
Economic and Housing Market Update

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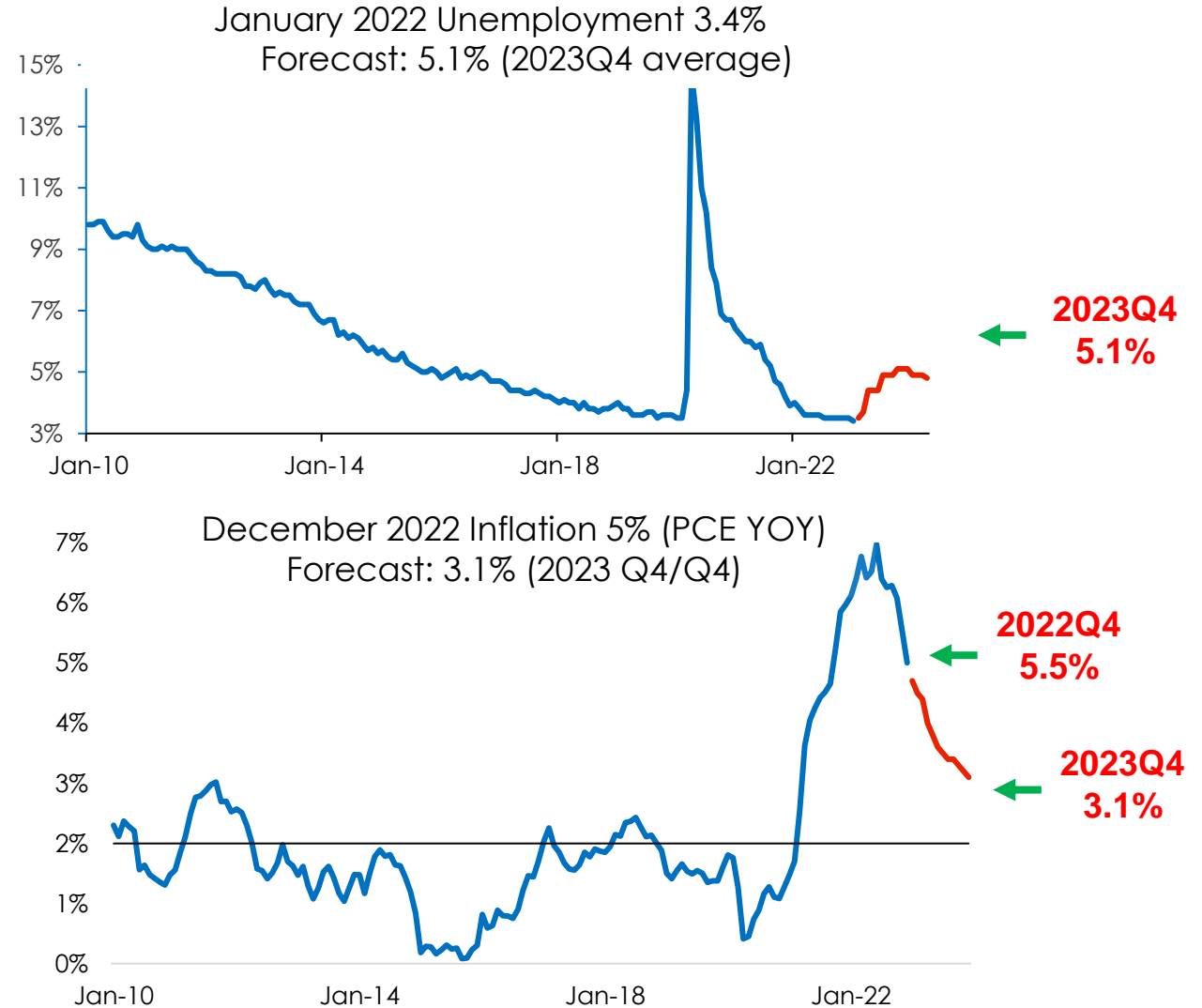


Economic and Housing Market Update

- Persistent inflation suggests more Fed tightening
 - Fed likely to push the federal funds rate to 5% or higher; tipping U.S. into recession in Q1 2023
 - Cuts to federal funds rate unlikely until 2024
- Buyer and seller standoff
 - Buyers facing worst affordability on record
 - Sellers contending with strong lock-in effect - Inventory challenges remain
- Mortgage origination counts fall by more than one half in 2022, another fifth in 2023
 - Increased use of ARM loans may introduce more market risk
- Home price forecast to slow to 1% annual average in 2023, declines in some states
- Over a decade of home price increases boosted home equity
 - HELOC use increases with record home equity
 - Home equity cushions borrowers from default
 - Recession could cause serious delinquencies to increase by 1 percentage point

Fed Allowing Recession to Bring Down Inflation

- Congressional dual mandate:
 - Maximum employment
 - **Price stability**
- Unemployment rate at new 50-year low
 - Employment continues to outperform expectations
 - Shallow recession means unemployment increase to 5%
- Fed's "price stability" definition:
 - 2% annual avg. (PCE)
 - Inflation started to moderate
- Fed funds target now 4.5%-4.75%
- Target rate may exceed 5% this year
- Fed rate increases likely to trigger shallow recession in first half of 2023



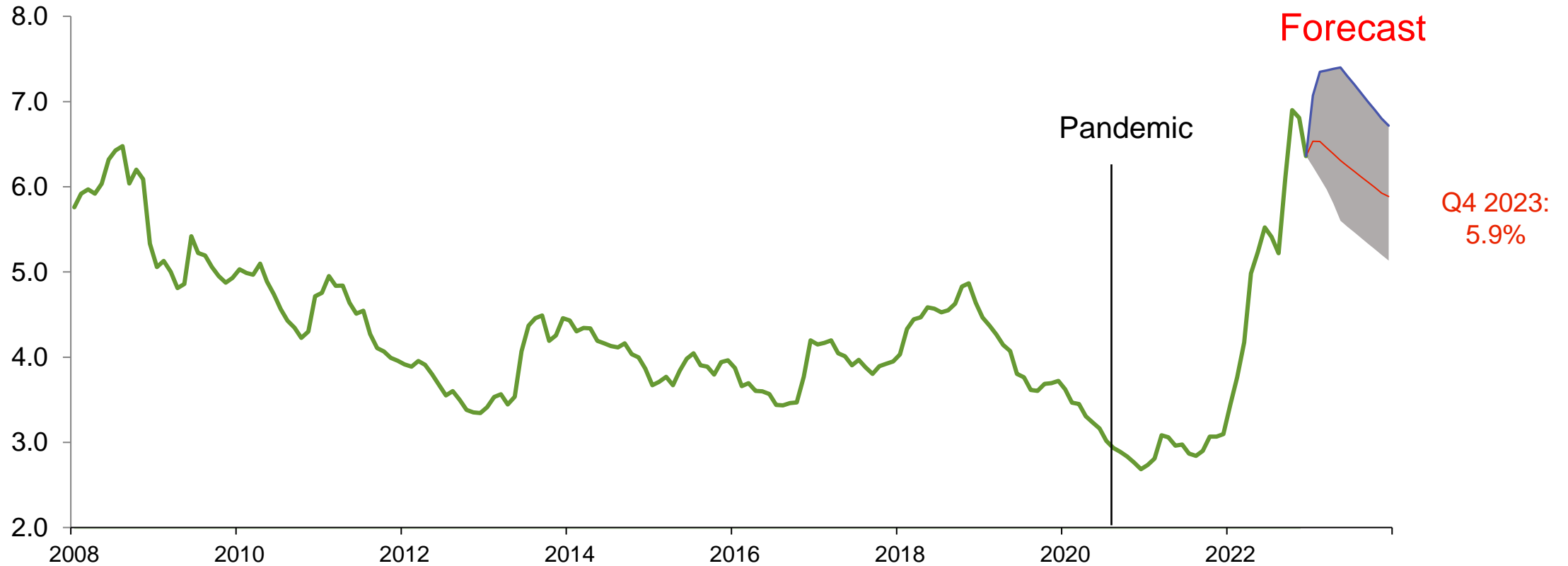
Source: BLS (unemployment rate), BEA (PCE price index), IHS Global Markit (Jan 2023, unemployment and PCE inflation forecast)

