

APOLLO GLOBAL MANAGEMENT

US Housing Outlook: Strong demand, low supply

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Unless otherwise noted, information as of April 2022

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US housing: Key themes

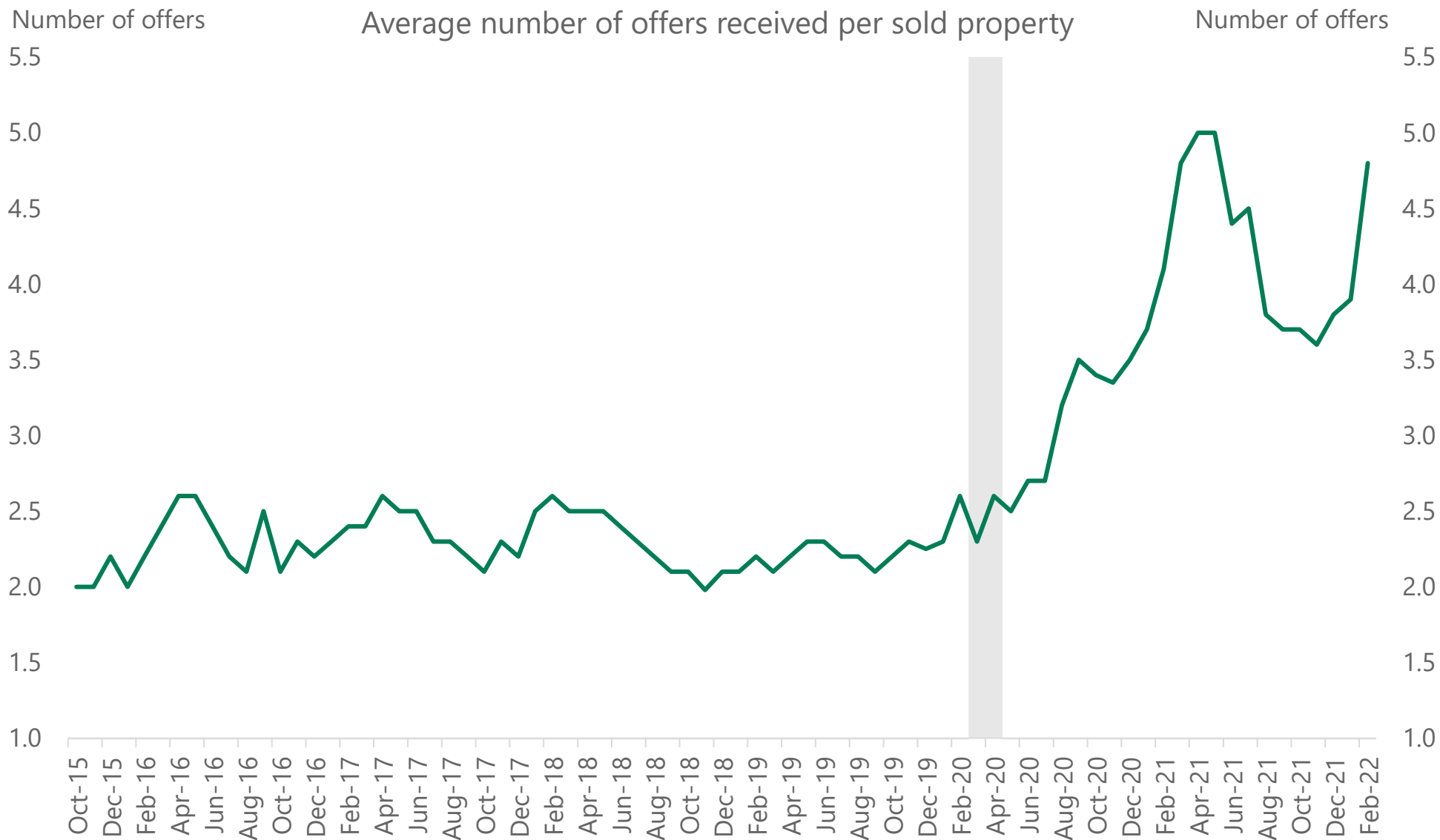
- 1) Despite rising mortgage rates, demand for housing remains strong,** driven by solid employment growth, high wage growth, robust household formation, and solid demand from first-time homebuyers.
- 2) Supply remains low across** all types of homes with a record-low inventory of existing homes for sale and record-low vacancy rates for renters and owners.
- 3) Rising rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle.**

Bottom line:

Strong demand combined with low supply should keep the housing cycle going in 2022. Rising home prices, high construction costs, significant supply coming, and rising interest rates are likely to slow housing activity over the coming quarters.

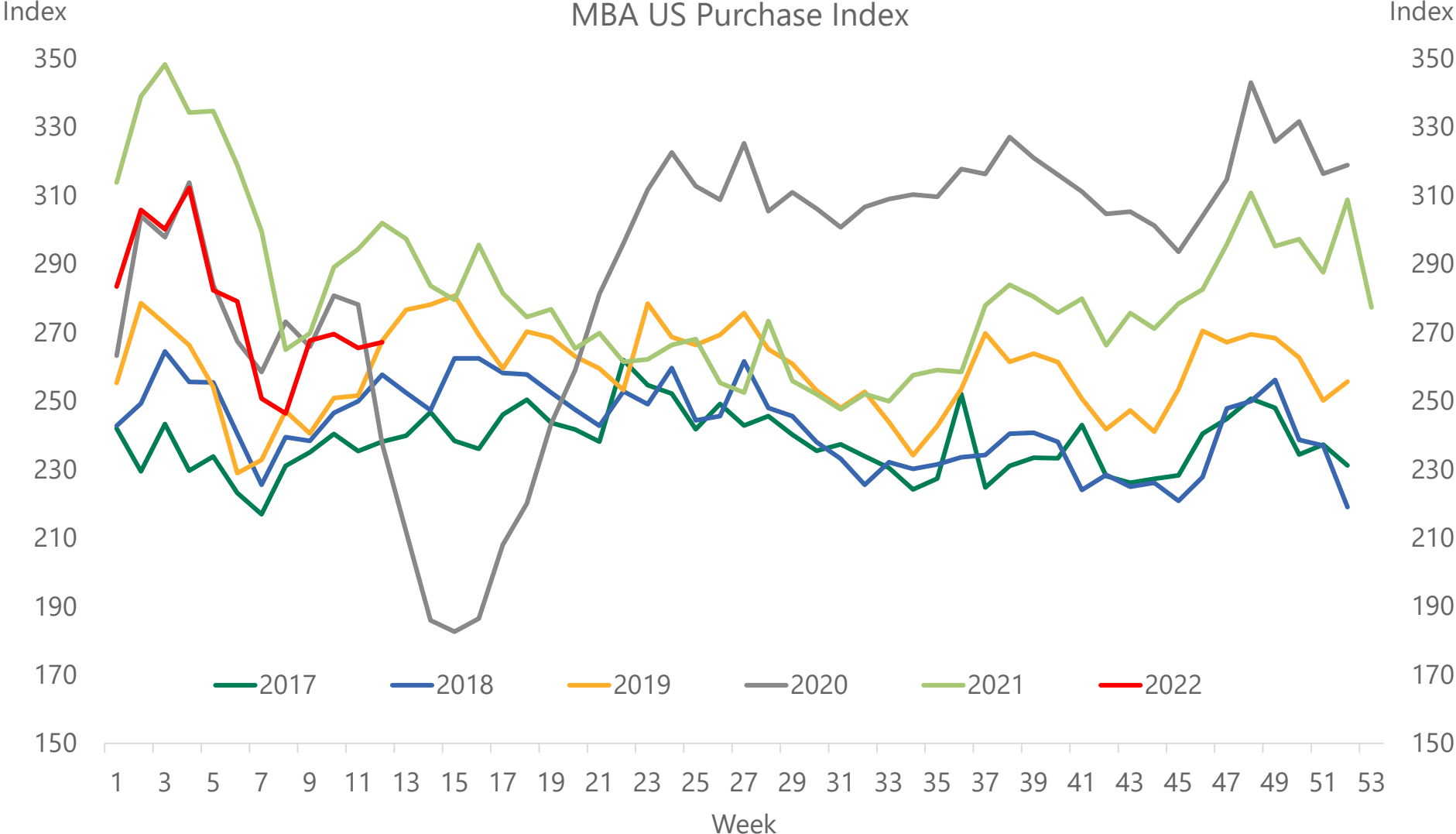
1) Limited signs of higher mortgage rates slowing demand for housing

Average number of offers received per sold property



Source: NAR, Apollo Chief Economist

Mortgage purchase applications still holding up despite rising mortgage rates



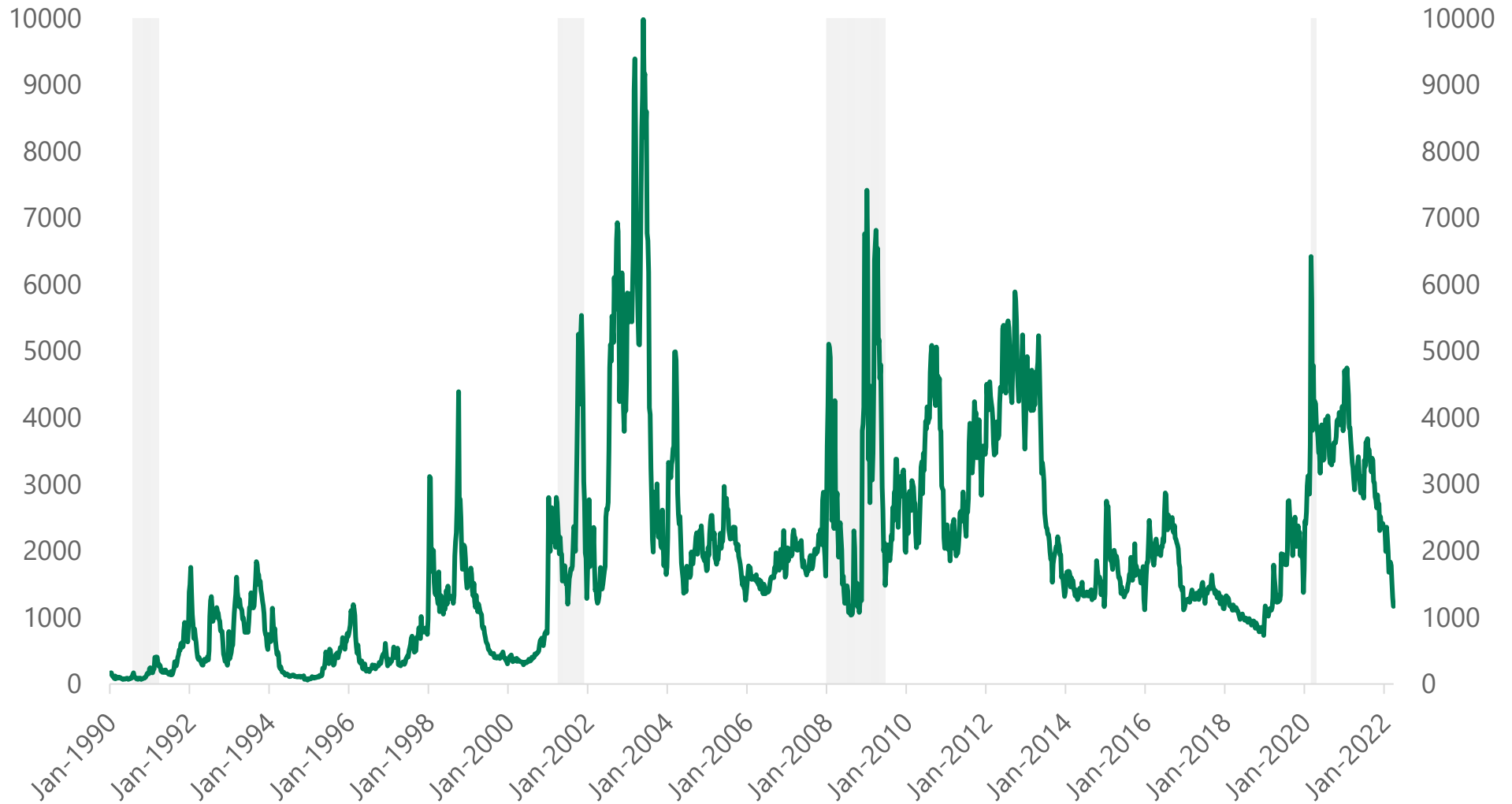
Source: Mortgage Bankers Association, Bloomberg, Apollo Chief Economist

Mortgage refi applications declining

Index, Mar 1990 = 100

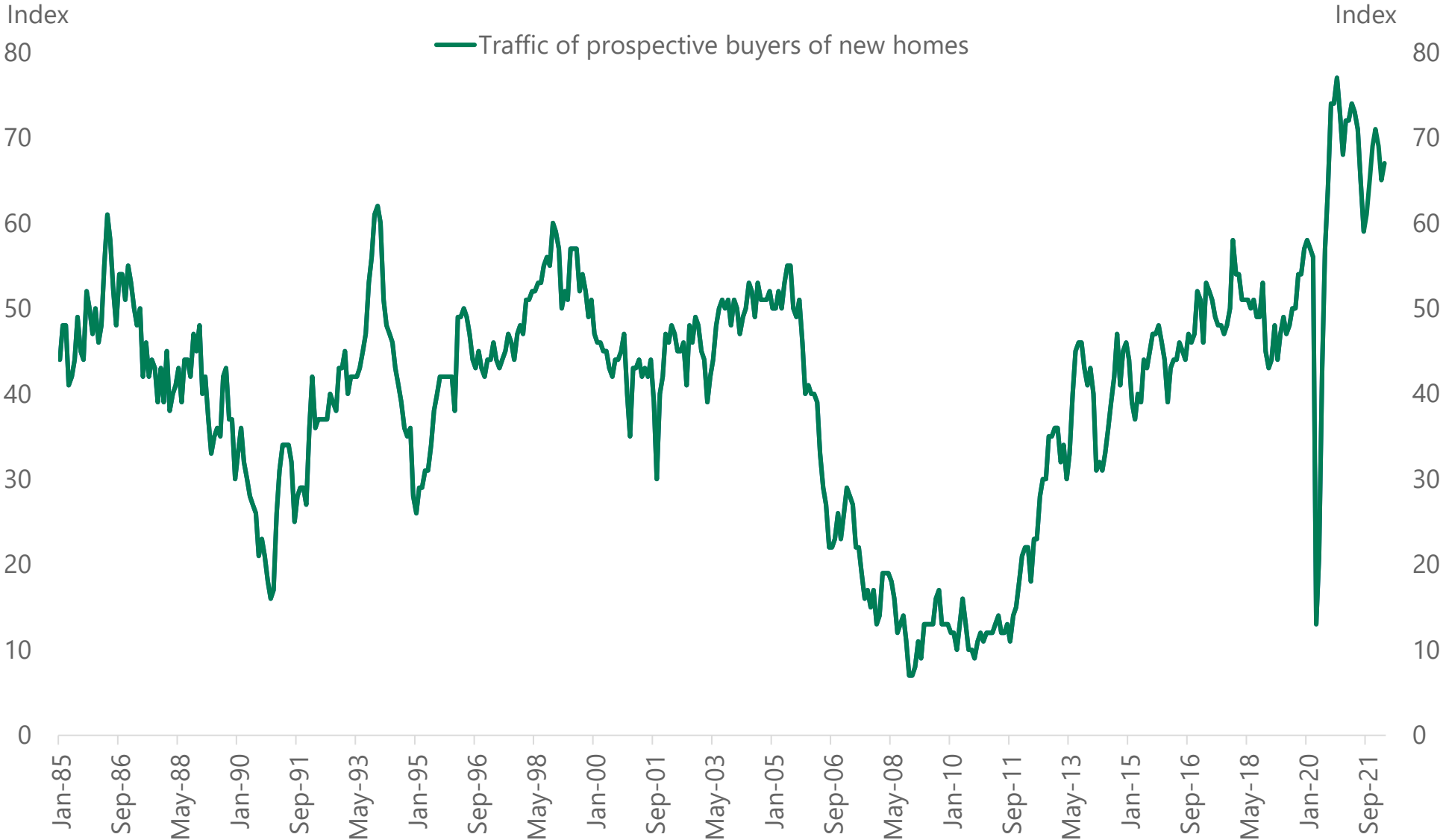
— Mortgage loan applications for refinancing

Index, Mar 1990 = 100



Source: Mortgage Bankers Association, Bloomberg, Apollo Chief Economist

Home buyer traffic remains high



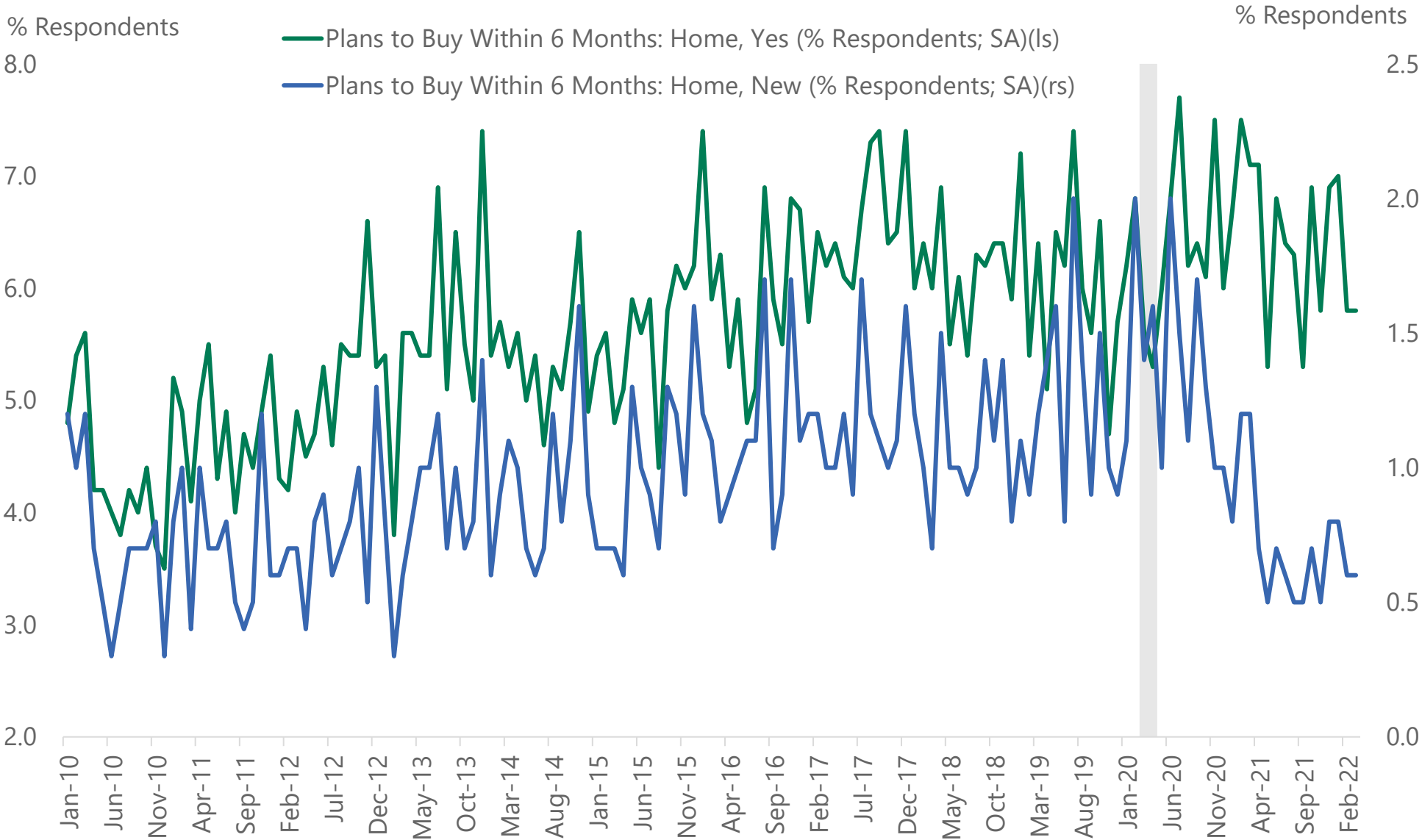
Source: Bloomberg, Apollo Chief Economist

