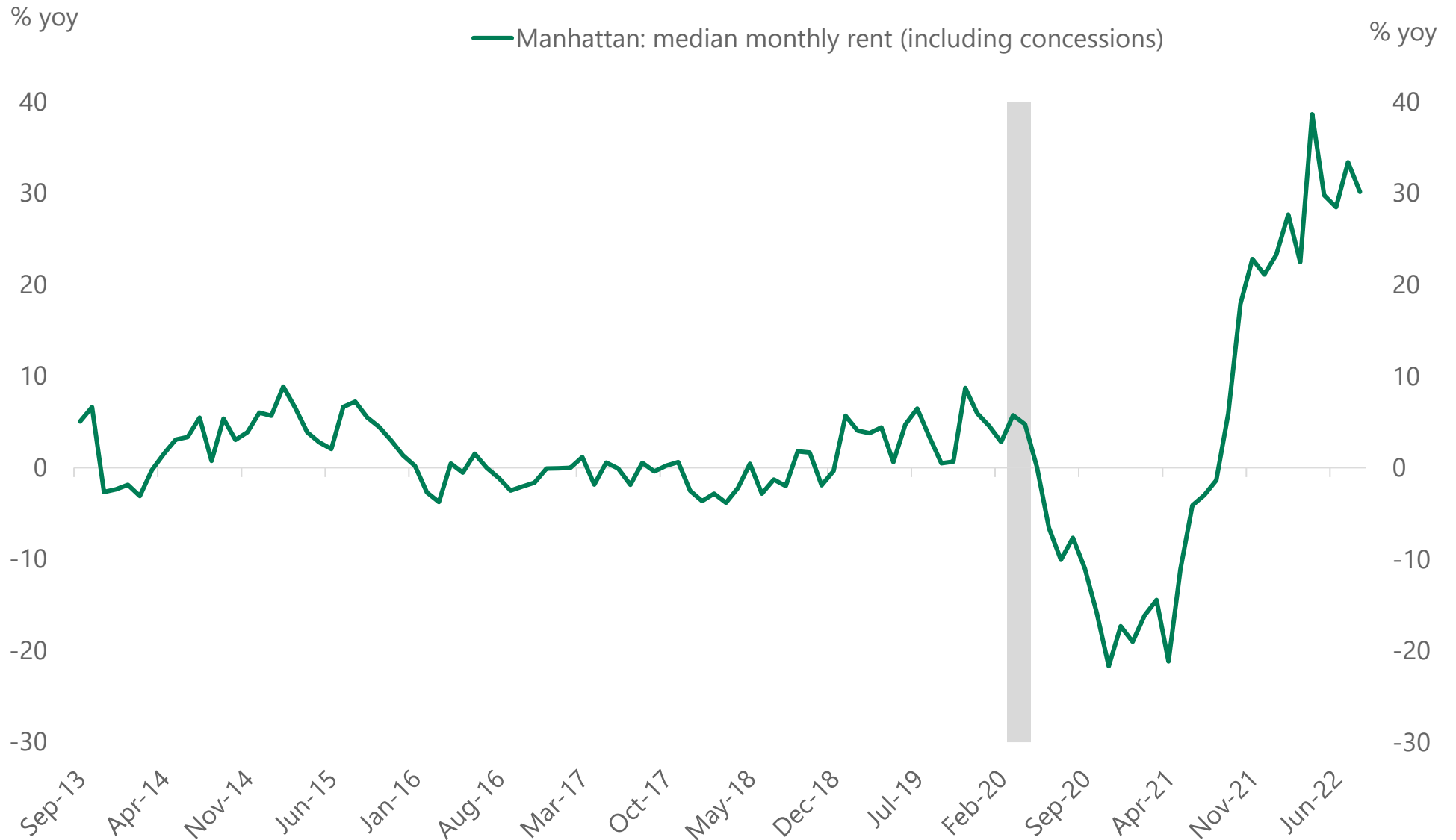


# Manhattan rents now above pre-pandemic levels



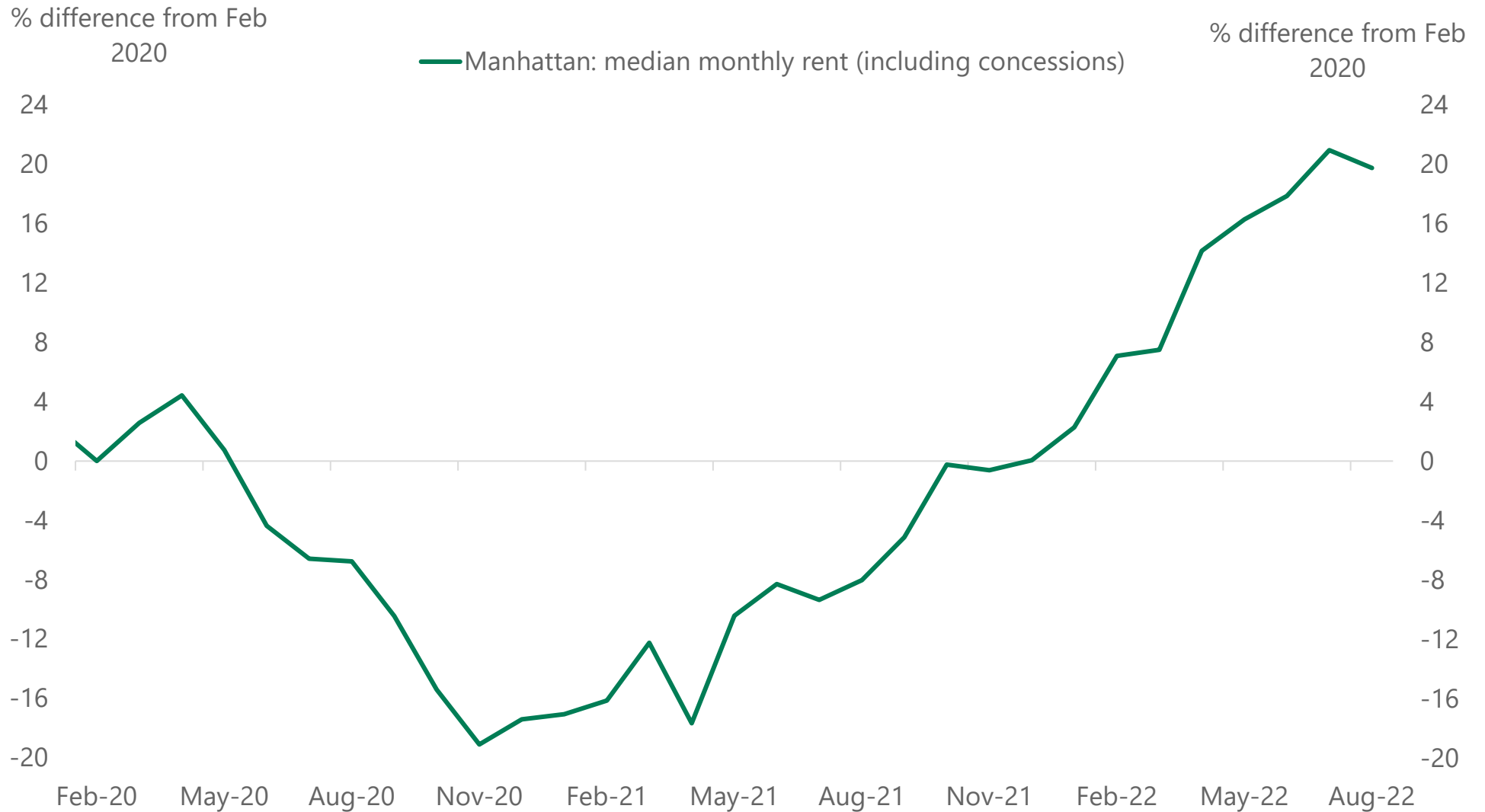
