

Inflation and Interest Rates Rising

Housing Affordability Risks Increasing

Great Lakes Design and Construction Expo
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Macro/Housing Outlook



Learning to live with the virus
Omicron less severe; pandemic moving to endemic stage?



Growth slowing in 2022 and 2023
Interest rates will move higher



Building materials challenges ease but remain a challenge
Supply-chains are a mess



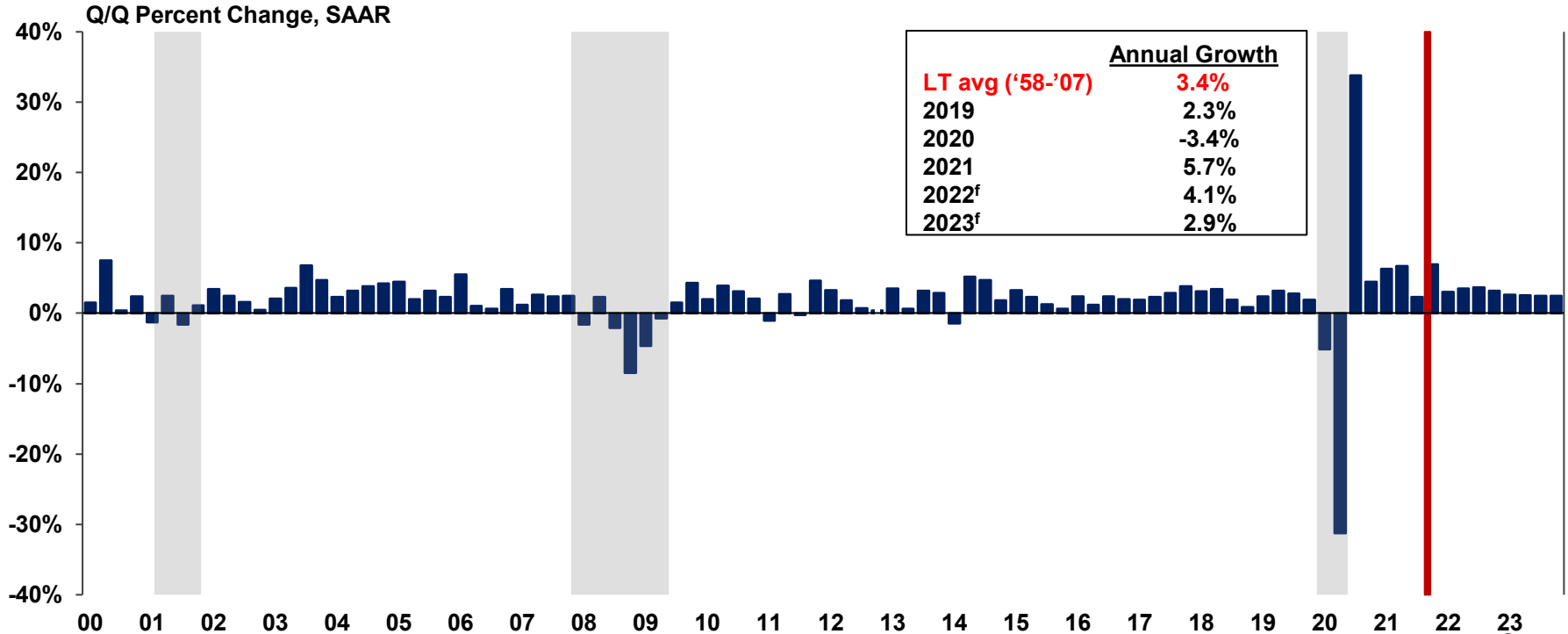
Single-family, multifamily construction gains; remodeling strong in 2022
Demand for more space in homes continues



Housing affordability risks erosion in 2022 and 2023
Communities with ability to add affordable housing will grow

GDP Growth – Solid Growth for 2021

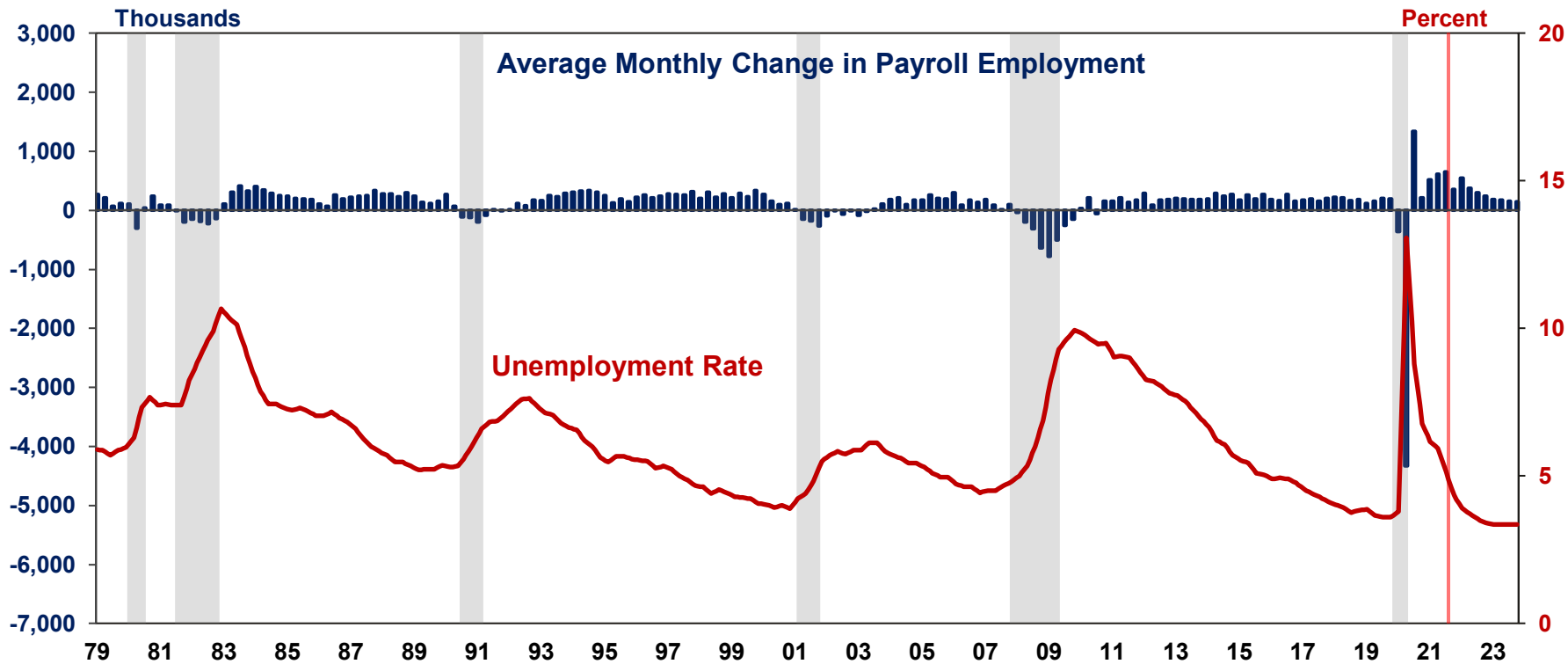
Growth slowing over next two years



Source: U.S. Bureau of Economic Analysis (BEA) and NAHB forecast.

Unemployment Headed Lower

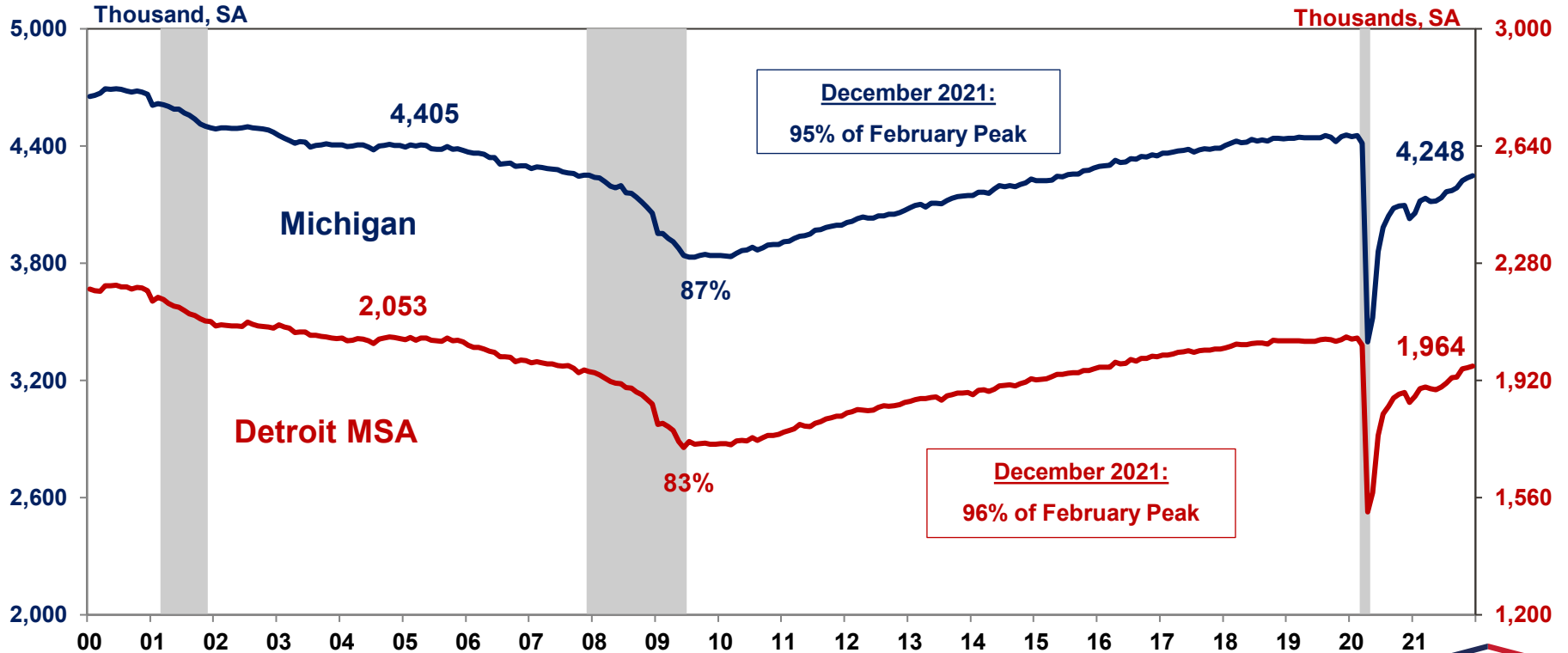
Job growth slowing as we head to 2023



Source: U.S. Bureau of Labor Statistics (BLS) and NAHB forecast.

Payroll Employment

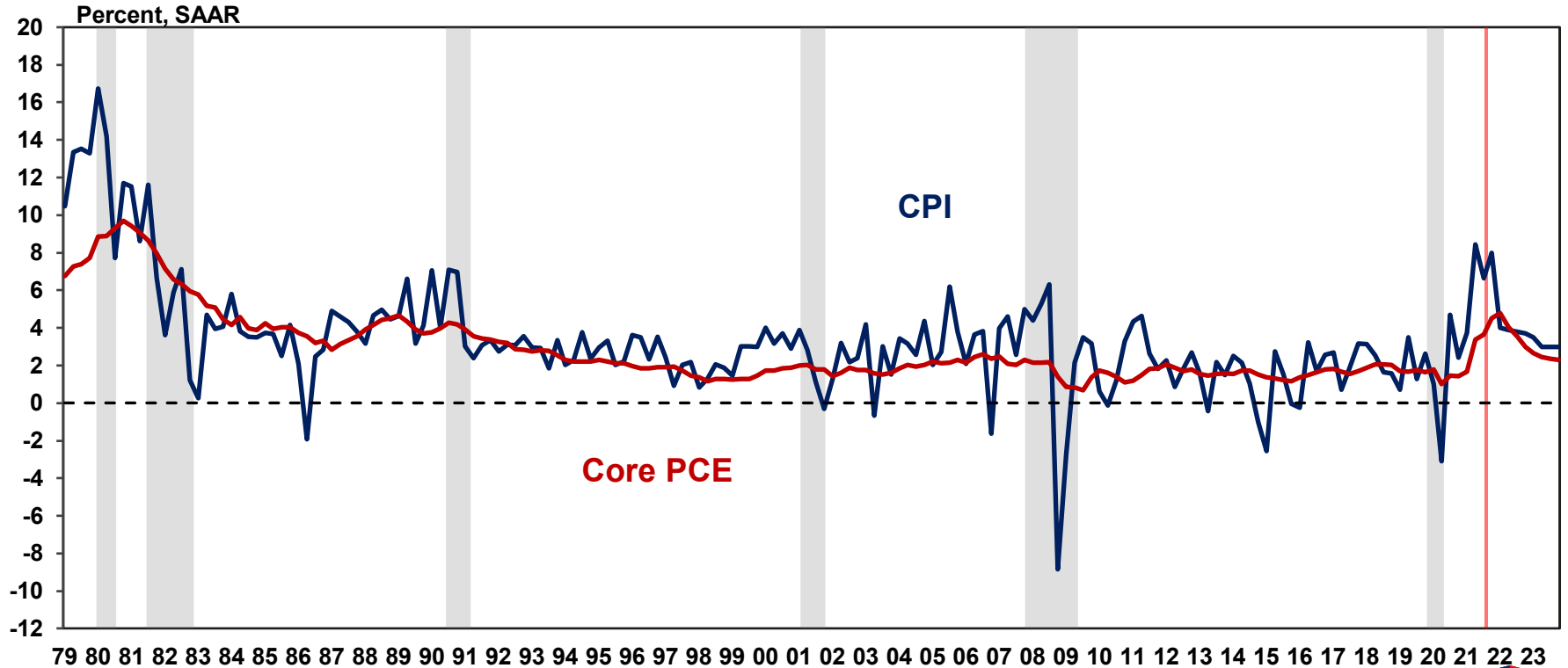
Detroit MSA recovering from COVID-19 recession



Source: U.S. Bureau of Labor Statistics (BLS)

Long-Term Consumer and Core Inflation

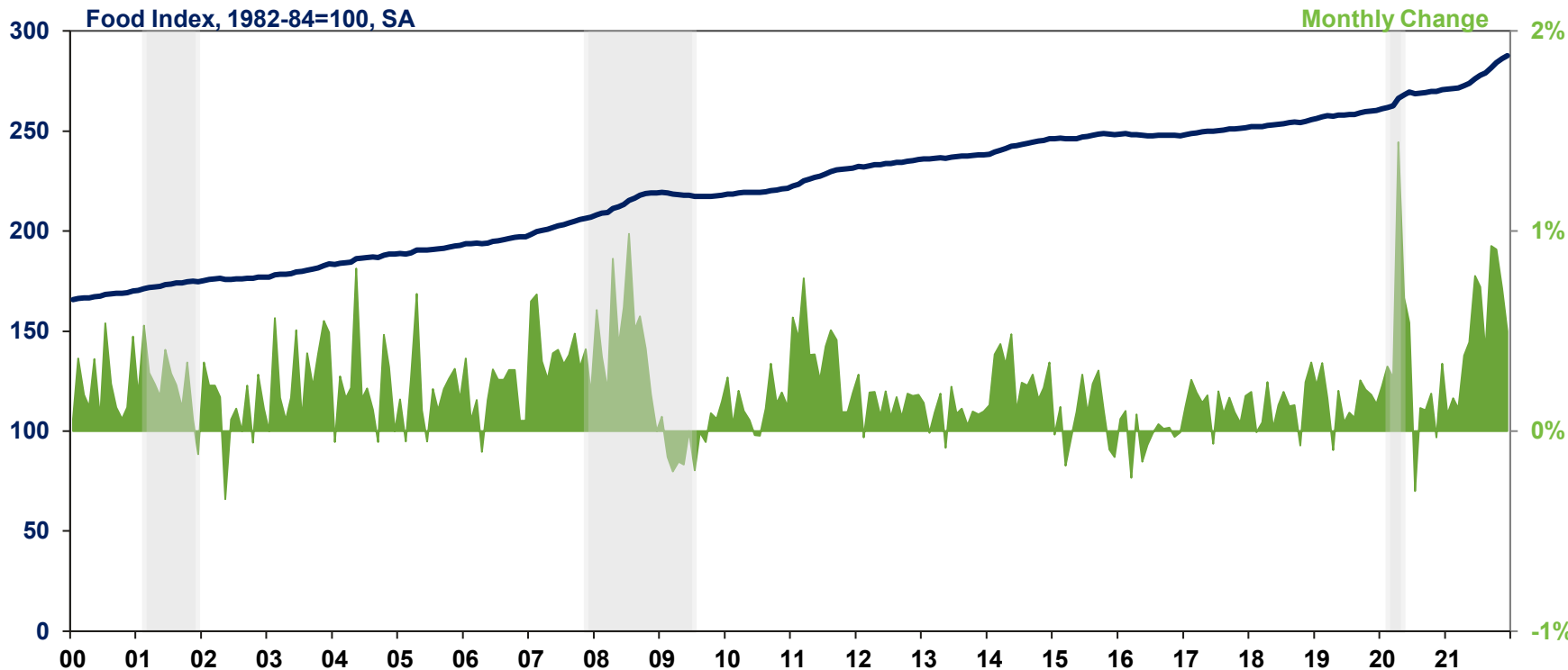
Inflationary pressure linked to supply-chain issues, some of which will unwind and ease



Source: U.S. Bureau of Labor Statistics (BLS), U.S. Bureau of Economic Analysis (BEA) and NAHB forecast

Consumer Inflation - Food

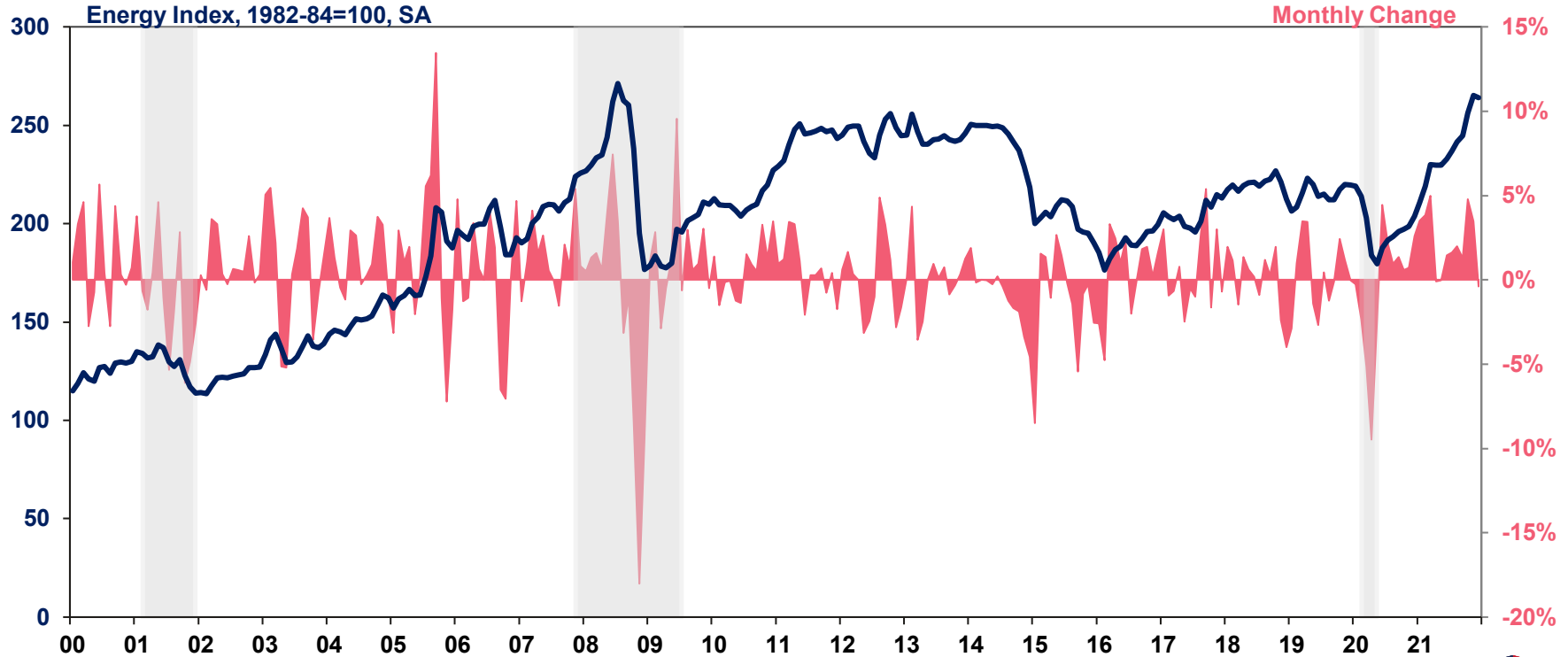
Food costs moving higher (6.3% from a year ago)



Source: U.S. Bureau of Economic Analysis (BLS)

Consumer Inflation – Gas and Energy

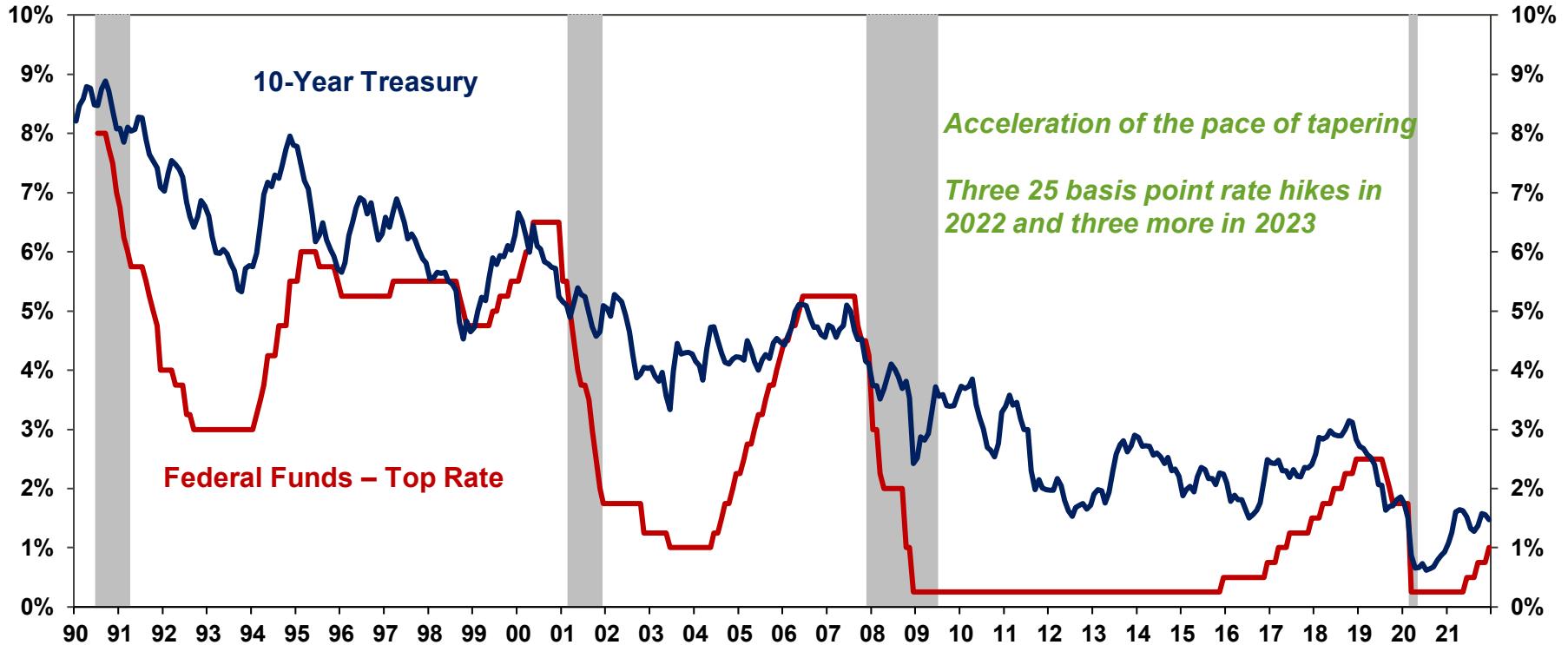
Energy costs are increasing (29% from a year ago)



Source: U.S. Bureau of Economic Analysis (BLS)

Monetary Policy Tightening in Response to Inflation

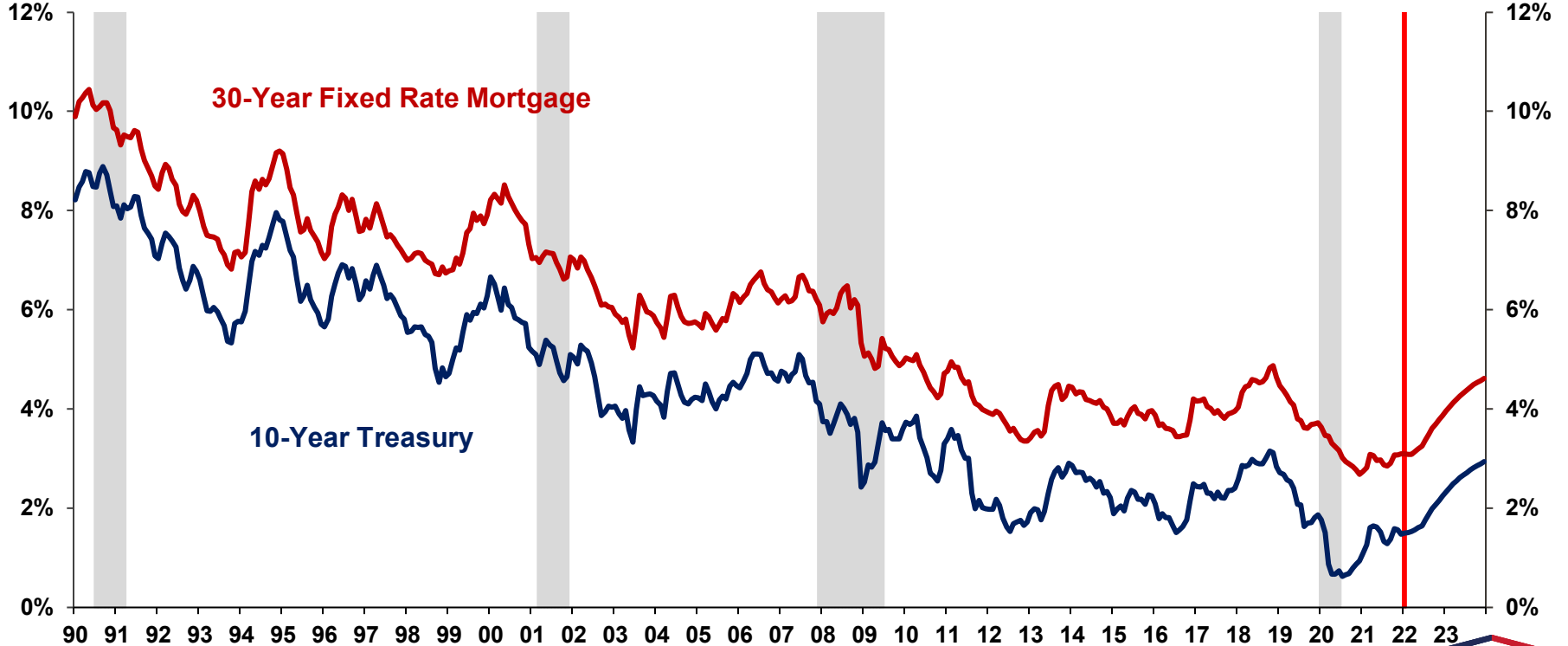
Taper first, then rising fed funds rate



Source: U.S. Board of Governors of the Federal Reserve System (FRB).