Note: "Full employment" estimate from Federal Reserve Board (March 16, 2022, Median 'Longer run' projections of FRB members and Bank presidents) and Congressional Budget Office (July 2021, Noncyclical Rate of Unemployment).

Mortgage Rates Forecast Uncertain

Increase in 2022 was the largest since 1980s, expected to stay in the 6% range

30-year Fixed-Rate Mortgage



Source: Freddie Mac Primary Mortgage Market Survey®, forecast is consensus of five external forecasts (NAHB is high, MBA is low)

Jump in Mortgage Rates and Home Prices Erode Buyer Affordability

November 2022 real P&I payment was 56% higher than a year earlier

Inflation-Adjusted Typical Mortgage Payment

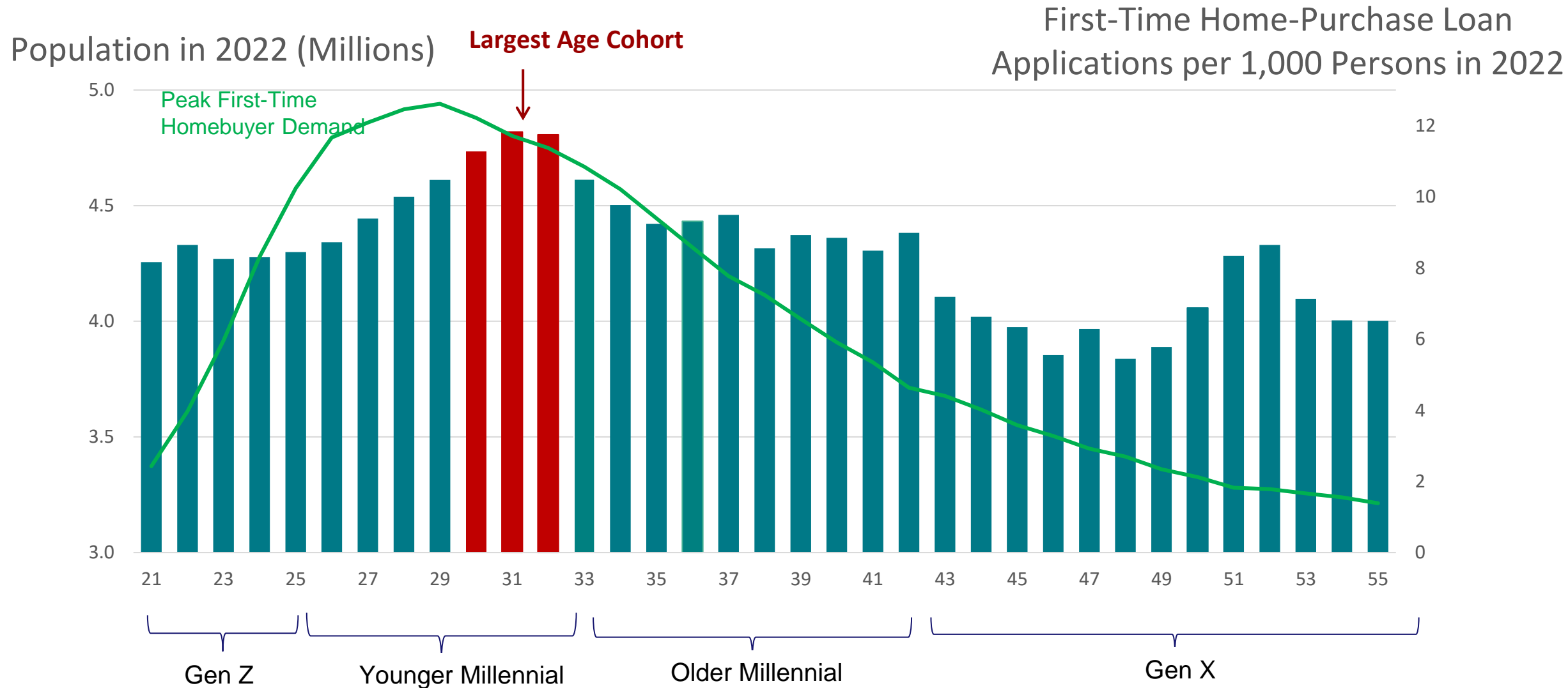


Source: CoreLogic MarketTrends, Bureau of Labor Statistics CPI, Freddie Mac PMMS, IHS Markit

Note: Typical mortgage payment is the calculated monthly principal and interest payment on a median-priced home with 20% down payment and 30-year fixed-rate mortgage. CPI All Urban Consumers is used for the inflation adjustment. Forecast for 30-year fixed-rate mortgage is consensus of five external forecasts (5.9% for November 2023) and prices are CoreLogic HPI Forecast (January 3, 2023 release).