Source: Elliman, Apollo Chief Economist

# Manhattan rents are up almost 30% year-over-year



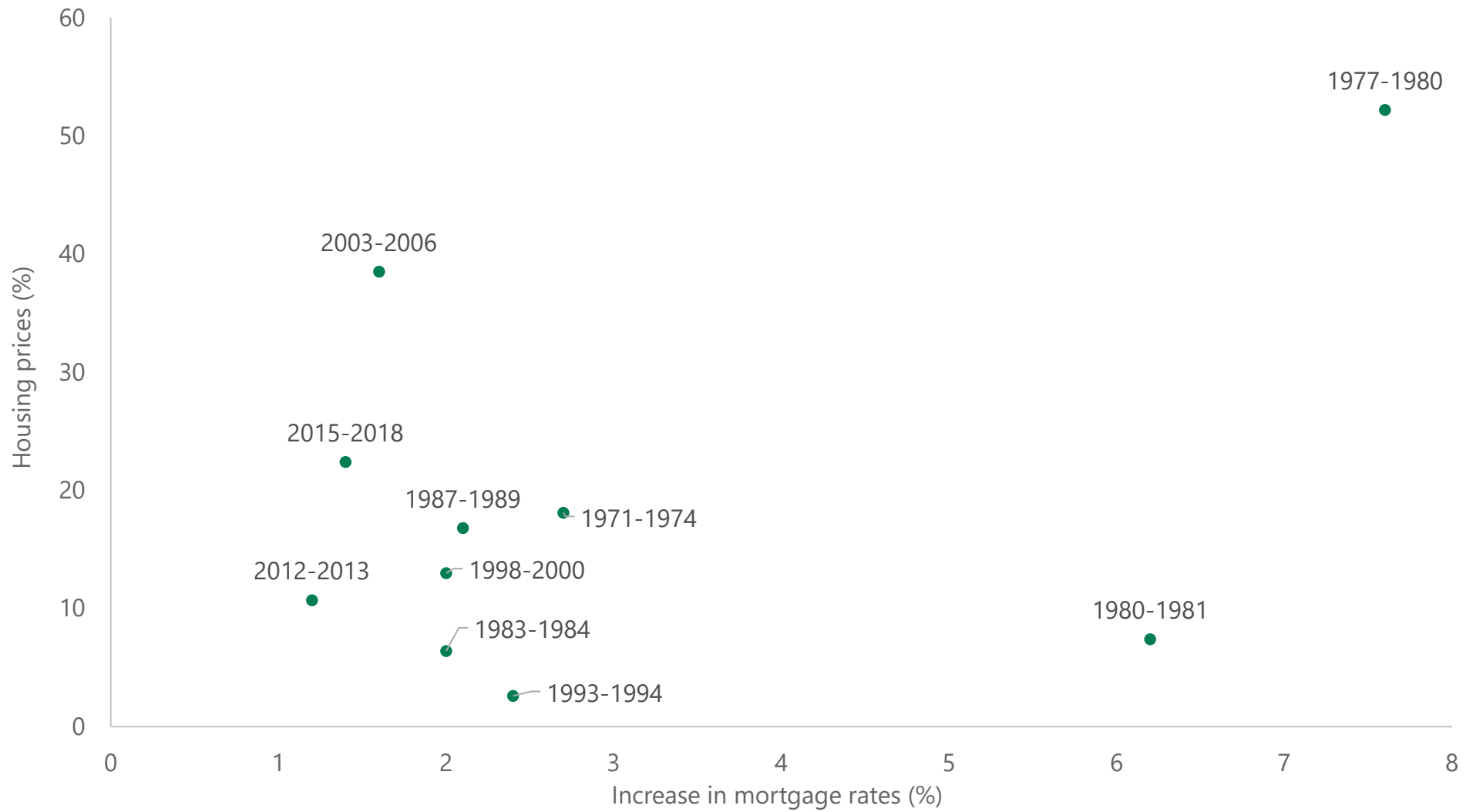
Source: Elliman, Apollo Chief Economist

# Manhattan rents above pre-pandemic levels