Interest Rates Trending Higher

Federal Reserve is tightening monetary policy



Source: Federal Reserve and Freddie Mac data and NAHB forecast.

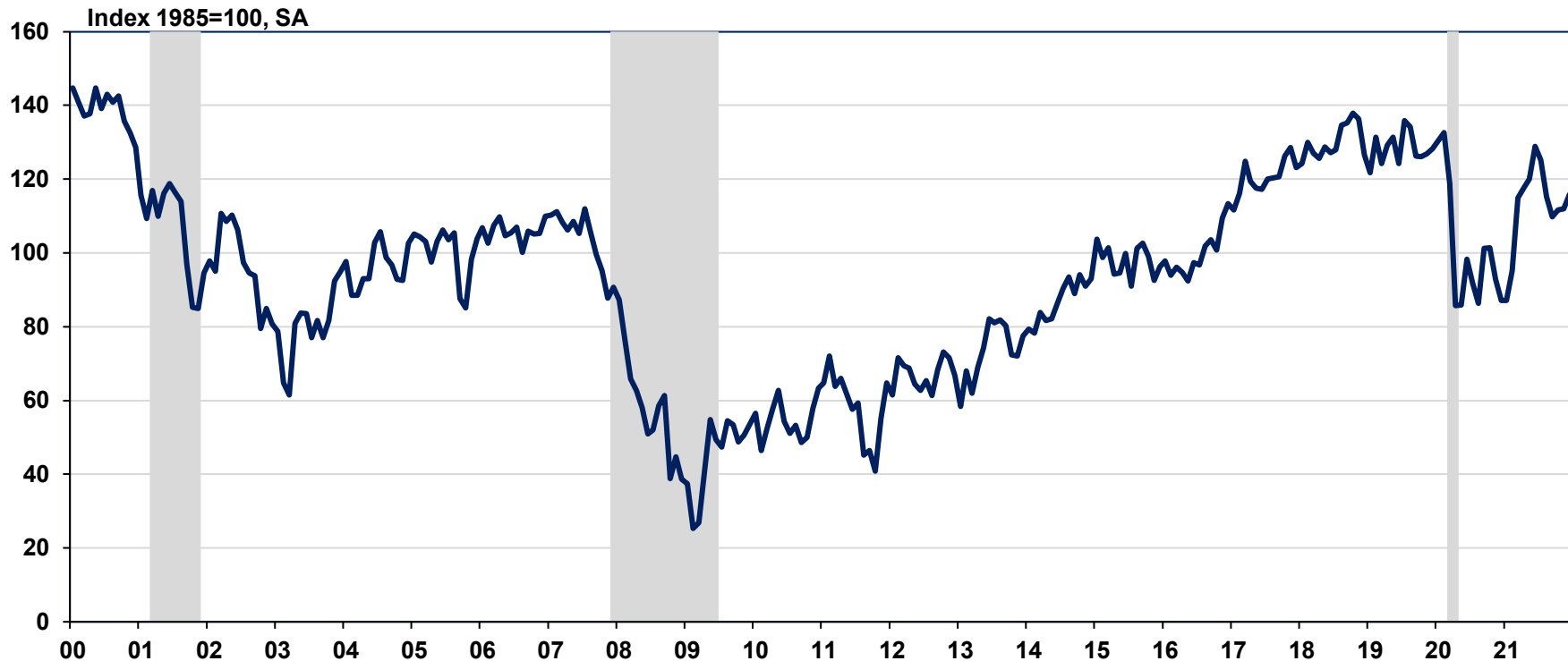


Demand-Side Economic Factors



Consumer Confidence

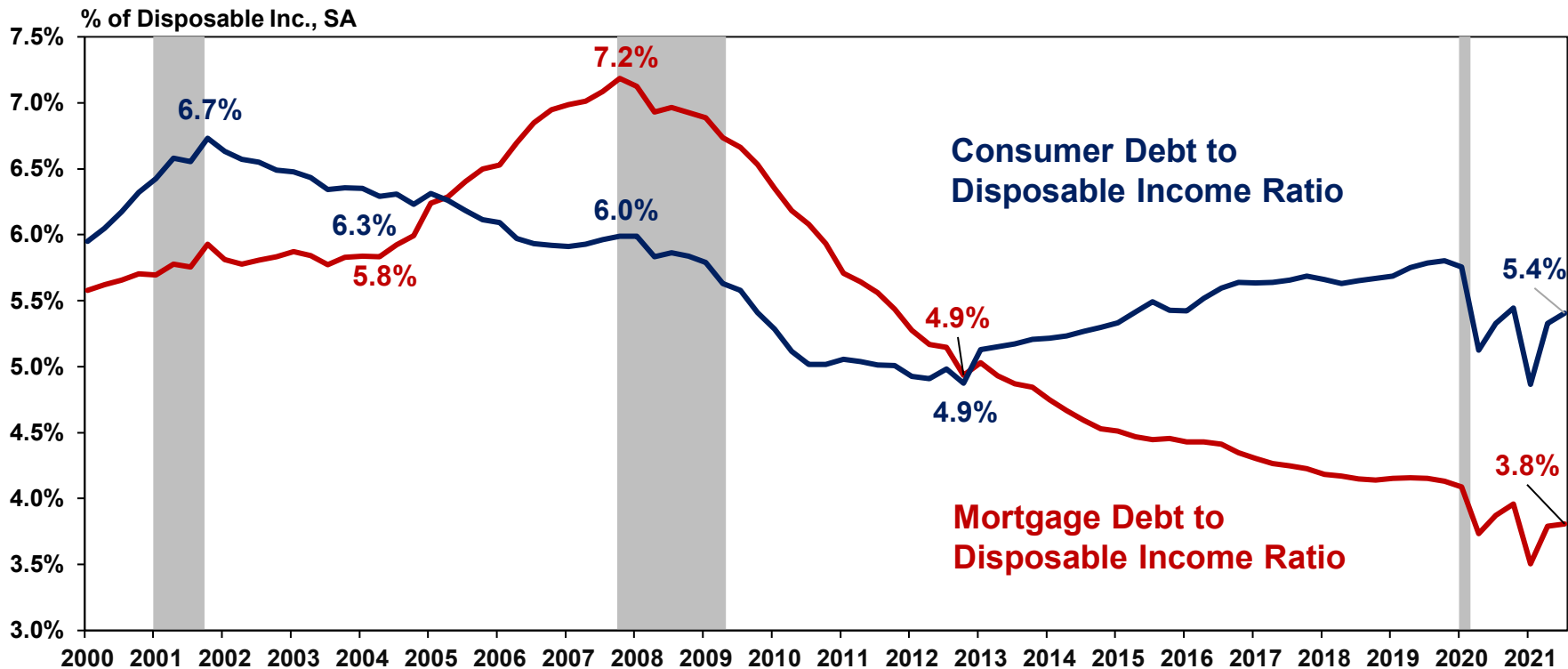
Consumer confidence improved in December despite a resurgence in COVID-19 cases



Source: The Conference Board.

Household Balance Sheets

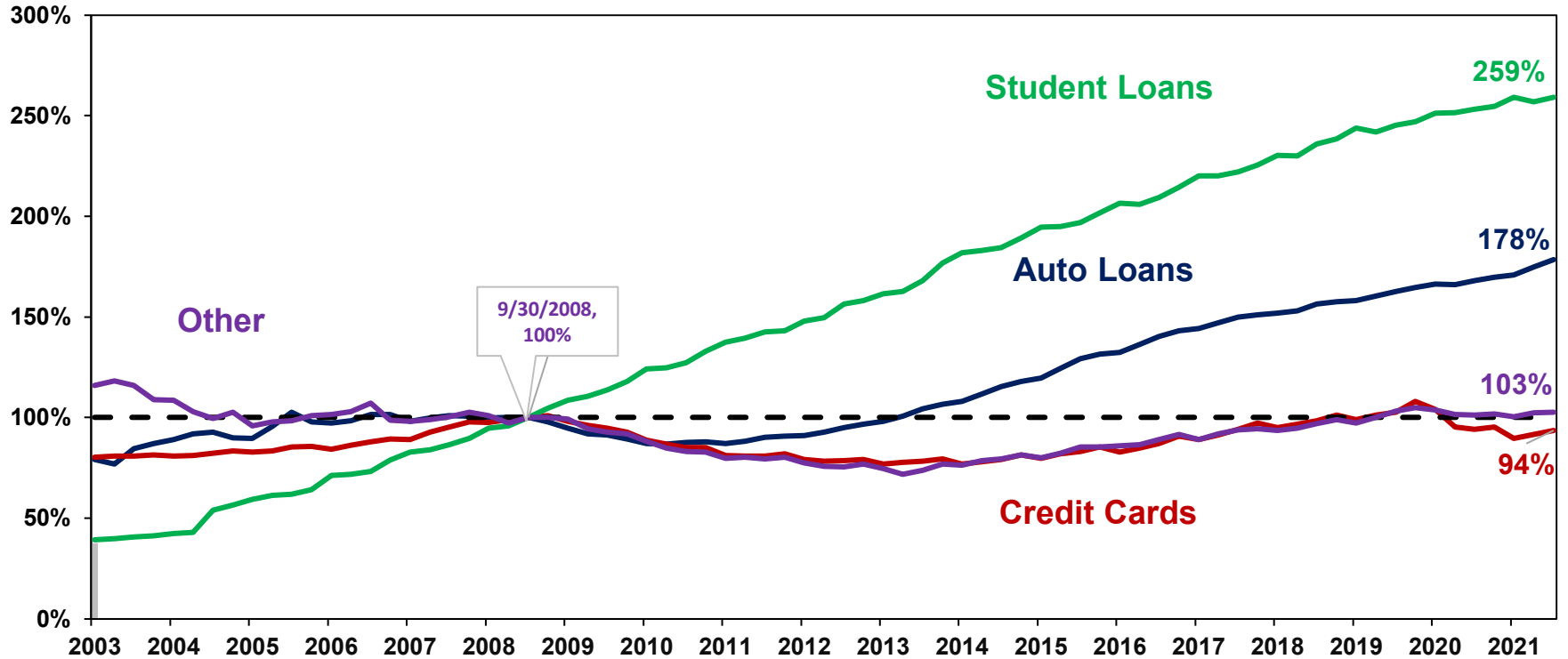
Debt-to-income ratio increased in 2021



Source: U.S. Board of Governors of the Federal Reserve System (FRB).

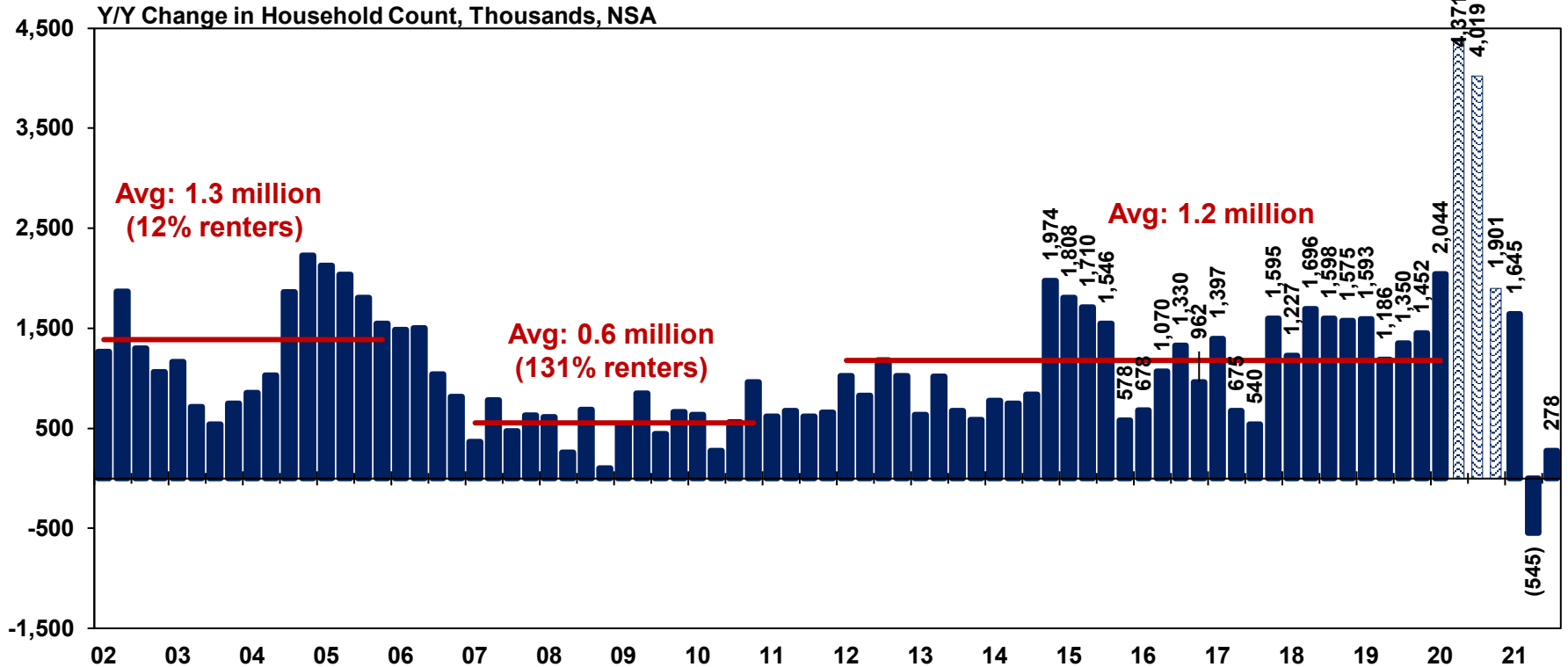
Consumer Debt

Credit cards debt declined during the 2020 crisis due to stimulus



Source: Federal Reserve Bank of New York

Household Formation – Data Interruption in 2020

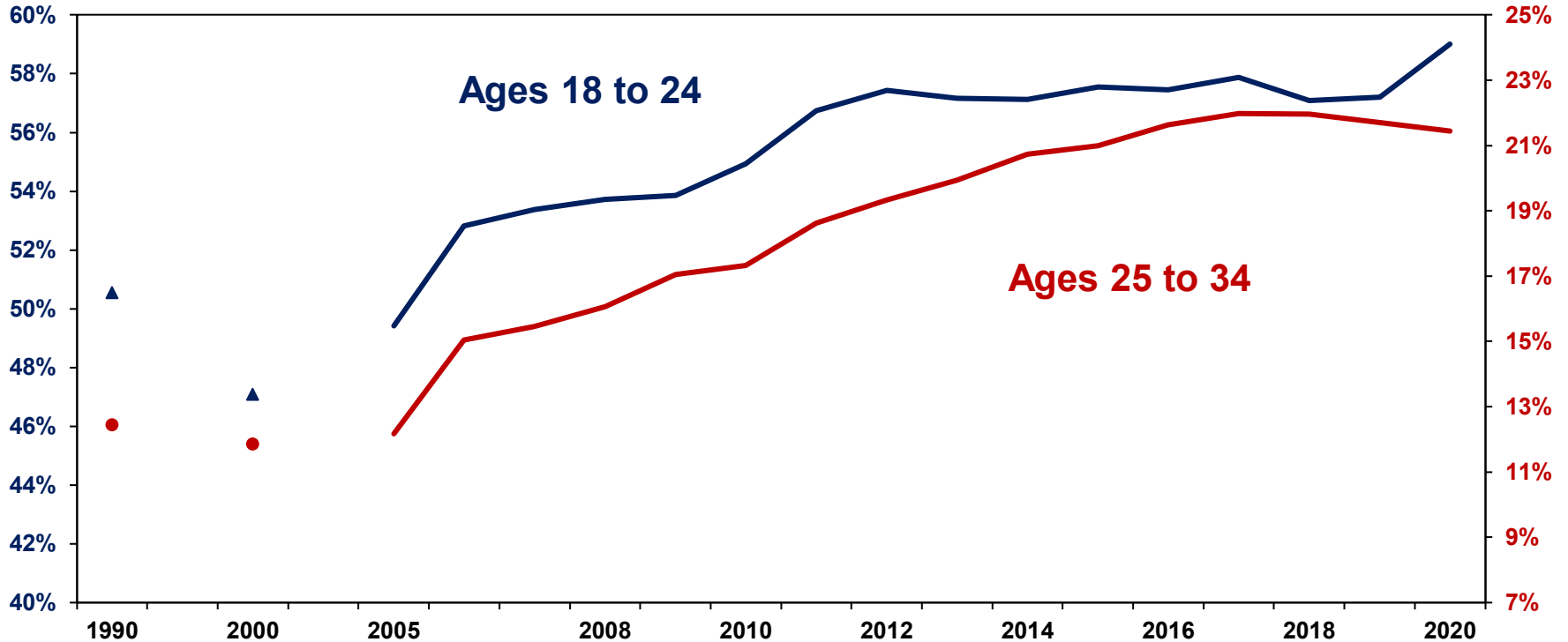


Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership Rates



Share of Young Adults Living with Parents

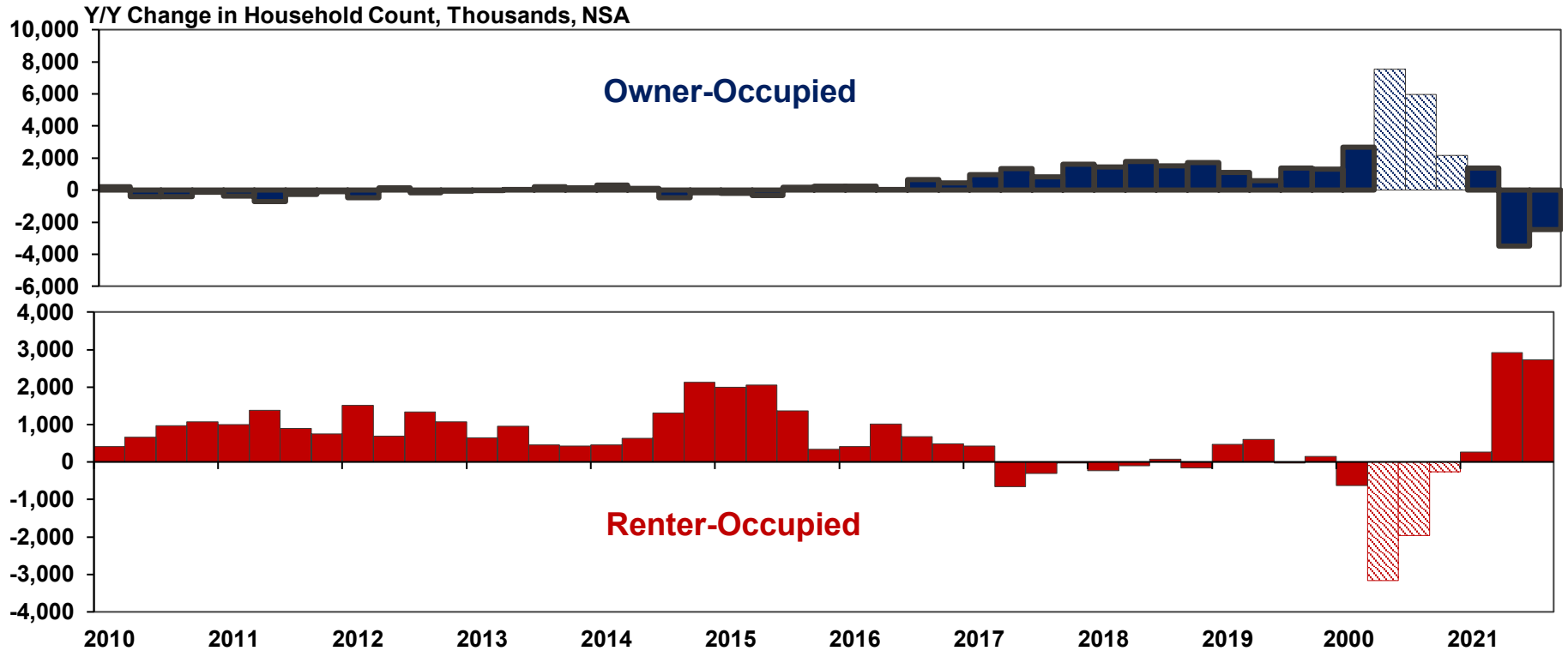
Almost doubled but was leveling off before 2020 downturn



Source: US Census 1990, 2000, PUMS, 2005-2018 ACS, PUMS, and NAHB Estimates

Household Formation

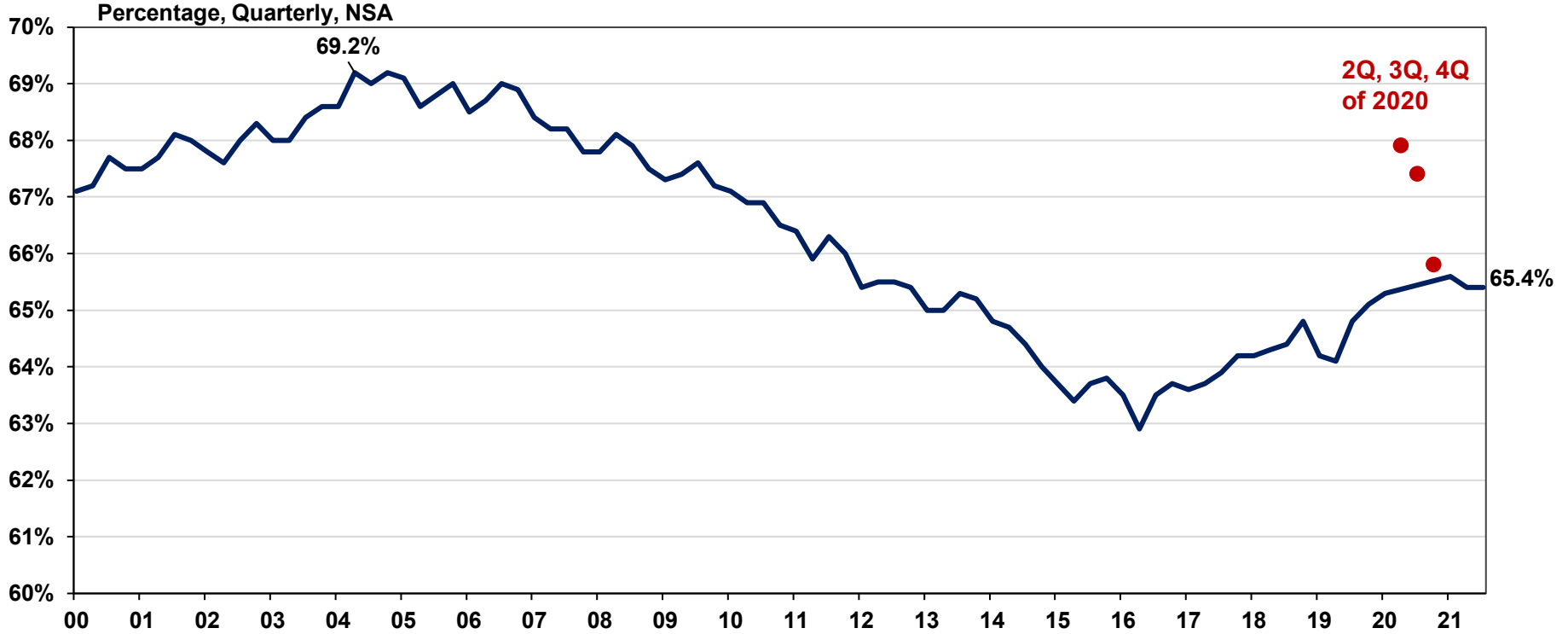
Rebound for rental housing in 2021 after homeownership gains in 2020



Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership

Homeownership Rate

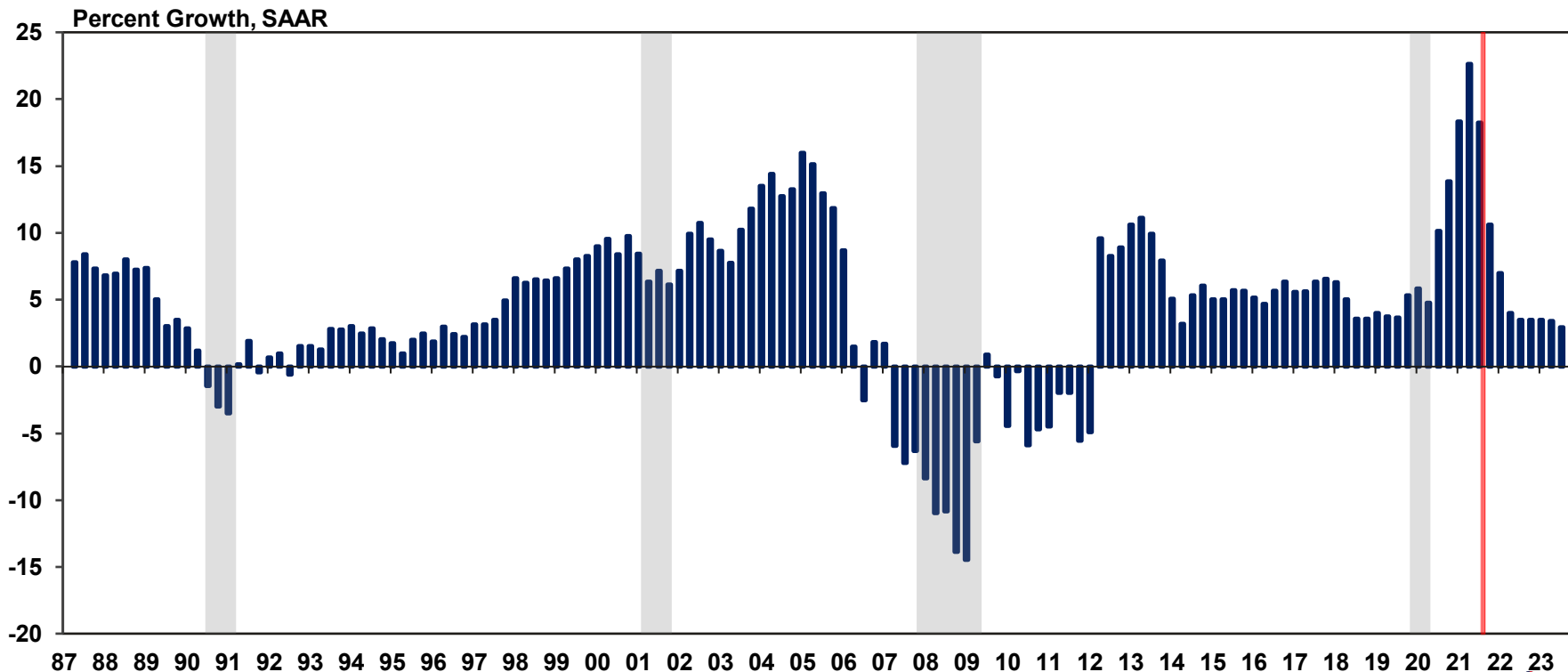
Near new normal for homeownership?