Interest in buying a new home remains high



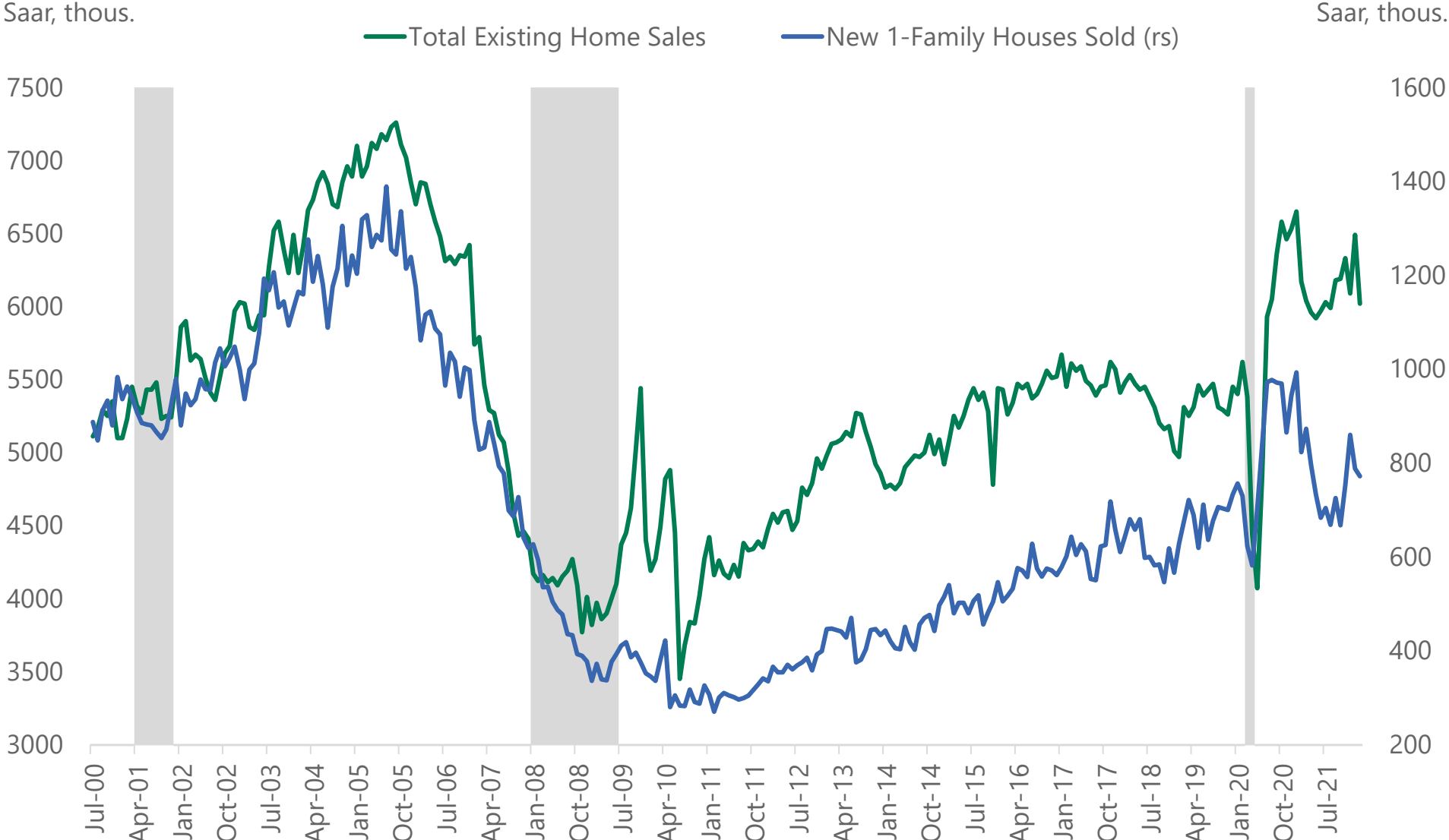
Source: Bloomberg, Apollo Chief Economist

Plans to buy an existing home remain strong



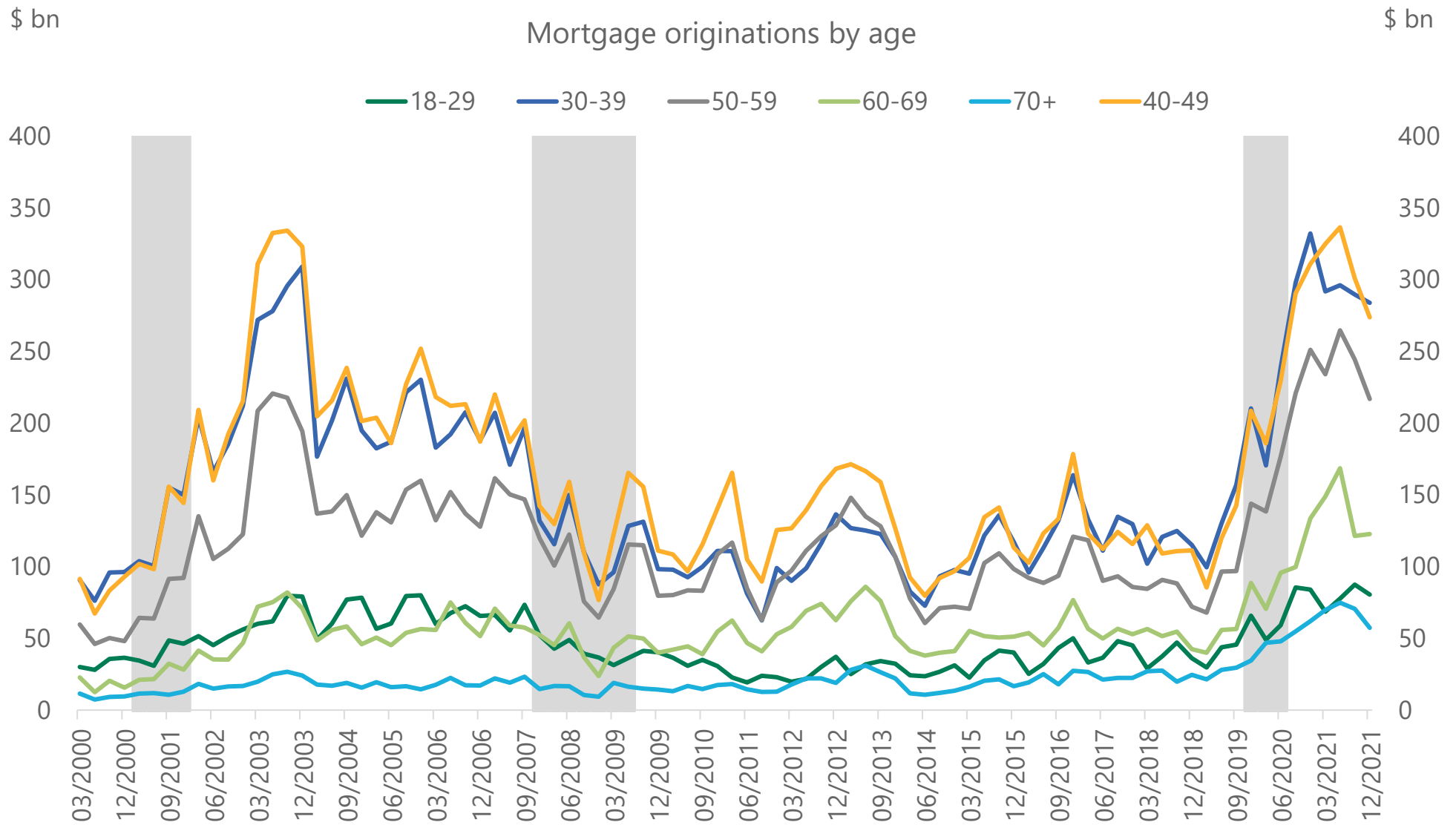
Source: Conference Board, Apollo Chief Economist

Home sales still strong



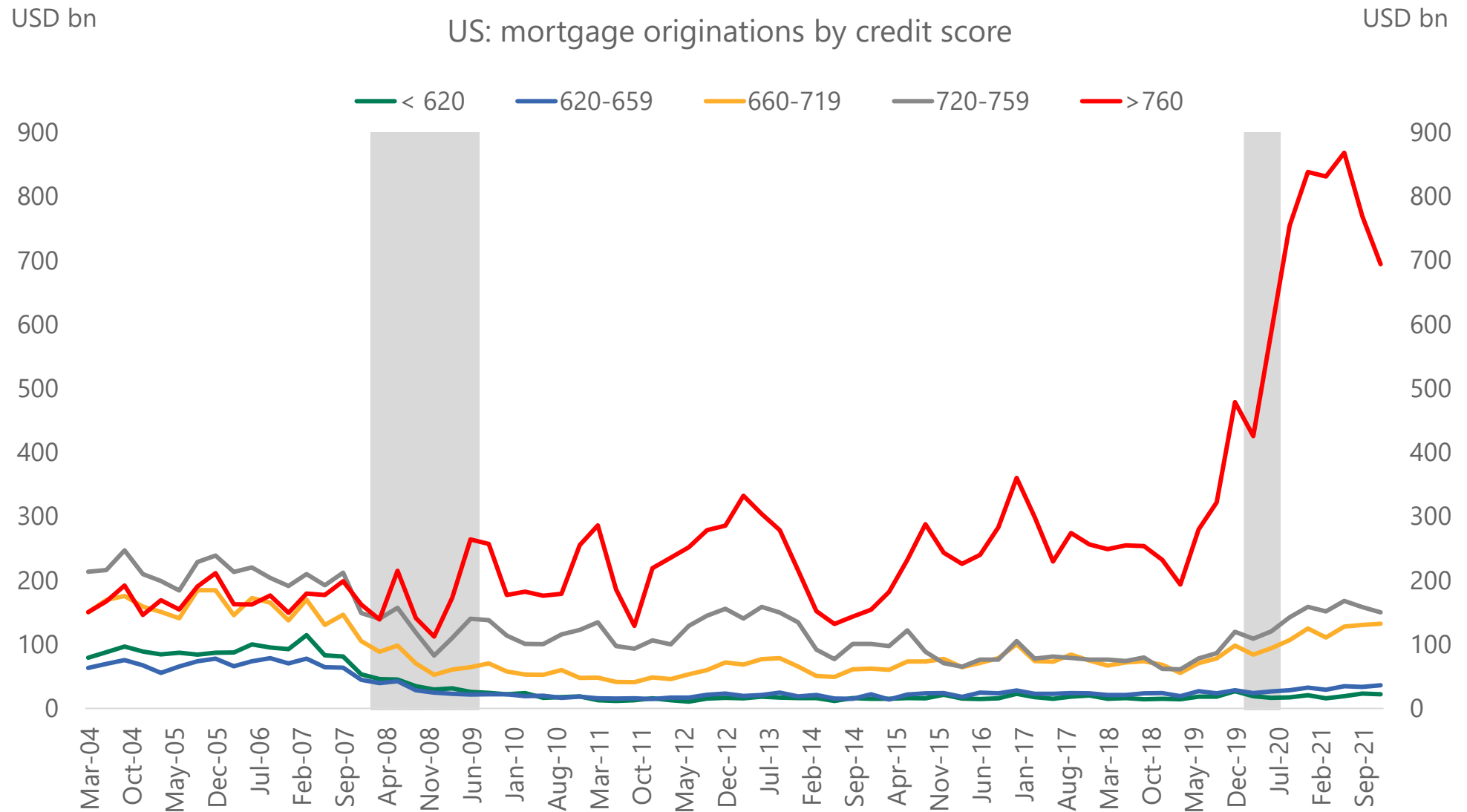
Source: Census Bureau, NAR, Haver, Apollo Chief Economist; Forecast is Bloomberg consensus

Mortgage originations higher for young generations but starting to roll over for all ages



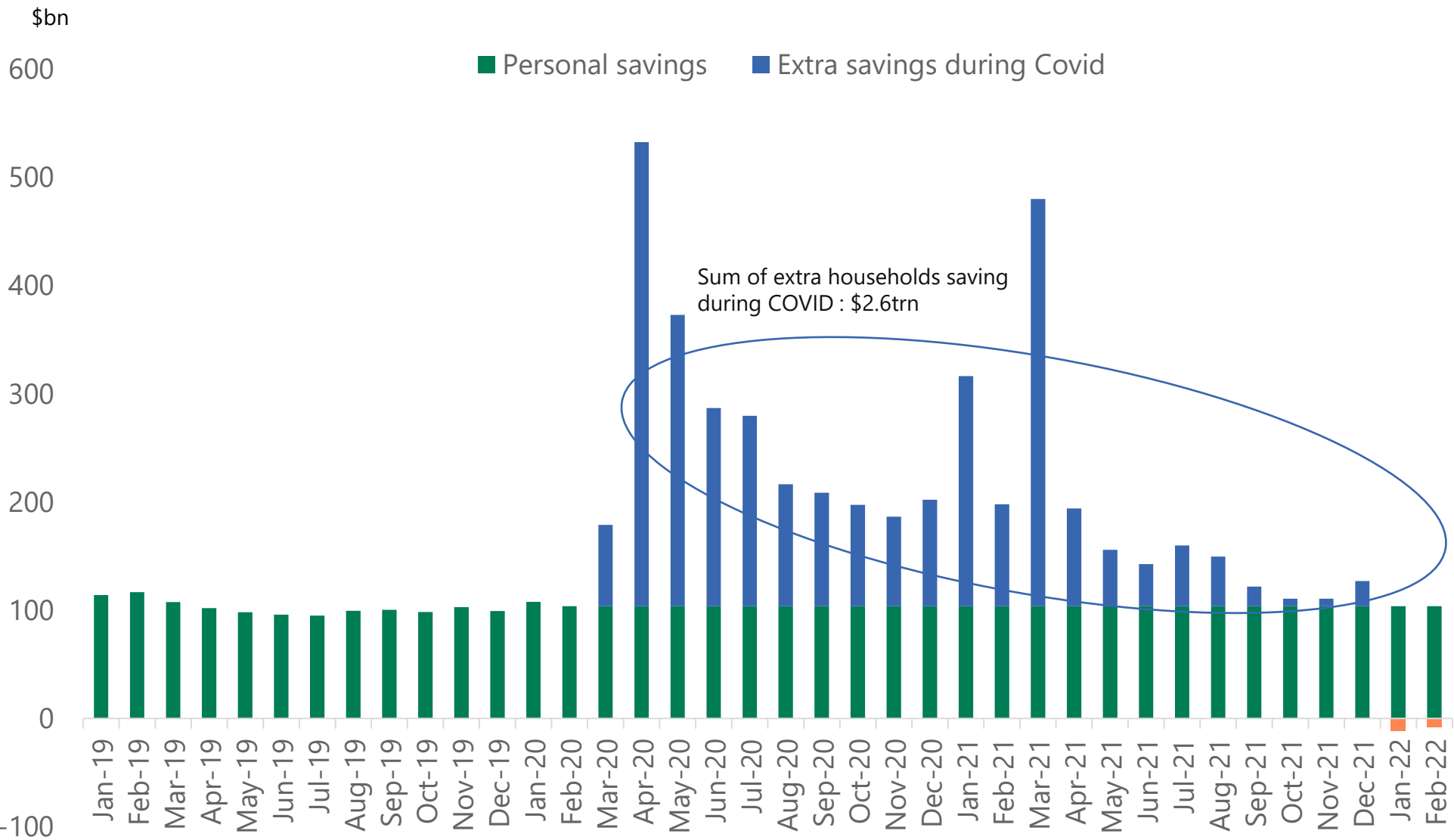
Source: NY Fed, Bloomberg, Apollo Chief Economist