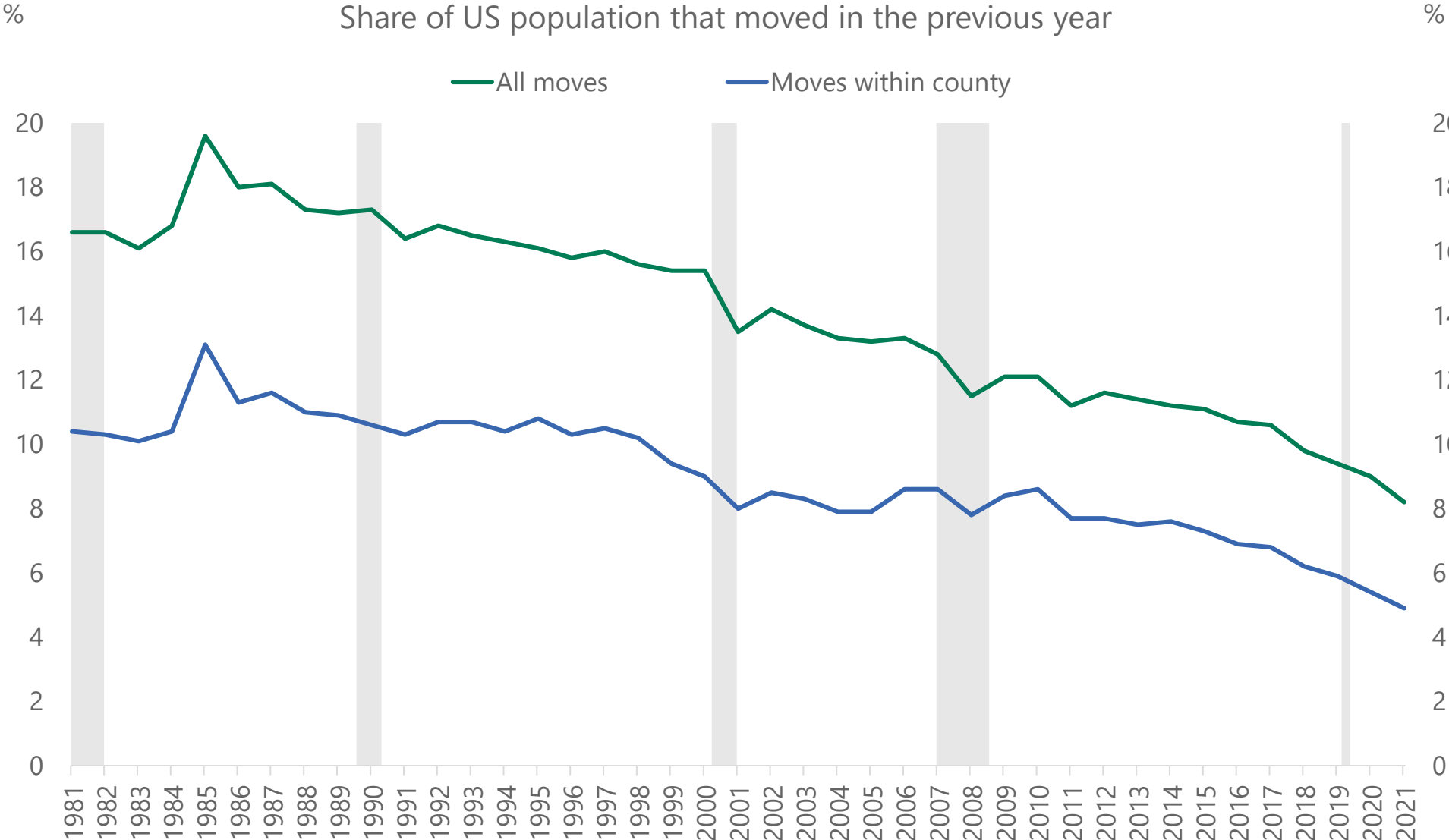
Source: Elliman, Apollo Chief Economist

# Rising mortgage rates is generally associated with