Source: U.S. Census Bureau (BOC): Housing Vacancies & Homeownership
Note: Red dots denote technical issues for the last four quarters.

S&P CoreLogic Case-Shiller National US Home Price Index

Price growth is expected to slow due to declining affordability conditions in 2022

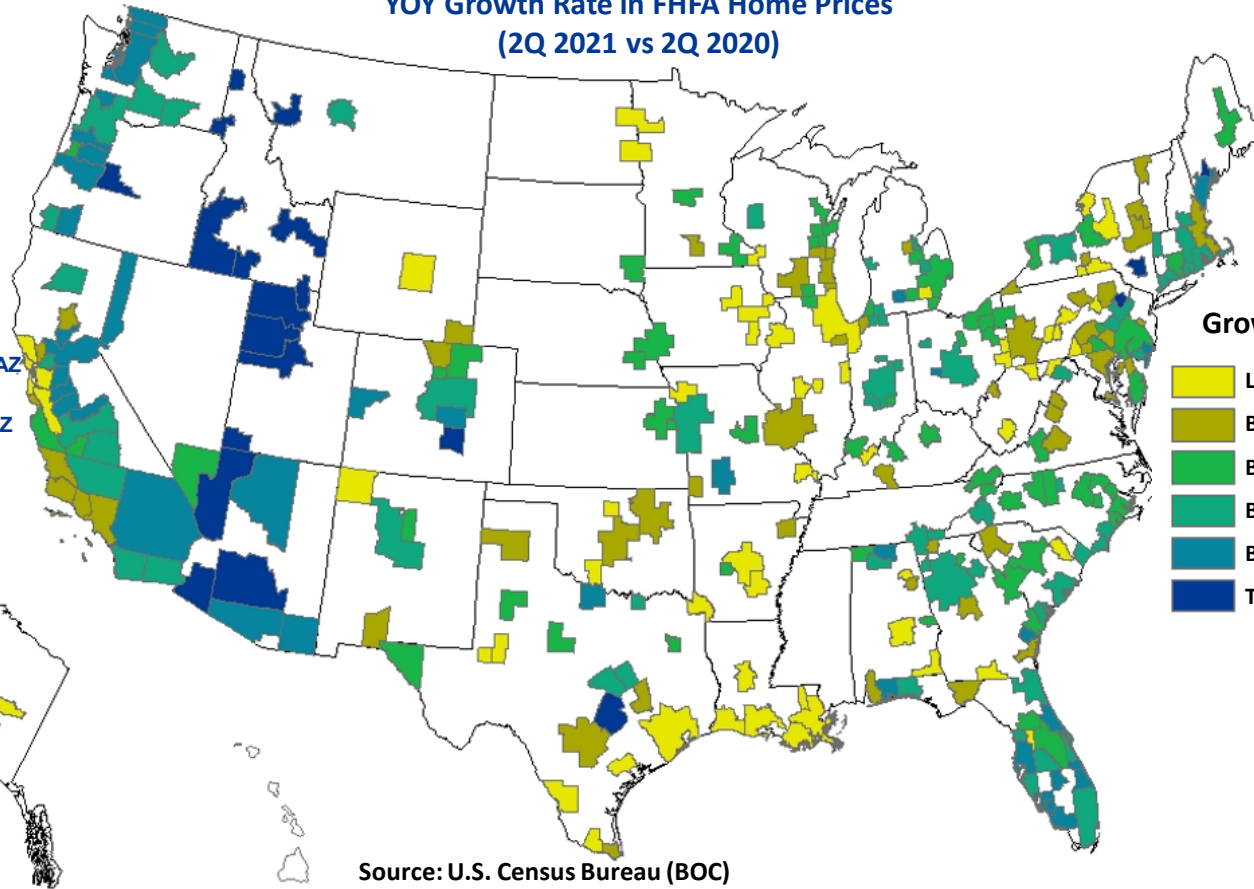


Source: NAHB forecast and S&P Dow Jones Indices LLC; CoreLogic, Inc..

Top 20 Markets for Home Price Growth

YOY Growth Rate in FHFA Home Prices
(2Q 2021 vs 2Q 2020)

- Coeur d'Alene, ID
- Boise City, ID
- Twin Falls, ID
- Idaho Falls, ID
- St. George, UT
- Kingston, NY
- Austin-Round Rock, TX
- Bend-Redmond, OR
- Ogden-Clearfield, UT
- Missoula, MT
- Provo-Orem, UT
- Logan, UT-ID
- Lake Havasu City-Kingman, AZ
- Salt Lake City, UT
- Phoenix-Mesa-Scottsdale, AZ
- Lewiston-Auburn, ME
- East Stroudsburg, PA
- Lewiston, ID-WA
- Yuma, AZ
- Pueblo, CO



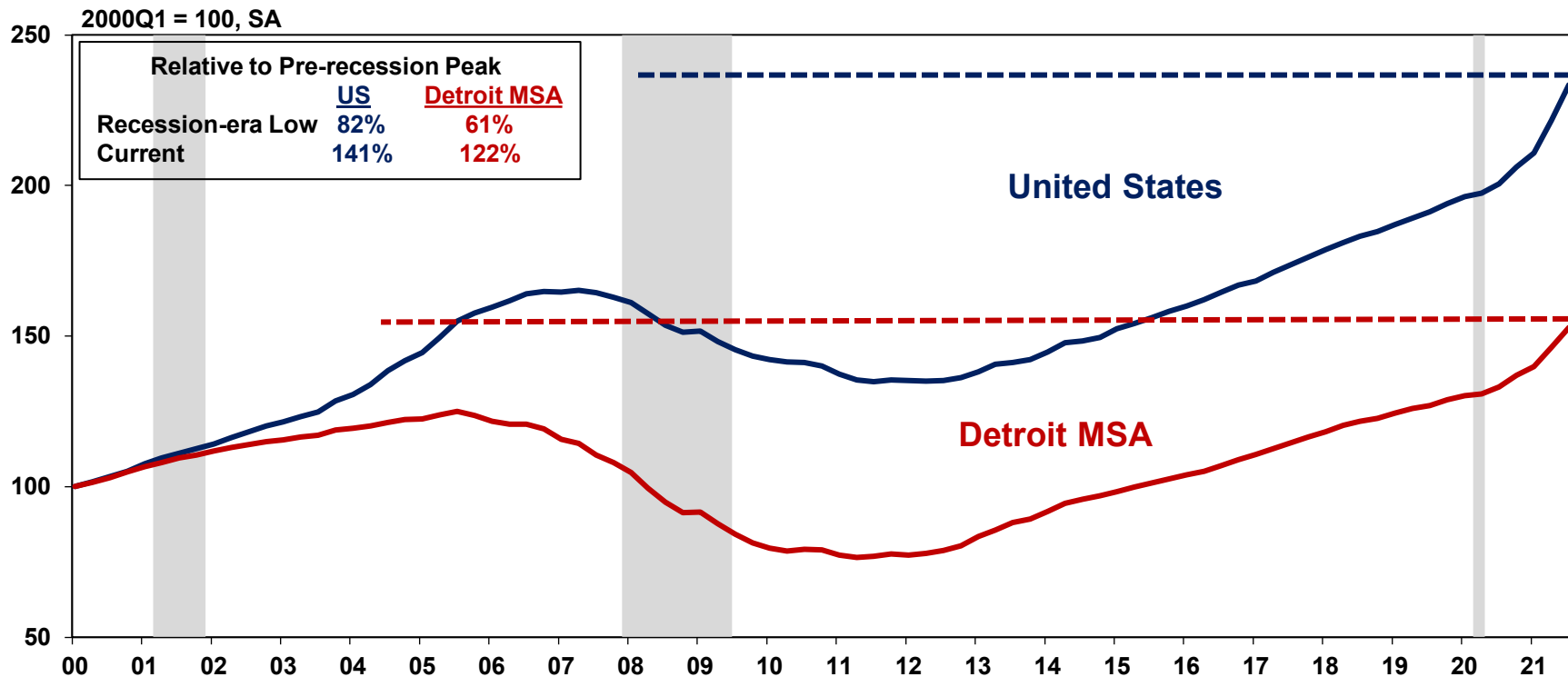
Growth Rate by Quintile

- Less than 9.0%
- Between 9.1% and 11.0%
- Between 11.1% and 12.6%
- Between 12.7% and 14.5%
- Between 14.6% and 18.1%
- Top 20 Markets (18.2% - 29.8%)

Source: U.S. Census Bureau (BOC)

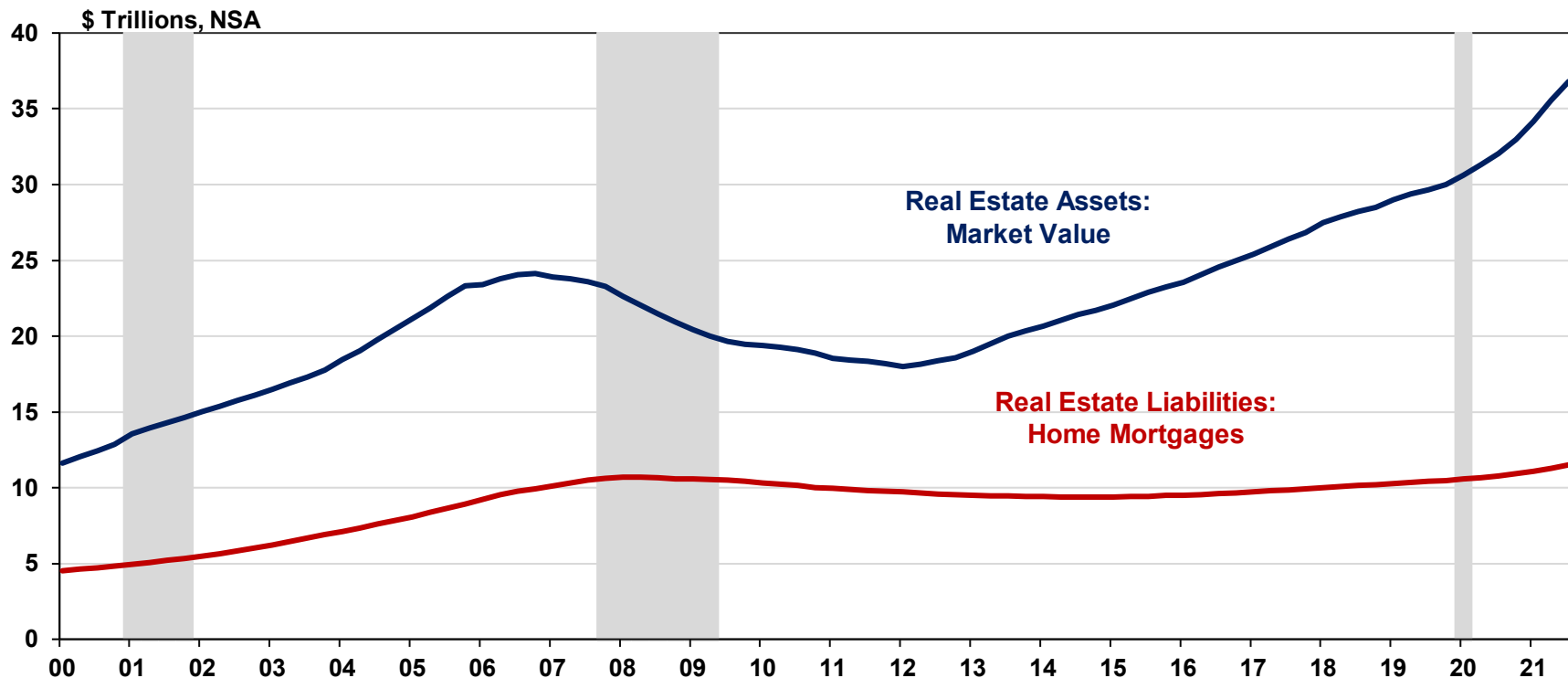
Existing House Price Index

Detroit MSA above pre-recession peak



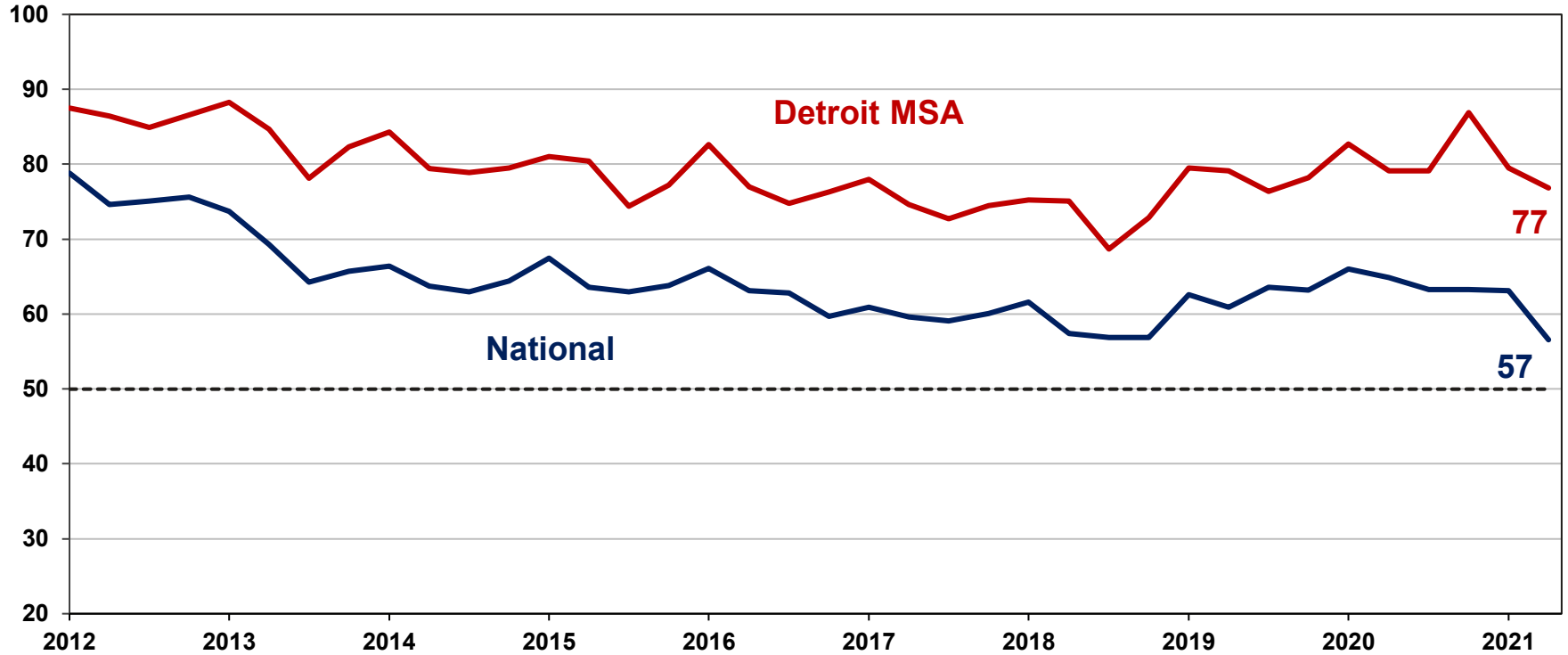
Household Balance Sheets: Q3 2021

\$25.3 trillion in homeowner equity



Source: U.S. Board of Governors of the Federal Reserve System (FRB): Z.1 Financial Accounts of the United States

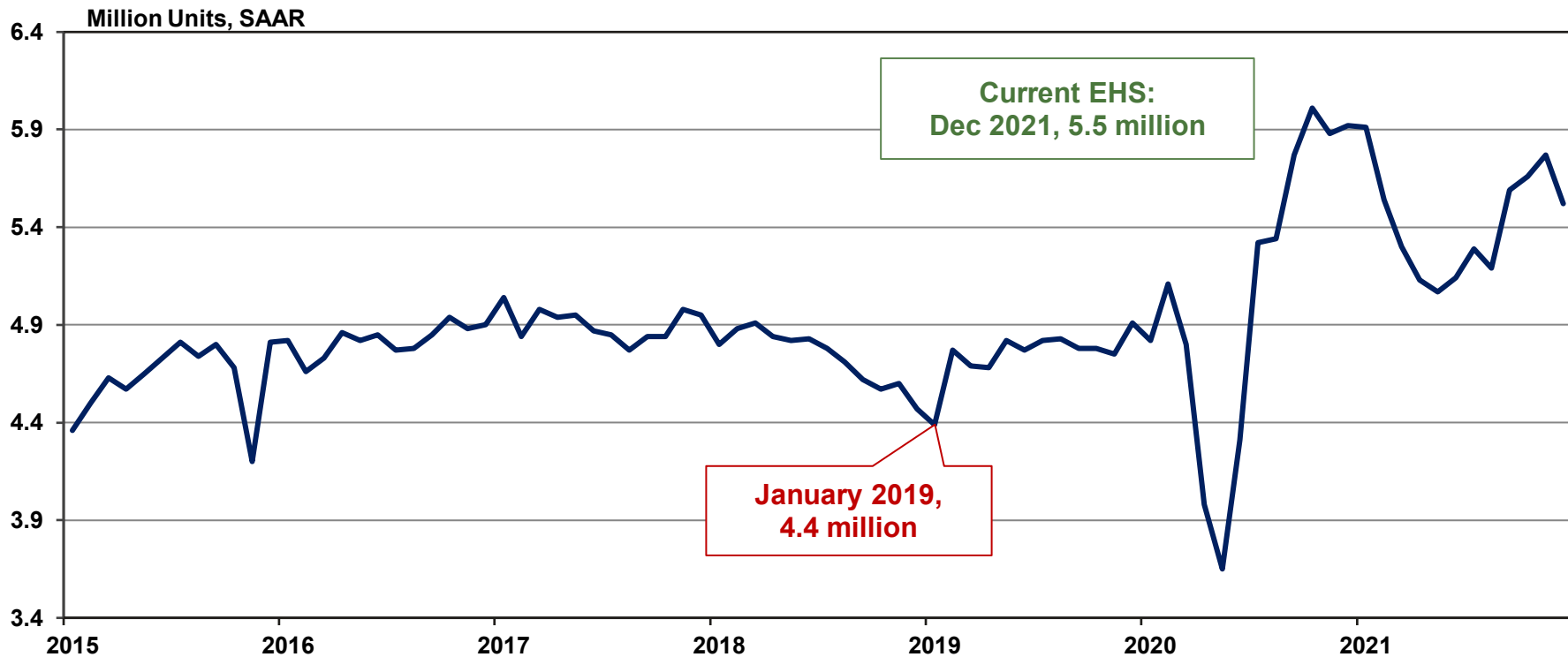
Housing Affordability – NAHB/Wells Fargo HOI



Source: NAHB/Wells Fargo Housing Opportunity Index (HOI).