Mortgage origination starting to decline for households with high credit scores



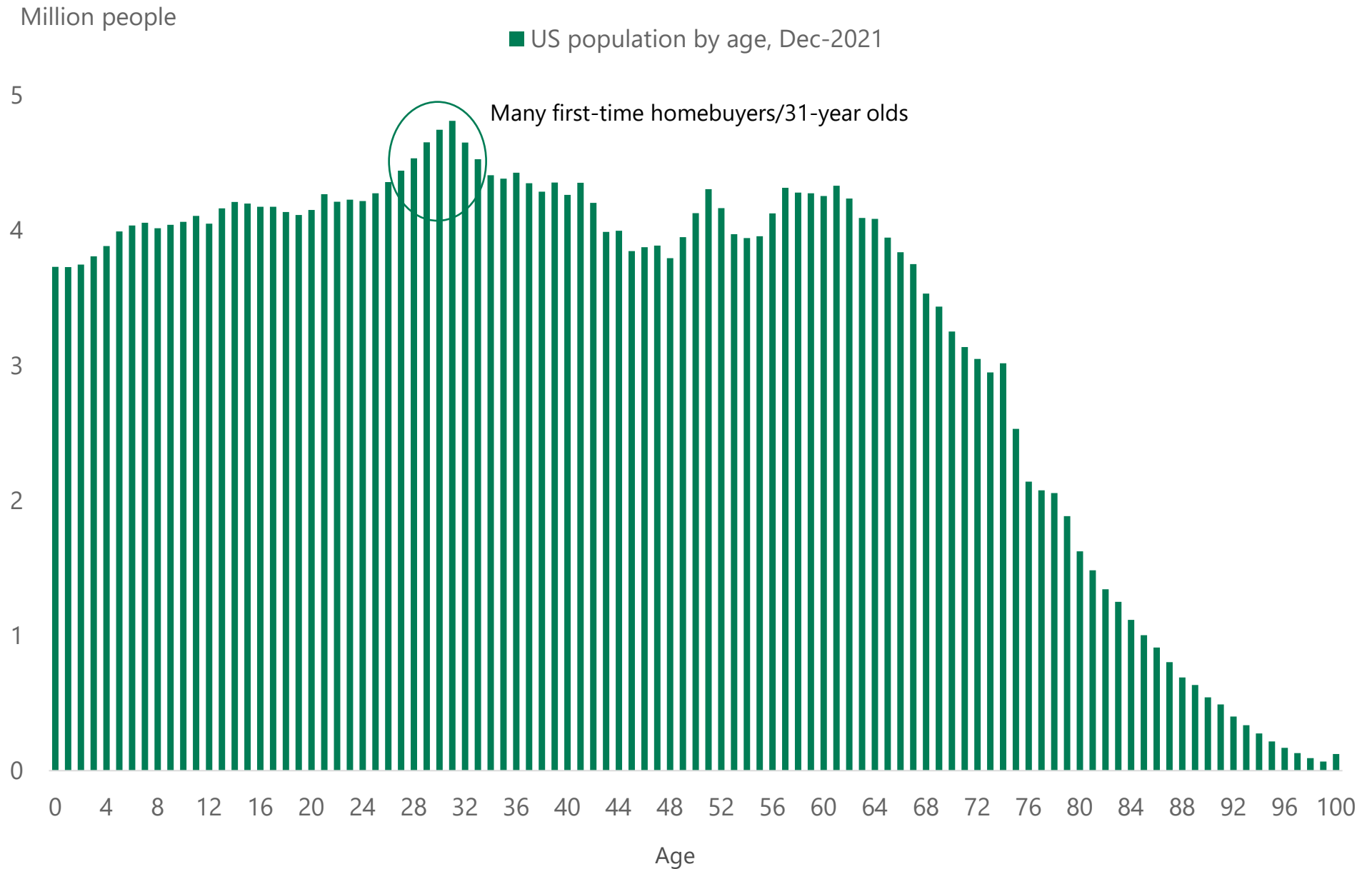
Source: NY Fed, Bloomberg, Apollo Chief Economist

Households have significant excess savings coming out of the pandemic



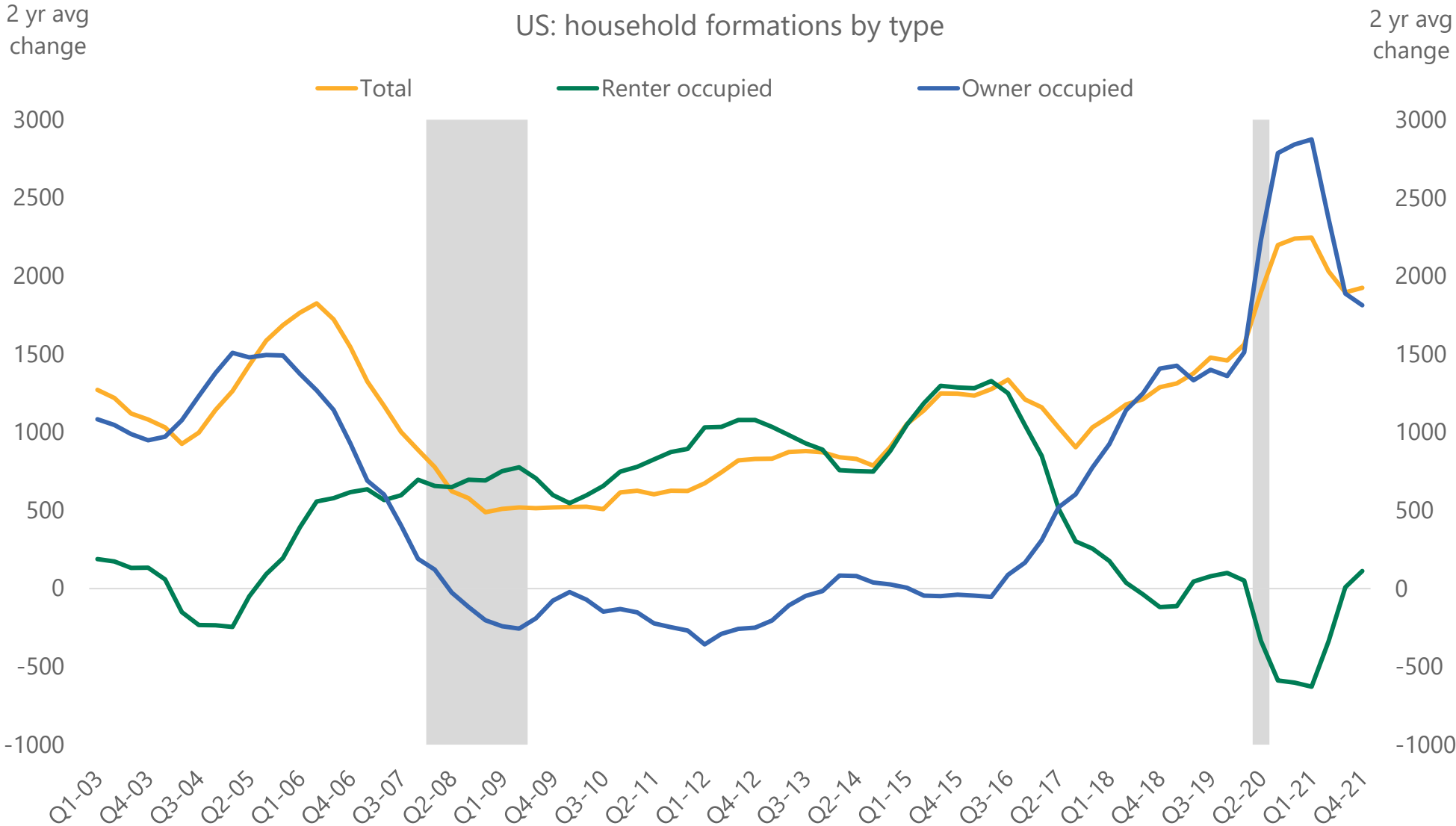
Source: BEA, Haver Analytics, Apollo Chief Economist

Demographics are a tailwind to housing demand



Source: UN, Haver, Apollo Chief Economist

Strong household formation driven by home buying



Source: Census Bureau, Haver, Apollo Chief Economist

More room for the homeownership rate to rise



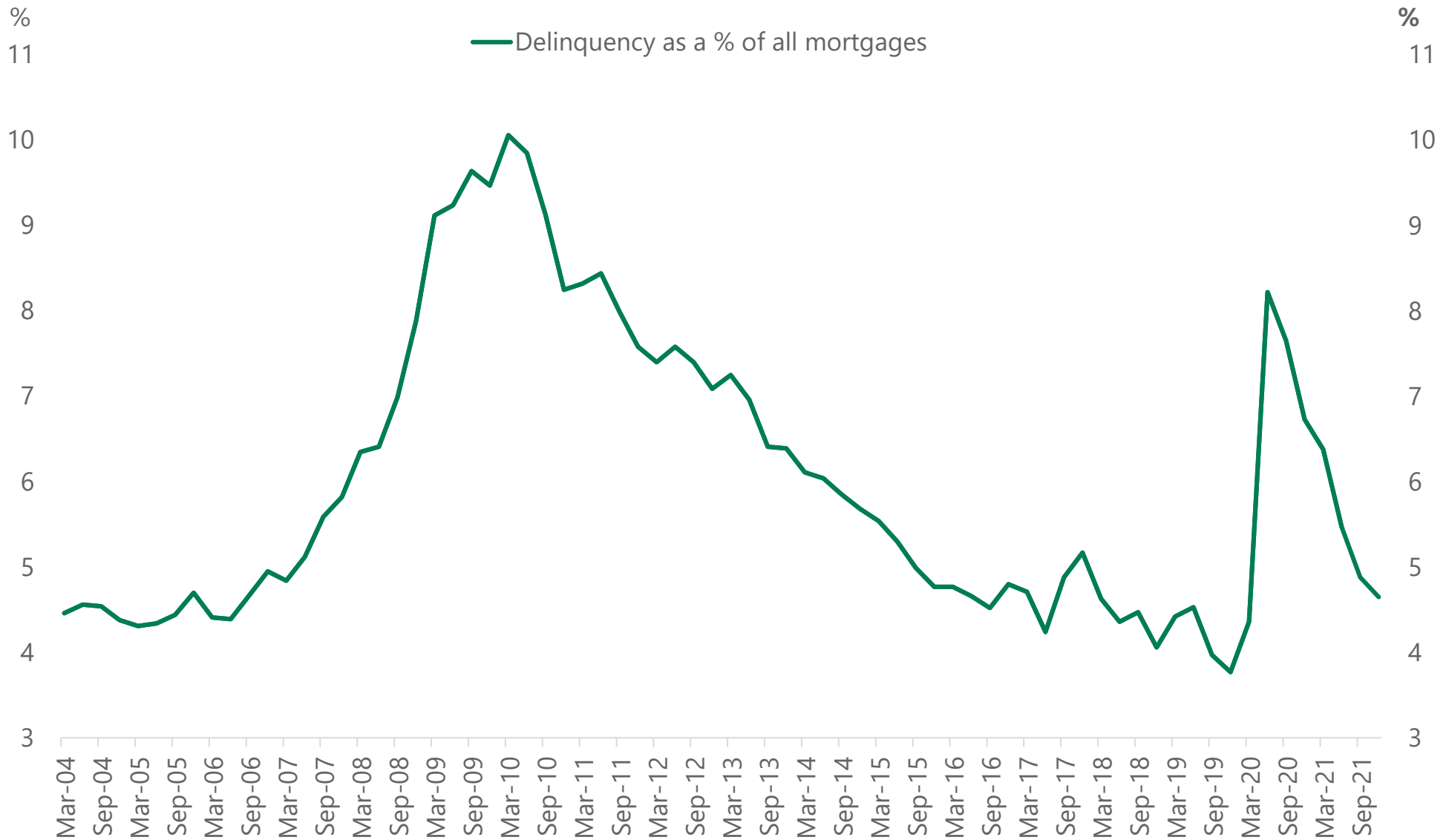
Source: Bloomberg, Apollo Chief Economist

Low unemployment is a strong tailwind to housing demand



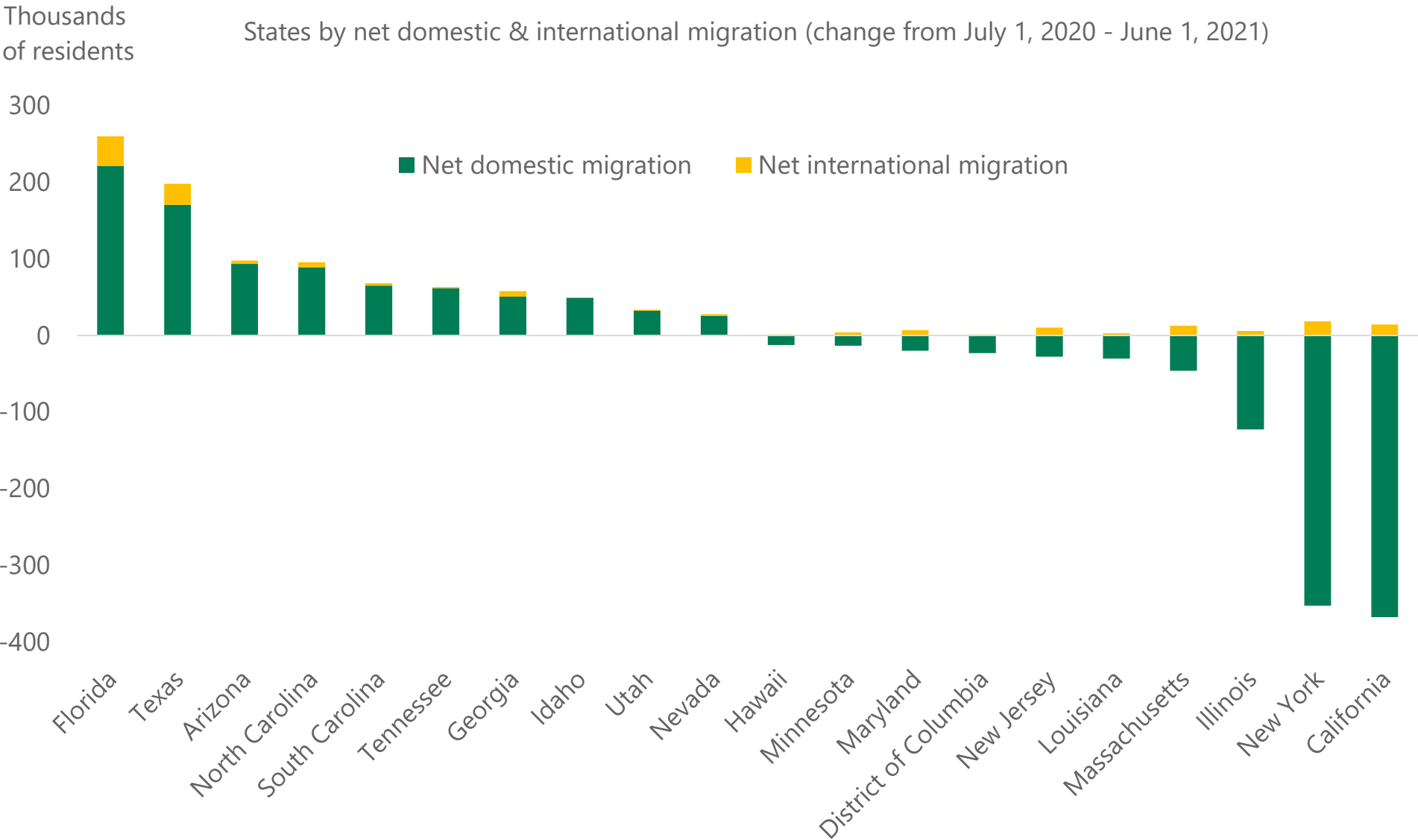
Source: BLS, Haver Analytics, Apollo Chief Economist

Delinquent mortgages trending down



Source: Bloomberg, Apollo Chief Economist

Migration out of California and migration into Florida during the pandemic



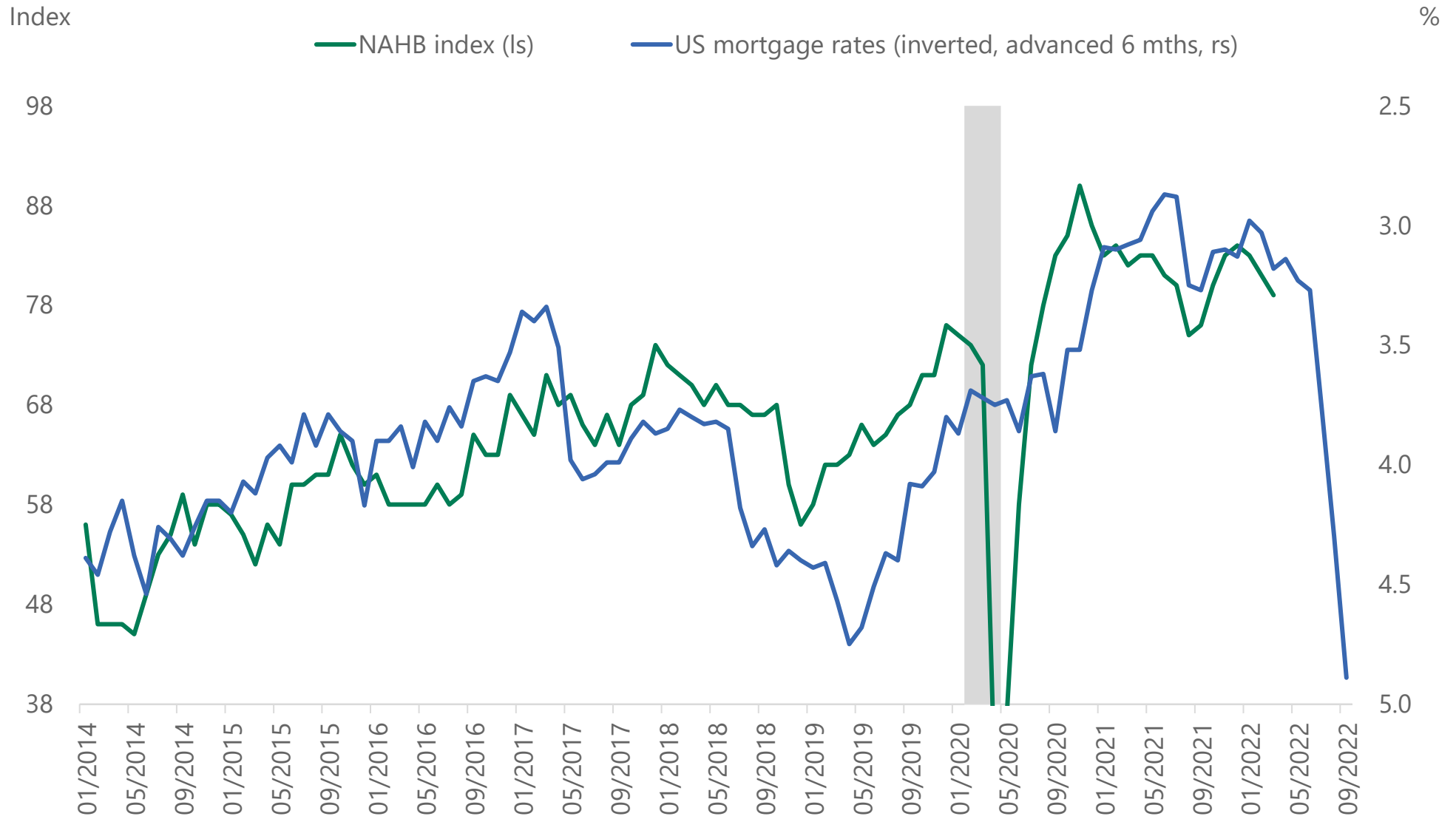
Source: Census Bureau, Apollo Chief Economist