lower home price inflation



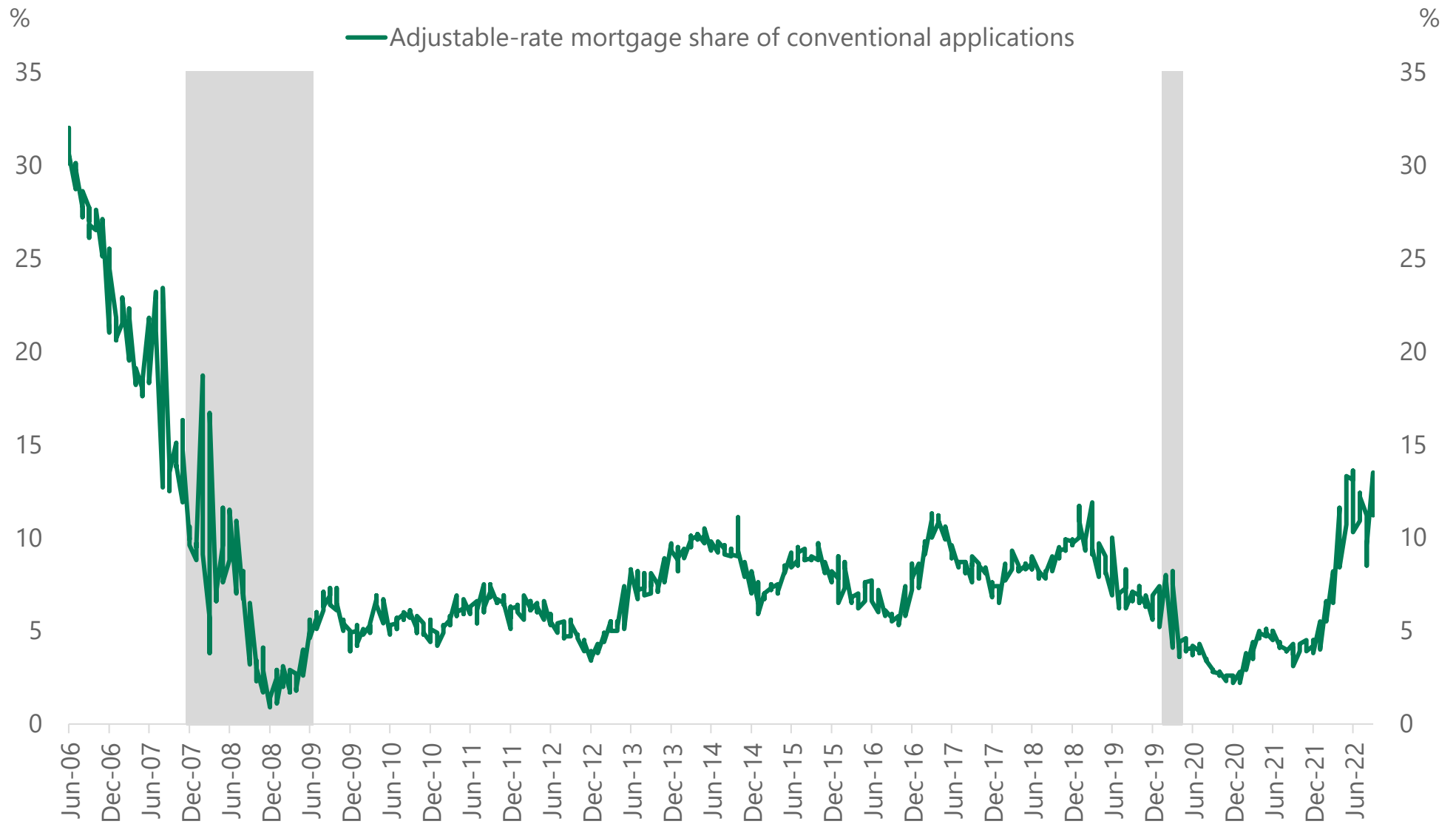
Source: FRED, Apollo Chief Economist