Existing Single-Family Home Sales (EHS)

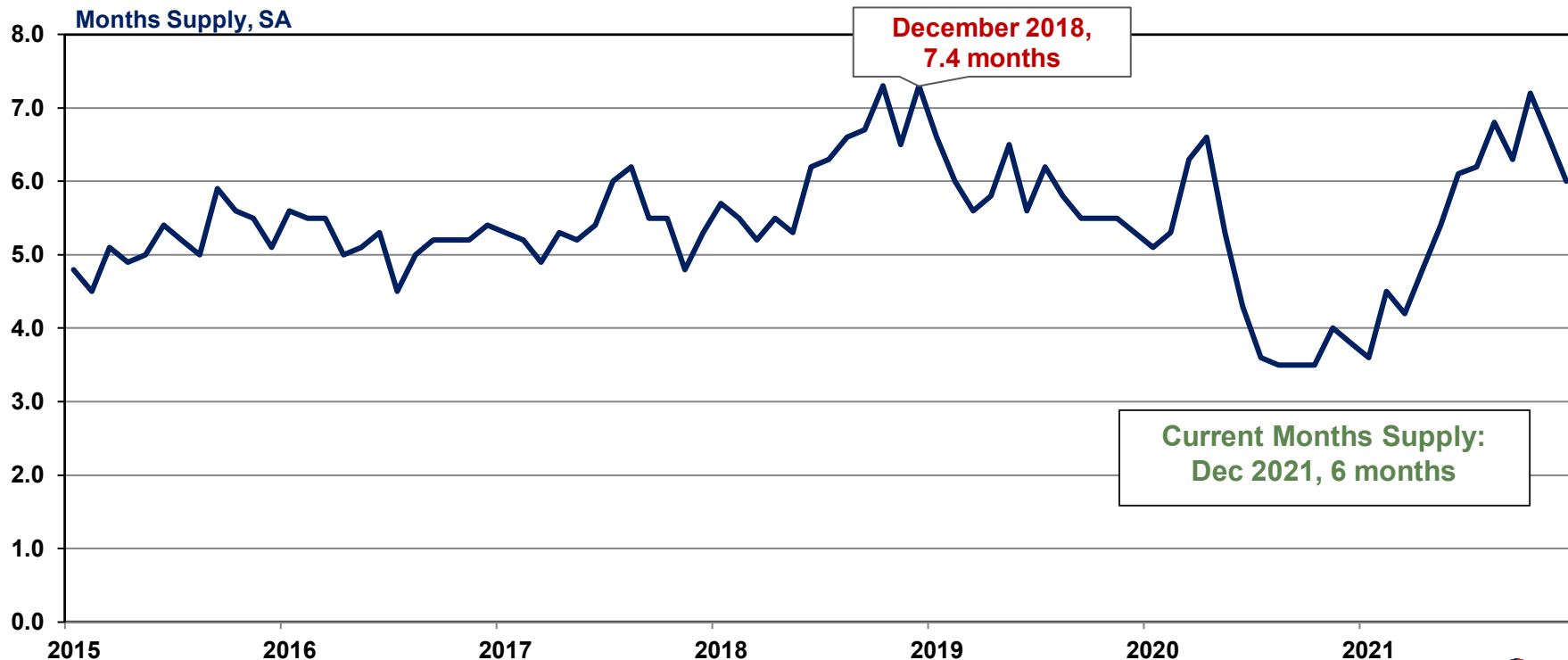
The pace of existing sales slipped



Source: National Association of Realtors (NAR)

New Home Inventory

Increase in sales rate has lowered sales-adjusted inventory levels



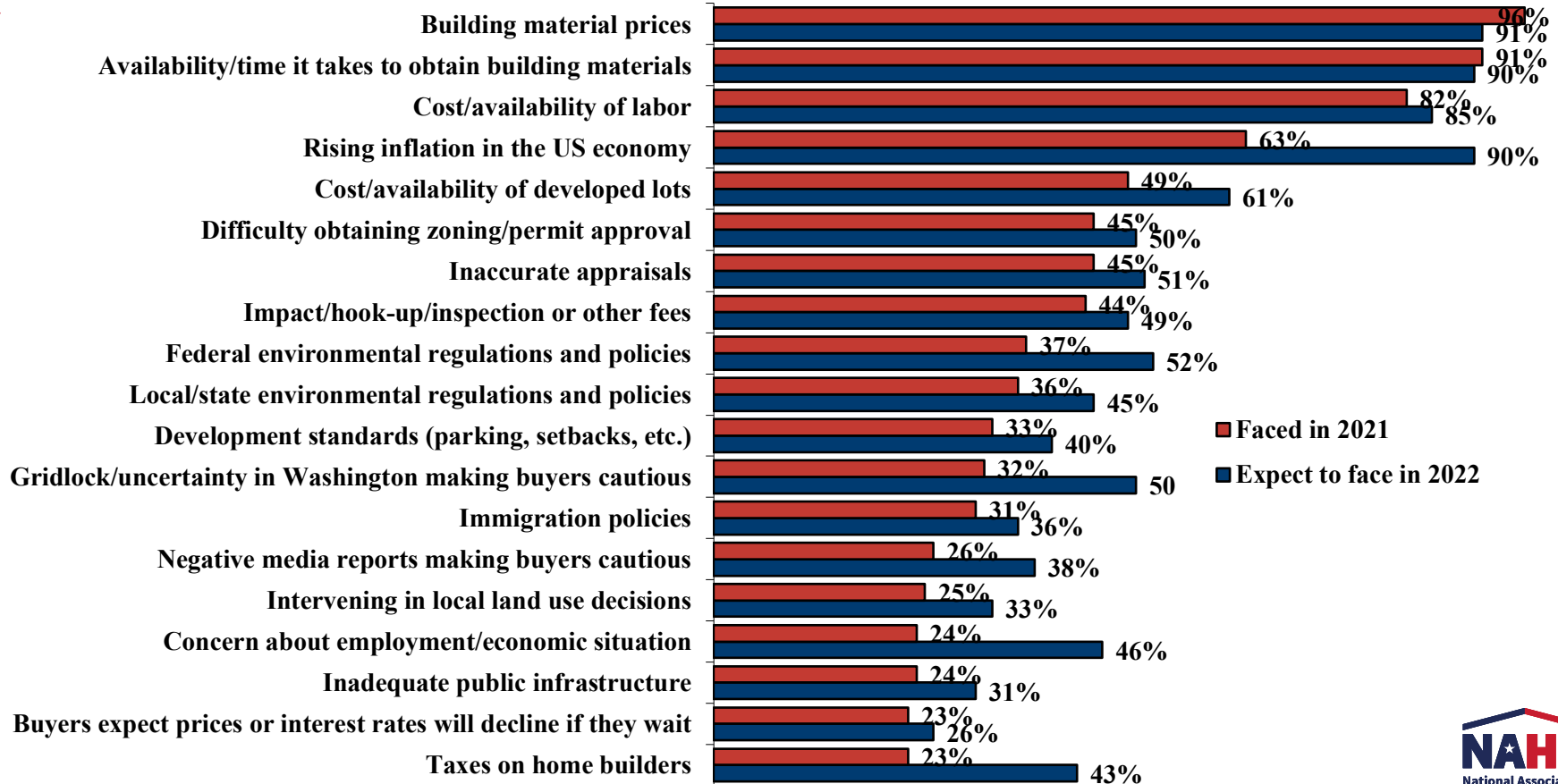
Source: U.S. Census Bureau (BOC)



Supply-Side Factors



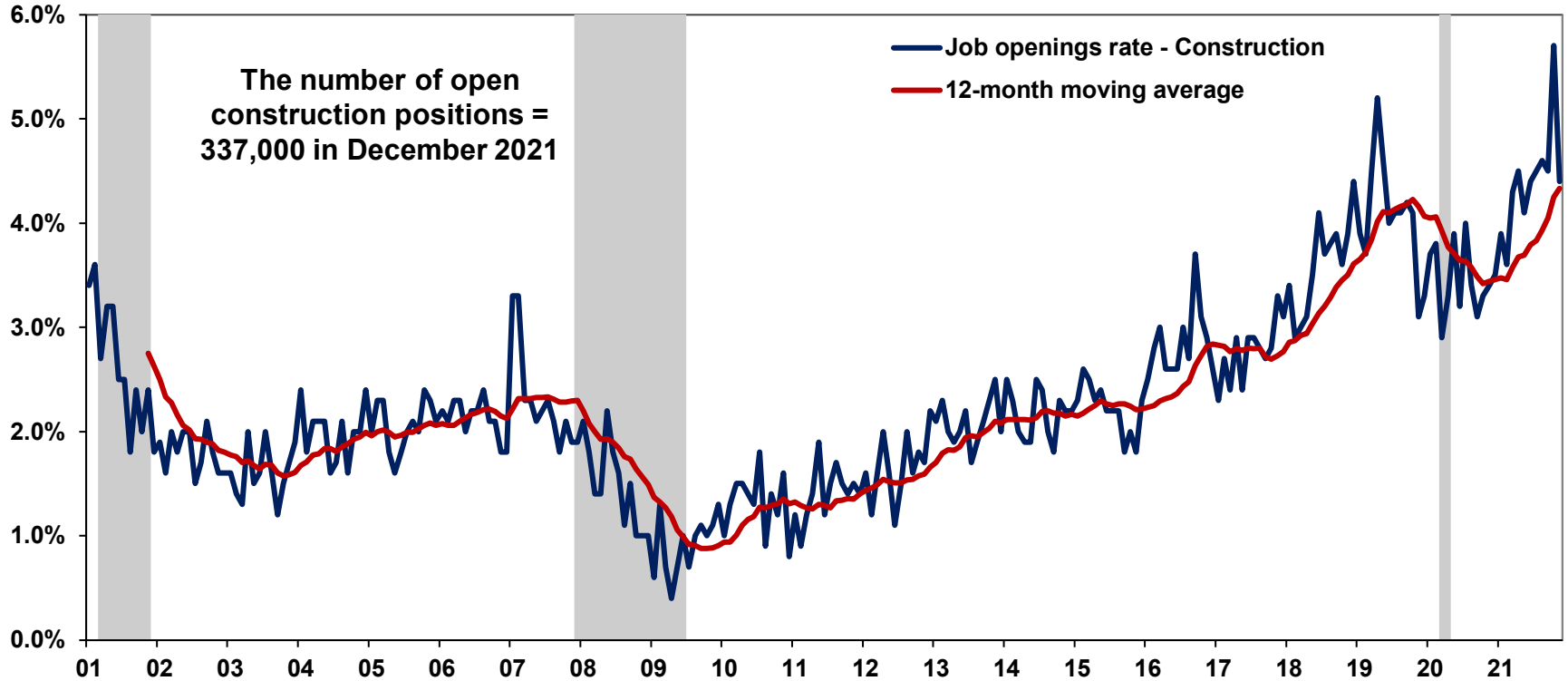
Significant Problems Builders Faced in 2021 and Expect to face in 2022



Source: NAHB/Wells Fargo Housing Market Index (HMI)

Labor – Construction Job Openings Surging

Skilled labor shortage persists; 105,900 net gain for residential construction since Jan 2020



Source: U.S. Bureau of Labor Statistics (BLS).

Construction Labor Market Projections/Needs



7.6 million workers in construction
3.1 million in residential construction



740,000 occupational openings per year
Based on industry growth and permanent worker exits



Keep in mind: 22% of workforce is self-employed
Immigrant share now 24%

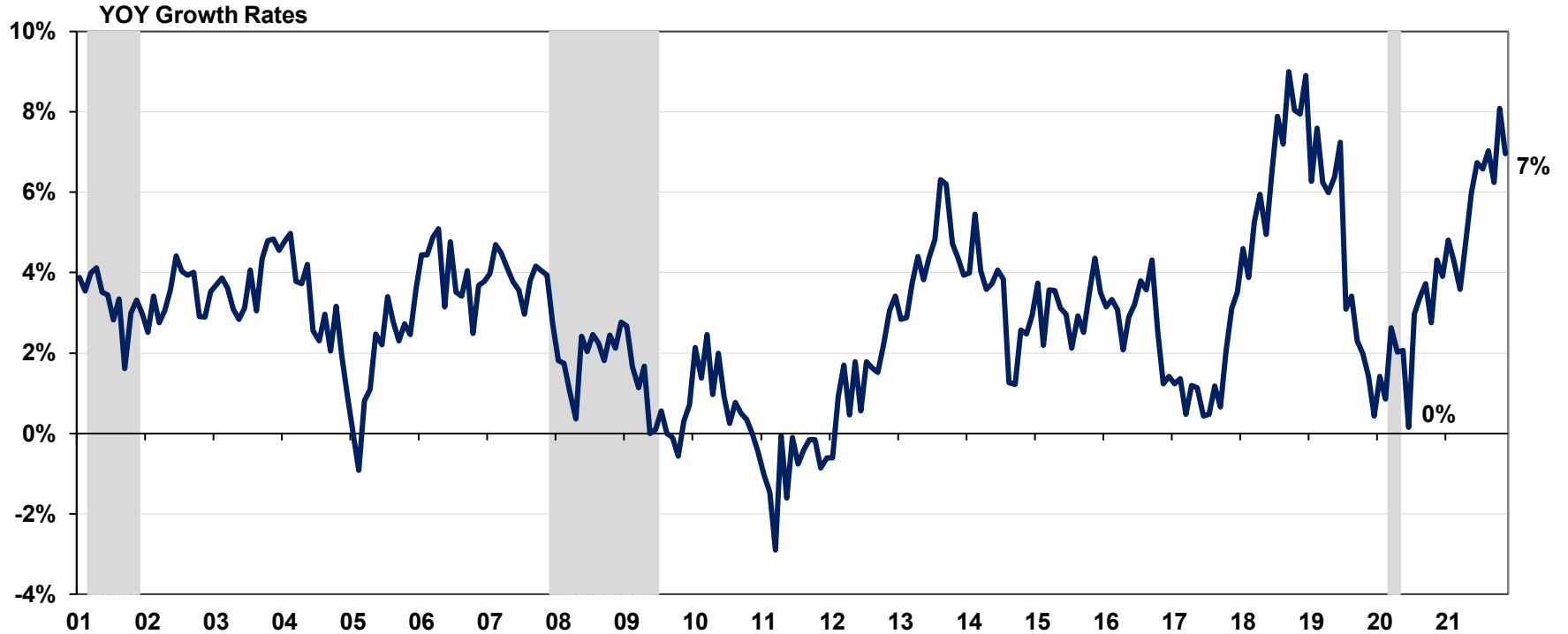


Median age of construction worker is 41



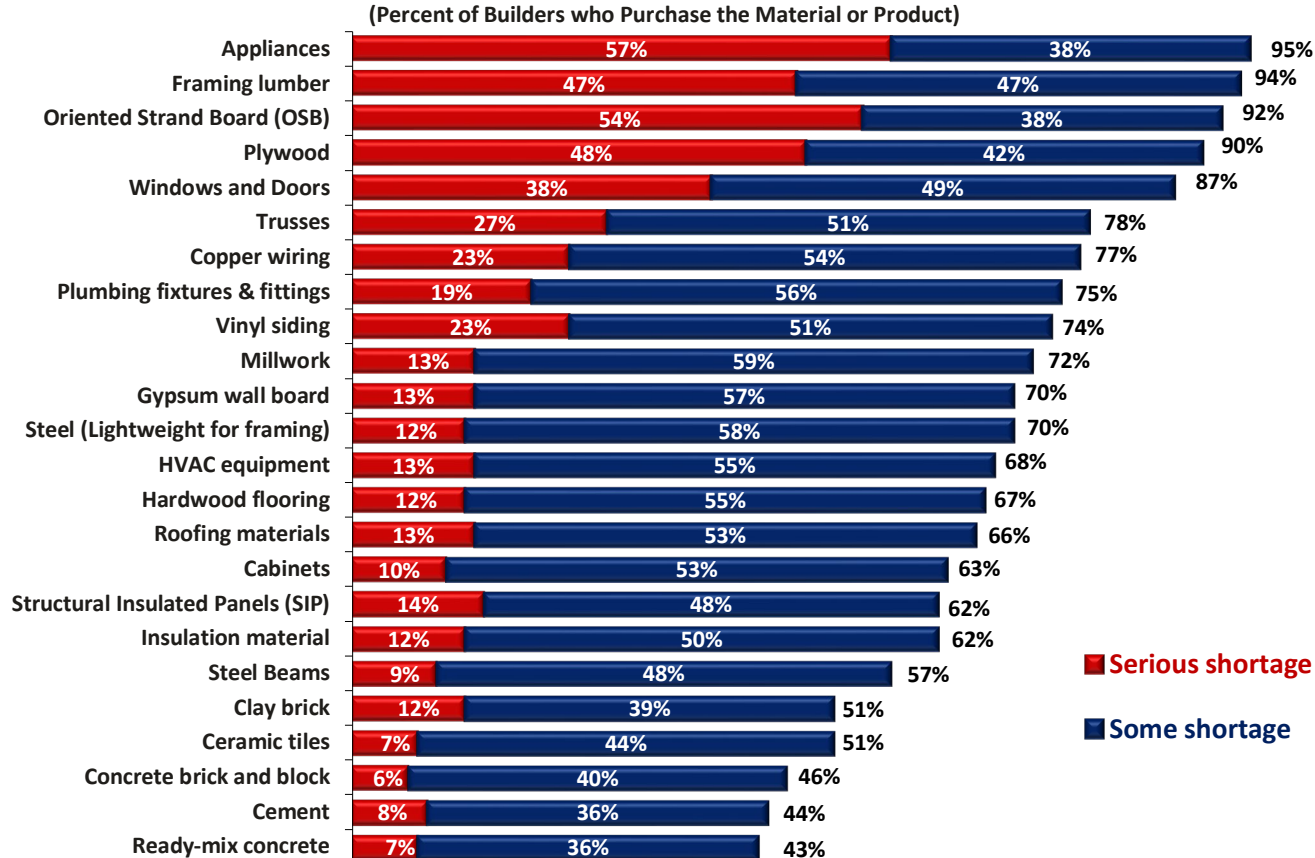
Workers aged 25 to 54 make up 69% of sector in 2019
Down from 72.2% in 2015

Wages for Residential Building Workers Rising Quickly



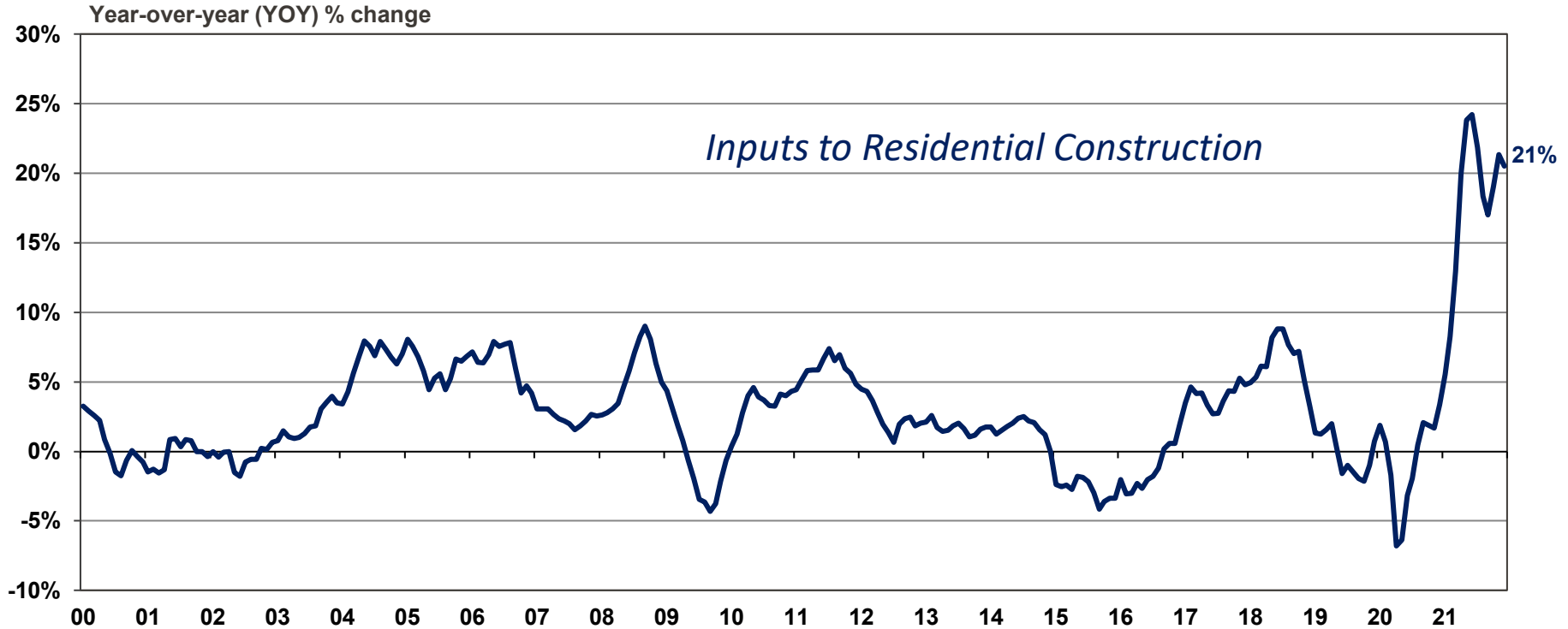
Source: U.S. Bureau of Labor Statistics (BLS).

Builders Reporting Shortages in 2021



Source: NAHB Survey.

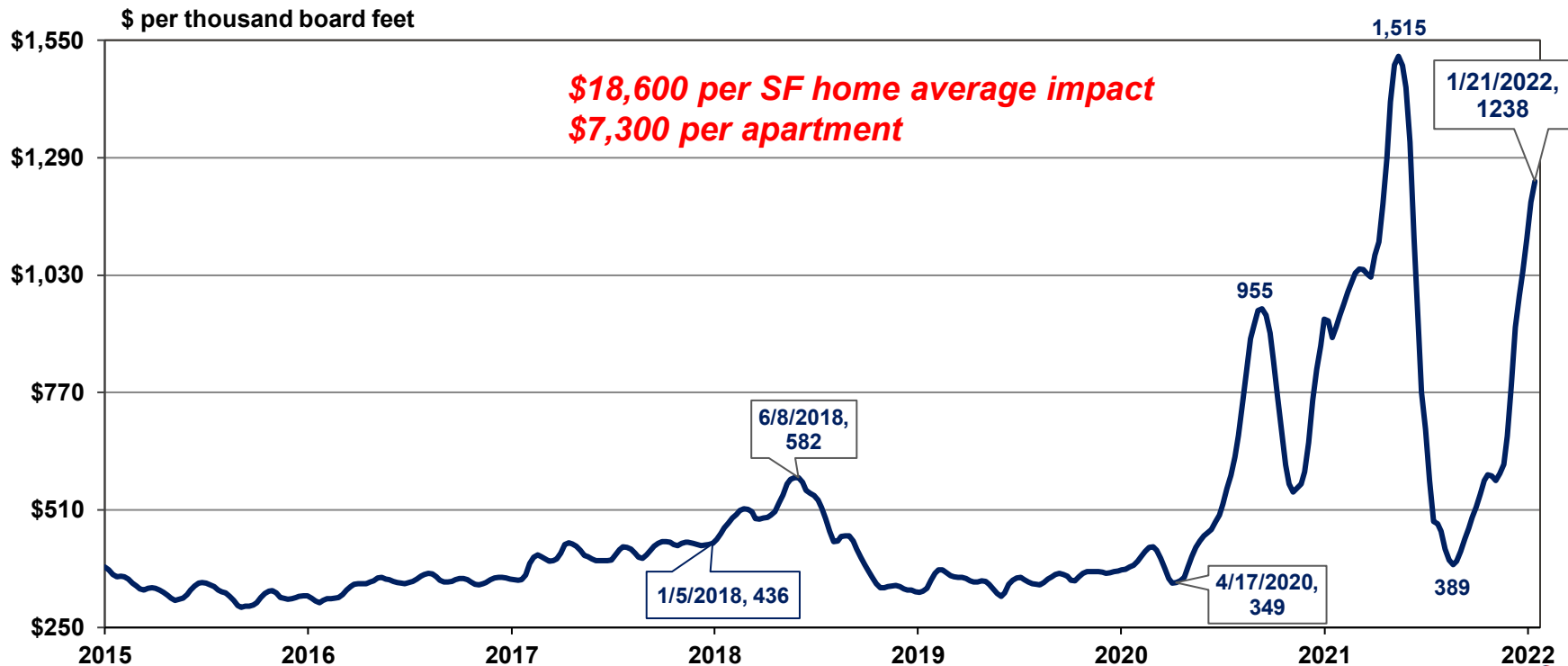
Building Materials - Residential Construction Cost



Source: U.S. Bureau of Labor Statistics (BLS): Producer Price Index (PPI)

Lumber Prices Edged Higher

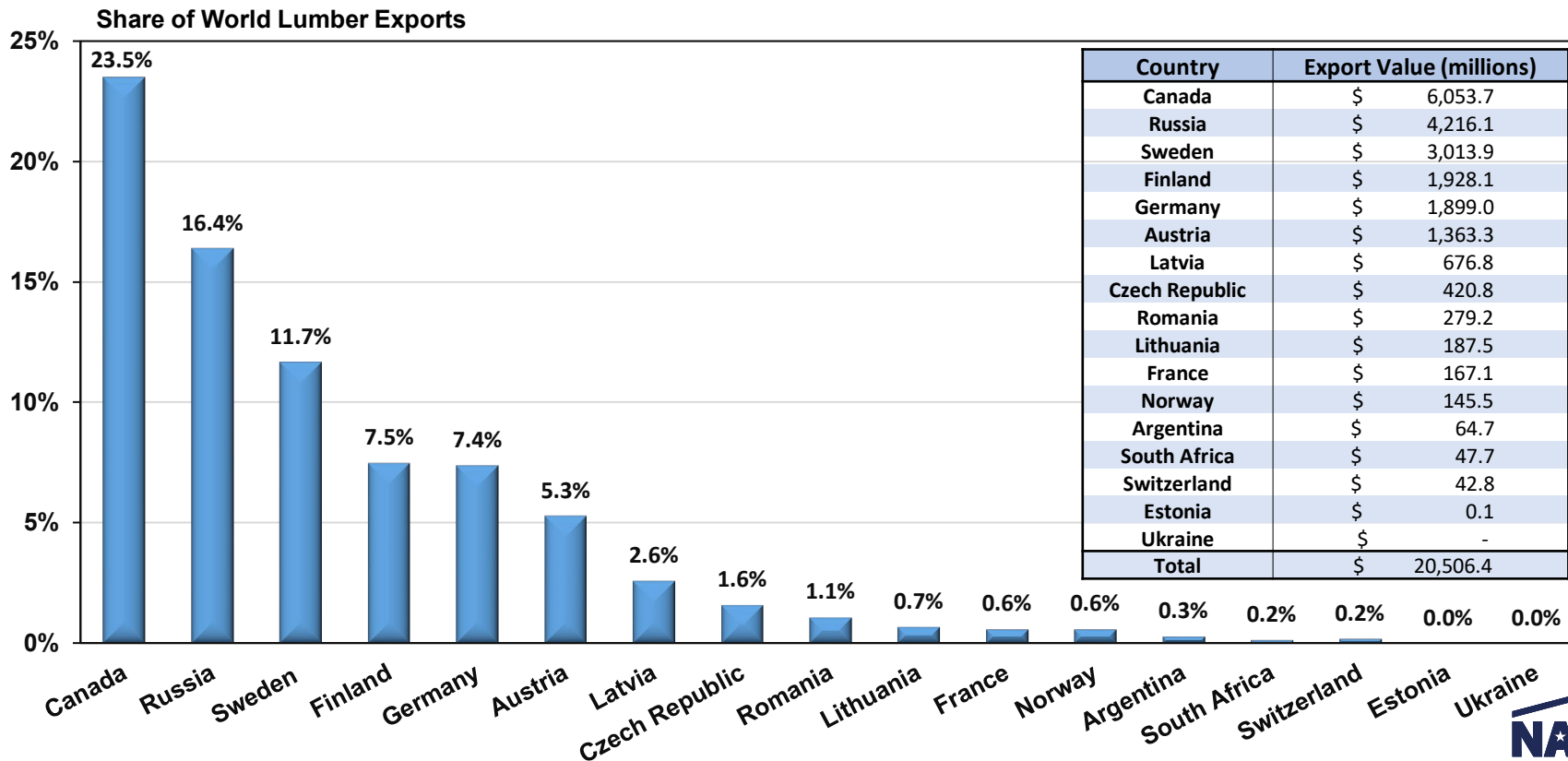
Current January price is \$1,238; up 218% in the past five months



Source: NAHB Analysis; Random Lengths Composite Index

Lumber Exports from Countries Meeting U.S. Standards

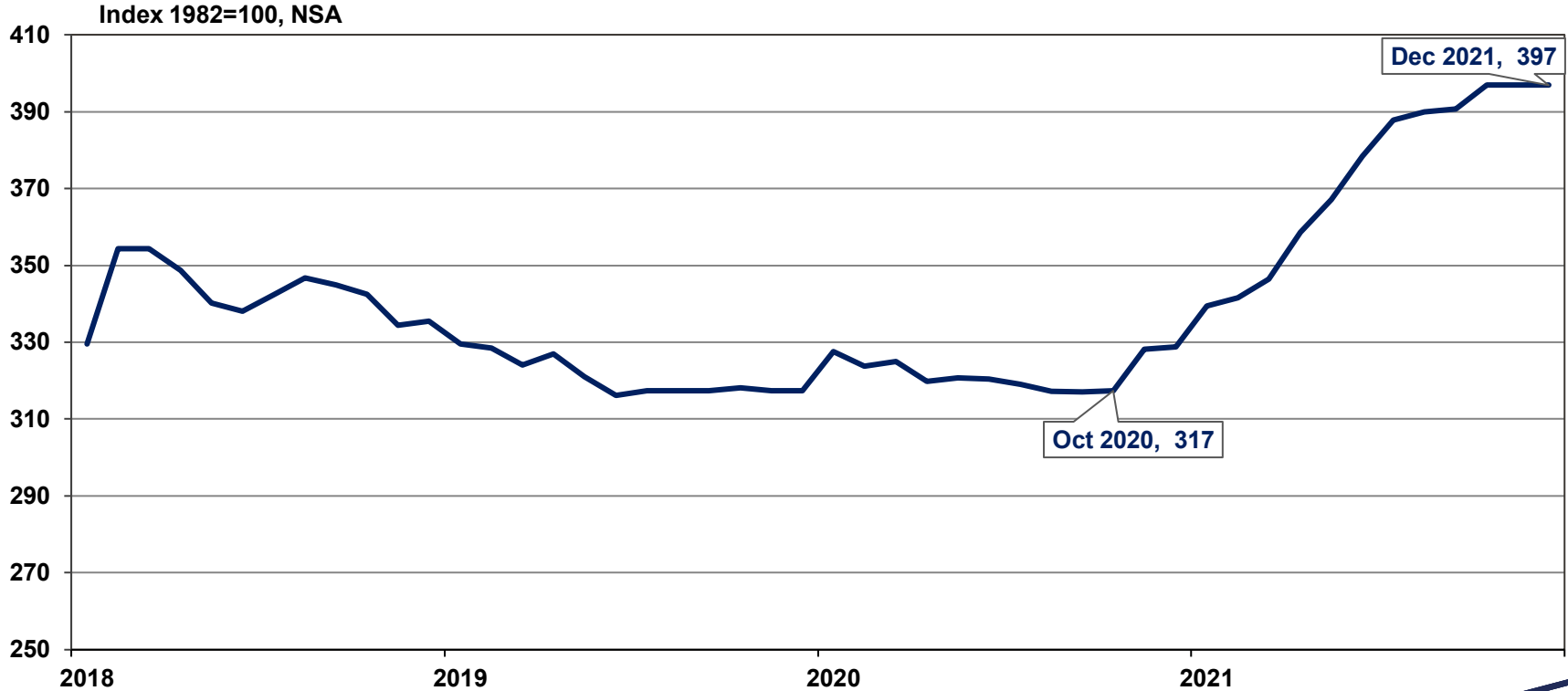
New trade partners?