Largest Age Cohort Enters Peak First-Time Homebuyer Age

Oldest Millennials were 41 years old in 2022

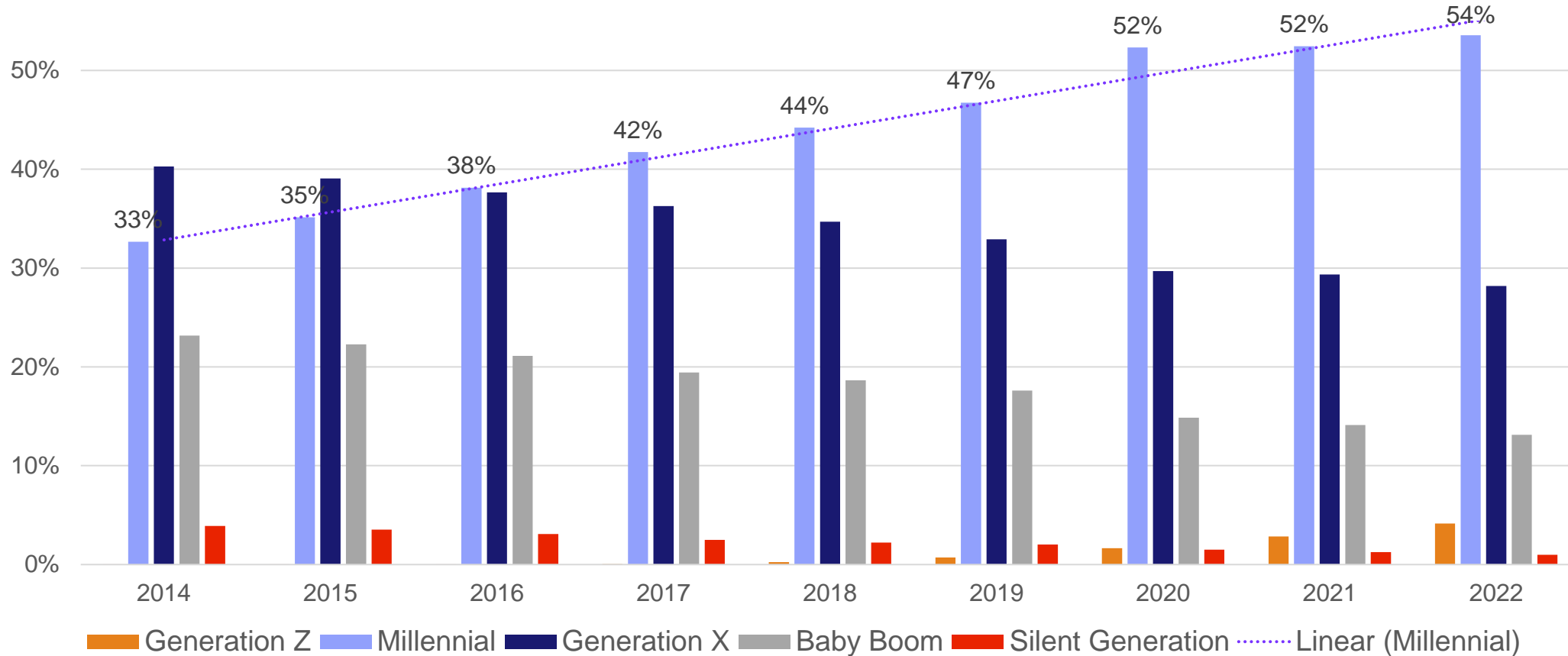


Source: U.S. Census Bureau, CoreLogic Application Data

Millennial Home Purchases Jumped in 2020

And Gen Z started buying, too

Home-Purchase Loan Applications by Cohort Share (percent)

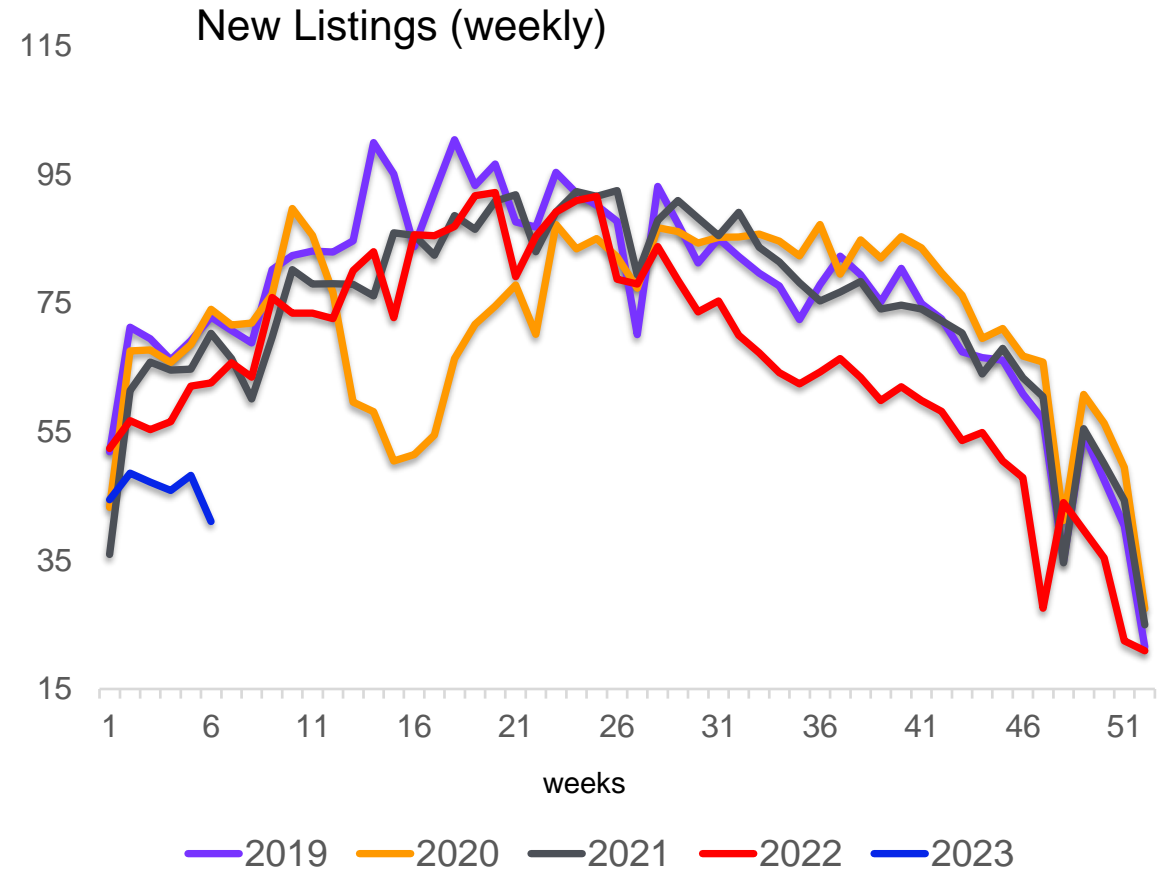
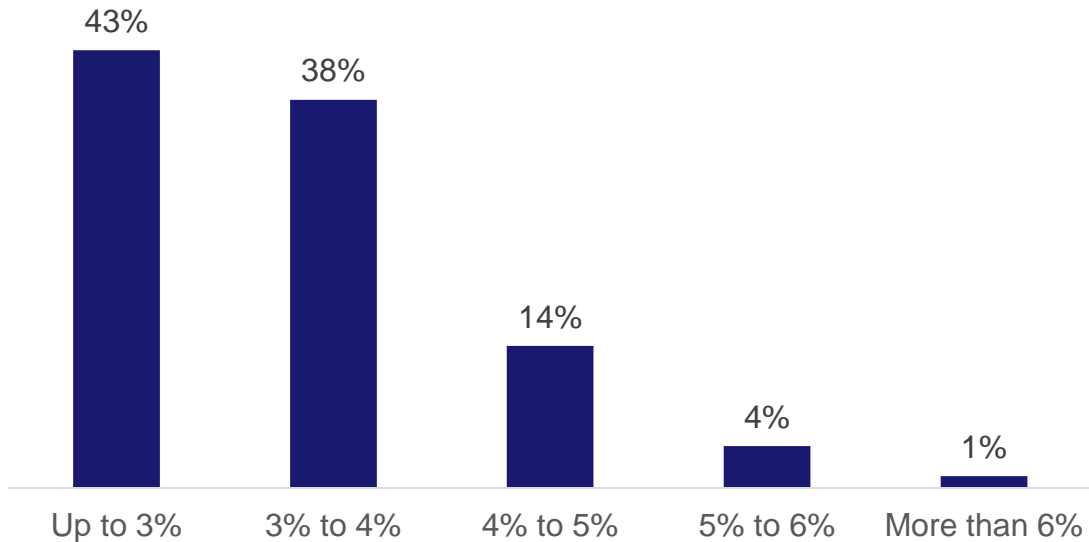