Mortgage rates rising



Source: Bloomberg, Apollo Chief Economist

Downside risks to NAHB index



Source: NAHB, Bloomberg, Apollo Chief Economist

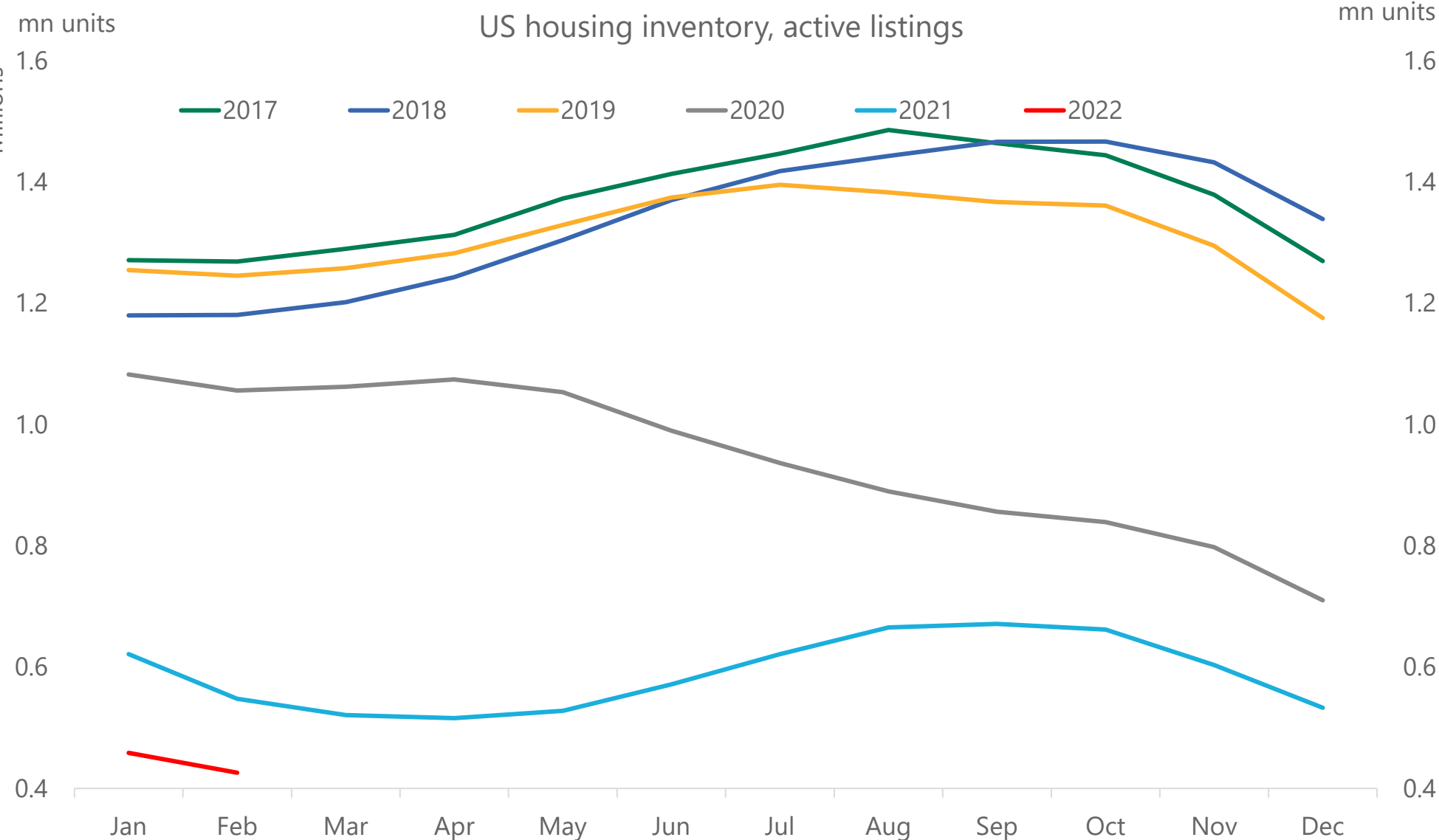
Housing starts likely to moderate



Source: Bloomberg, Apollo Chief Economist

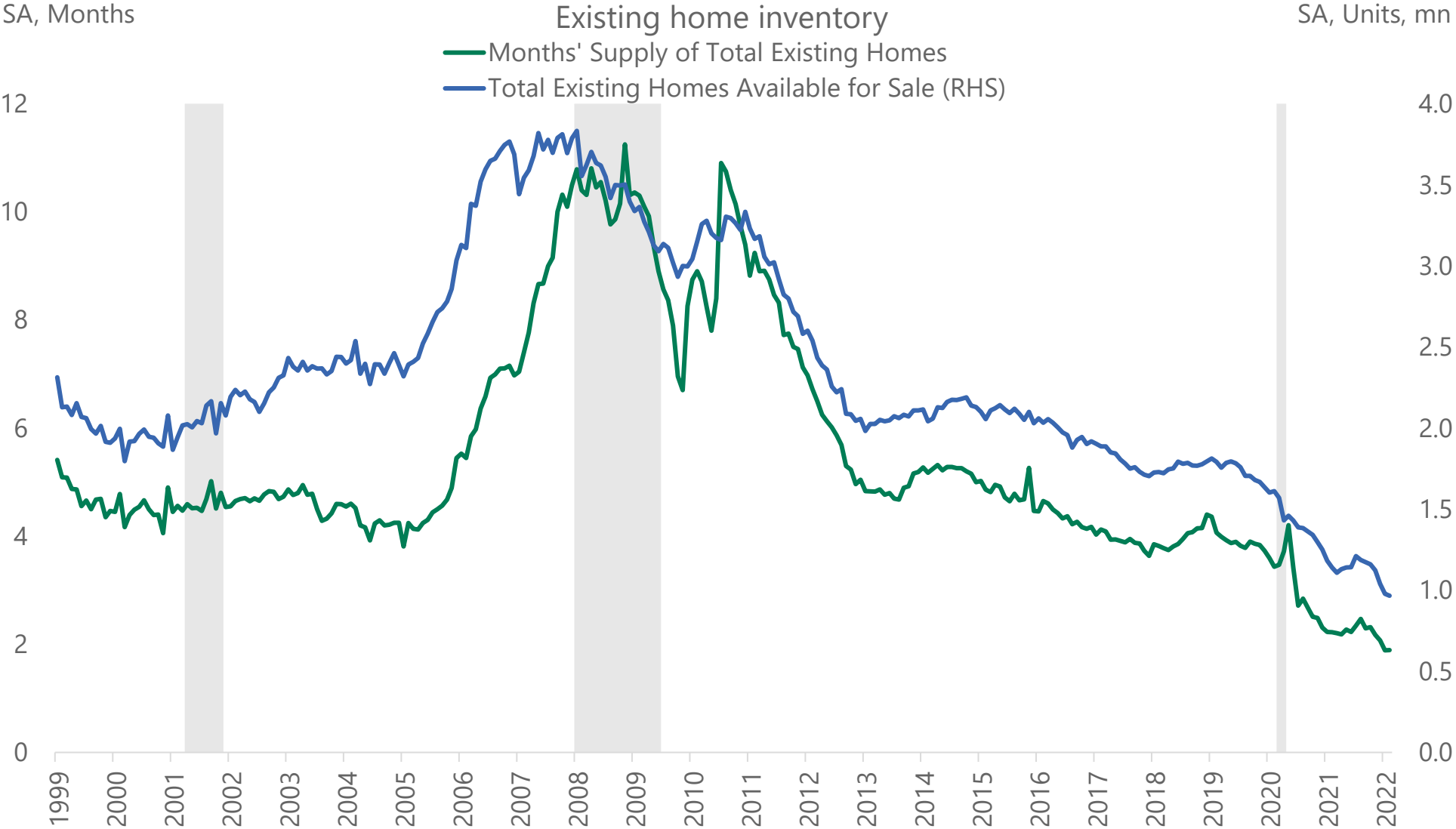
2) Housing supply still low

US housing inventory at 5-year lows



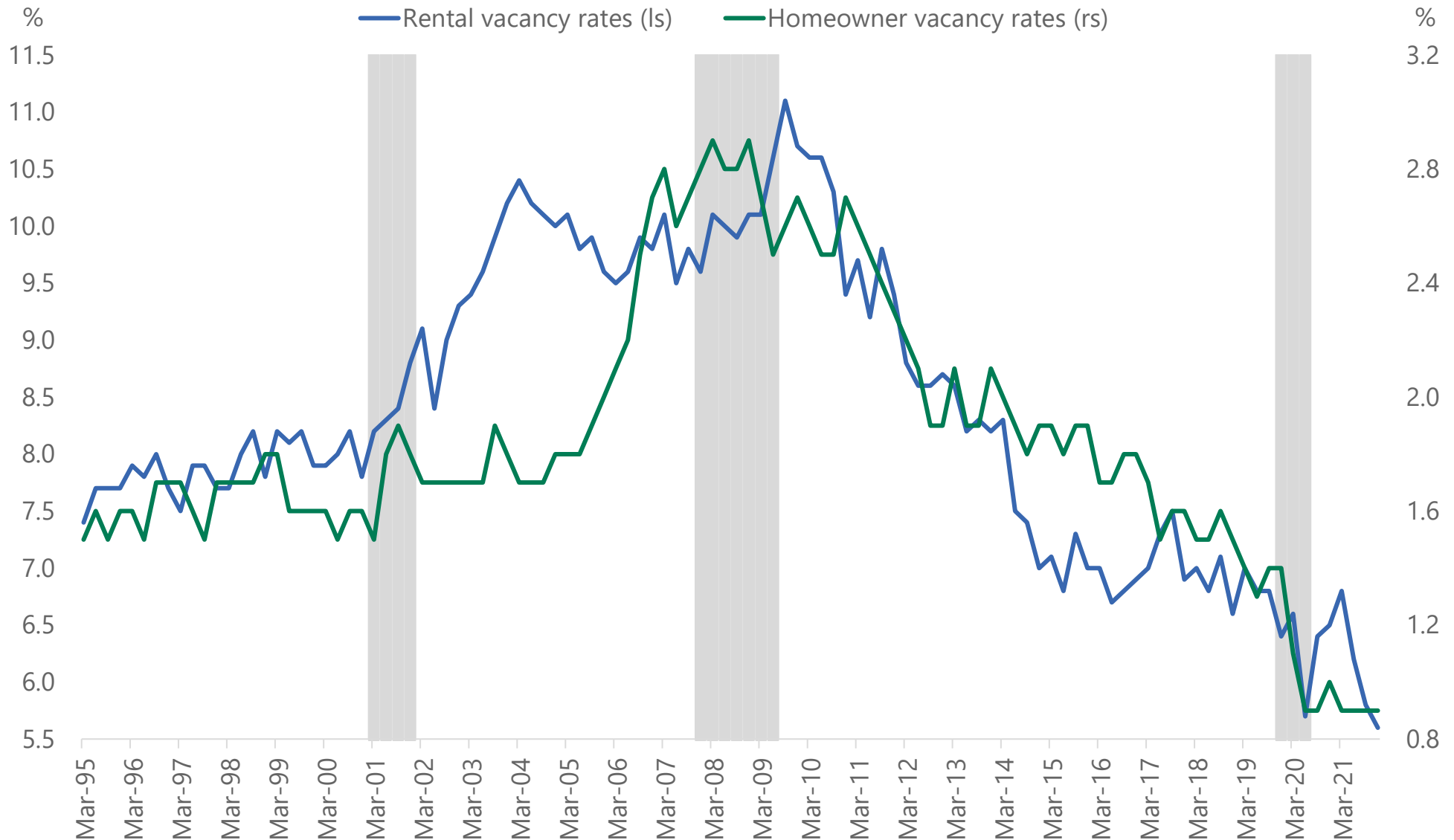
Source: Realtor.com, Apollo Chief Economist

Record low inventory of homes for sale



Source: NAR, Apollo Chief Economist

Vacancy rates at record-low levels



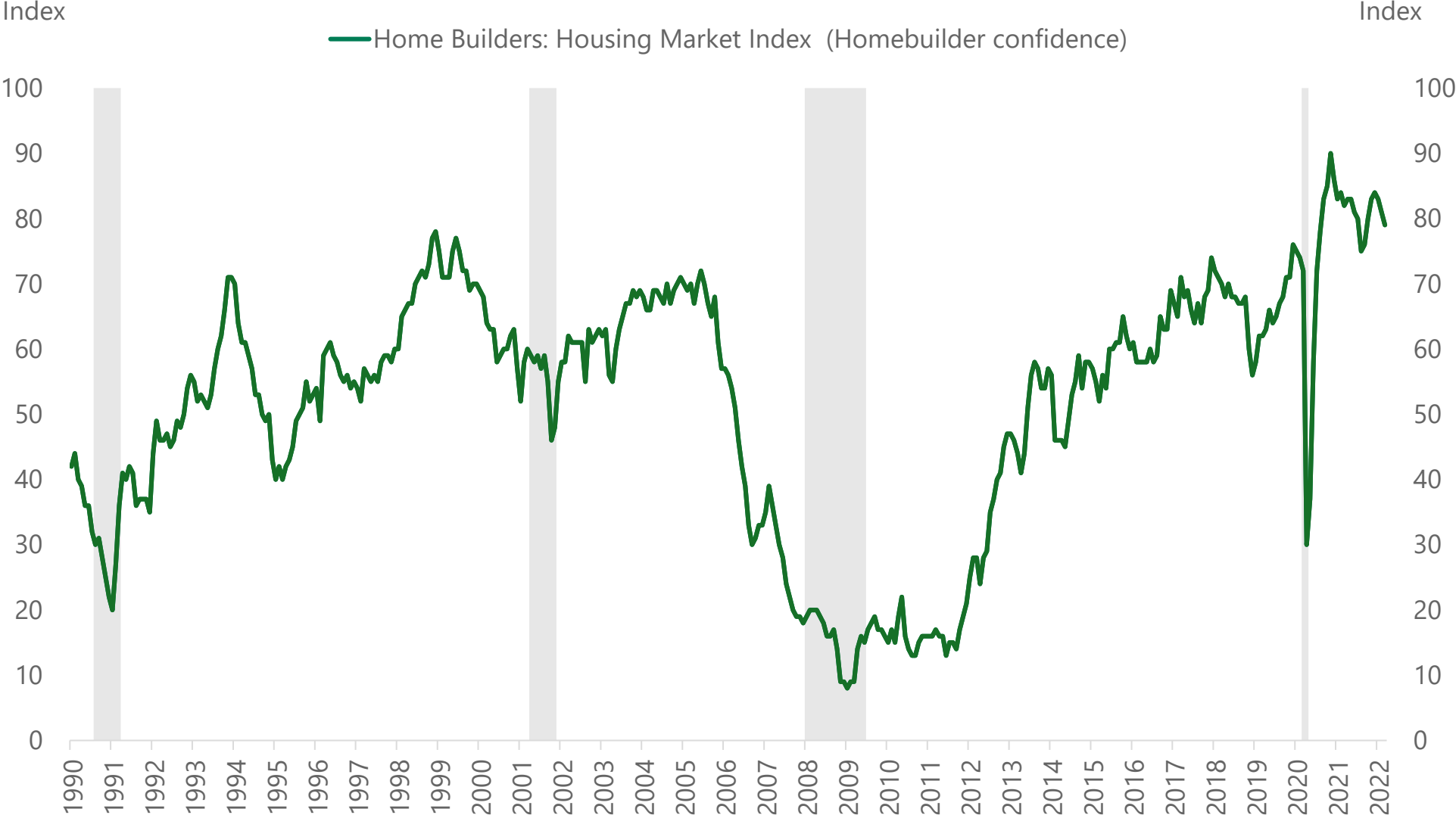
Source: Bloomberg, Apollo Chief Economist

This is a good time to sell a house



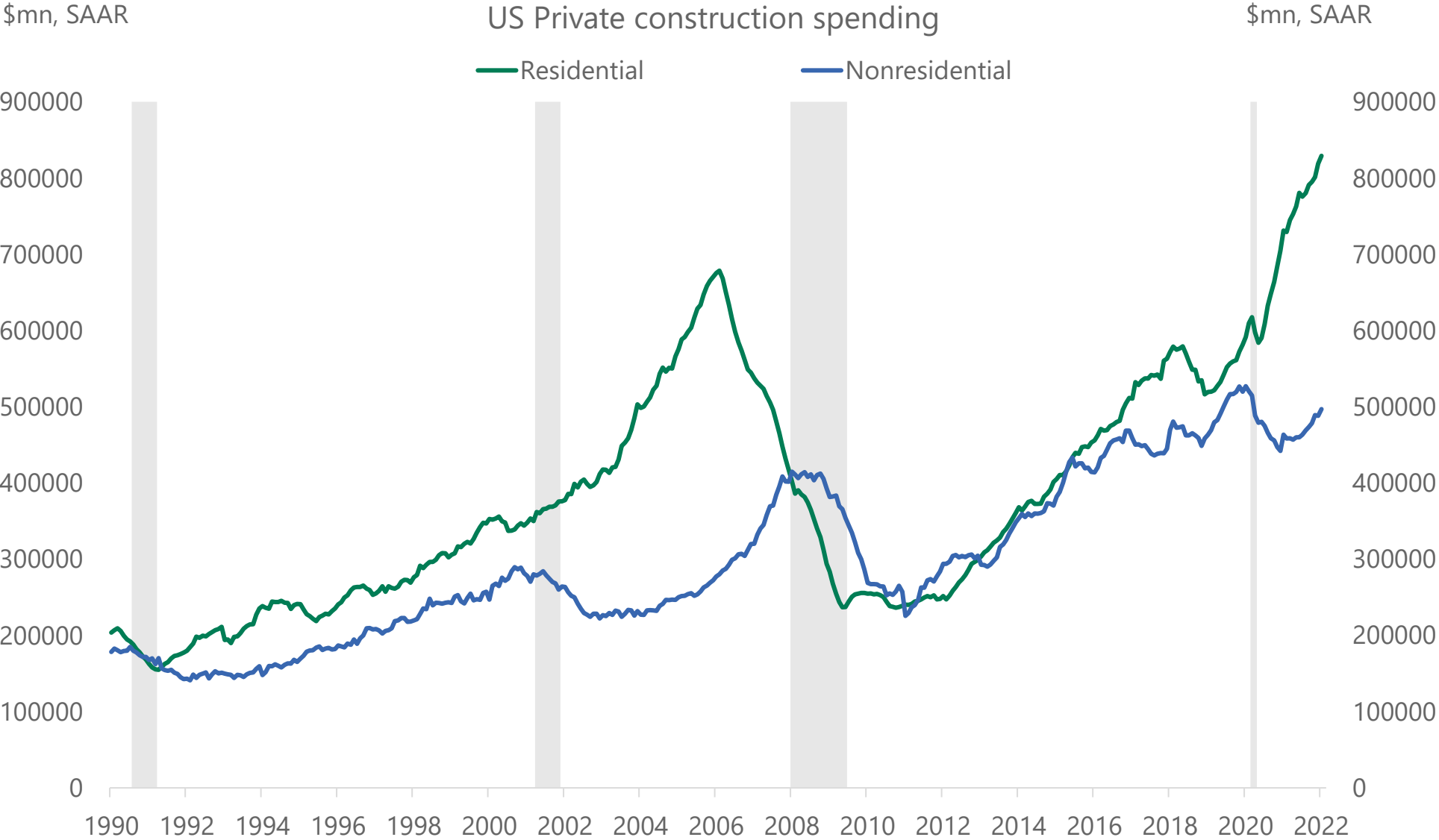
Source: University of Michigan, Apollo Chief Economist