Source: UN Comtrade, World Integrated Trade Solution, World Bank.

Building Materials Prices - Gypsum

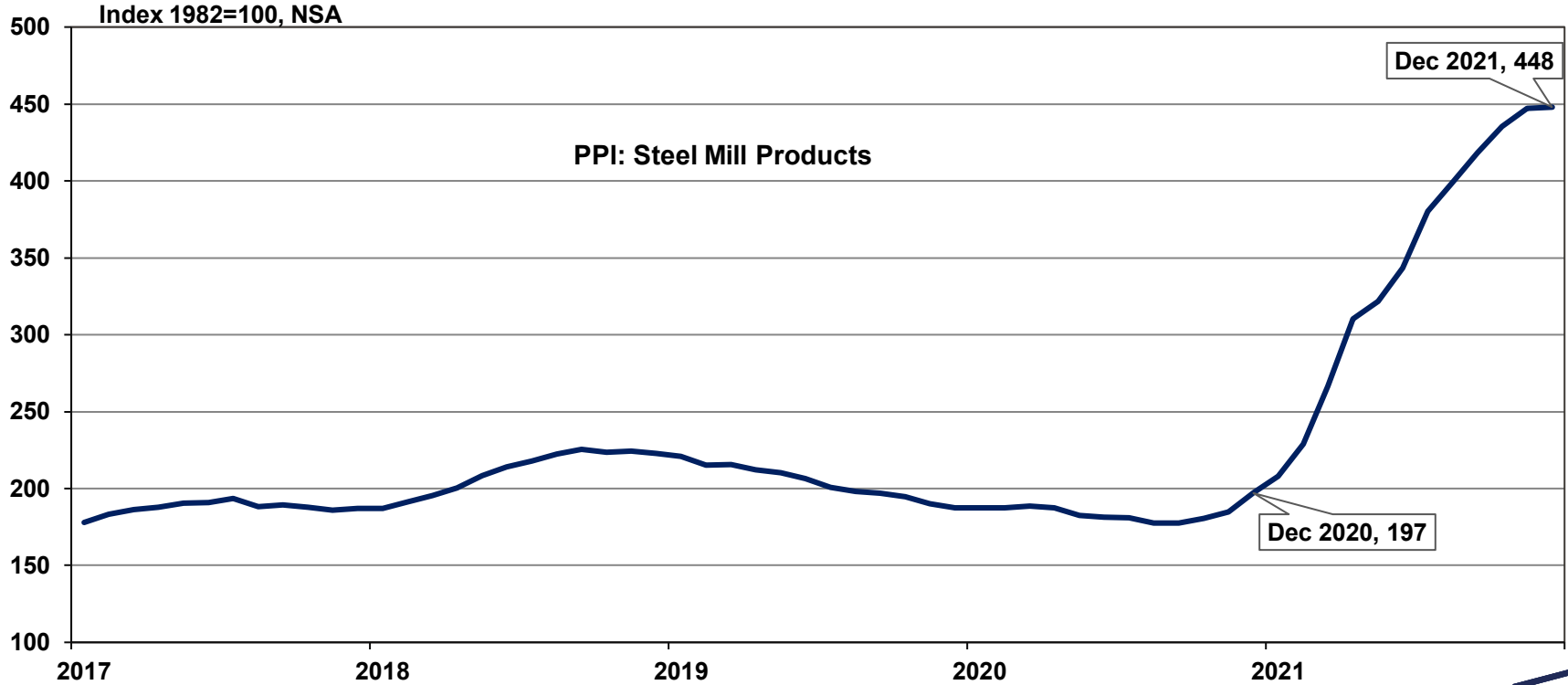
Gypsum increased 21% in the past 12 months



Source: NAHB Analysis; U.S. Bureau of Labor Statistics (BLS)

Building Materials Prices – Steel

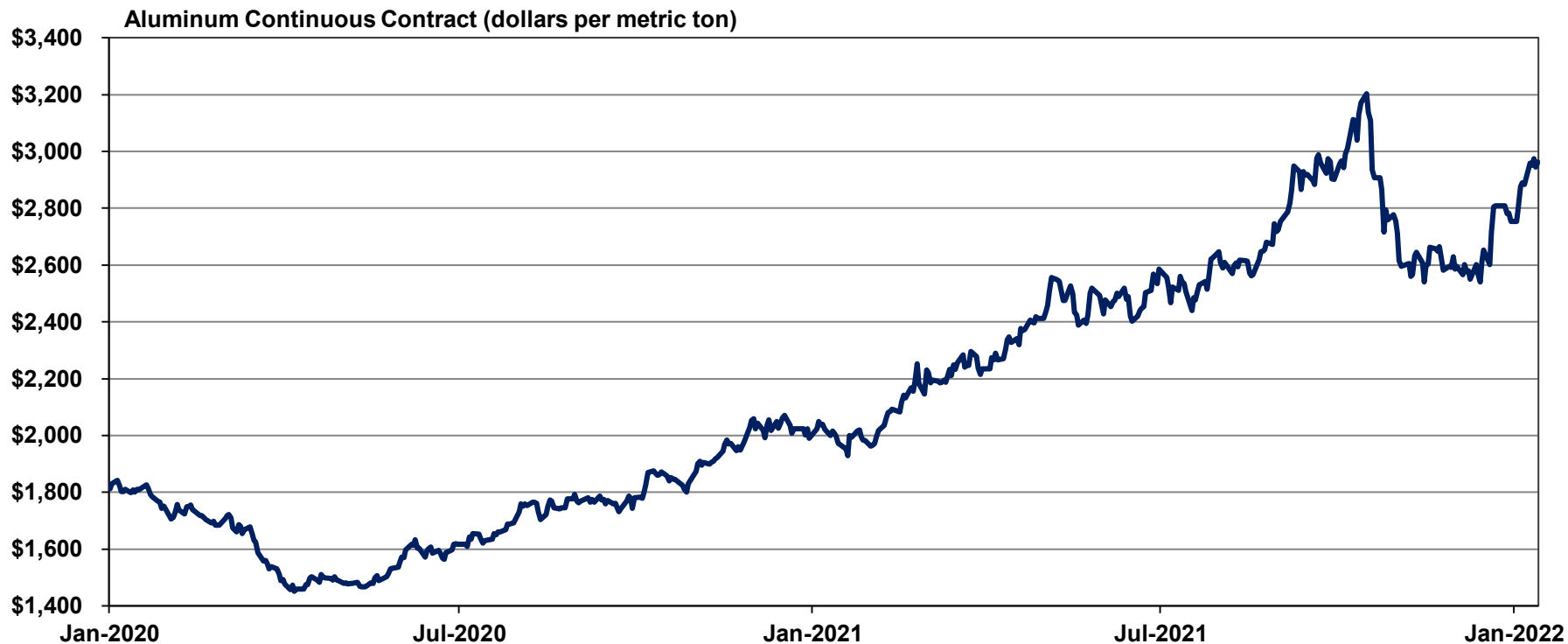
Steel prices increased 127% in a year



Source: NAHB Analysis; U.S. Bureau of Labor Statistics (BLS)

Building Materials Prices - Aluminum

Up 63% since January 2020



Source: NAHB Analysis; CME Group; Nymex

Building Materials Prices - Copper

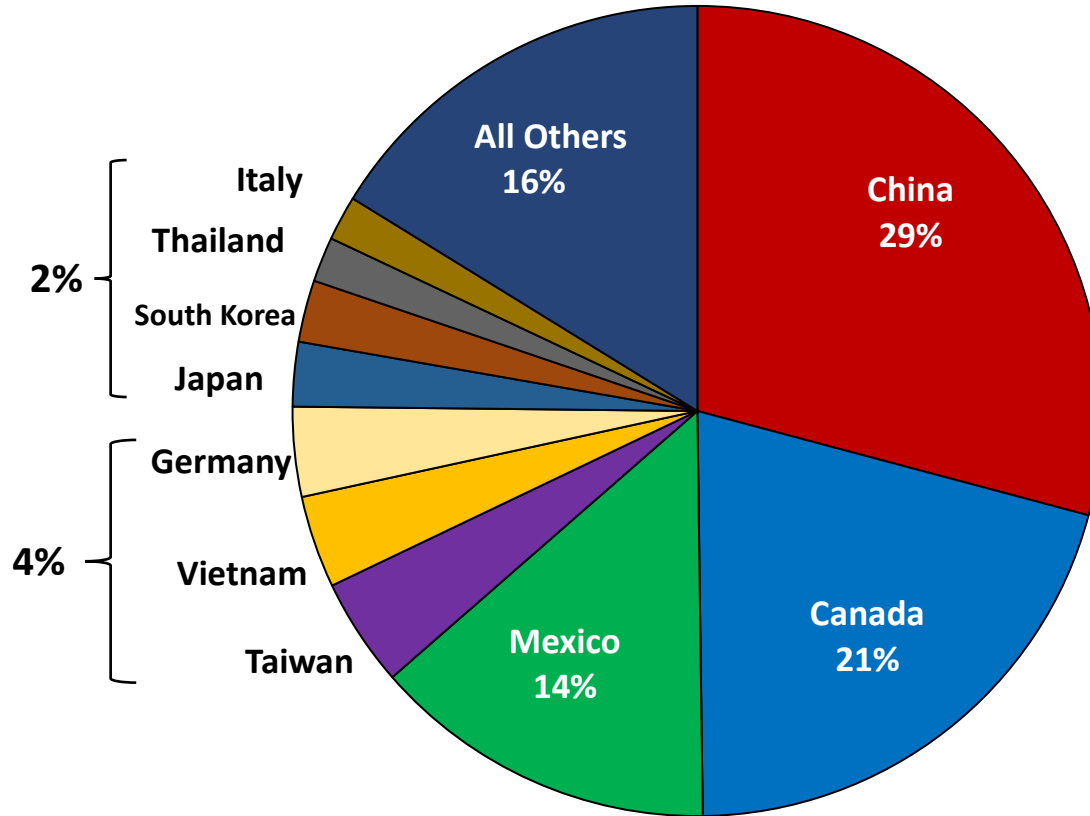
Initially fell 27% but now 59% above pre-pandemic levels



Source: NAHB Analysis; CME Group; Nymex

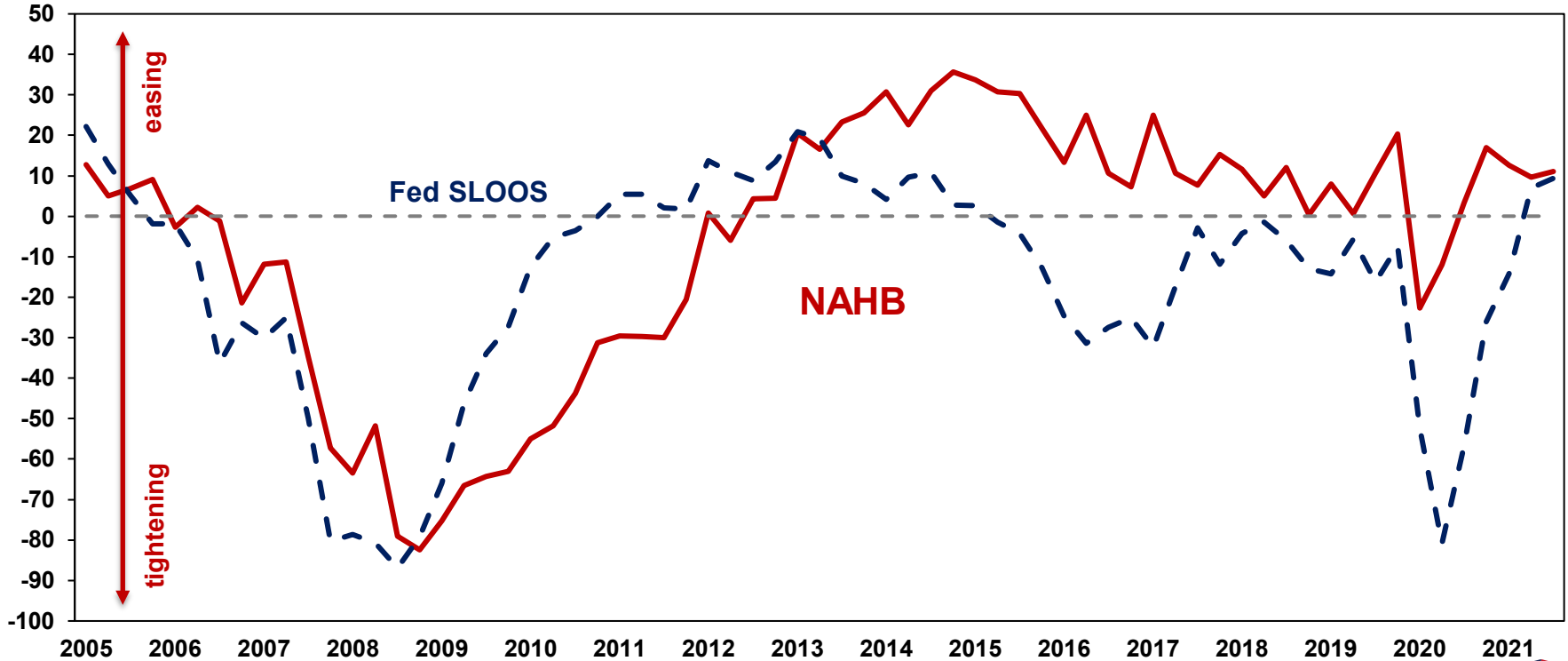
Share of Building Materials Imports in 2020

Total \$58 billion imports in 2020; imports from Vietnam tripled from 2019



/ Lending – AD&C Loan Conditions

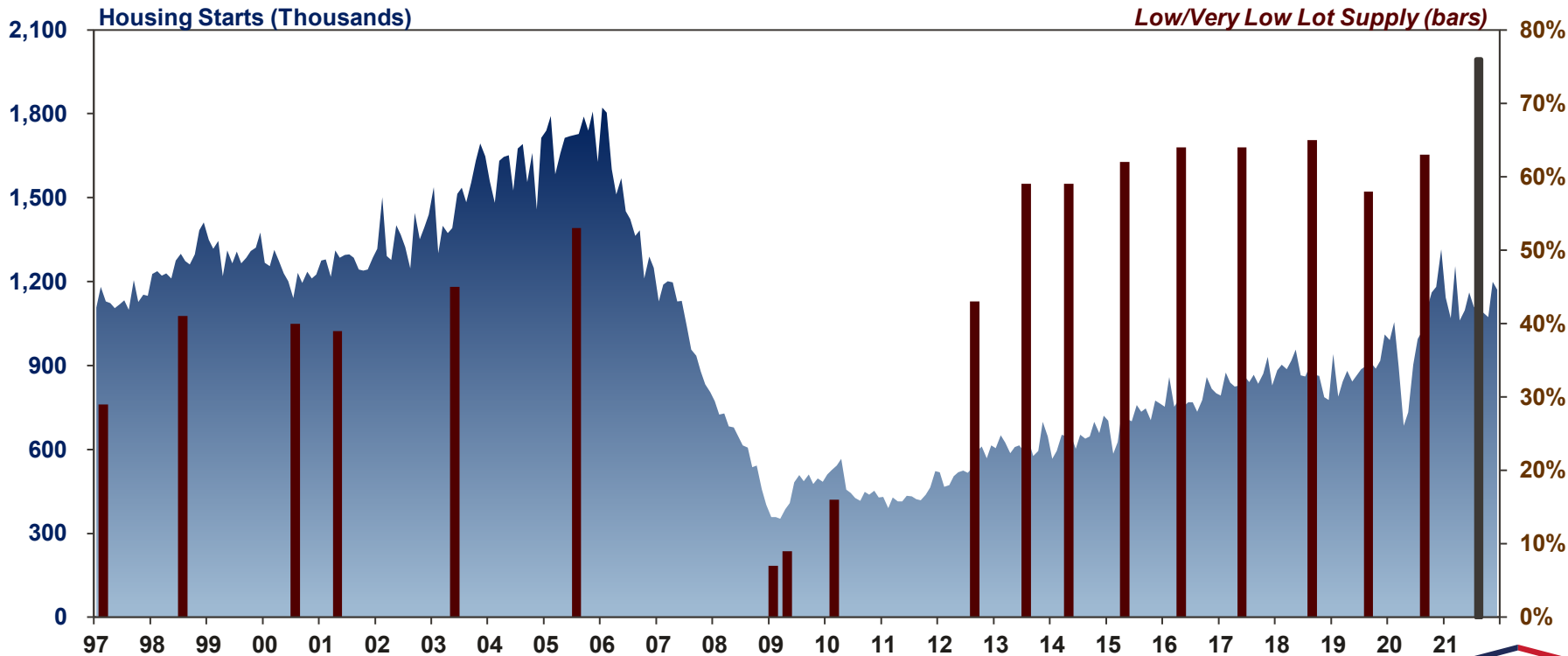
A modest easing of credit reported in 3Q21



Source: NAHB survey; Federal Reserve's Senior Loan Officer Opinion Survey (SLOOS)

/ Lot Shortages Reported by Single-family Builders

Shortage of lots reached a new record in 2021



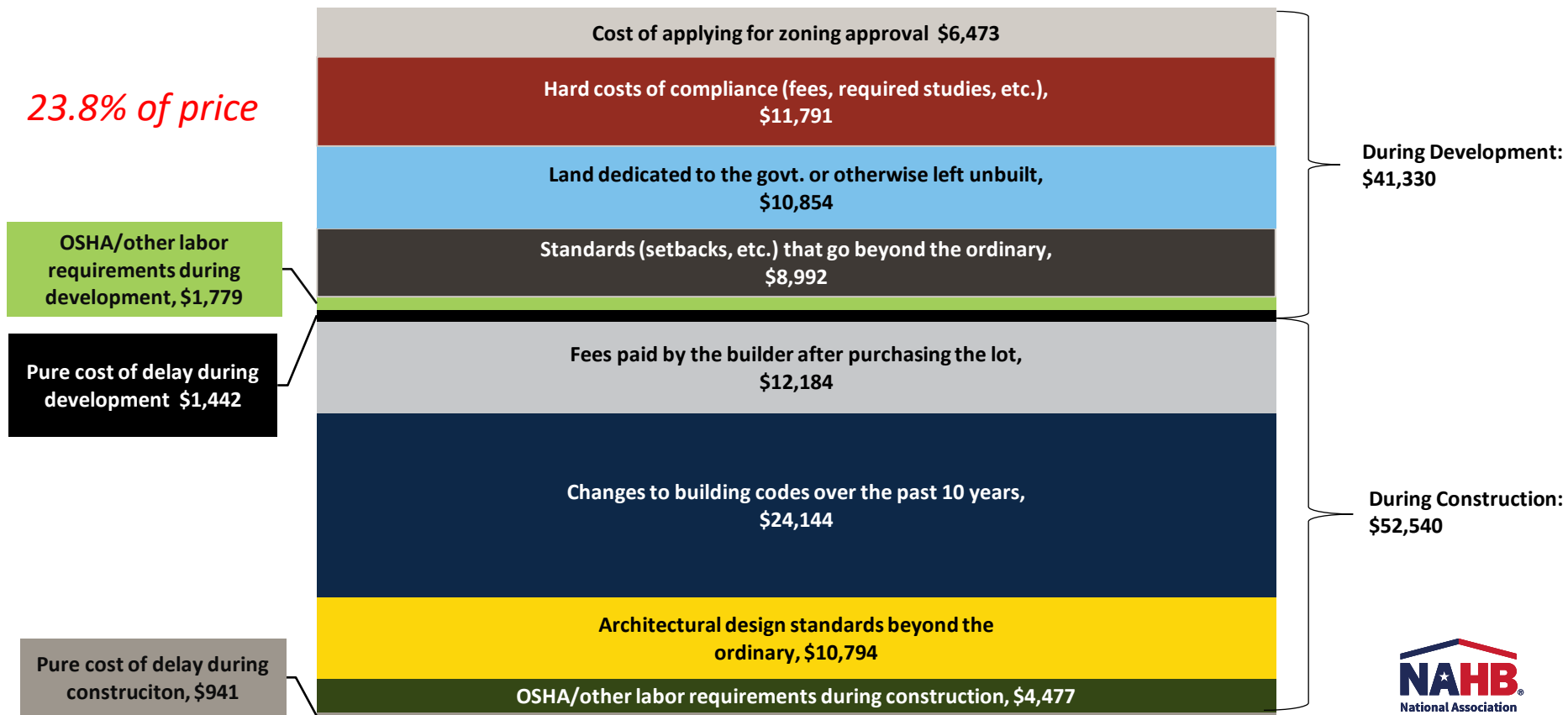
Source: Census Bureau and NAHB/Wells Fargo HMI survey



Regulatory Costs \$93,870 Per New Home (11% Gain 2016 to 2021)

Total effect of building codes, land use, environmental and other rules

23.8% of price



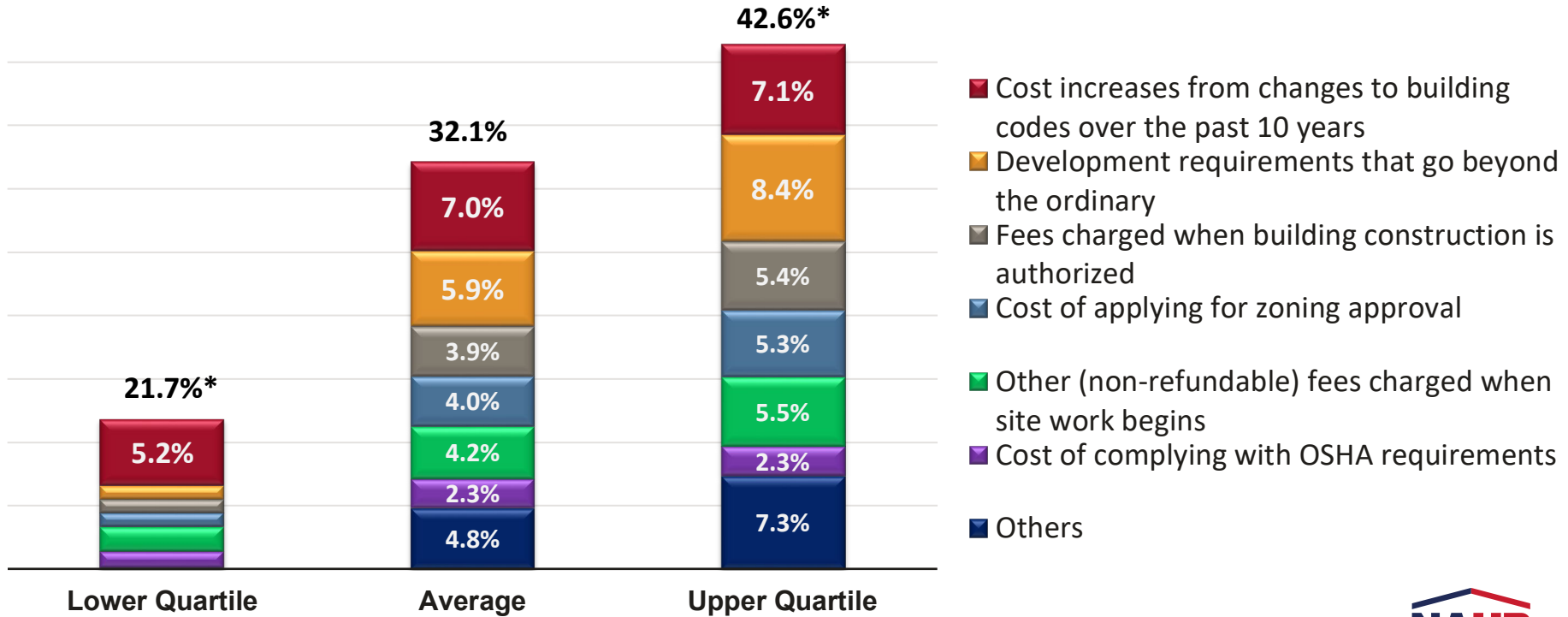
Source: NAHB/Wells Fargo Housing Market Index (HMI)



Regulations - 32% of Multifamily Development Costs

NAHB-NMHC research

Government Regulations as a Share of Multifamily Development Costs



Note: * For quartiles, all types of costs do not sum to the total.