Note: Birth years by cohort: Generation Z after 1997, Millennial 1981-1996, Generation X 1965-1980, Baby Boom 1946-1964, Silent Generation before 1946
Source: CoreLogic home-purchase loan applications

Inventory Challenge: Higher Mortgage Rate Disincentivize New Listings

At over 6% current mortgage rate, 99% of mortgage debt outstanding has locked-in lower mortgage rate

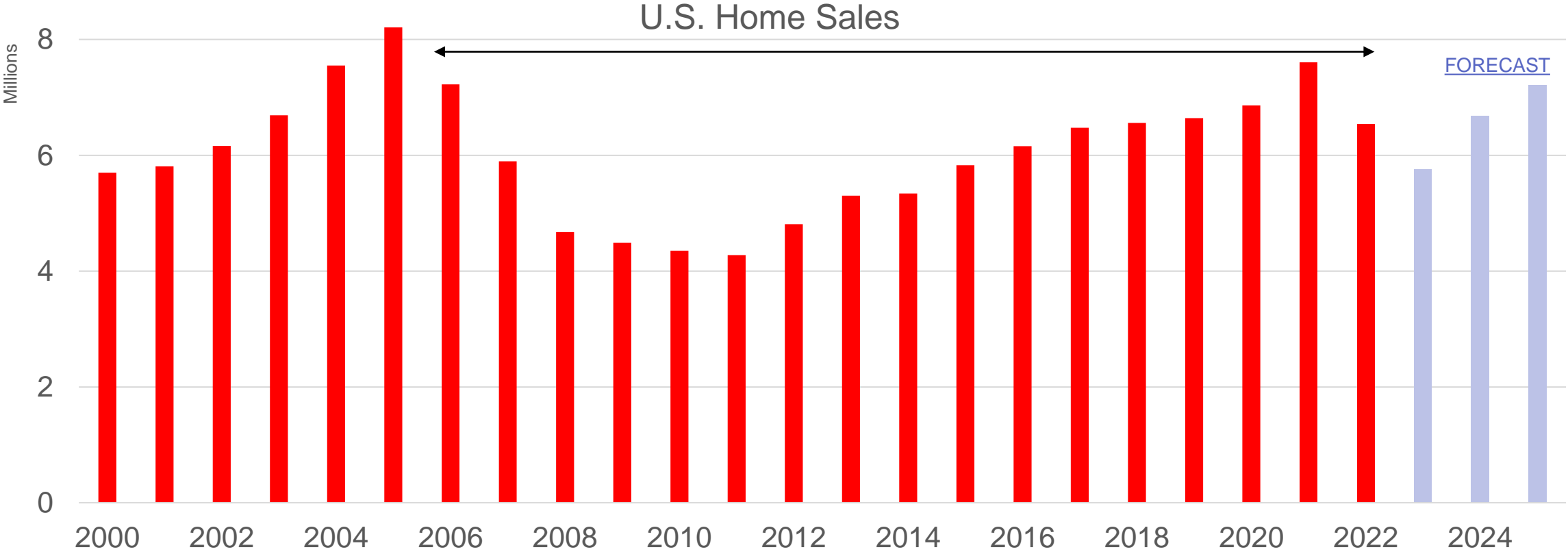
Mortgage Rate of Outstanding Mortgages As of December 2022



Source: CoreLogic MLS, February 13, 2023; CoreLogic TrueStanding Servicing as of December 2022

Home Buying Demand Collapses; Lowest Sales in a Decade

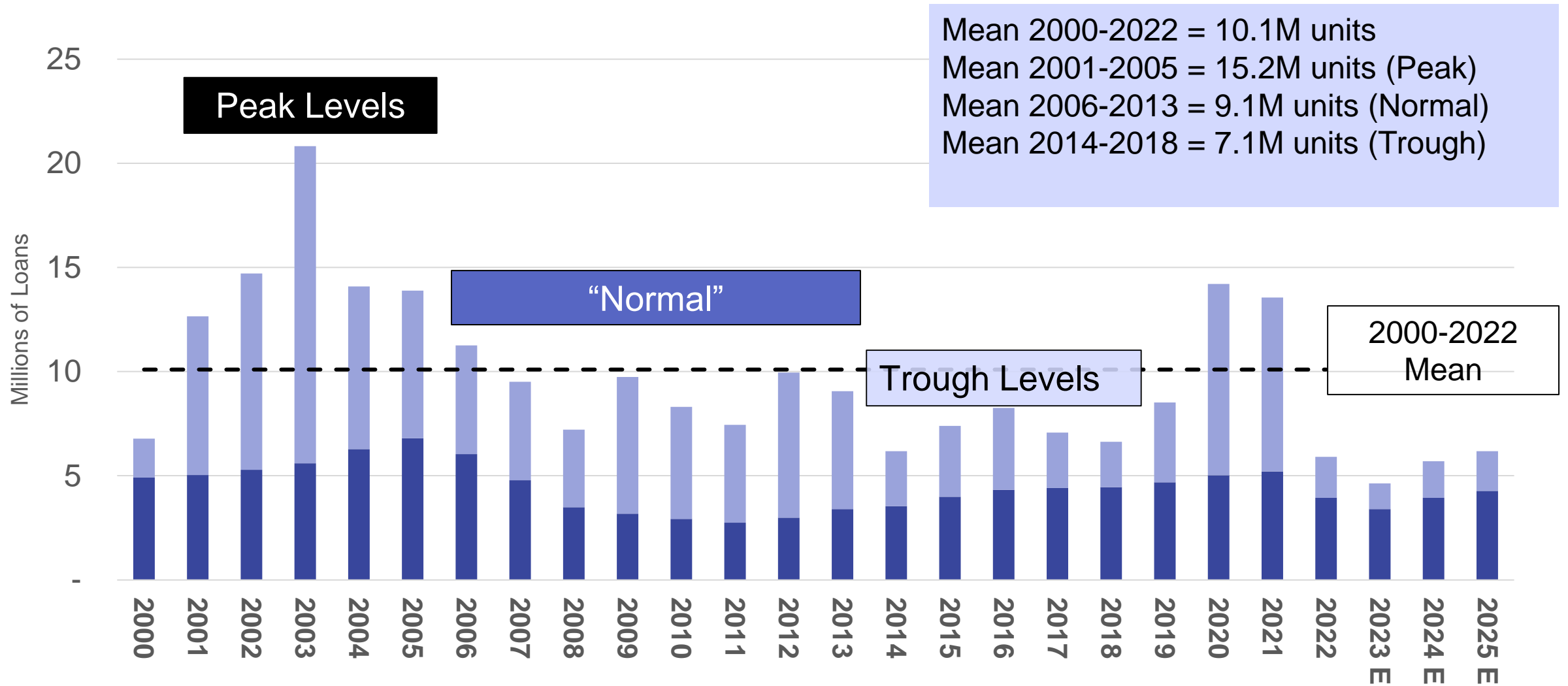
Recovery begins in 2024 and extends into 2025