Homebuilder confidence is high



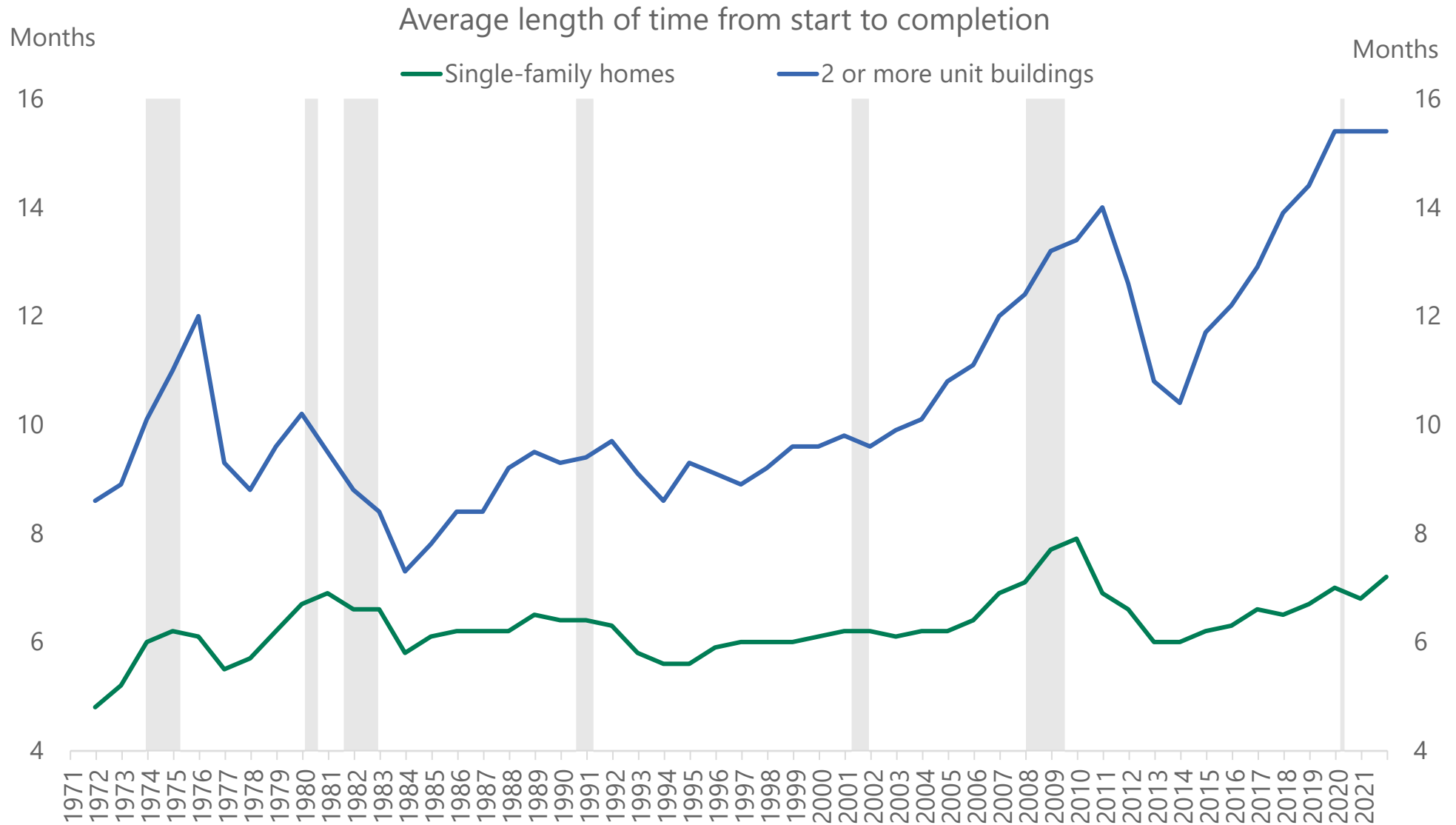
Source: NAHB, Apollo Chief Economist

Residential construction spending very strong



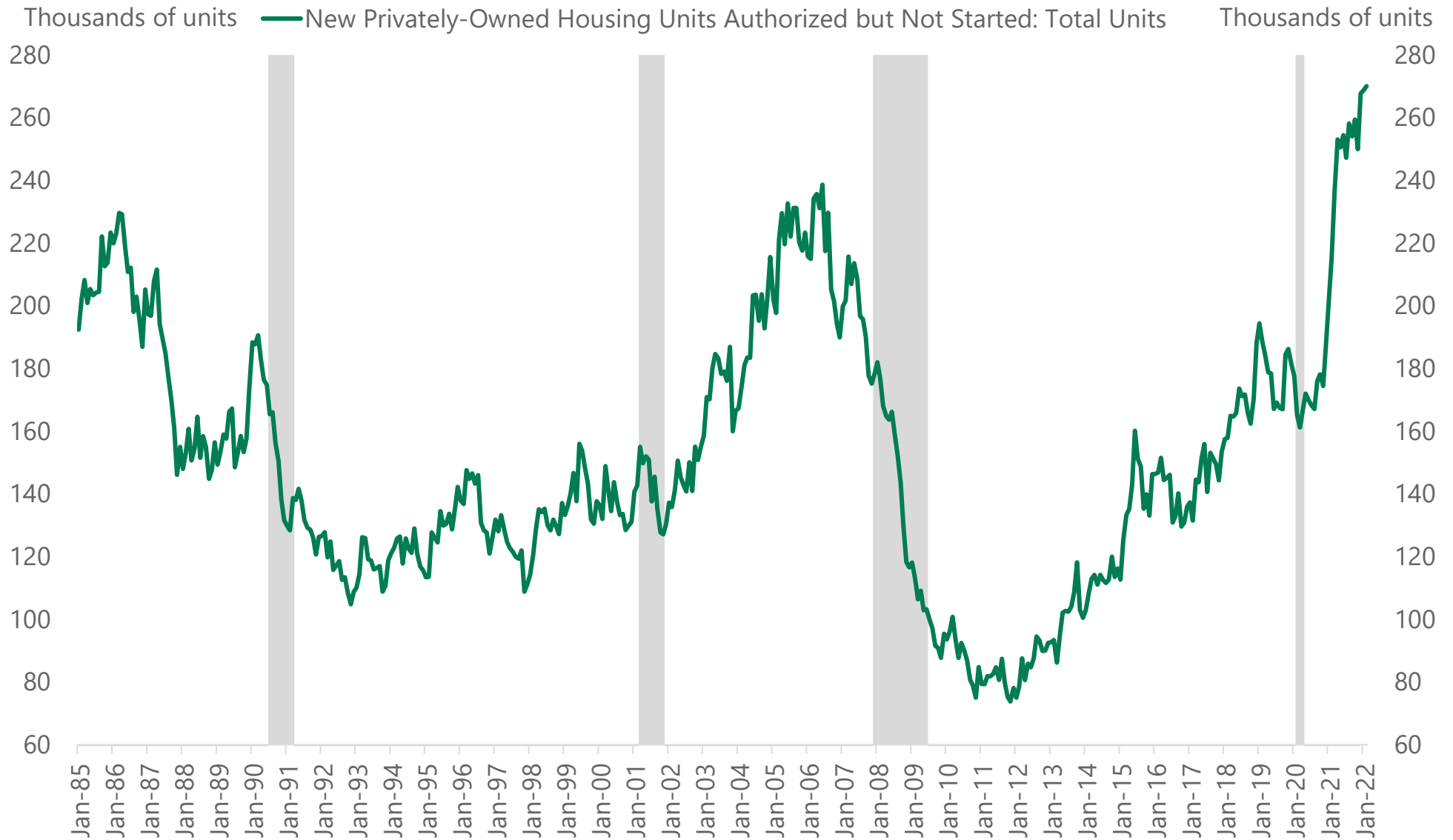
Source: Census, Apollo Chief Economist

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



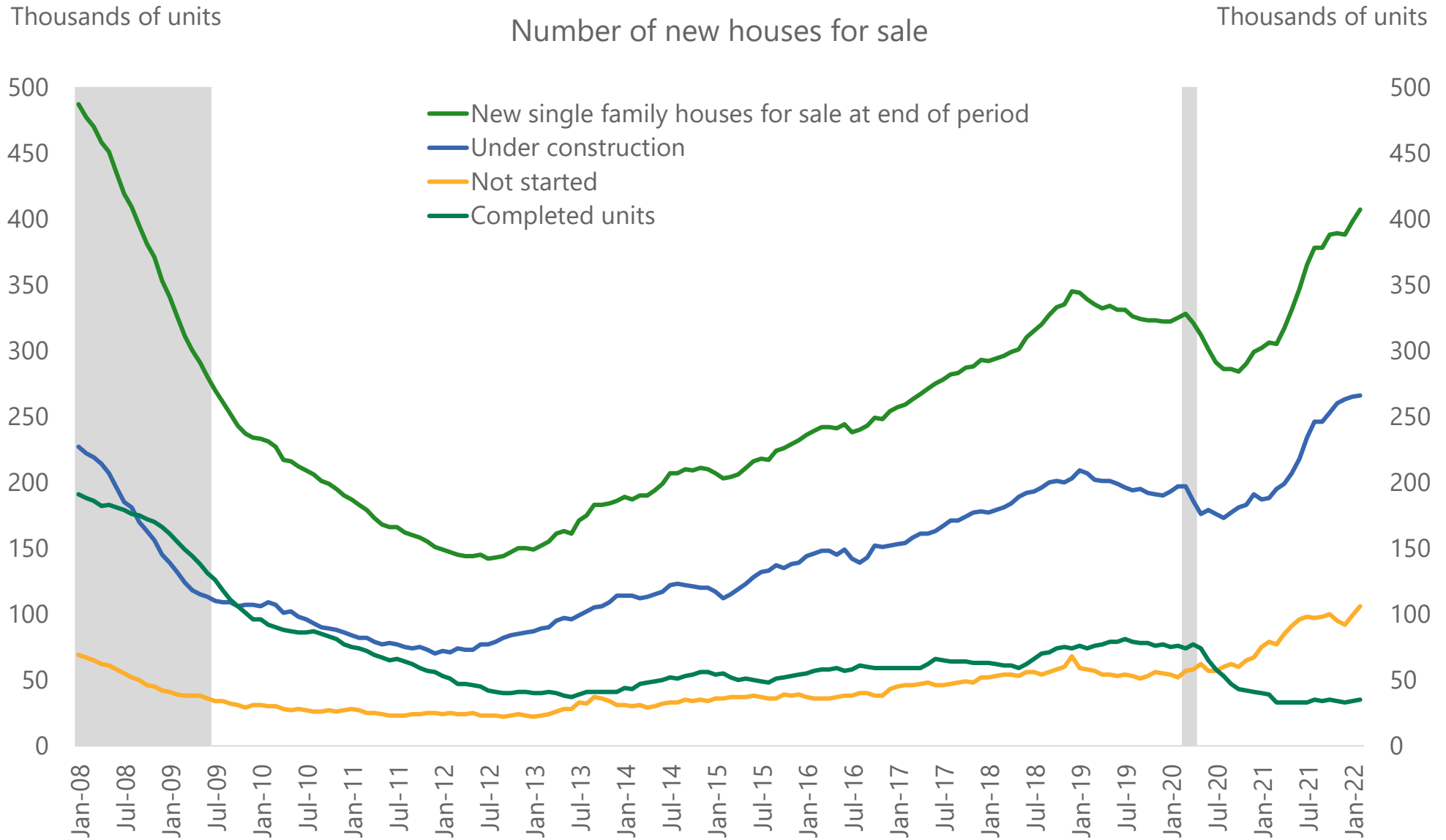
Source: Census, Haver Analytics, Apollo Chief Economist. Note: Single family homes are 1 unit buildings

New housing units authorized



Source: FRED, Apollo Chief Economist

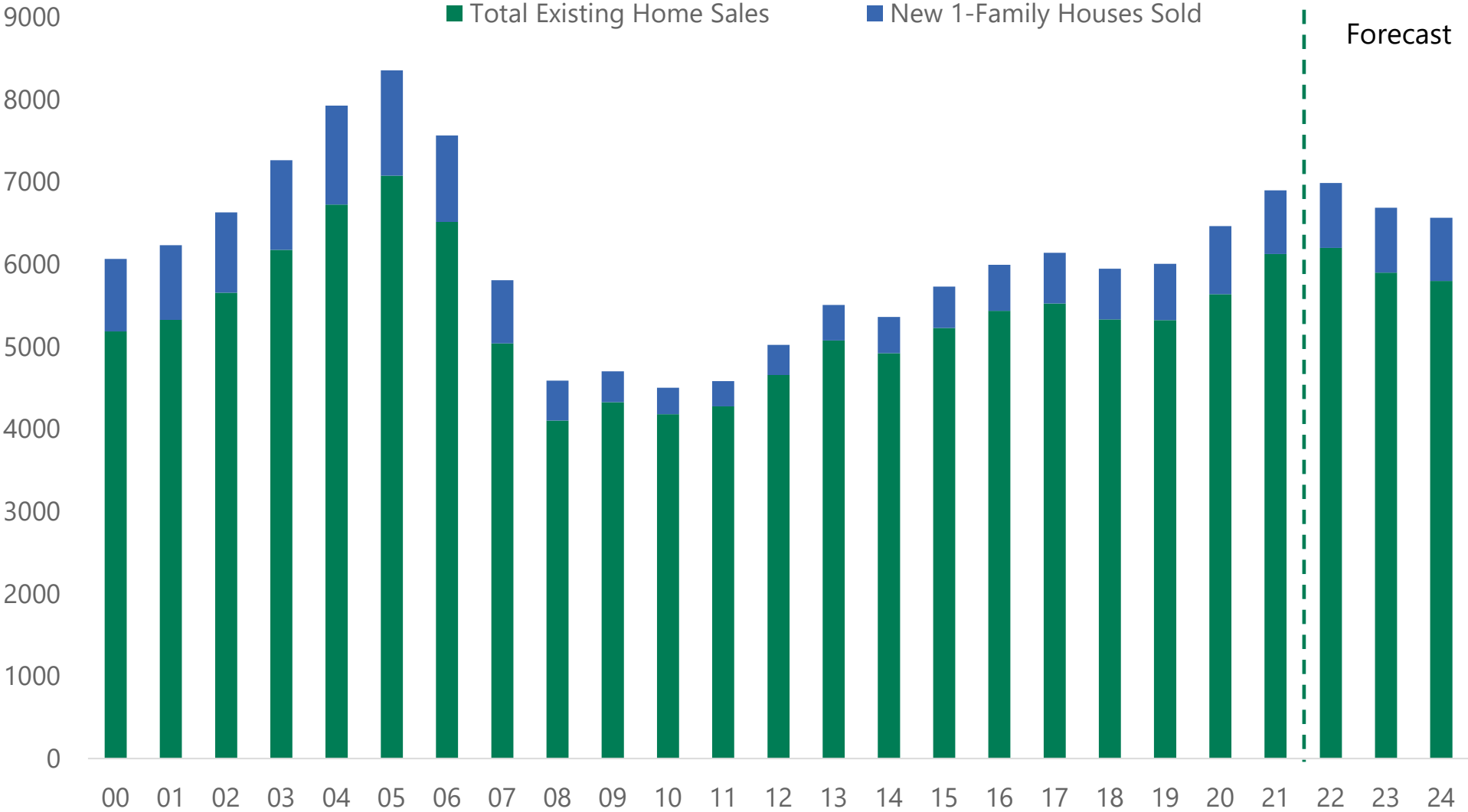
More new houses for sale where construction has not yet started



Source: Census Bureau, Apollo Chief Economist

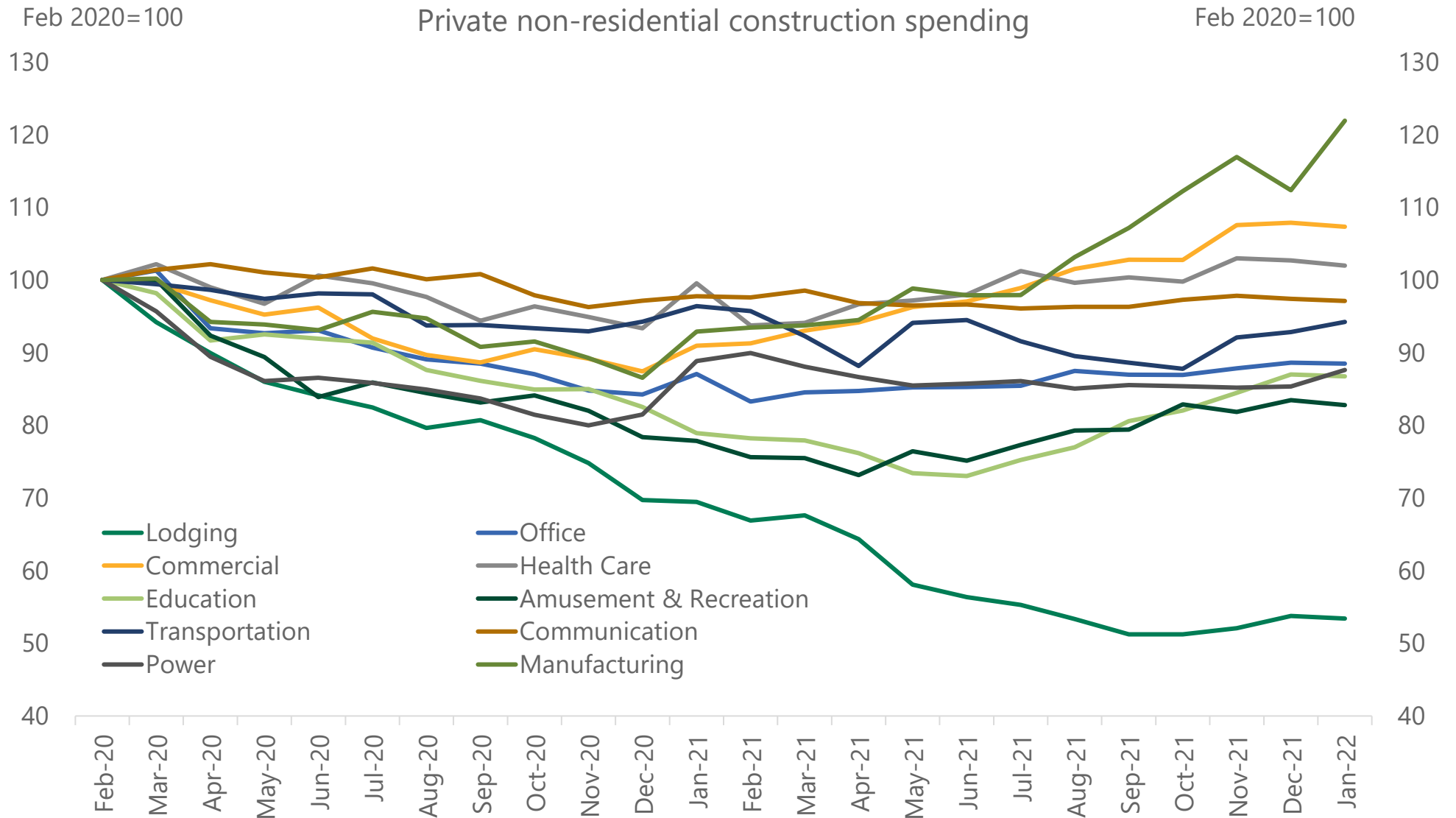
Consensus forecast for home sales

SAAR, thous.