Source: NAHB/Wells Fargo HMI survey

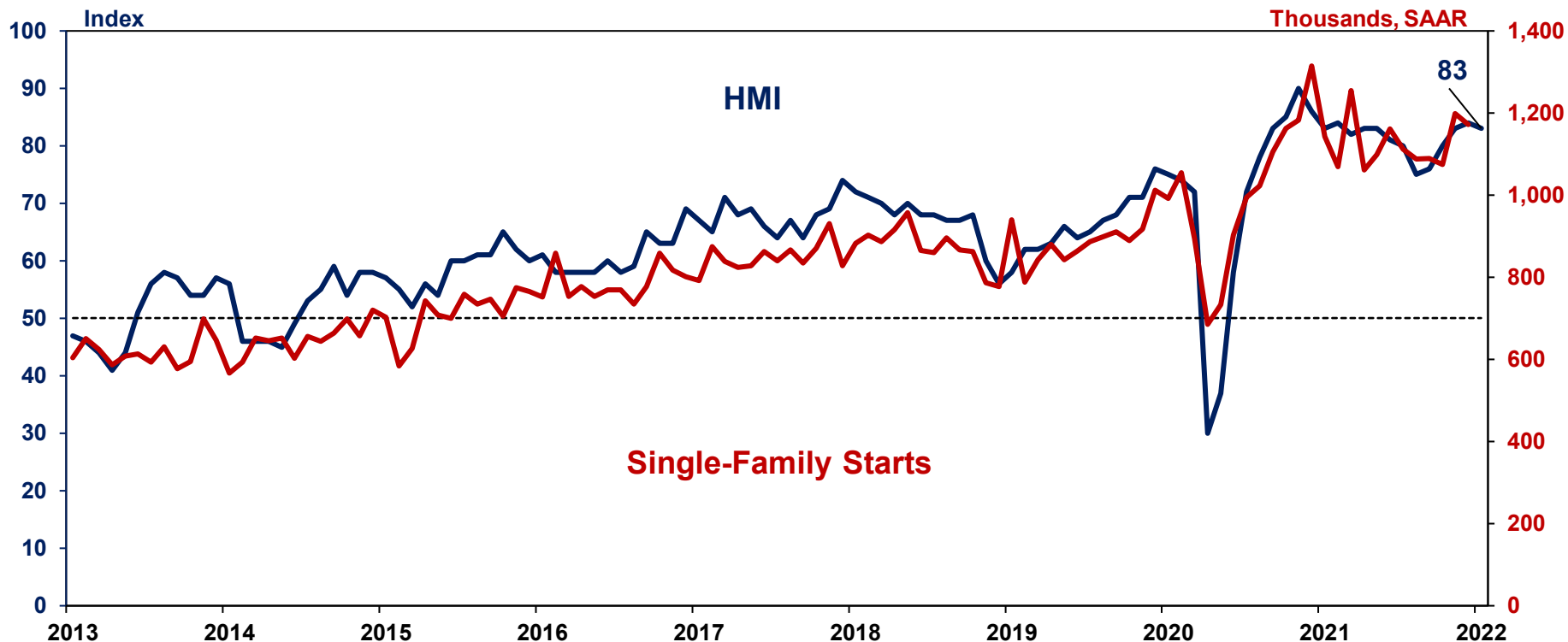
A decorative graphic on the left side of the page. It features a horizontal dashed line of small gold dots. From the right end of this line, a vertical bar extends upwards and downwards. The upper portion of this bar is dark blue, and the lower portion is red.

Single-Family Outlook



NAHB/Wells Fargo Housing Market Index (HMI)

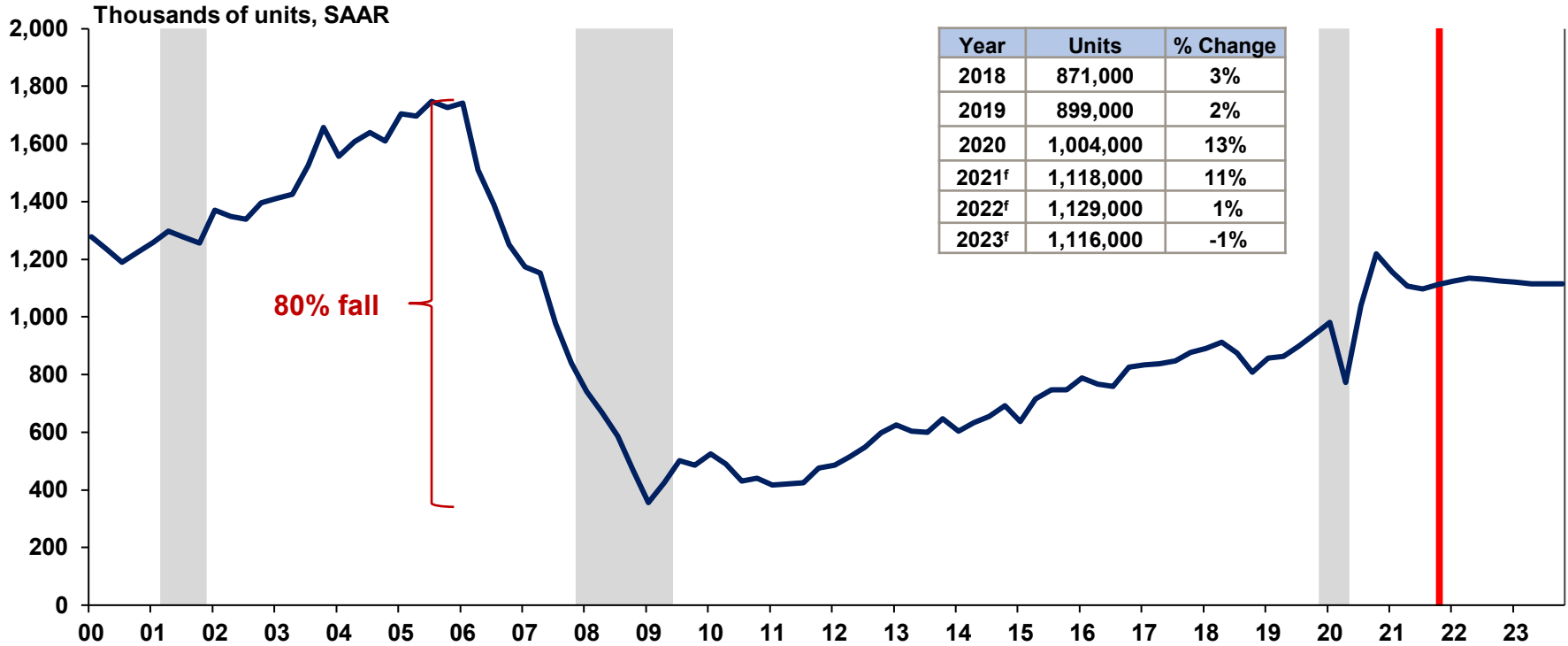
Builder confidence moved one point lower due to growing inflation concerns



Source: Census Bureau and NAHB/Wells Fargo HMI survey

Single-Family Starts

Growth slows in 2022 and 2023, returning to long-run trend but 26% higher than 2019



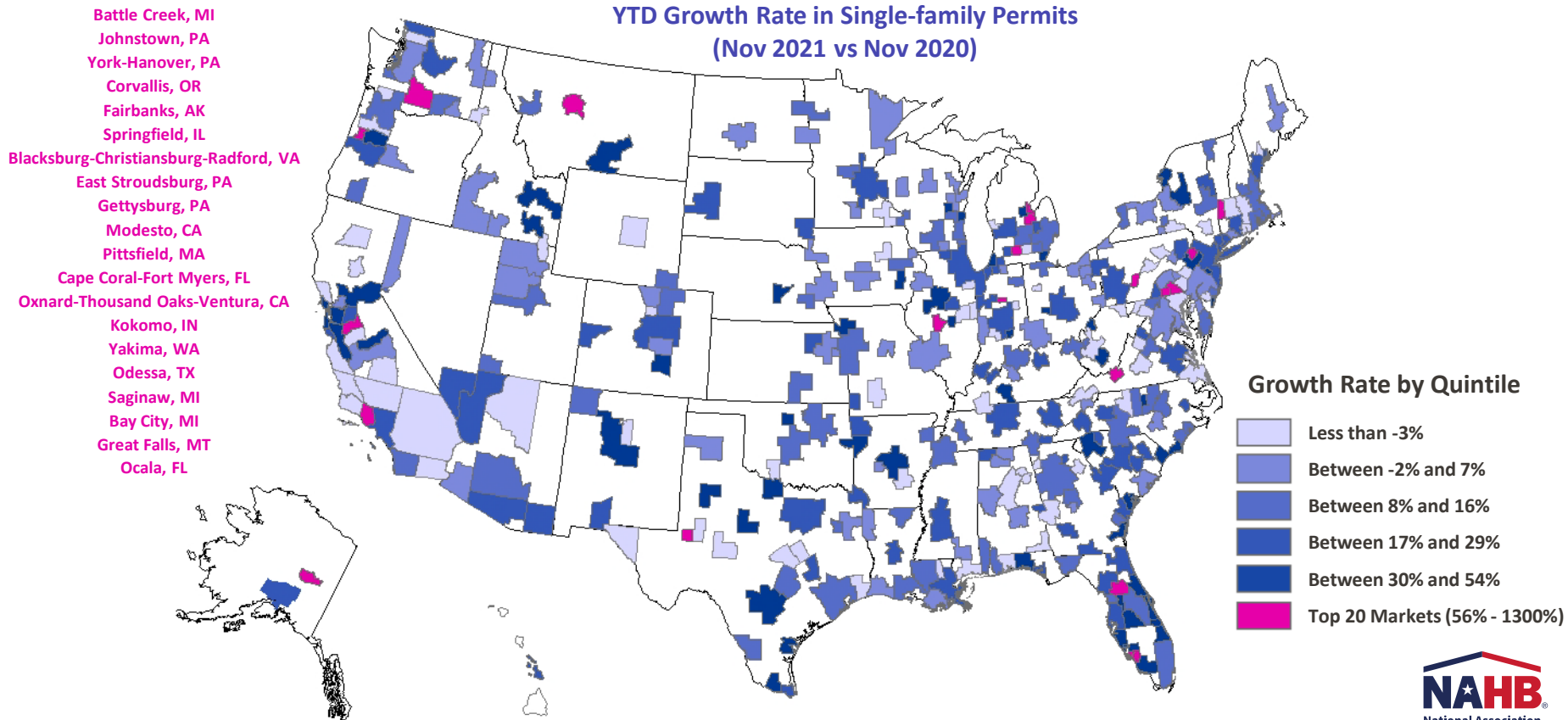
Source: U.S. Census Bureau (BOC) and NAHB forecast

Top 10 Largest Single-Family Markets by Permits

Top 10 Largest SF Markets	November 2021 (# of units YTD, NSA)	YTD % Change (compared to 2020)
Houston-The Woodlands-Sugar Land, TX	48,278	11%
Dallas-Fort Worth-Arlington, TX	46,544	18%
Phoenix-Mesa-Scottsdale, AZ	32,585	15%
Atlanta-Sandy Springs-Roswell, GA	29,437	15%
Austin-Round Rock, TX	22,354	15%
Tampa-St. Petersburg-Clearwater, FL	17,950	23%
Charlotte-Concord-Gastonia, NC-SC	17,650	8%
Orlando-Kissimmee-Sanford, FL	16,184	14%
Nashville-Davidson-Murfreesboro-Franklin, TN	15,160	18%
Jacksonville, FL	14,950	27%

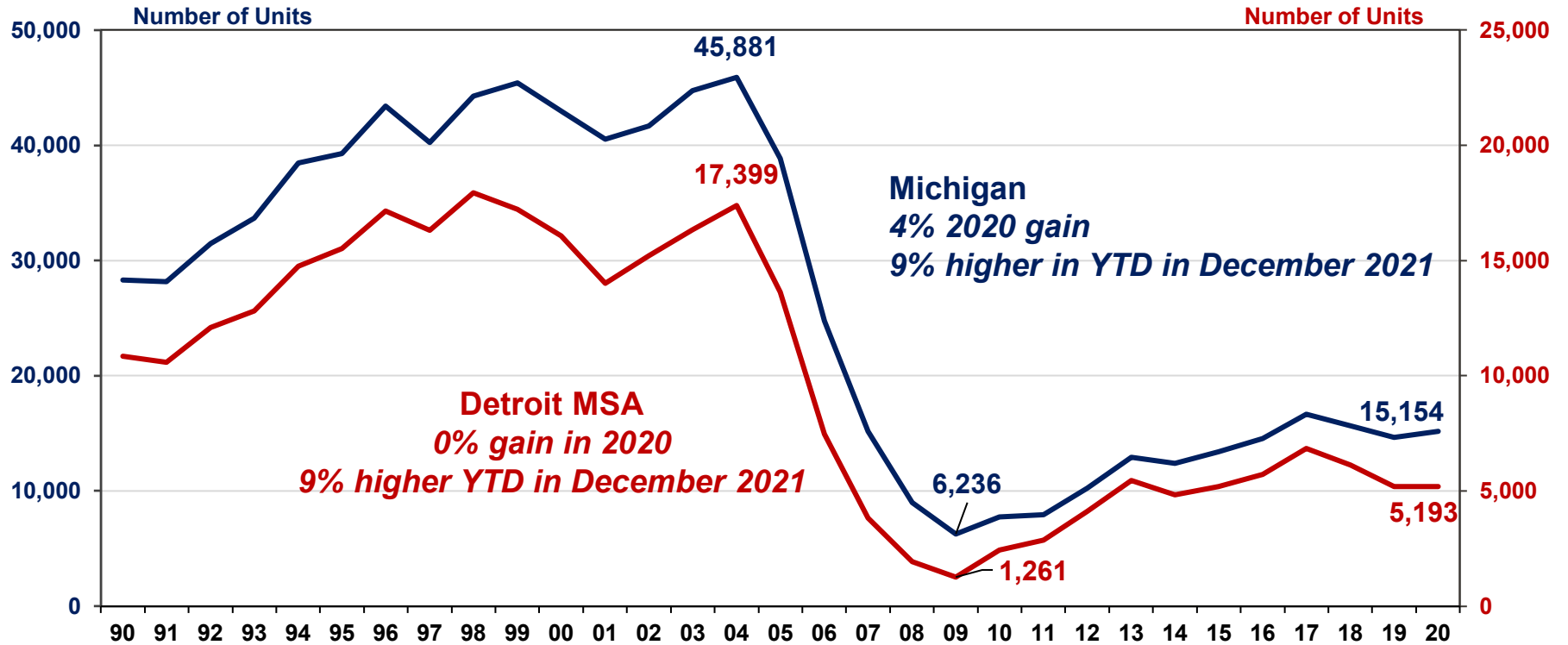
Source: U.S. Census Bureau (BOC).

Top 20 Markets for Single-Family Permits Growth



Source: U.S. Census Bureau (BOC)

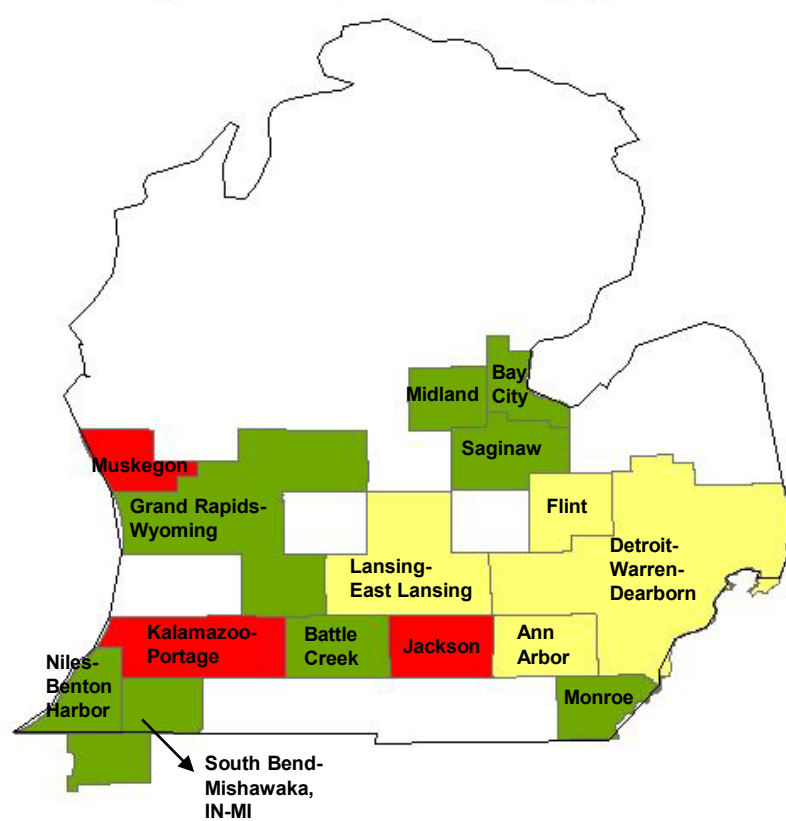
Single-Family Building Permits – Michigan and Detroit MSA



Source: Census Bureau.

YOY Growth for Single-Family Permits: Dec 2021 vs. Dec 2020

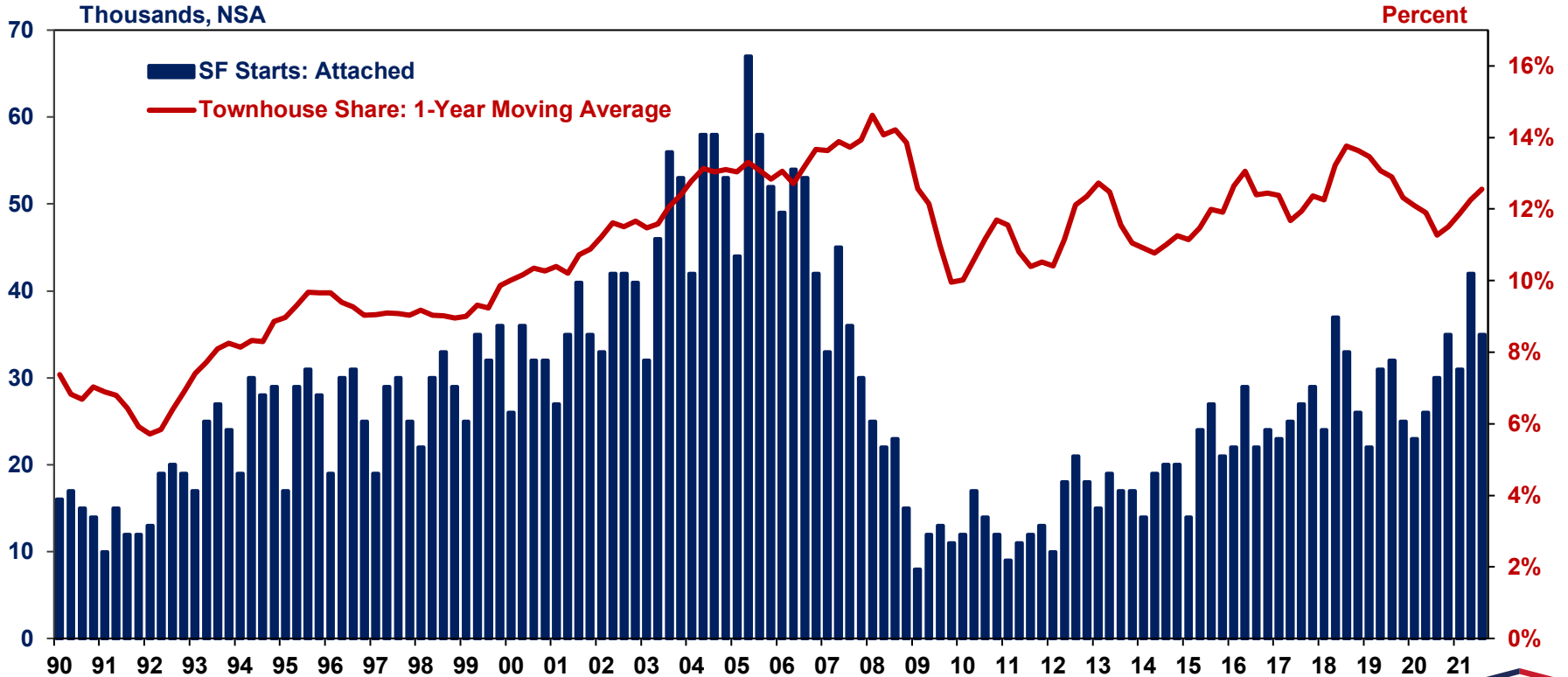
- Rank**
- Growth Rate < 0
 - $0 \leq \text{Growth Rate} < \text{U.S. (14\%)}$
 - Growth Rate > U.S. (14%)



Source: U.S. Census Bureau (BOC)

Townhouse Construction Accelerating

Year-over-year construction increases continued in 3Q21

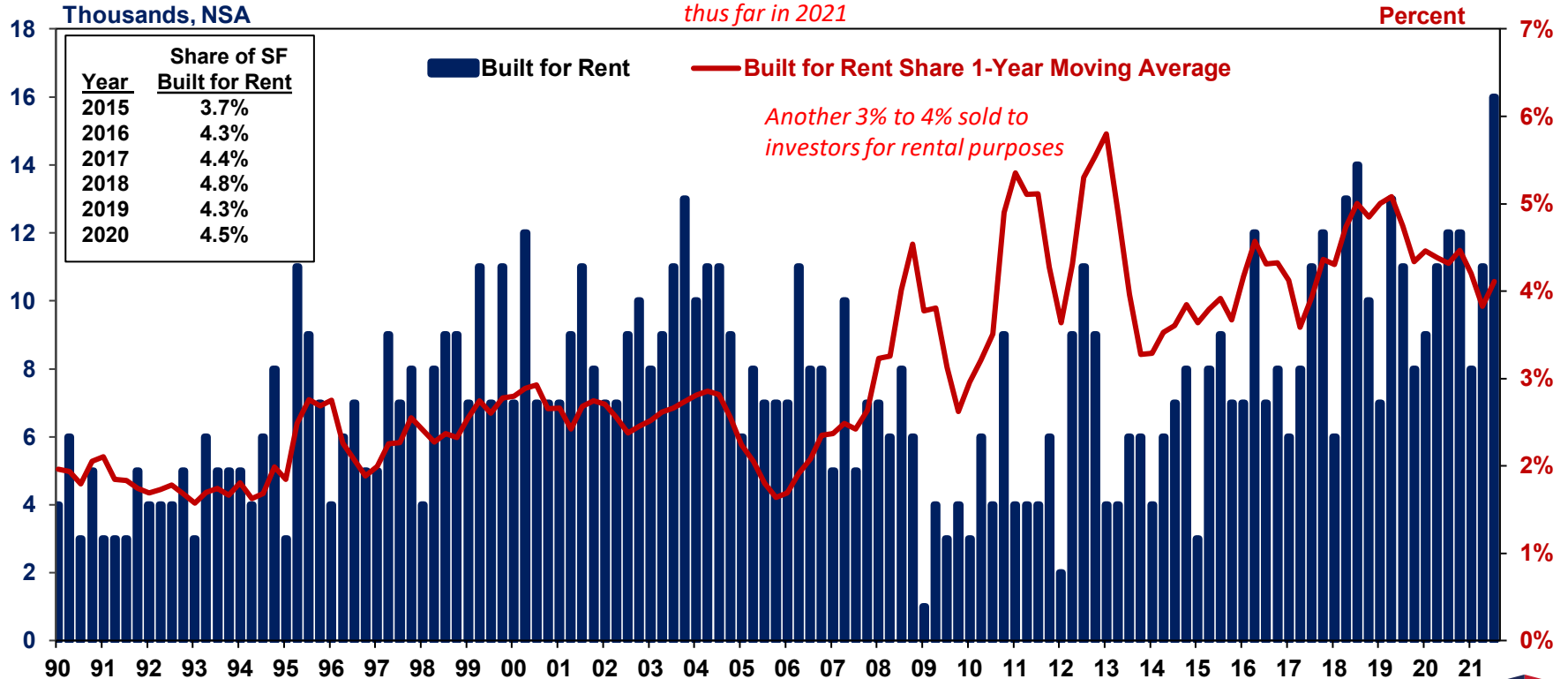


Source: U.S. Census Bureau (BOC)