Source: CoreLogic MarketTrends, Total Sales, MBA Mortgage Finance Forecast change rate (2023-2025; January 19, 2022)

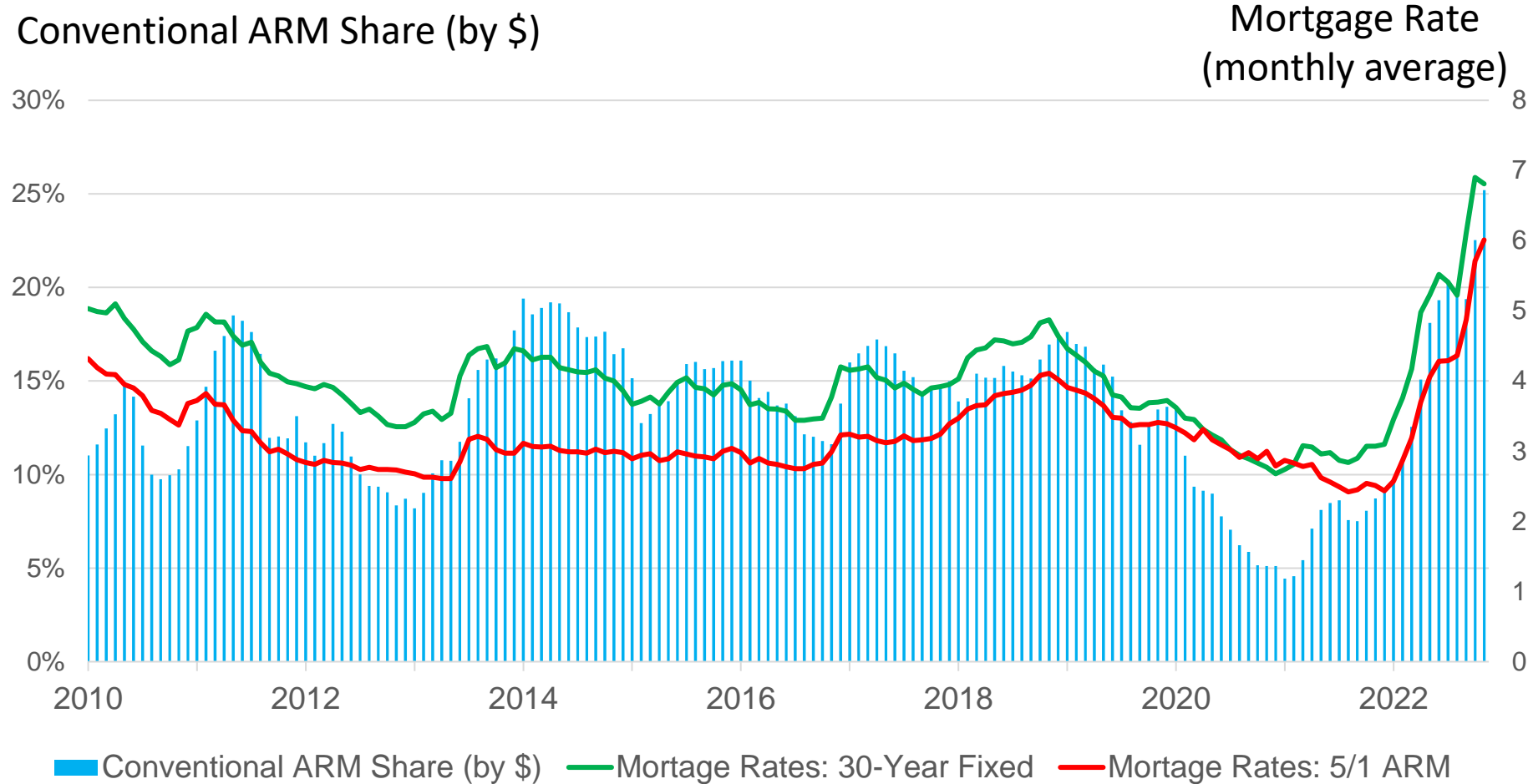
Mortgage Origination Counts Forecast Below “Normal” Levels

Purchase Activity to Grow, Refinance Activity to Remain Low



ARM Share Up With Rise in FRM Rates

ARM Share bottomed at 4% in January 2021, rose to 25% by November 2022; highest in 14 years