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



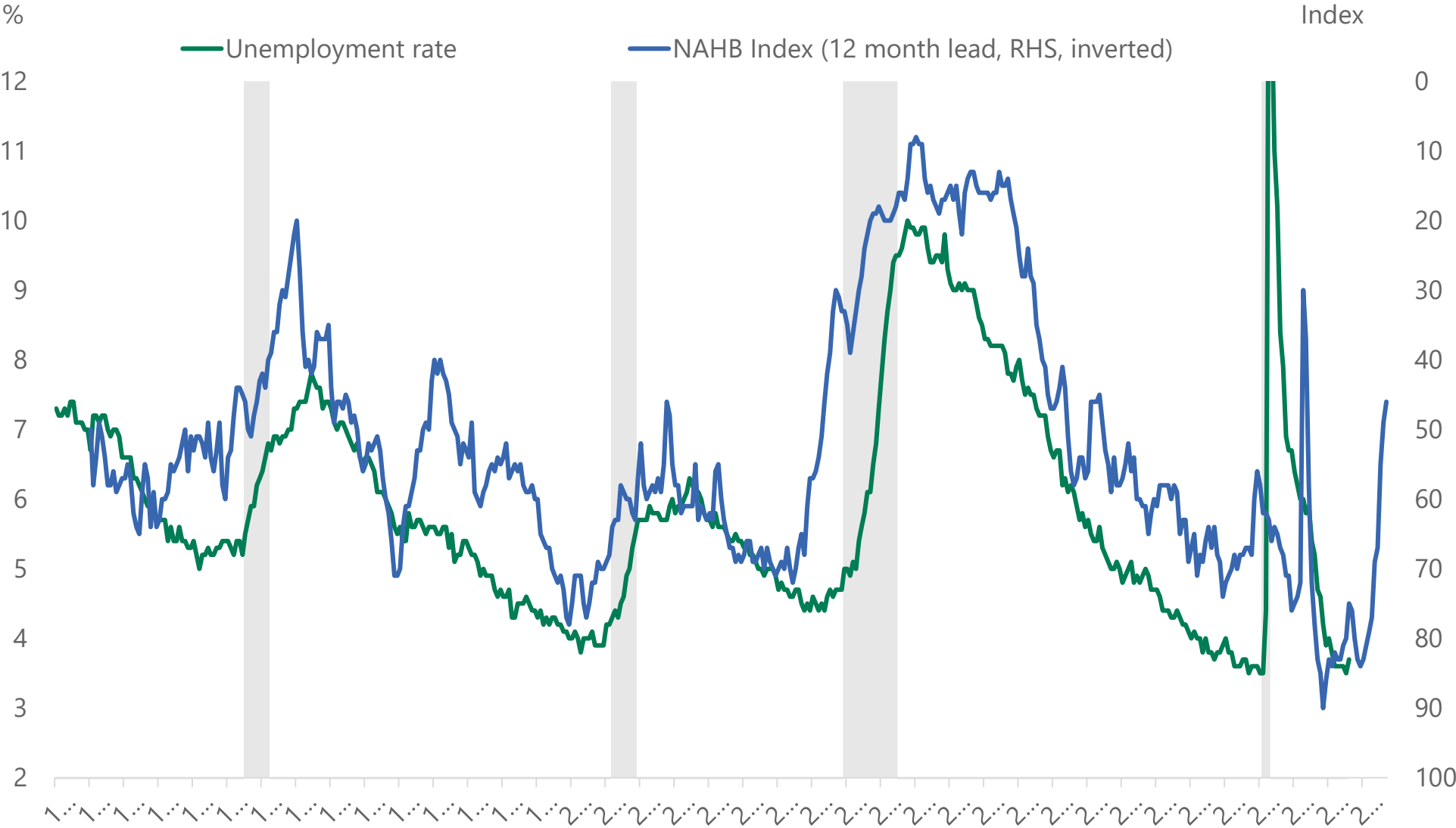
Source: Census CPS, Apollo Chief economist