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

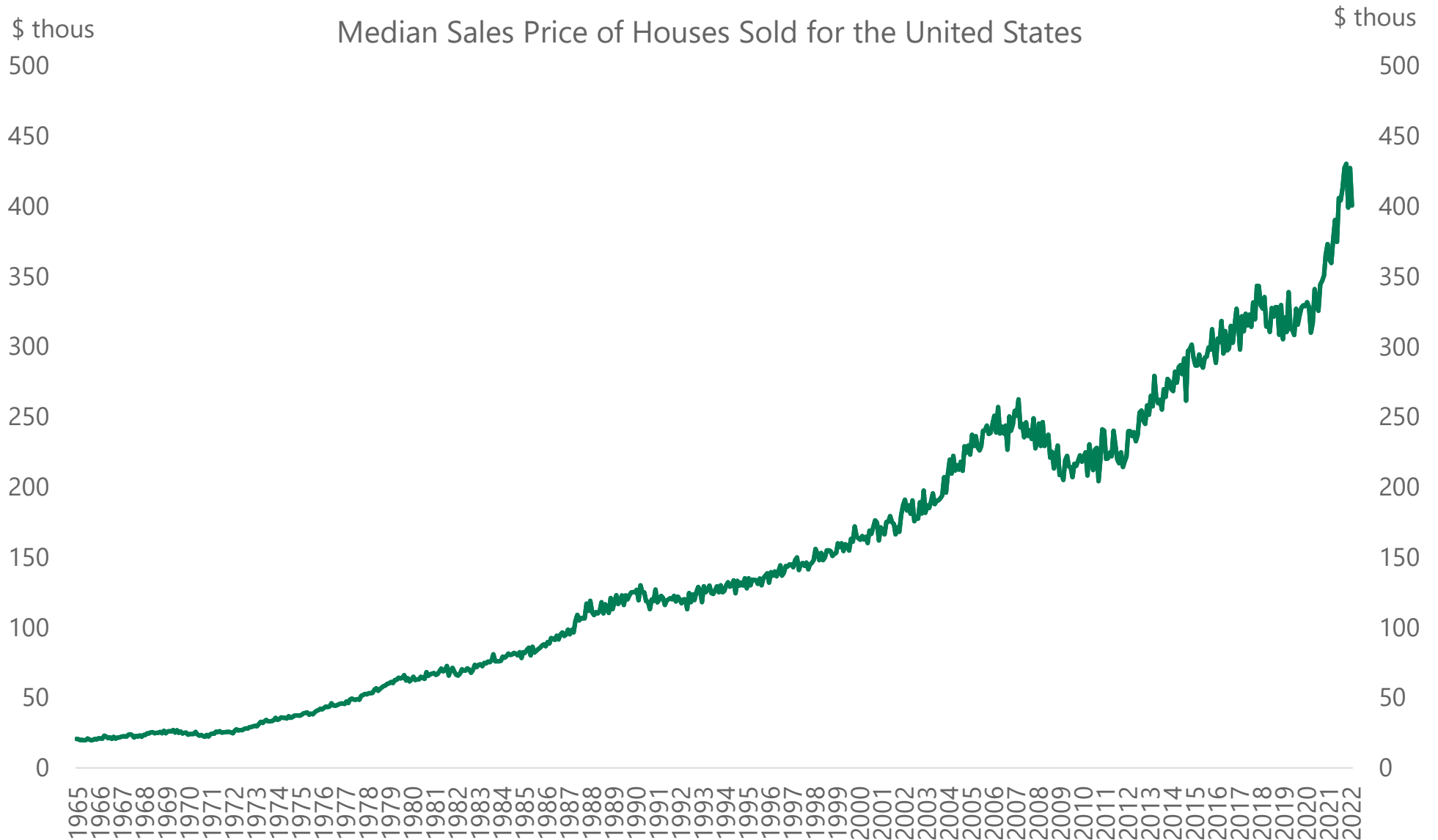
Lodging has seen the biggest decline in non-residential construction



Source: Census, Haver Analytics, Apollo Chief Economist

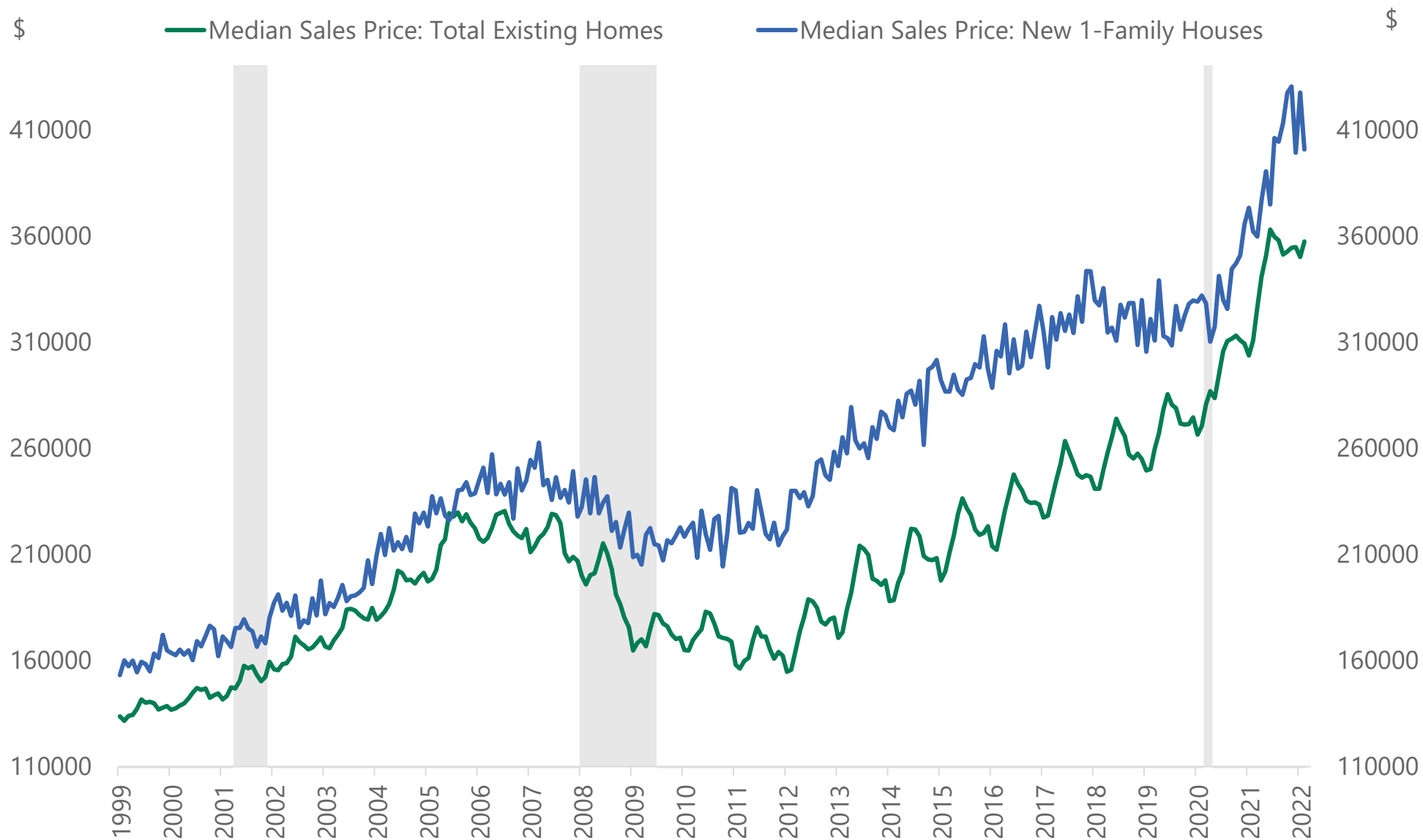
3) Rising rates, high home prices, strong supply pipeline, and high building costs are risks to this housing cycle

Median home sales price above \$400K



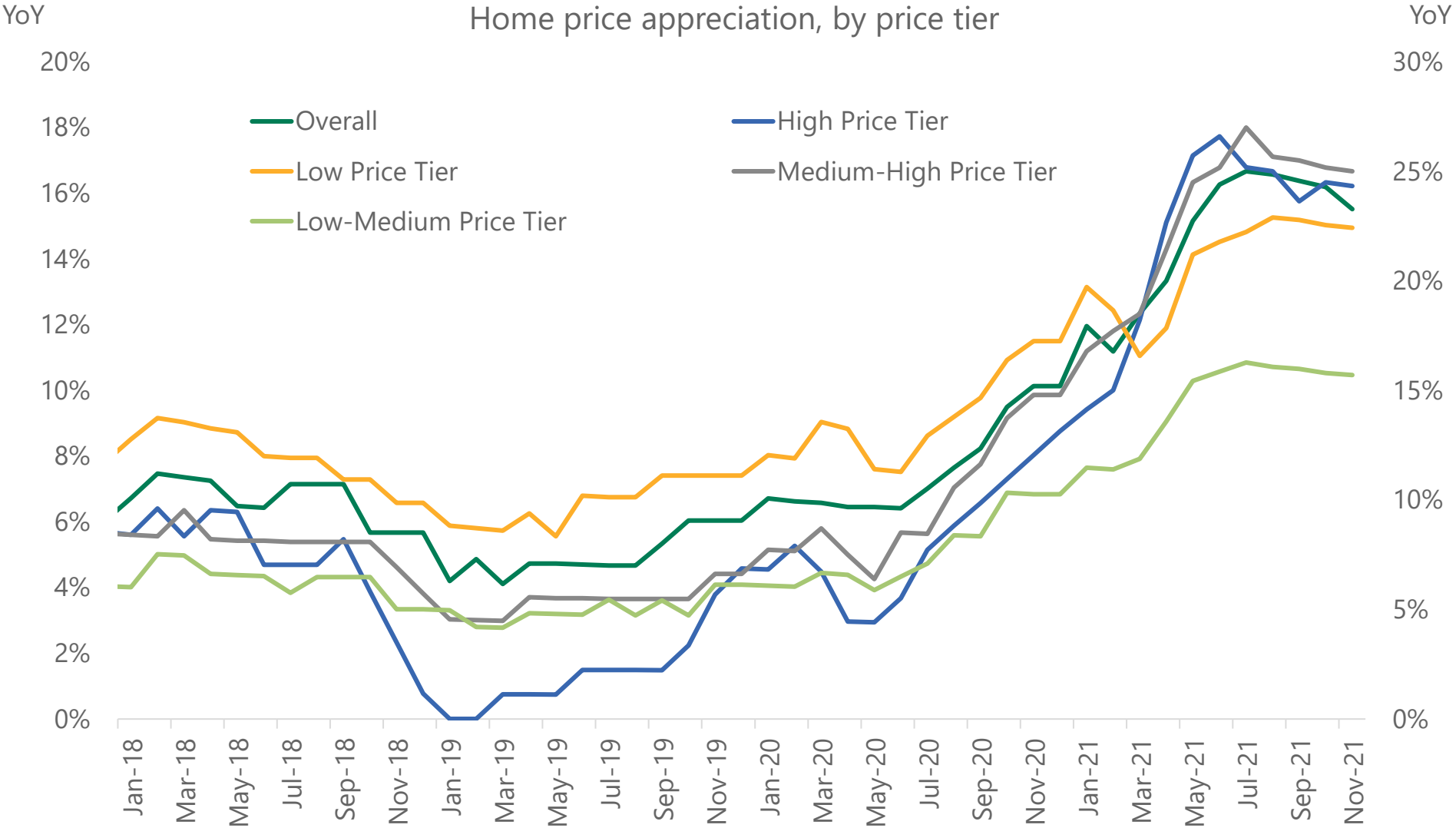
Source: Census Bureau, Apollo Chief Economist

High home prices keep rising



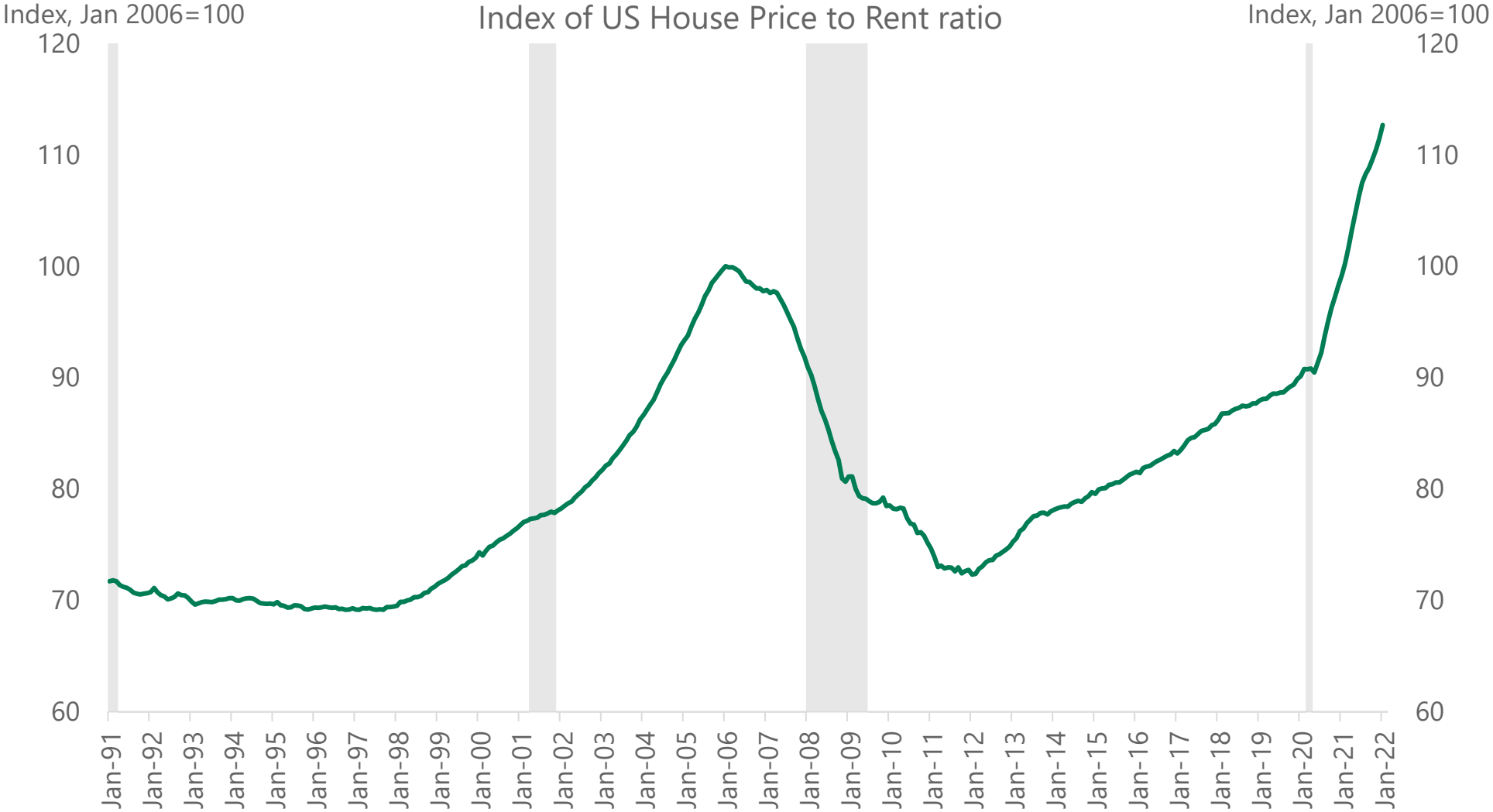
Source: Census, Apollo Chief Economist

House prices rising faster for more expensive homes



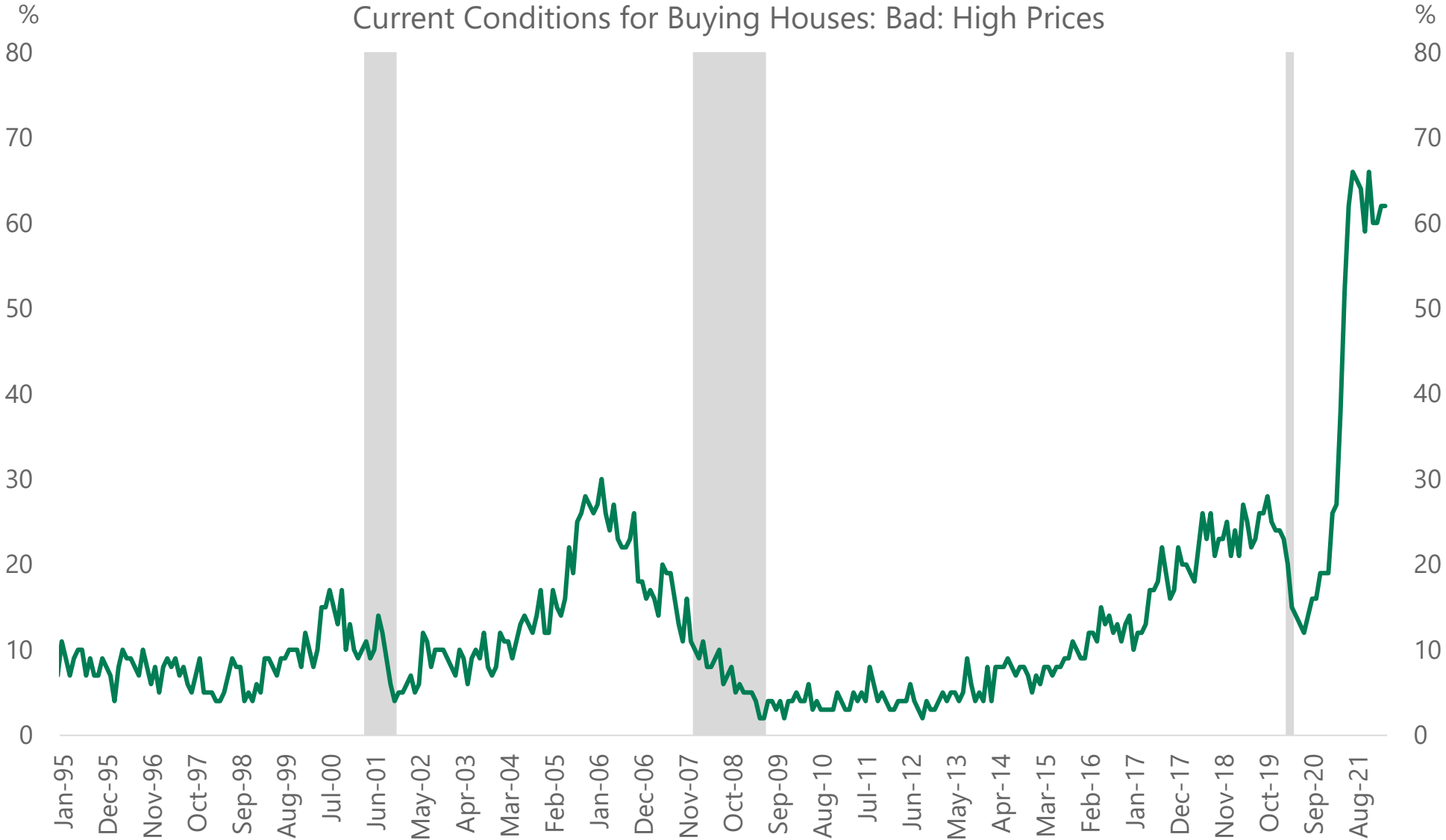
Source: American Enterprise Institute, Haver, Apollo Chief Economist