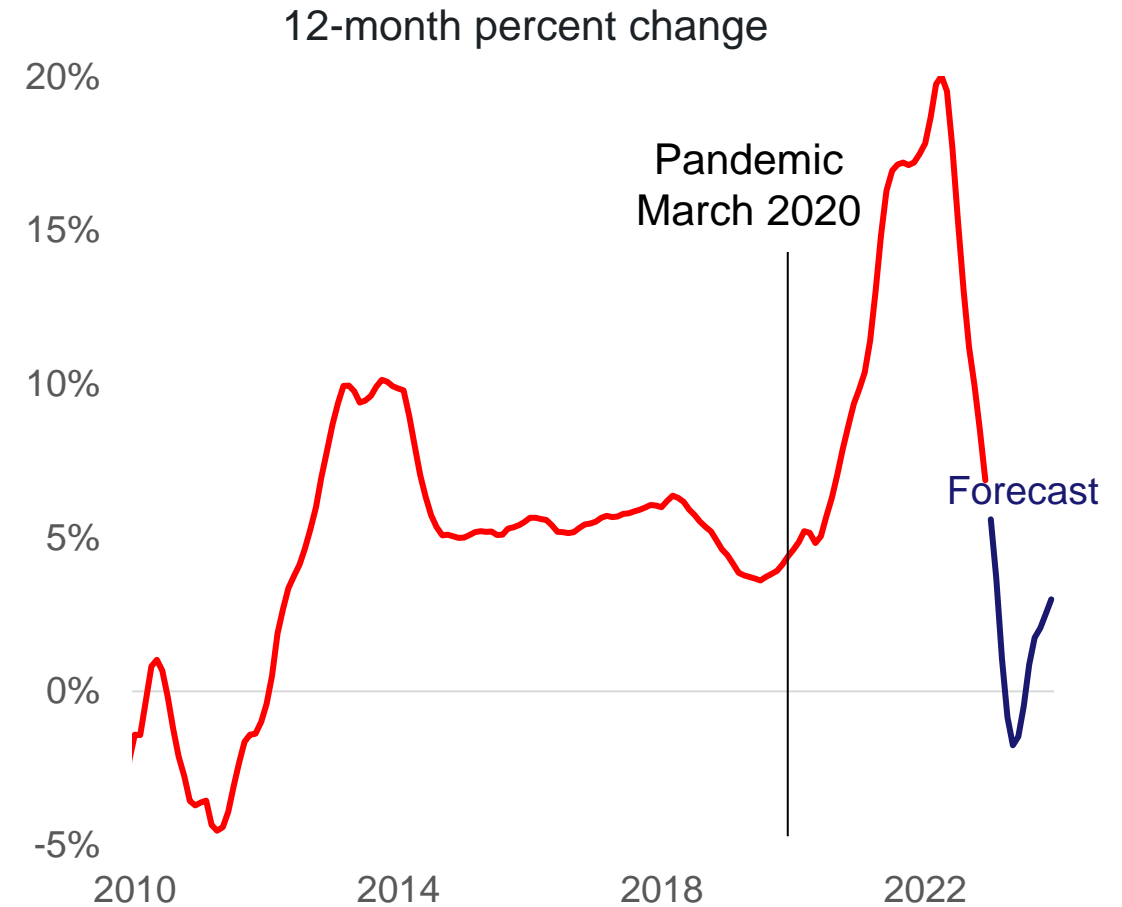
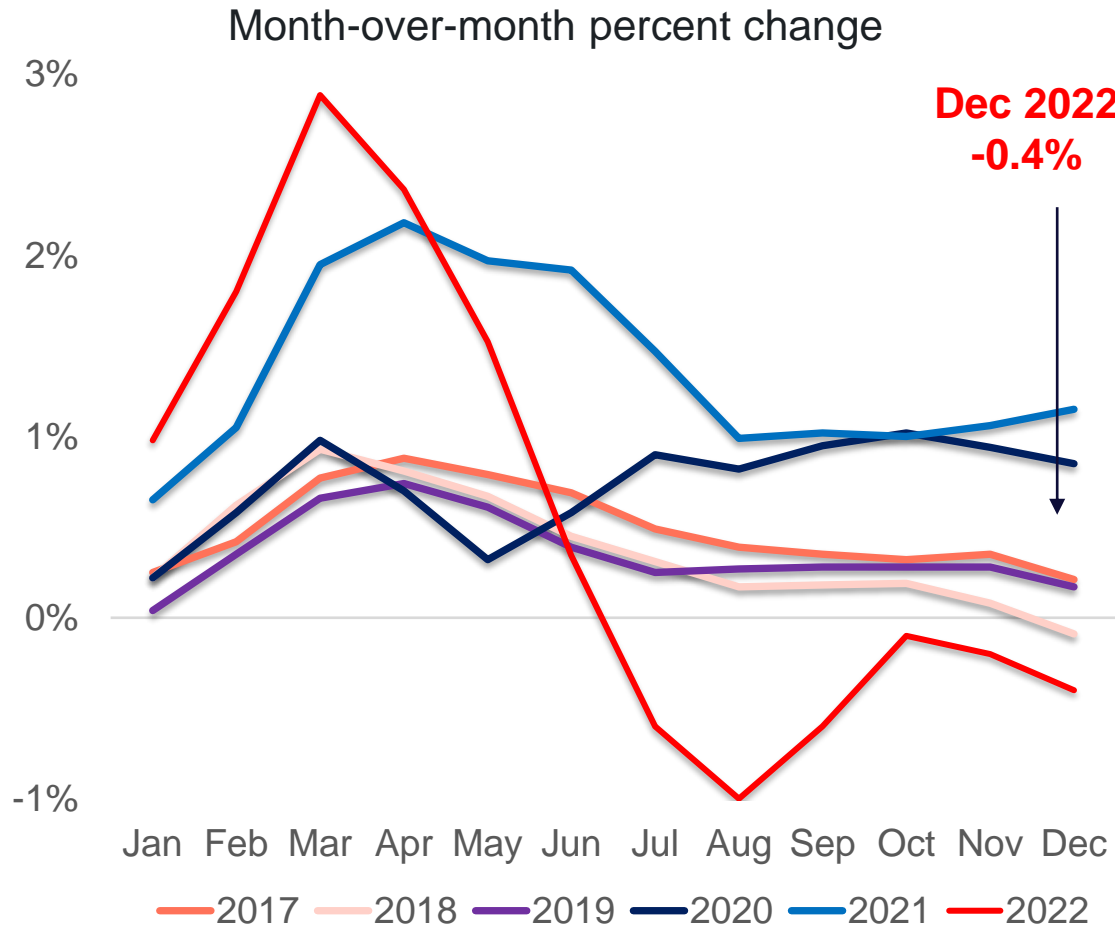
ARM share increases with loan size. ARM share in November 2022:

- \$200K-\$400K: 15%
- \$400K-\$1M: 26%
- Above \$1M: 51%

Source: CoreLogic, Freddie Mac.