# The share of ARMs increased to 14% of overall loans



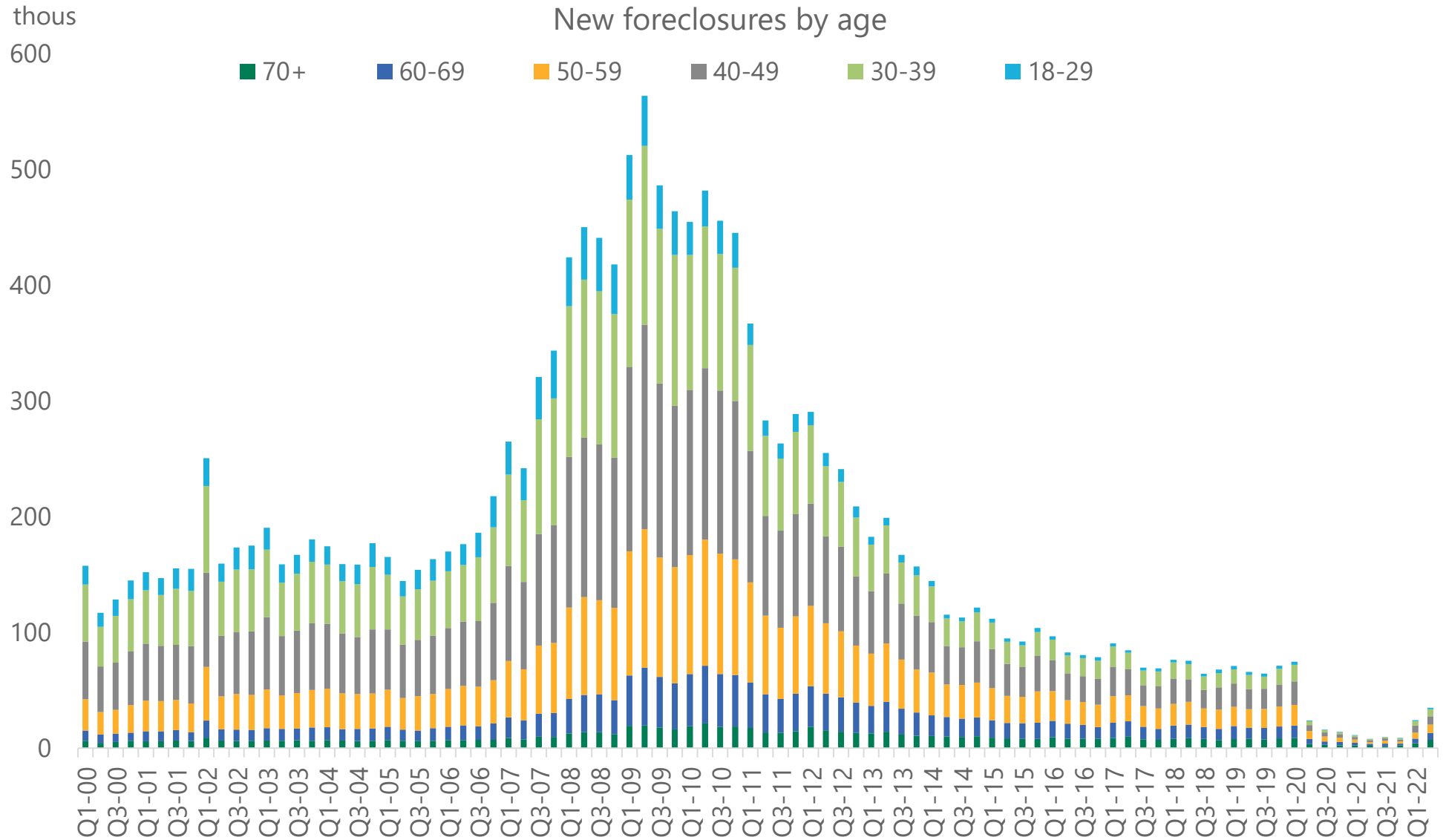
Source: MBA, Bloomberg, Apollo Chief Economist (Note: It is 5-year ARM)

# Some upside risks to the unemployment rate



Source: NAHB, BLS, Bloomberg, Apollo Chief Economist

# New foreclosures by age



Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist



# Biography



## **Torsten Slok, Ph.D.**

Chief Economist

Apollo Global Management

[tslok@apollo.com](mailto:tslok@apollo.com)

Torsten Slok joined Apollo in 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, including #1 in 2019. 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.