Single-Family Built-for-Rent Construction

A window of opportunity

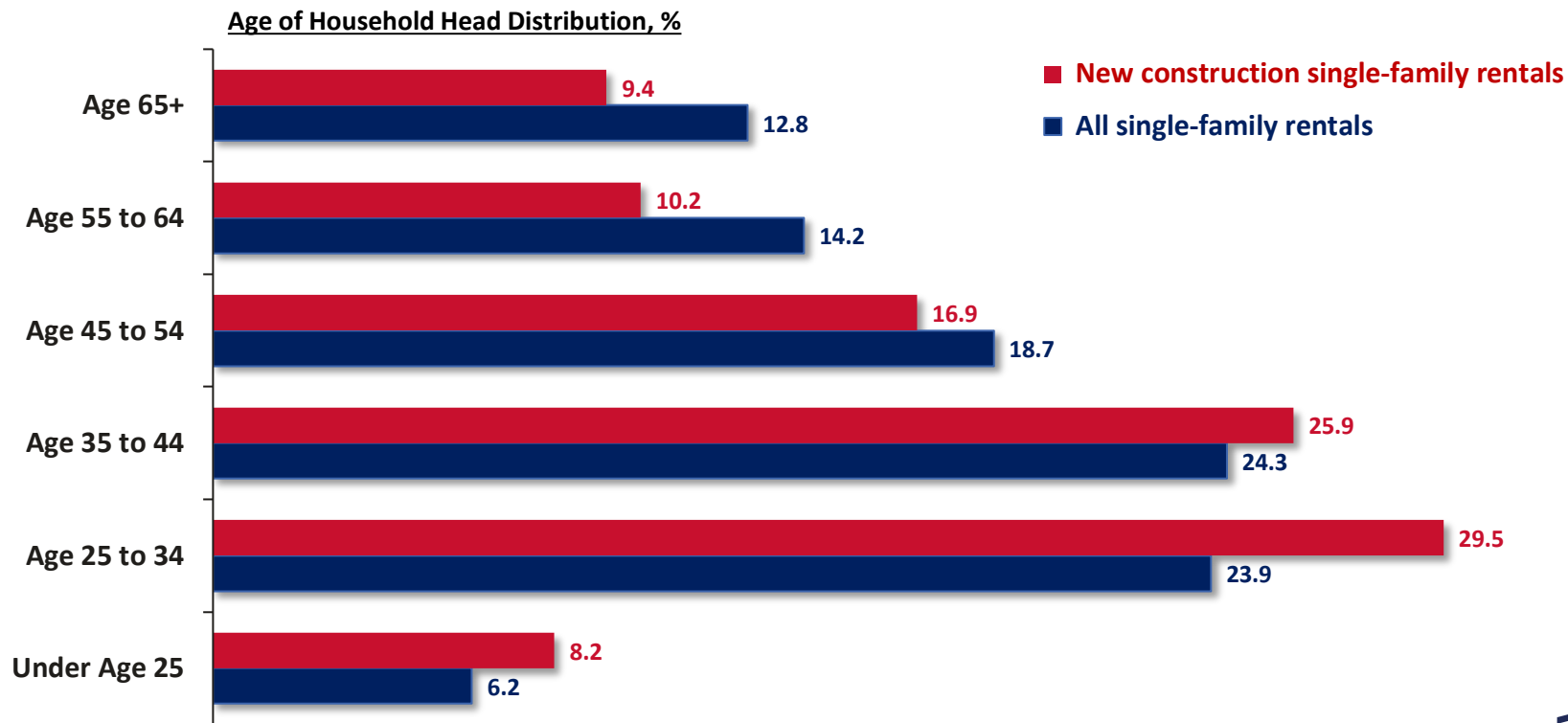
25% of builders have seen an uptick of investor buyers thus far in 2021



Source: U.S. Census Bureau (BOC)

Single-Family Rental Household Characteristics

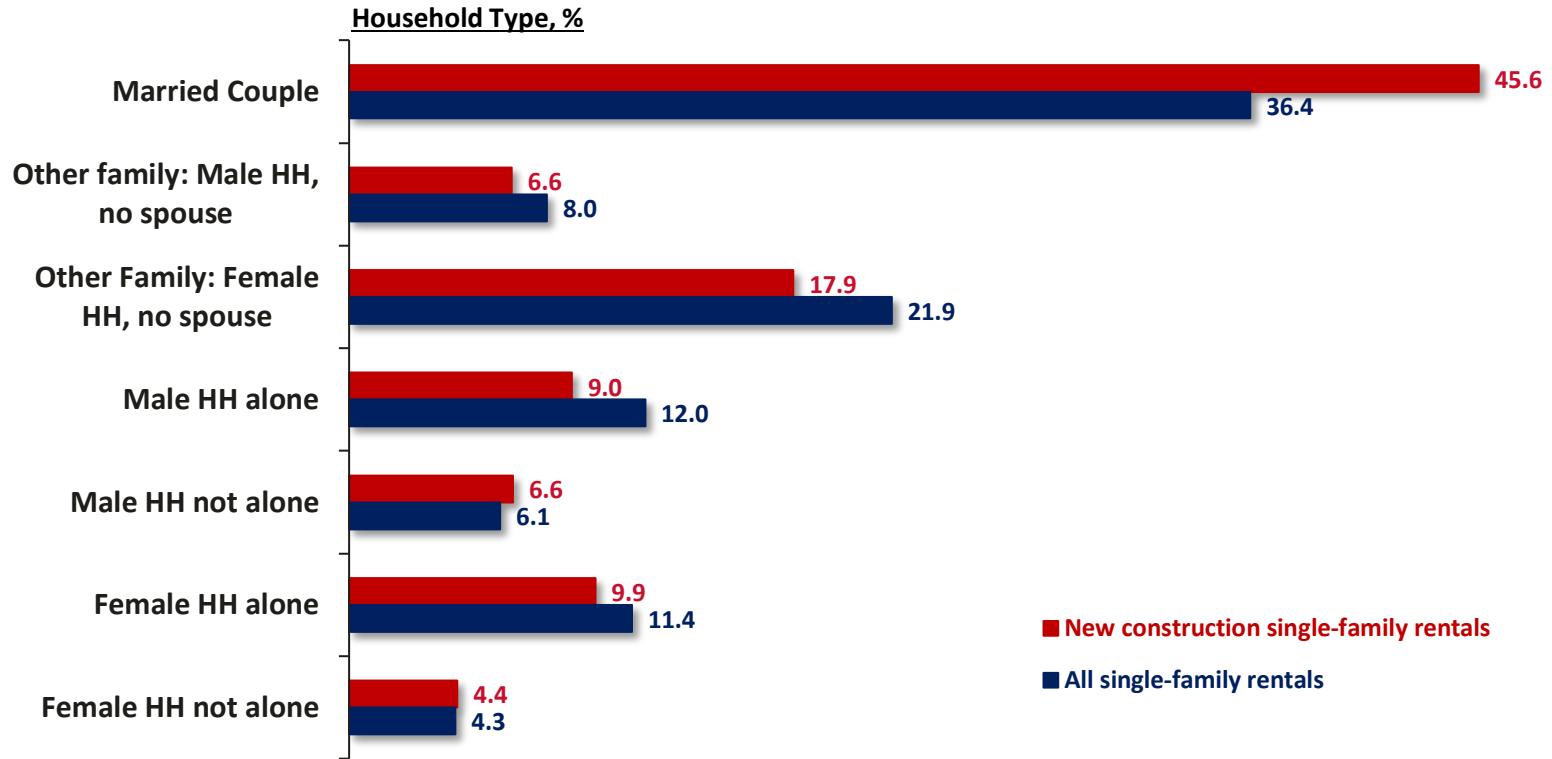
SFBFR housing residents younger



Source: NAHB tabulation of the 2019 American Community Survey

Single-Family Rental Household Characteristics

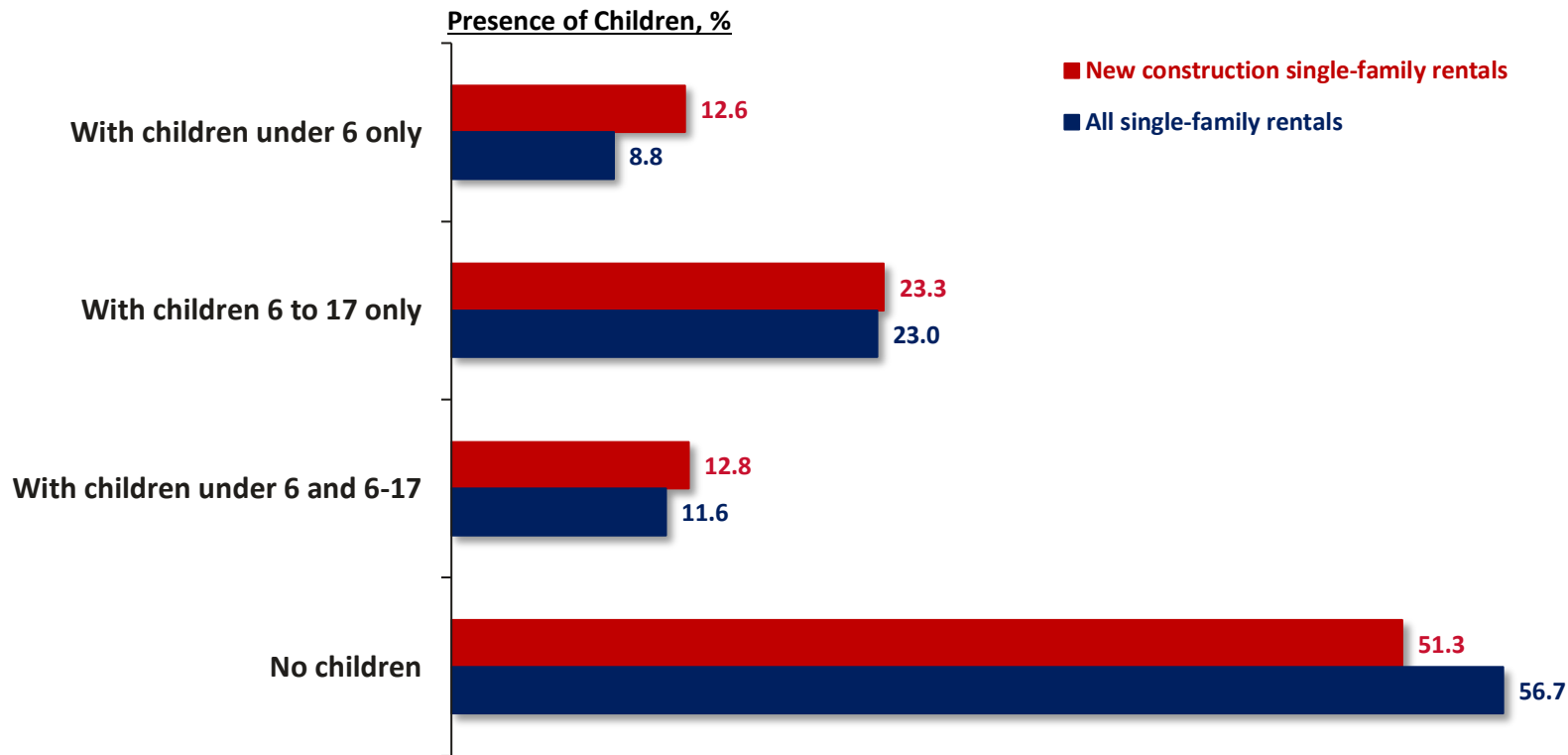
SFBFR tenants more likely to be married



Source: NAHB tabulation of the 2019 American Community Survey

Single-Family Rental Household Characteristics

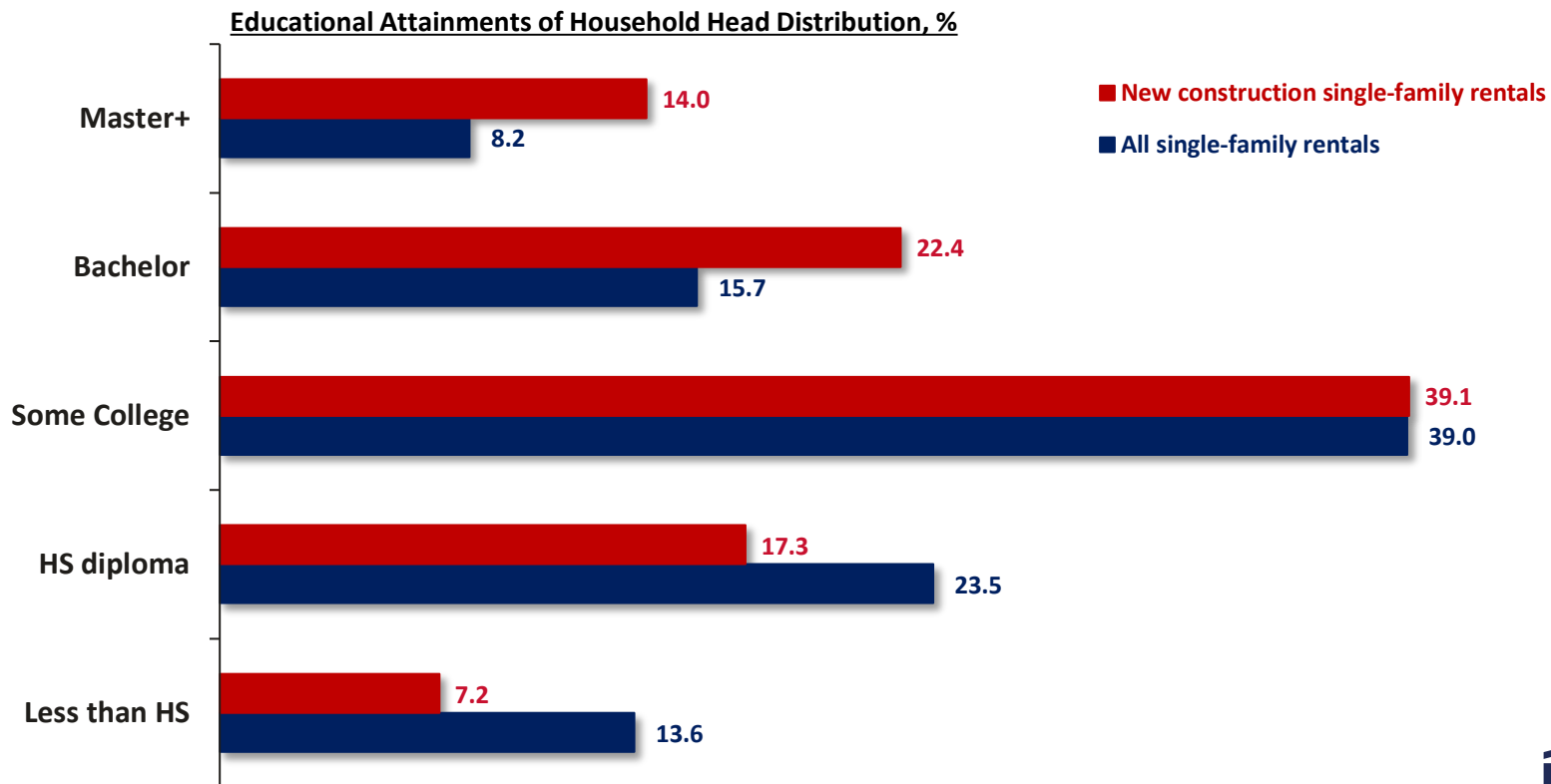
SFBFR tenants more likely to have young children



Source: NAHB tabulation of the 2019 American Community Survey

Single-Family Rental Household Characteristics

SFBFR tenants more likely to have college degrees



Source: NAHB tabulation of the 2019 American Community Survey

Single-Family Rental Household Characteristics

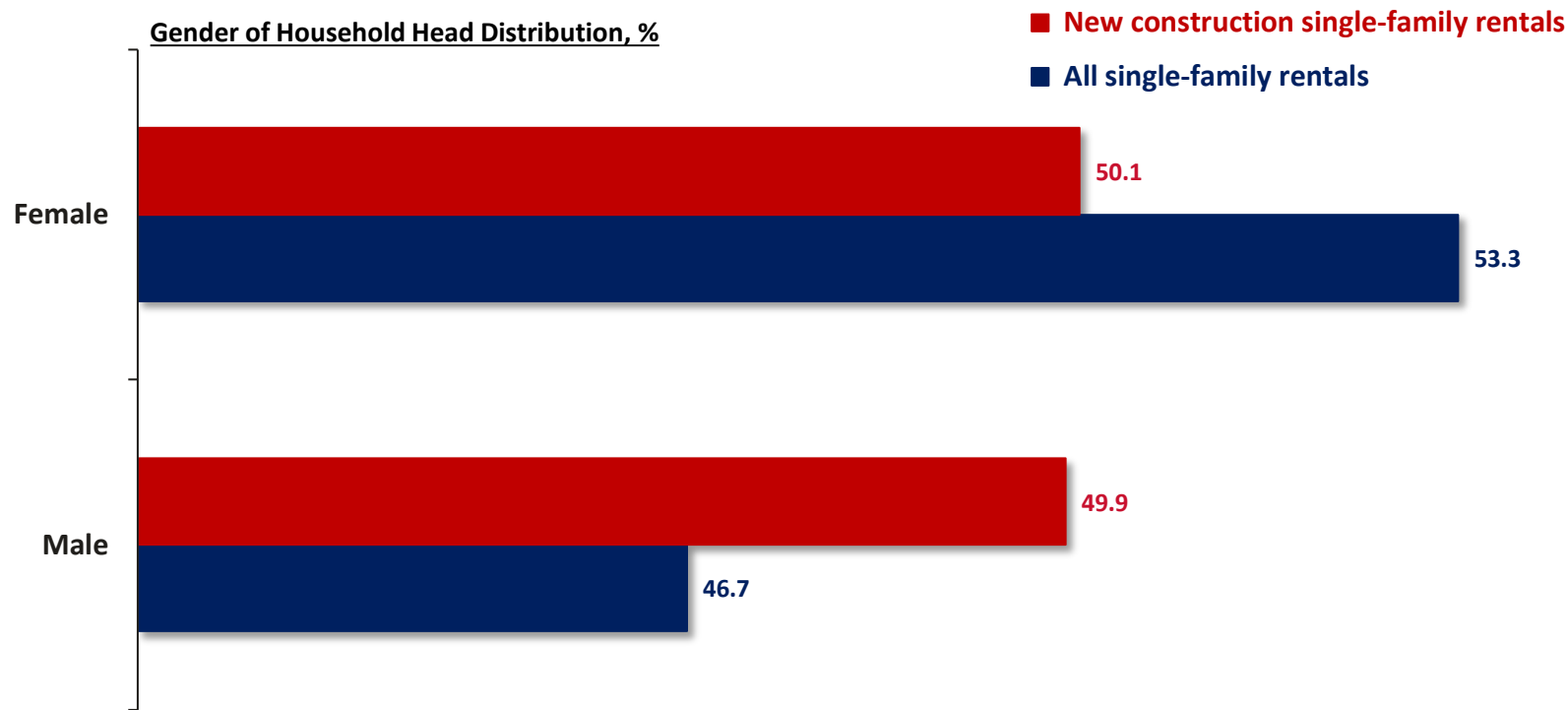
SFBFR tenants have higher income and (slightly) larger households



Source: NAHB tabulation of the 2019 American Community Survey

Single-Family Rental Household Characteristics

Existing rental housing more likely rented by women



Source: NAHB tabulation of the 2019 American Community Survey

How Single-Family Built-for-Rent Differ from Built-for-Sale

- SFBFR are typically smaller with fewer bedrooms and bathrooms.
- SFBFR are more likely to be a single-story building.
- SFBFR are much more likely to be a townhouse (single-family attached).
- SFBFR are more likely to be located on a smaller lot.
- SFBFR are almost all wood-framed.
- SFBFR are more likely to have a vinyl siding exterior and less likely to have stucco.
- SFBFR are more likely to have a one-car garage or no garage.
- The highest count of SFBFR construction is found in the West South Central Census division (Texas, Oklahoma, Arkansas and Louisiana).
- Although a small share of the total, SFBFR are more likely to be age-restricted.
- SFBFR are more likely to have a smaller construction permit value but have many units with permit values above \$300,000.
- Average construction time is slightly longer for SFBFR homes.

Source: NAHB analysis of U.S. Census Bureau (BOC) data

<https://eyeonhousing.org/2019/08/contrasting-built-for-rent-and-for-sale-new-single-family-homes/>

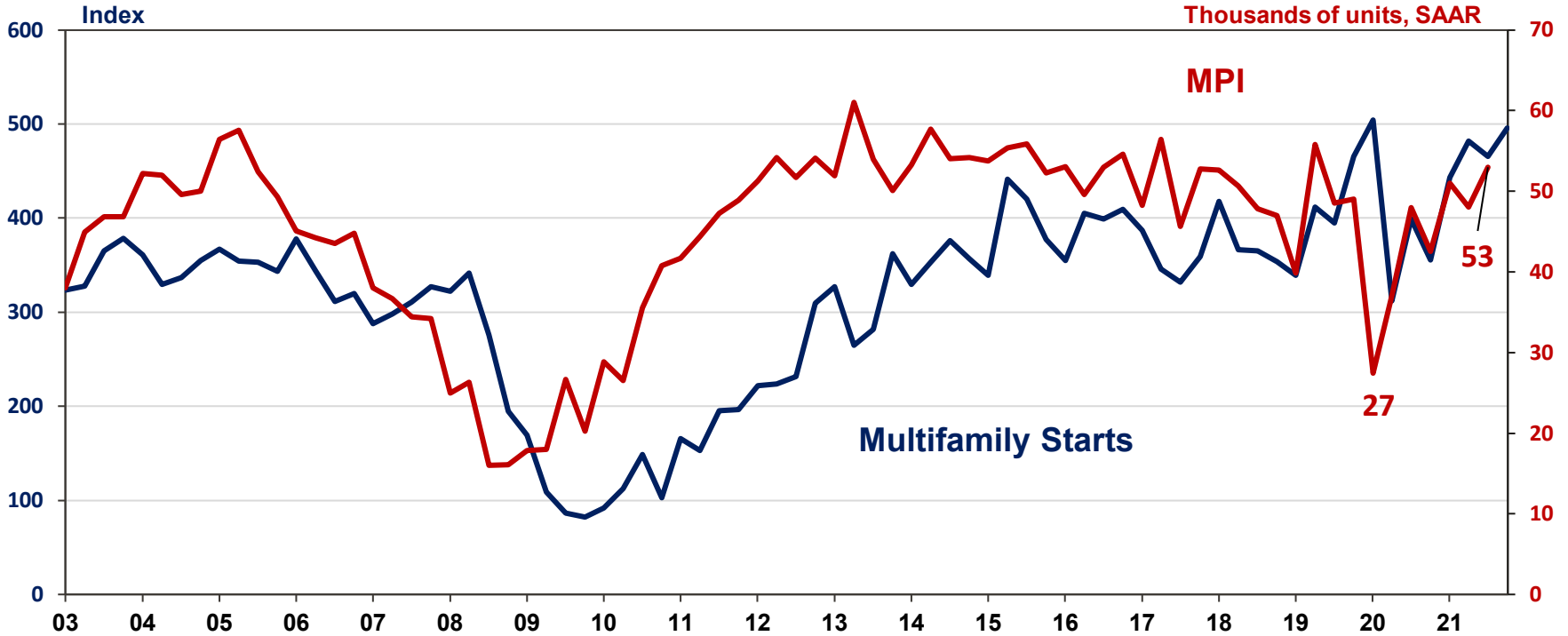


Multifamily Outlook



NAHB Multifamily Production Index

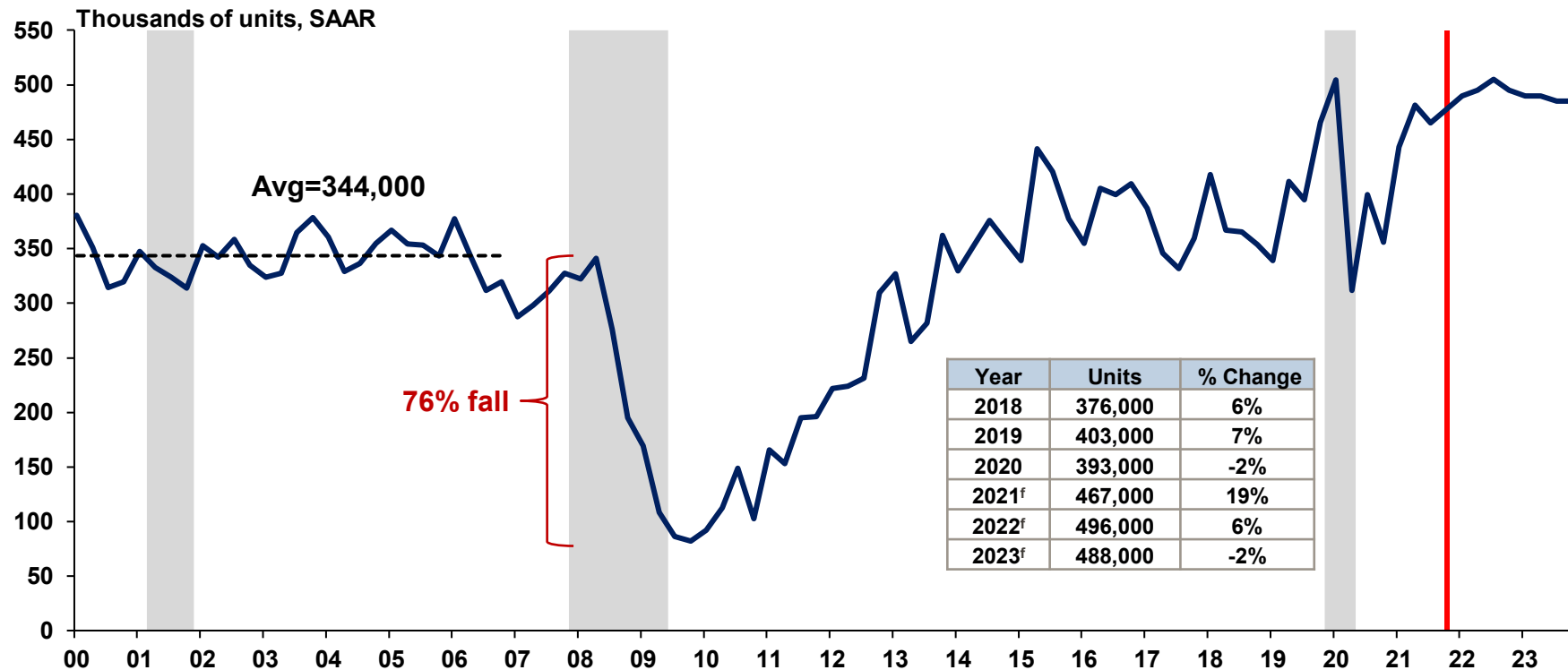
Sentiment on multifamily production Improved in 3Q



Source: U.S. Census Bureau (BOC) and NAHB Multifamily Market Survey (MMS).