Home Price Growth to Continue to Slow

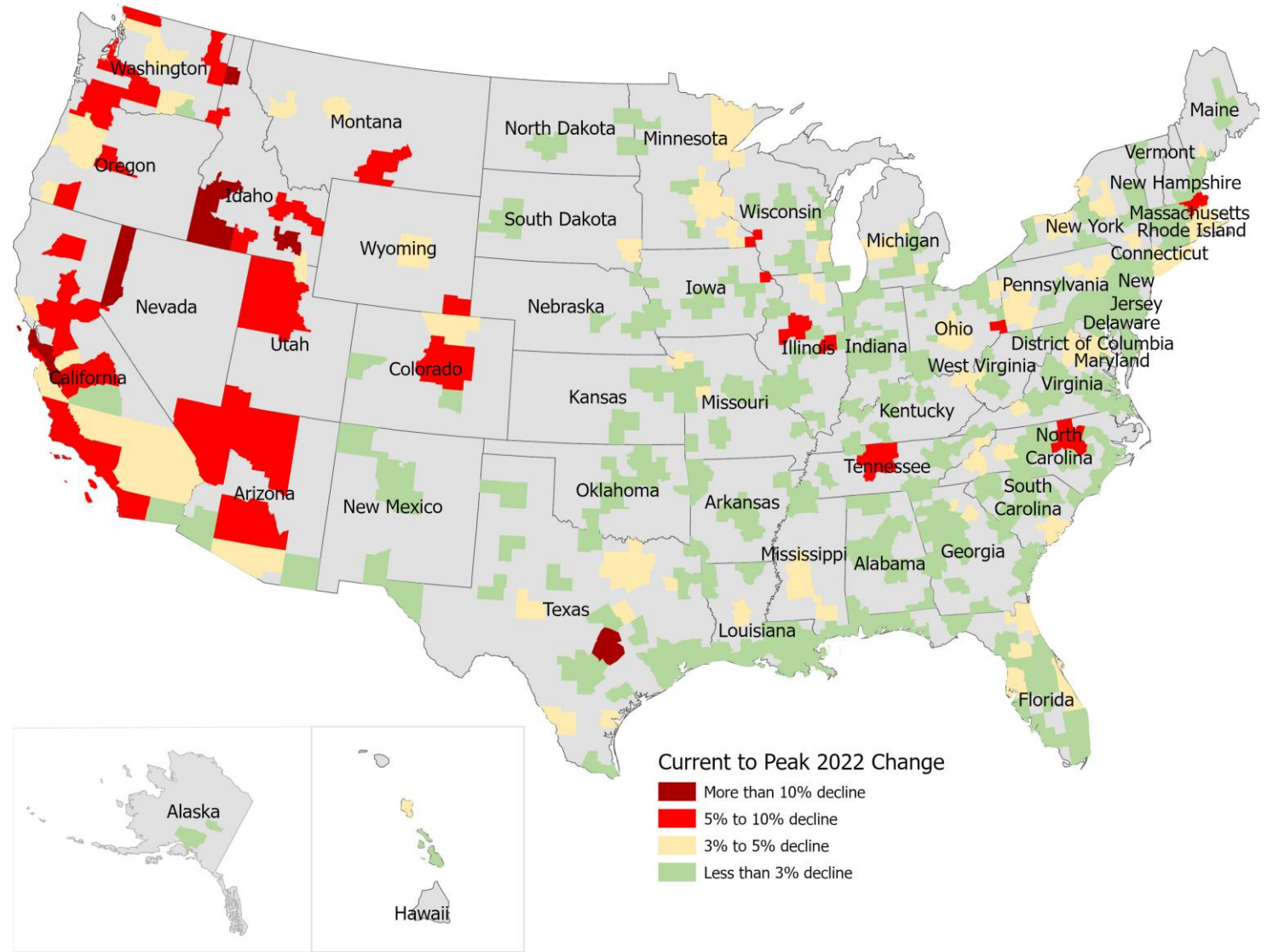
Expected peak to trough decline of ~4% nationally; 2023 Average +1.3%



Home Prices Down 3.2% From Spring Peak, Still 35% Up from March 2020

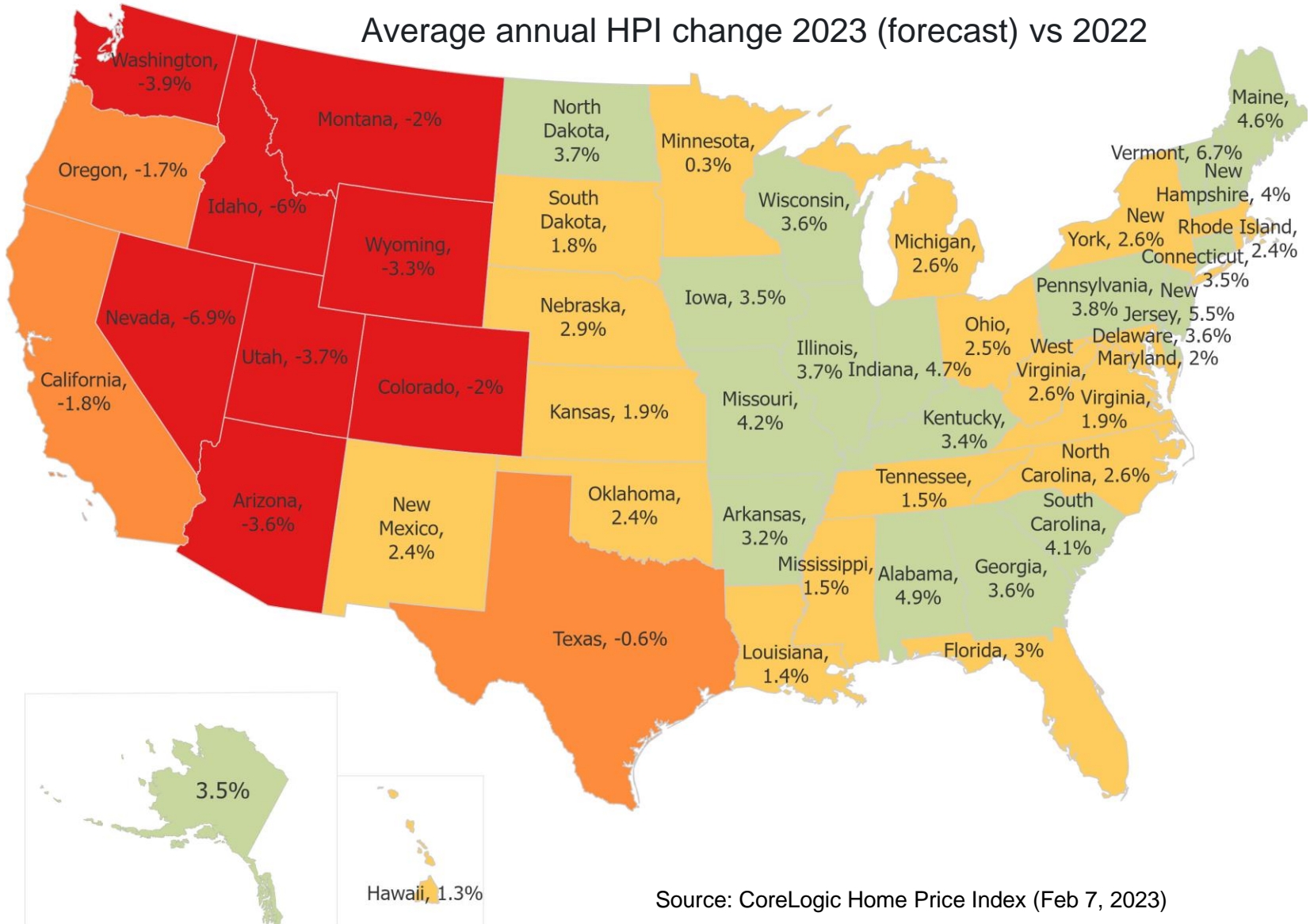
All metros have seen some price decline since spring peak, and 17 are down year-over-year

Metros with largest cumulative declines since peak:	Current to Peak 2022
San Rafael CA	-14%
Oakland-Hayward-Berkeley CA	-14%
Seattle-Bellevue-Everett WA	-13%
Boise City ID	-13%
San Jose-Sunnyvale-Santa Clara CA	-13%
San Francisco-Redwood CA	-12%
Coeur d'Alene ID	-12%
Austin-Round Rock TX	-11%
Pocatello ID	-11%
Reno NV	-10%
Boulder CO	-10%
Santa Cruz-Watsonville CA	-10%
Napa CA	-10%
Billings MT	-9%
Stockton-Lodi CA	-9%
Bend-Redmond OR	-9%
Carson City NV	-9%
Lewiston ID-WA	-9%
Olympia-Tumwater WA	-9%
Ogden-Clearfield UT	-8%