Home price to rent ratio is above 2006 levels



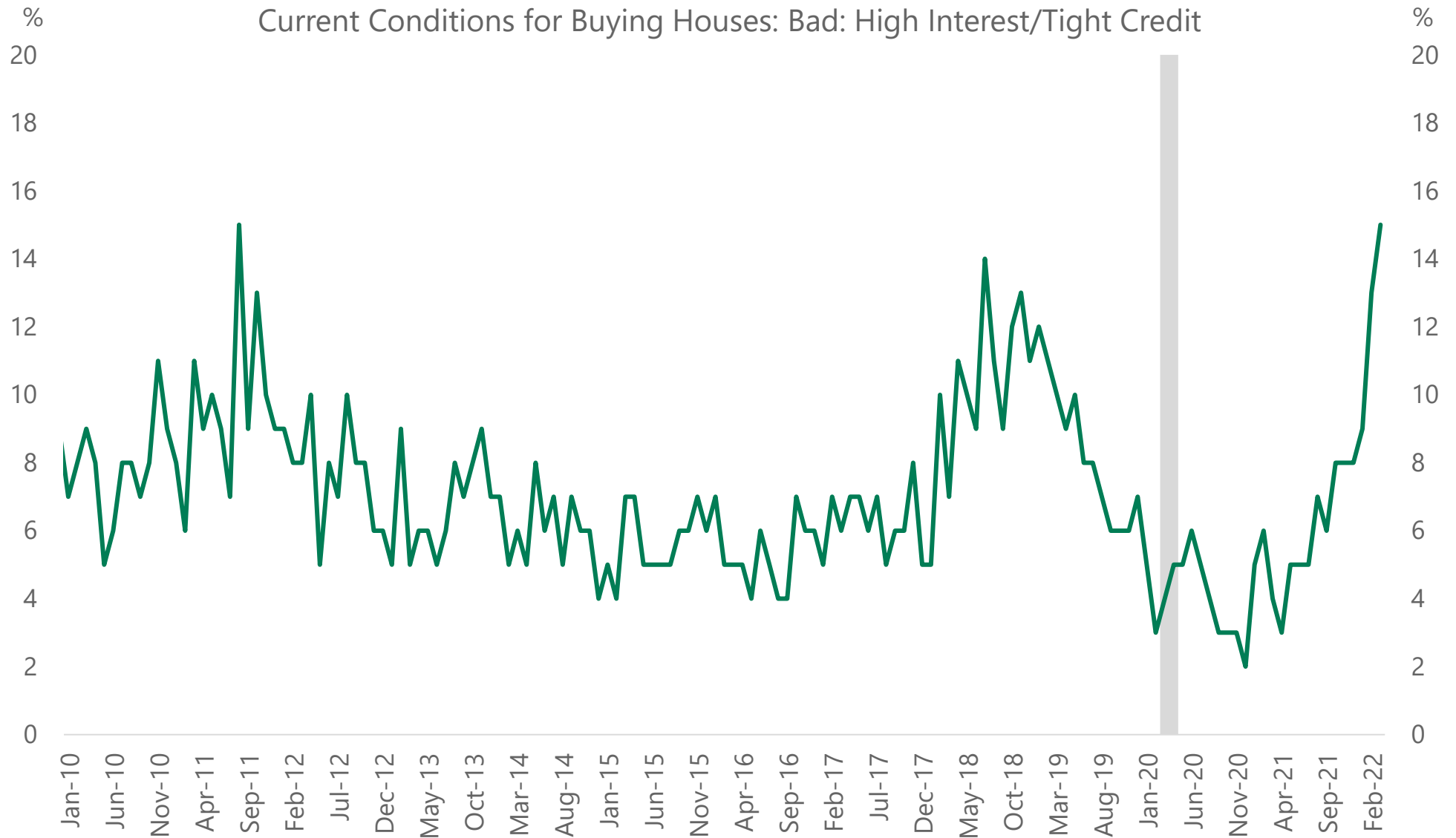
Source: FHFA, BLS, Apollo Chief Economist. Note: the series is indexed ratio of FHFA monthly purchase only house price index divided by the OER component of the CPI.

High prices having negative impact on homebuyer sentiment



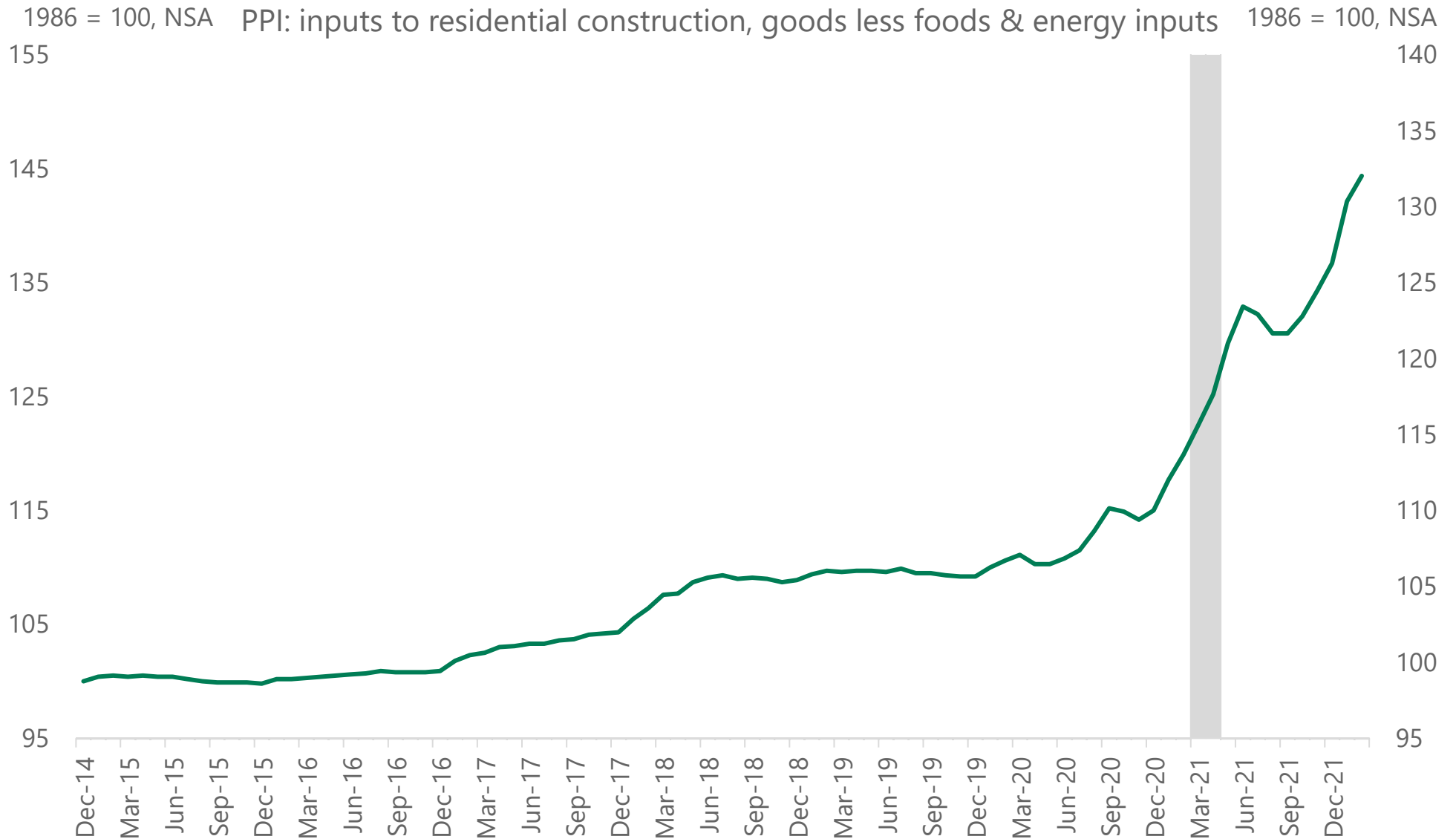
Source: University of Michigan, Apollo Chief Economist

Tighter credit also having negative impact on homebuyer sentiment



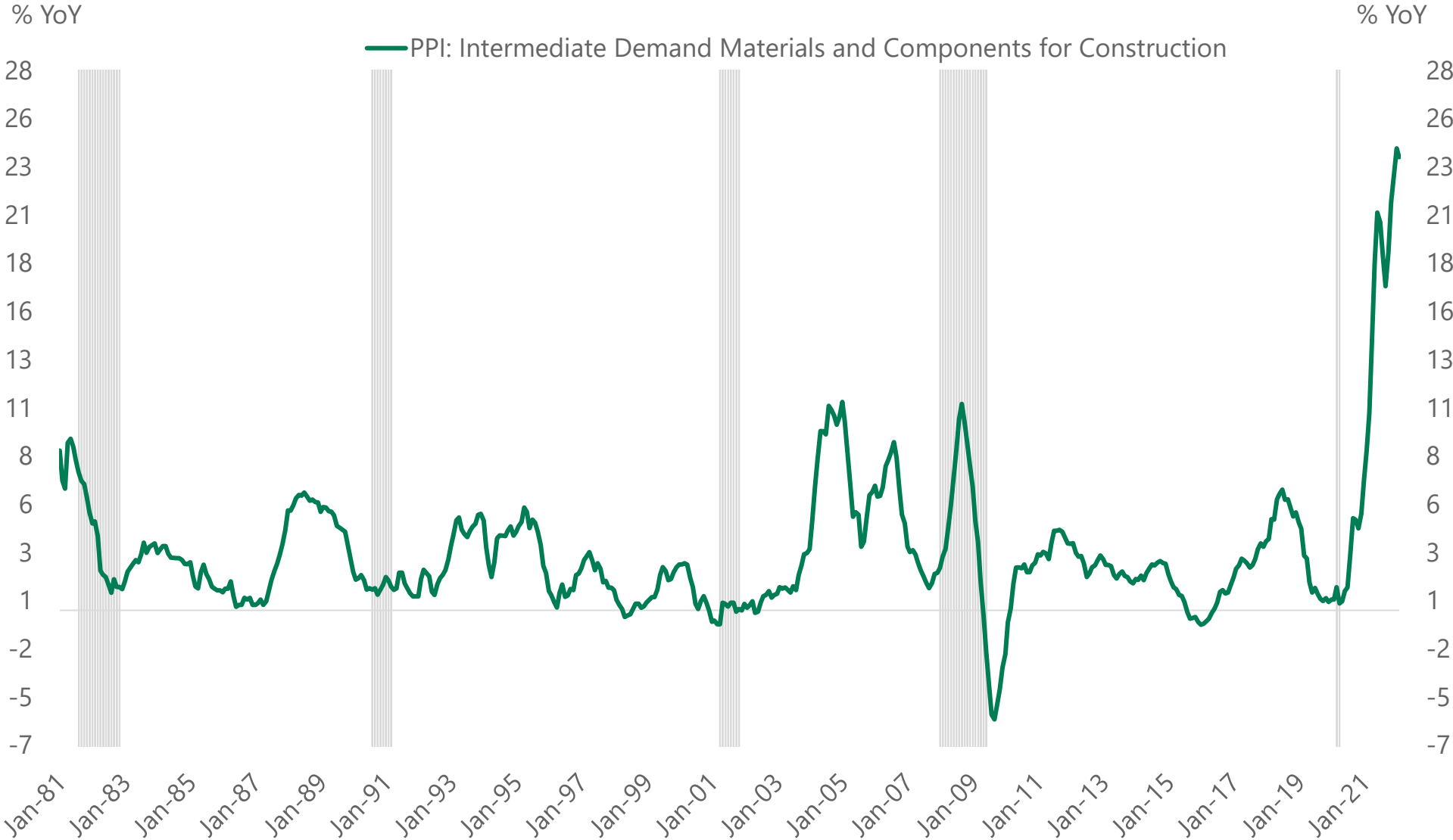
Source: University of Michigan, Apollo Chief Economist

Housing construction costs rising



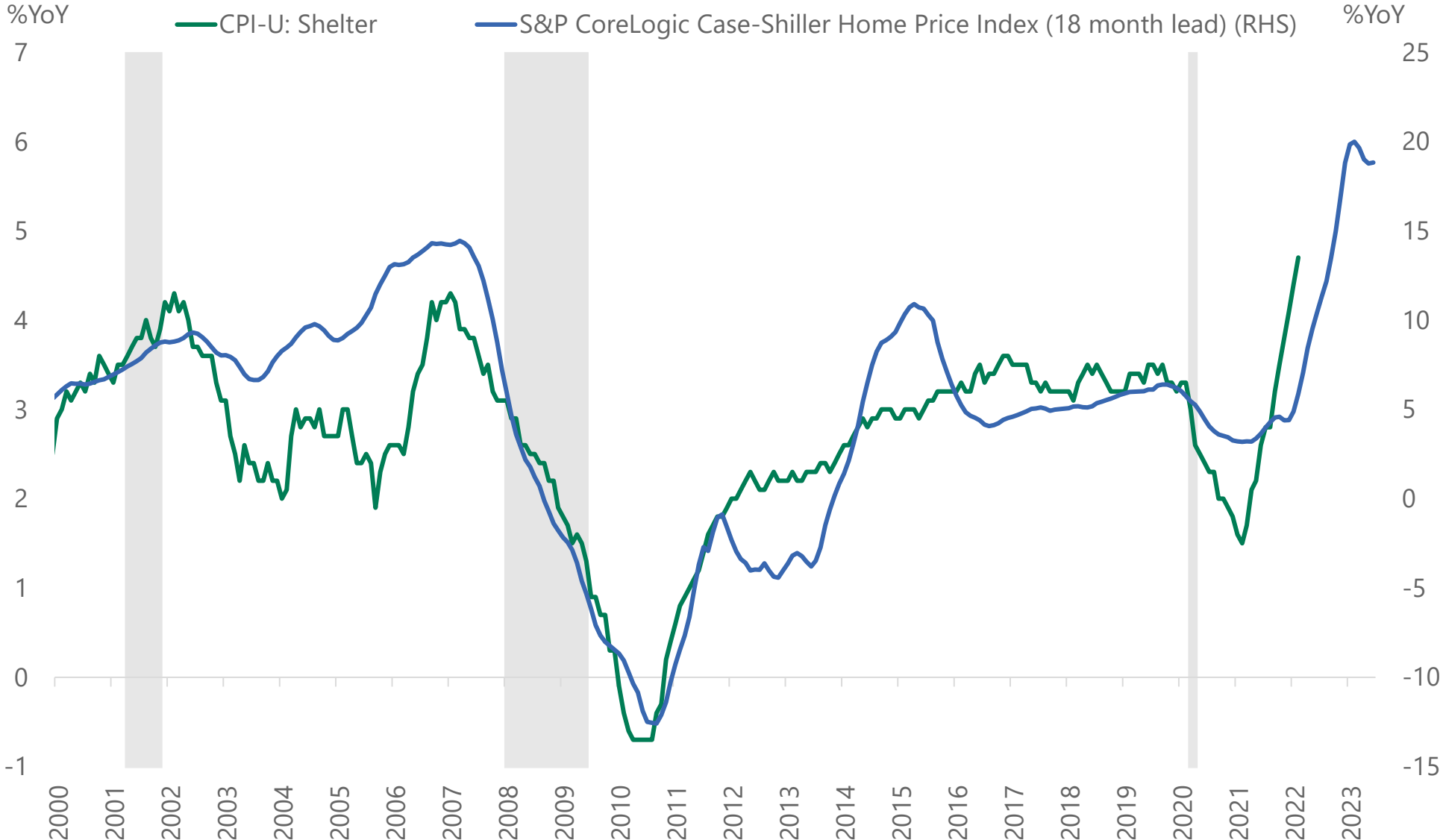
Source: Bureau of Labor Statistics, Apollo Chief Economist