Multifamily Construction Growing

Multifamily growth rising on low vacancies and rising rents



Source: U.S. Census Bureau (BOC) and NAHB forecast

Top 10 Largest Multifamily Markets by Permits

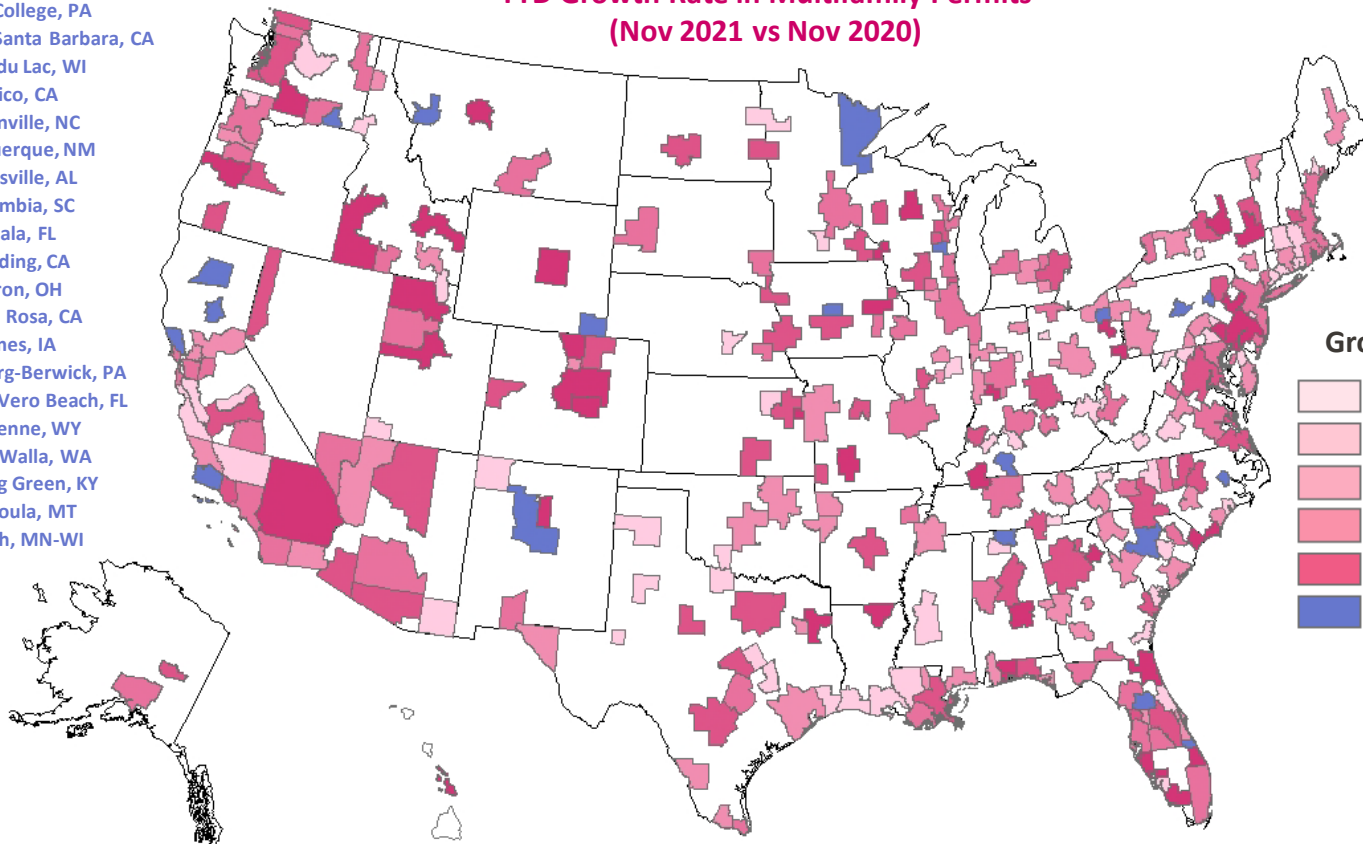
Top 10 Largest MF Markets	November 2021 (# of units YTD, NSA)	YTD % Change (compared to Nov 2020)
New York-Newark-Jersey City, NY-NJ-PA	40,668	4%
Dallas-Fort Worth-Arlington, TX	25,478	74%
Austin-Round Rock, TX	23,719	21%
Seattle-Tacoma-Bellevue, WA	19,786	59%
Los Angeles-Long Beach-Anaheim, CA	18,169	22%
Denver-Aurora-Lakewood, CO	14,687	125%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	14,674	119%
Phoenix-Mesa-Scottsdale, AZ	14,420	12%
Miami-Fort Lauderdale-West Palm Beach, FL	14,222	6%
Houston-The Woodlands-Sugar Land, TX	13,781	-25%

Source: U.S. Census Bureau (BOC).

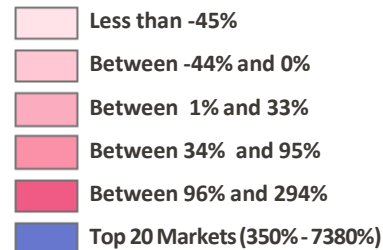
Top 20 Markets for Multifamily Permits Growth

YTD Growth Rate in Multifamily Permits
(Nov 2021 vs Nov 2020)

State College, PA
Santa Maria-Santa Barbara, CA
Fond du Lac, WI
Chico, CA
Greenville, NC
Albuquerque, NM
Huntsville, AL
Columbia, SC
Ocala, FL
Redding, CA
Akron, OH
Santa Rosa, CA
Ames, IA
Bloomsburg-Berwick, PA
Sebastian-Vero Beach, FL
Cheyenne, WY
Walla Walla, WA
Bowling Green, KY
Missoula, MT
Duluth, MN-WI



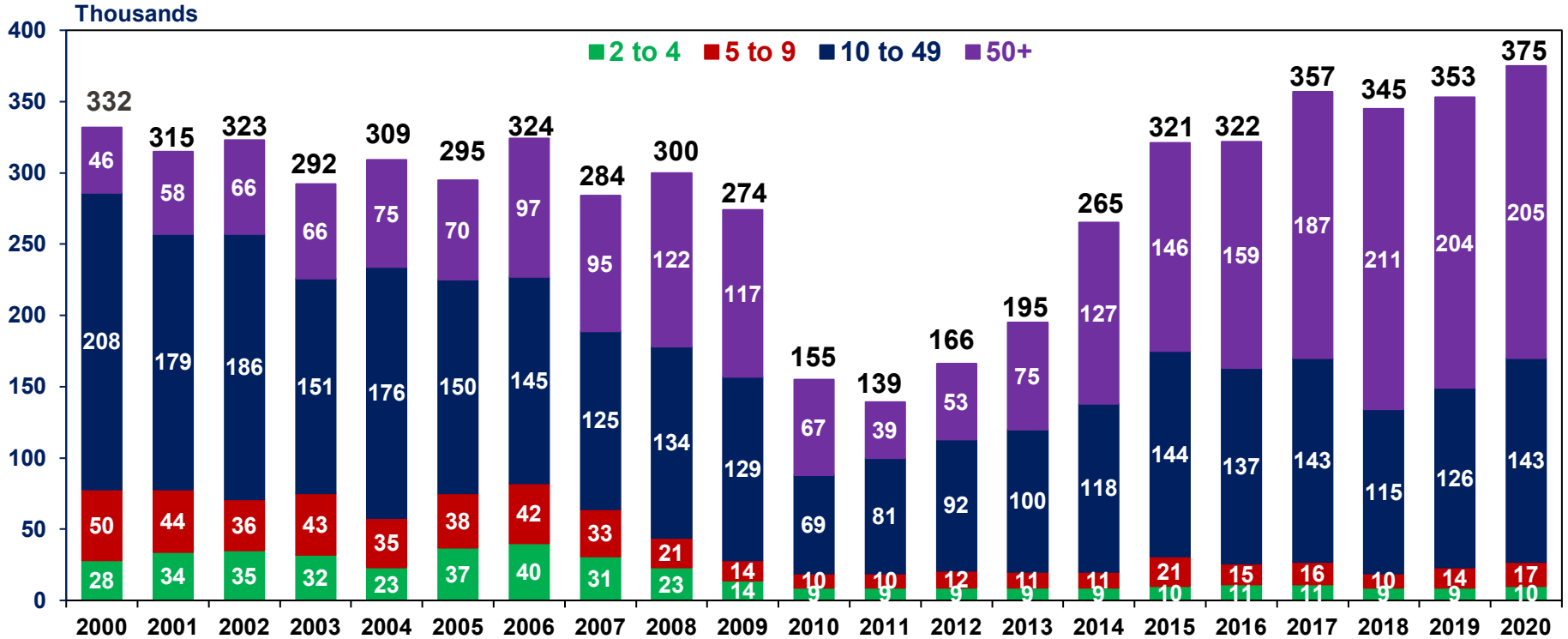
Growth Rate by Quintile



Source: U.S. Census Bureau (BOC)

Multifamily Buildings Completed By Units

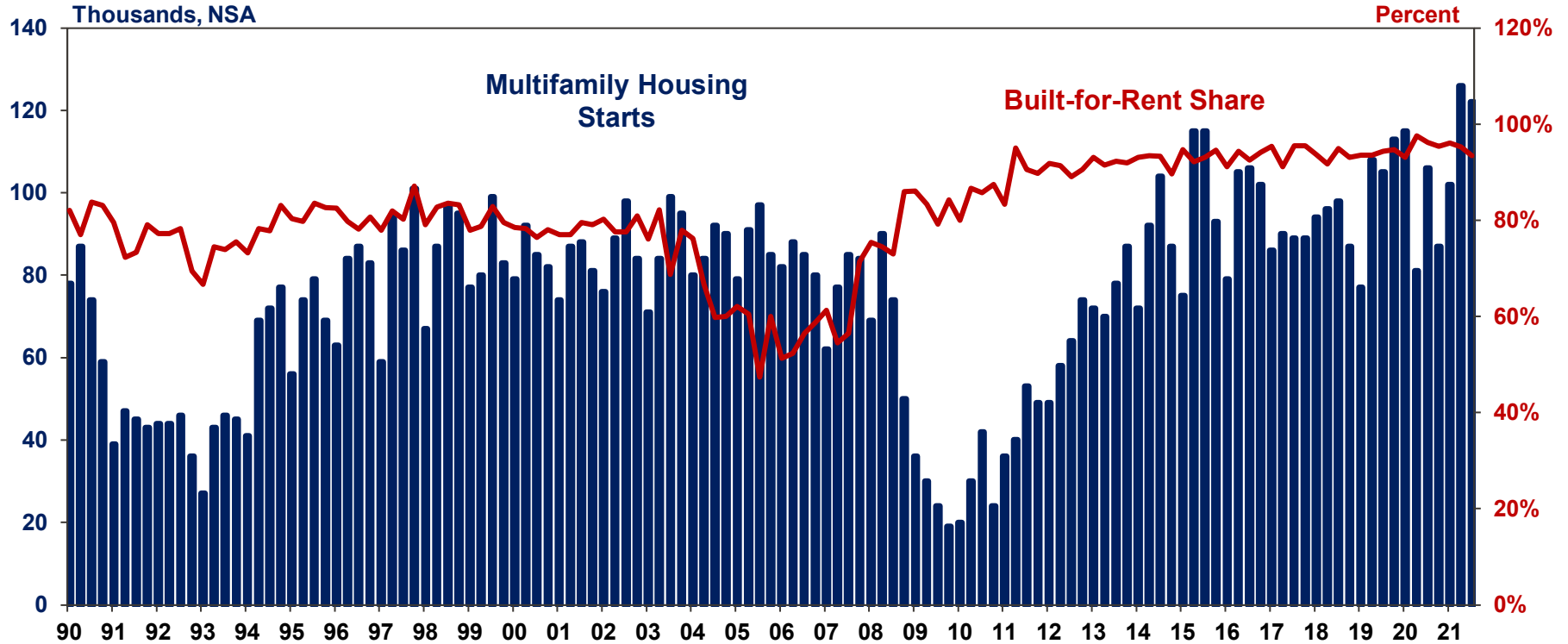
The share of 50+ unit property declined to 55% in 2020



Source: U.S. Census Bureau (BOC).

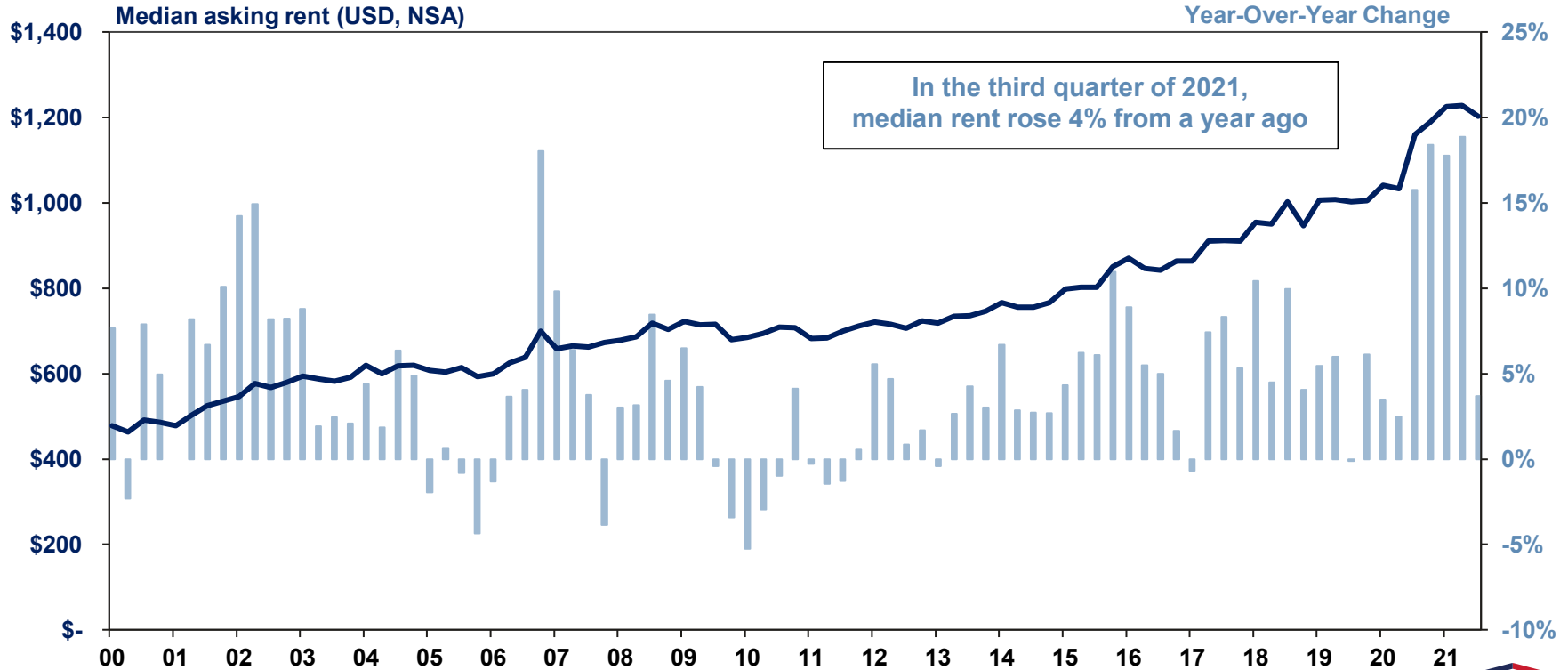
Multifamily Construction

Rental production dominates



Source: U.S. Census Bureau (BOC).

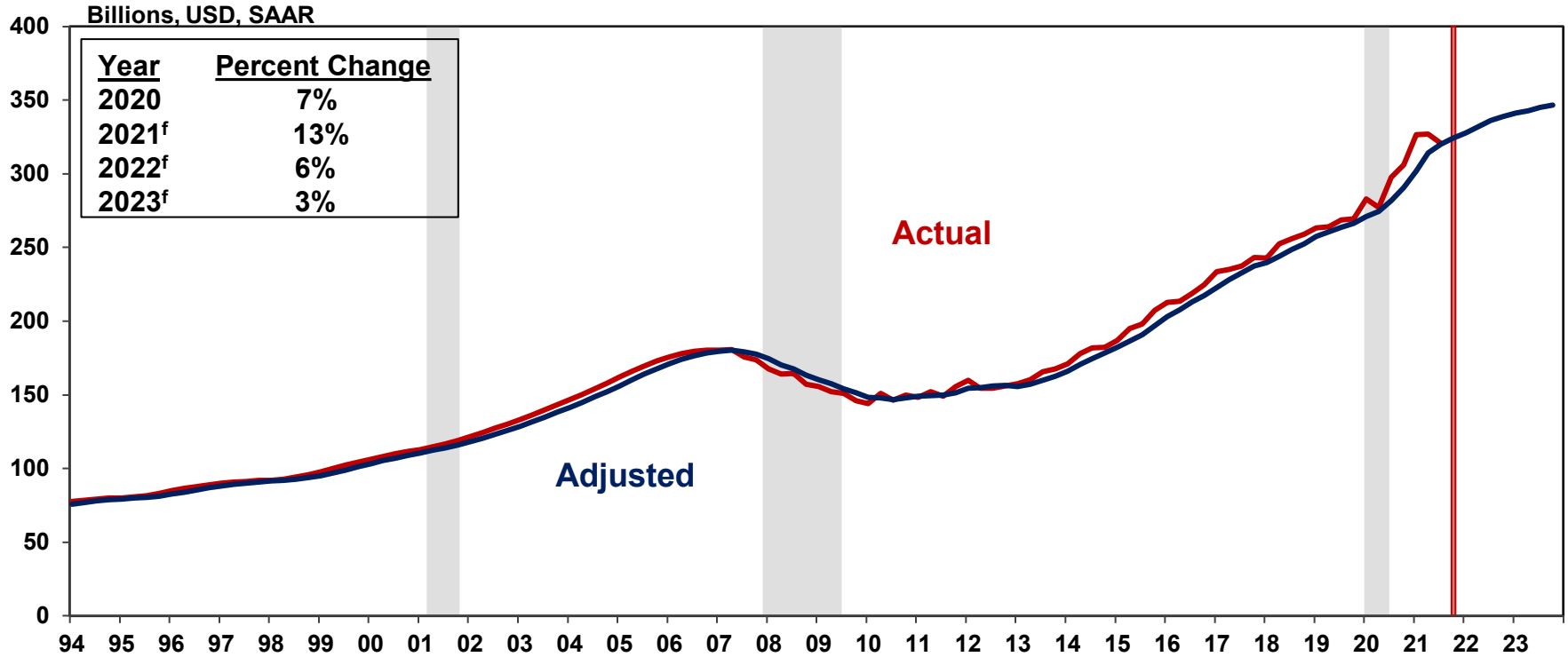
Rent Growth Slowing



Source: U.S. Census Bureau (BOC): Housing Vacancy Survey

Residential Remodeling

Remodeling growth will continue as people use their homes for more purposes

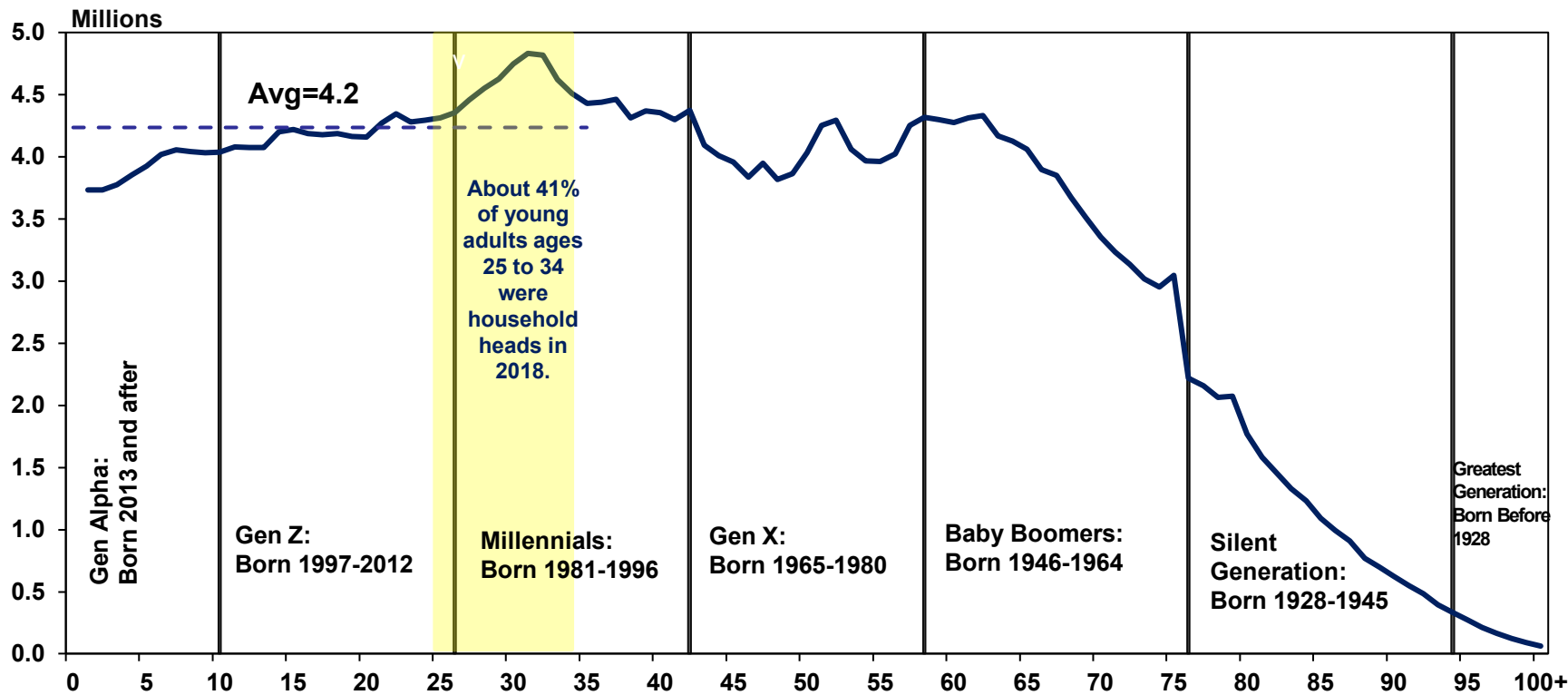


Source: U.S. Bureau of Economic Analysis (BEA): National Income and Product Accounts (NIPA) and NAHB forecast.

Note: In the analysis, 1-year moving average is used for adjusted data to smooth the trend.

Rising Population Entering Housing Demand Years: 2022

Gen X the majority of new construction home buyers



Source: U.S. Census Bureau (BOC).

/ 10-Year Political and Economic Outlook

- More people working at home
- Competition for training/4-year degree
- More multigenerational households
- More building reduces U.S. housing deficit
- No silver tsunami
- More teardown construction
- No long-run change for homeownership
- China will become old before rich
- First Gen-X president
- Lower population growth/birth rates
- Higher taxes and inflation
- More crime in urban areas
- Opioid crisis continues
- Another pandemic
- Climate change politics
- Larger homes
- More education paths
- More housing needed
- Can exceed 1.2M SF starts
- No housing surplus
- More local builder demand
- Lower rate forecasts are wrong
- China long-run threat smaller
- Changing political culture
- Lower housing demand 10-15 years
- Household income/wealth lower
- Housing demand shift out
- Affects younger workers
- Housing demand shift out
- Land development harder

Thank you

Questions?

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eyeonhousing.org
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