High inflation in input costs



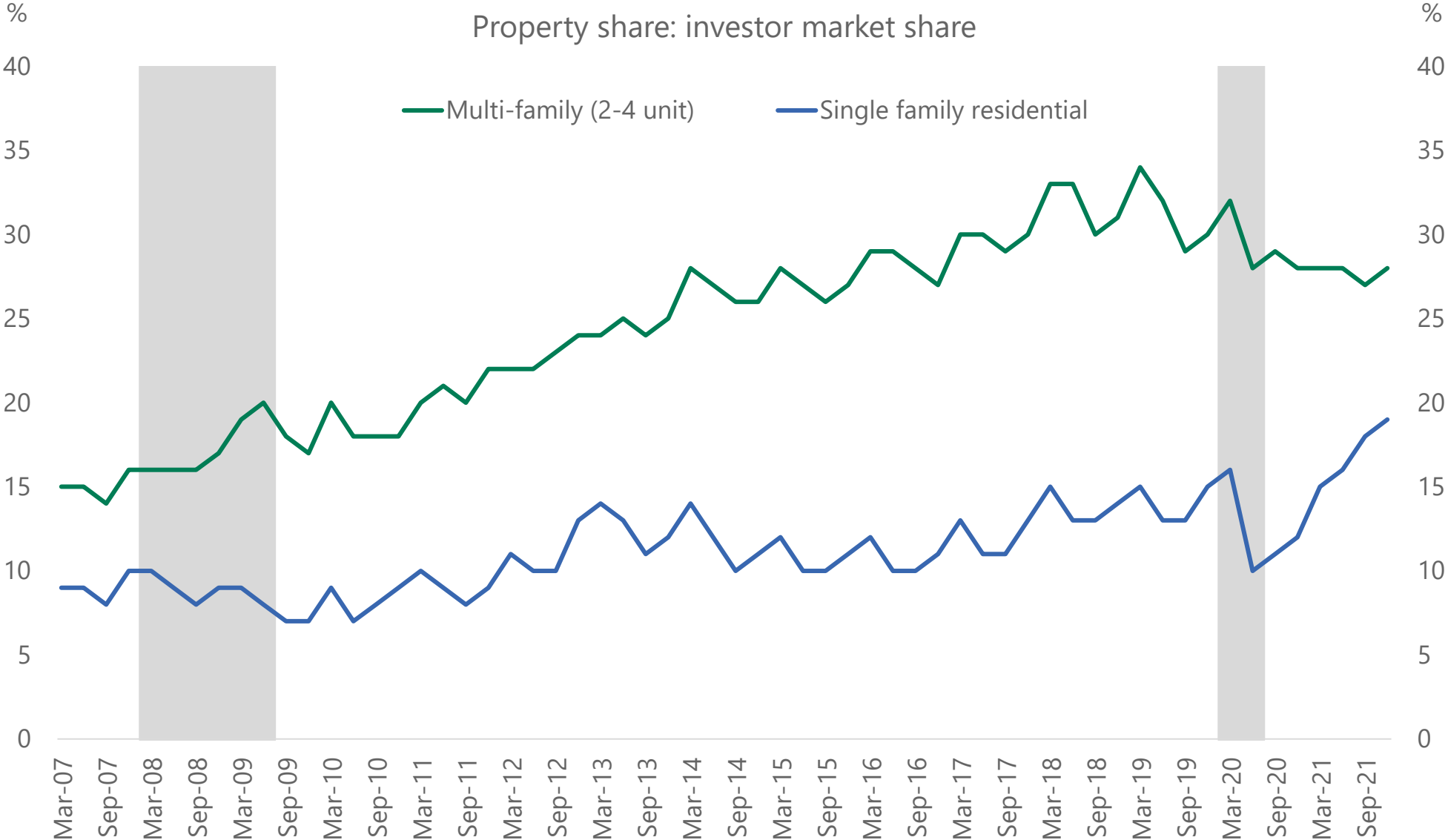
Source: Bureau of Labor Statistics, Apollo Chief Economist

Rising home prices is a problem for the Fed



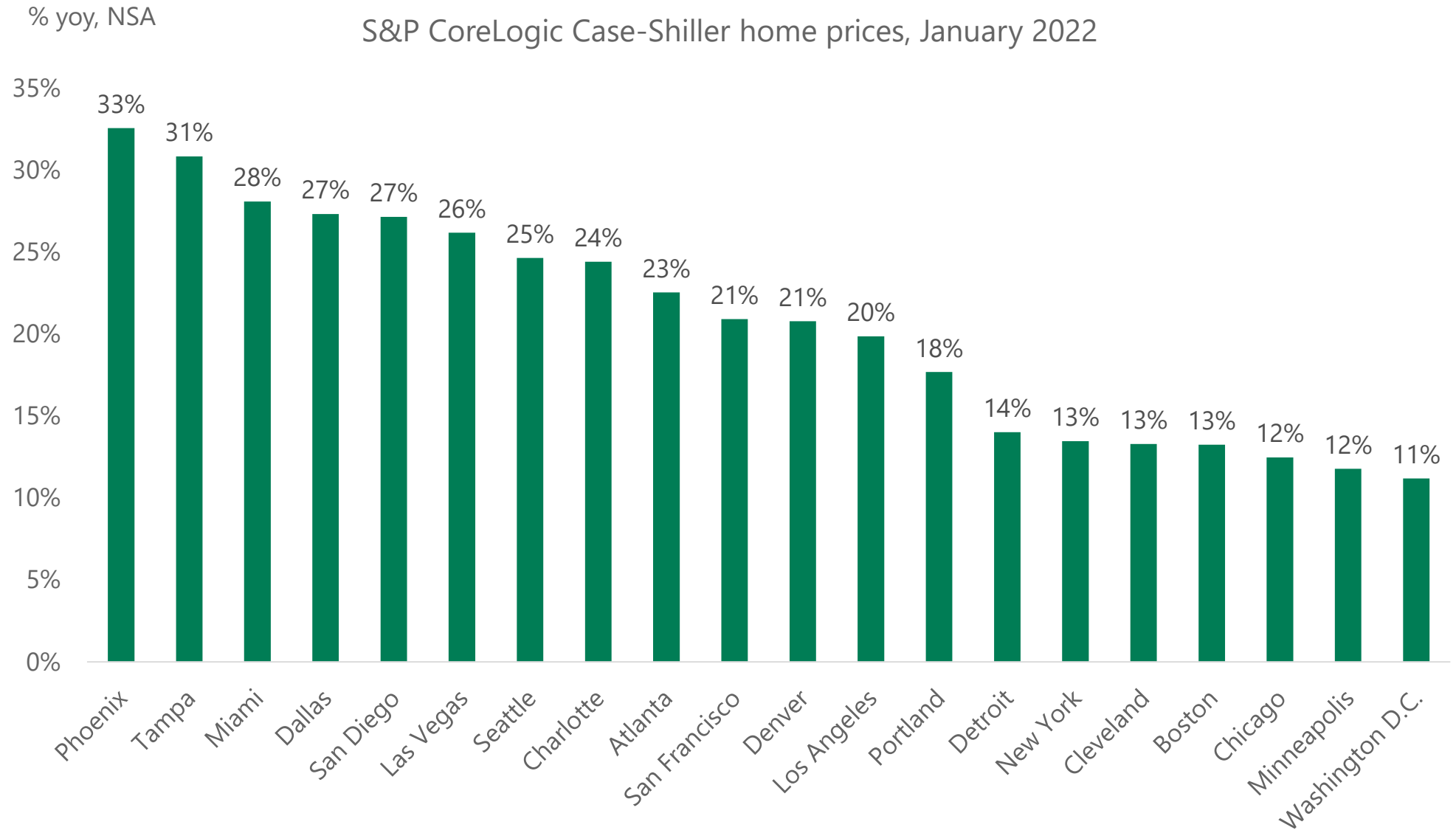
Source: S&P case-shiller, BLS, Bloomberg, Apollo Chief Economist

Share of homes purchased by real-estate investor



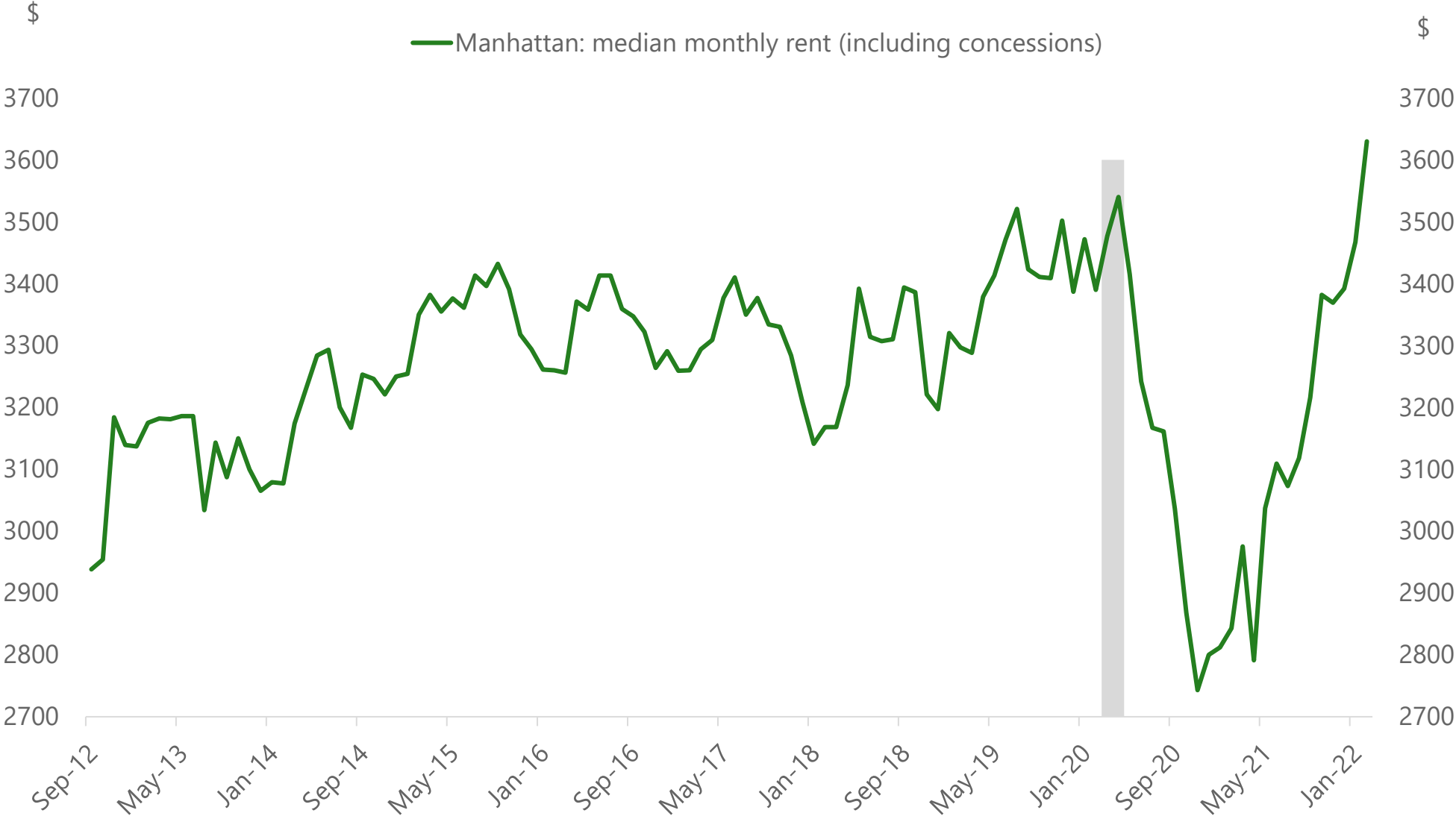
Note: Redfin, Apollo Chief Economist (Note: Investor market share: the percentage of total home sales in which an investor was the buyer)

Home prices up 33% in Phoenix and 31% in Tampa



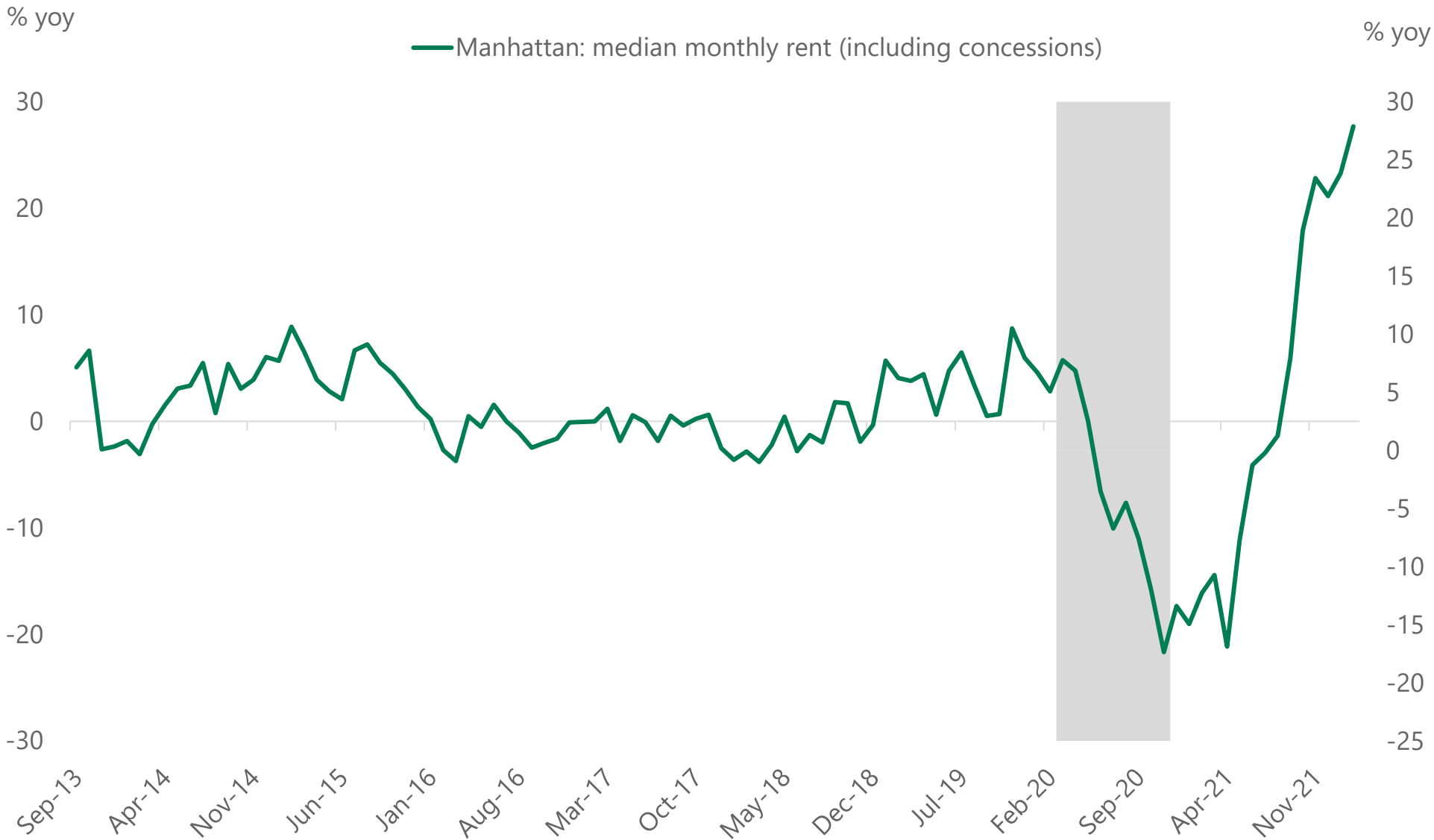
Source: S&P Case-shiller, Bloomberg, Apollo Chief Economist

Manhattan rents now above pre-pandemic levels



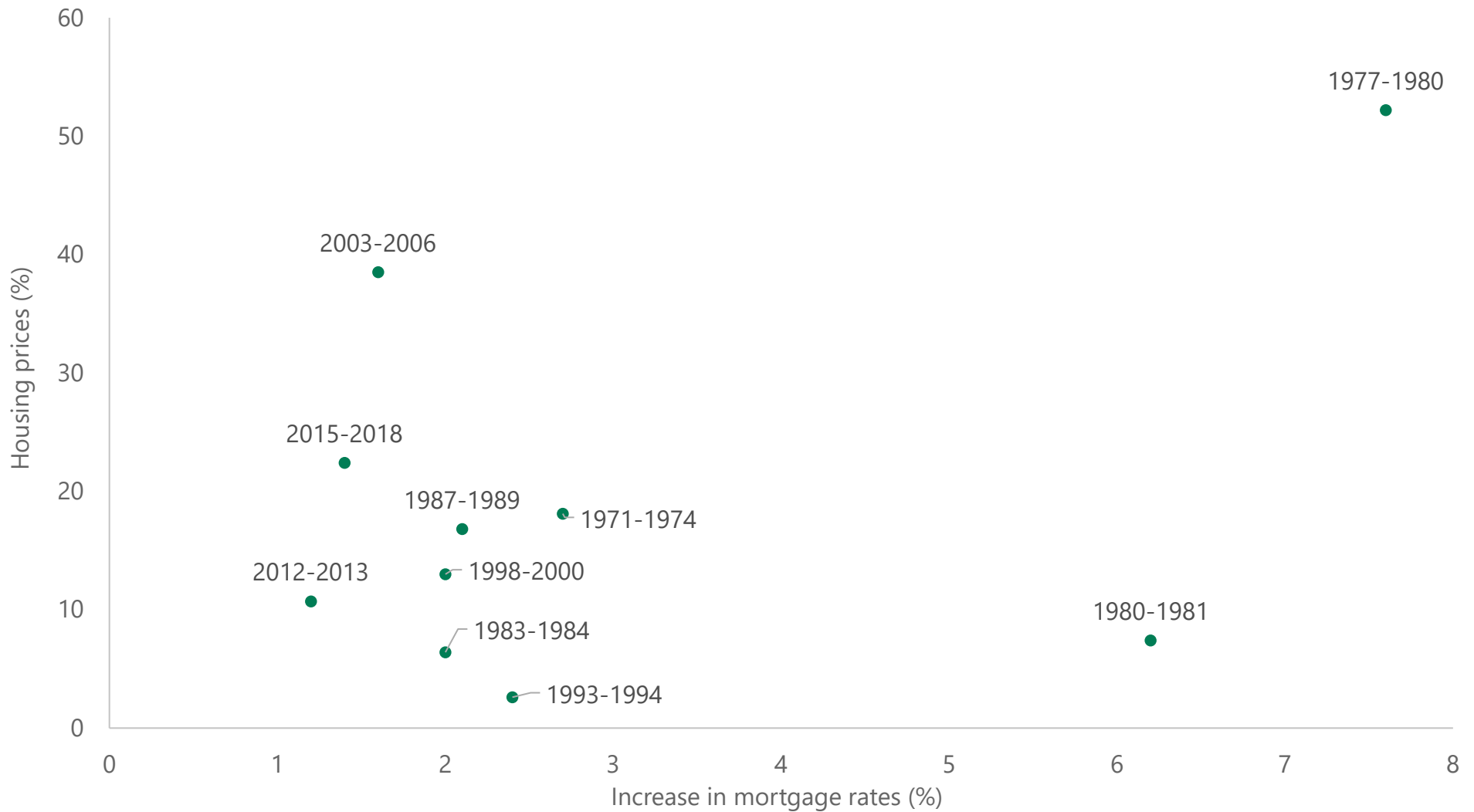
Source: Elliman, Apollo Chief Economist

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



Source: Elliman, Apollo Chief Economist

Rising mortgage rates is associated with rising home prices



Source: FRED, Apollo Chief Economist

Biography



Torsten Slok, Ph.D.

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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.