COVID-19 Boom States Reset Post-Pandemic

Average annual HPI change 2023 (forecast) vs 2022



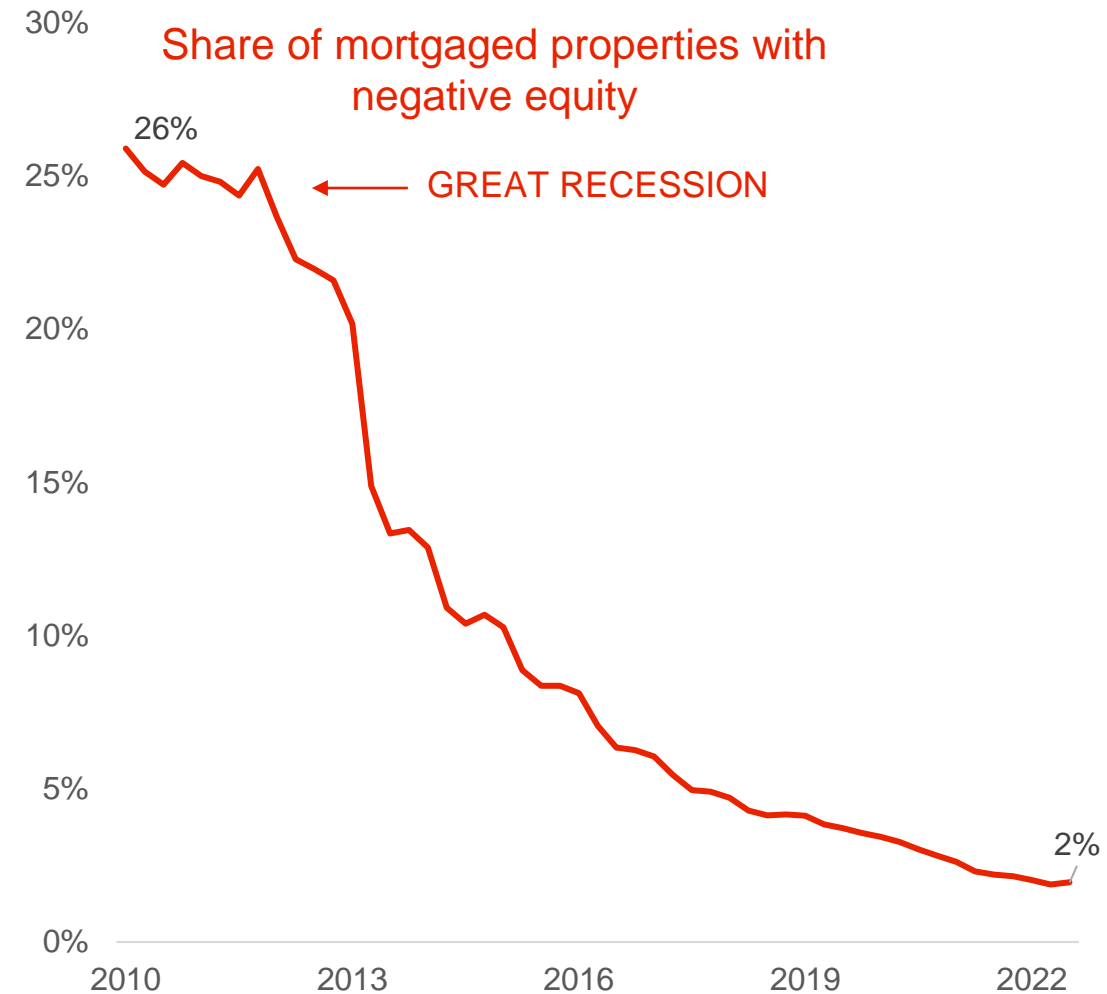
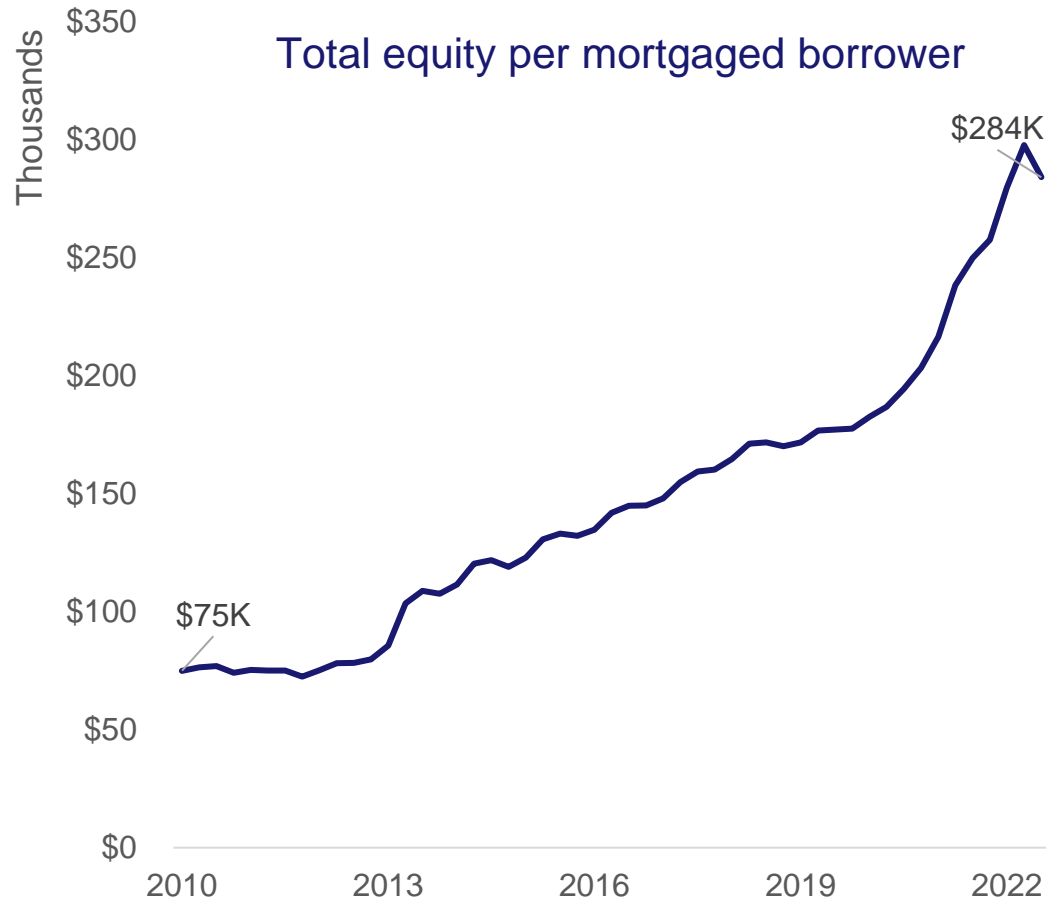
Top 10 states with largest peak to trough declines

Idaho	-11.8%
Nevada	-11.5%
Washington	-11.1%
Arizona	-8.4%
California	-8.2%
Utah	-8.0%
Wyoming	-7.8%
Montana	-7.1%
Oregon	-6.9%
Colorado	-6.7%

Source: CoreLogic Home Price Index (Feb 7, 2023)

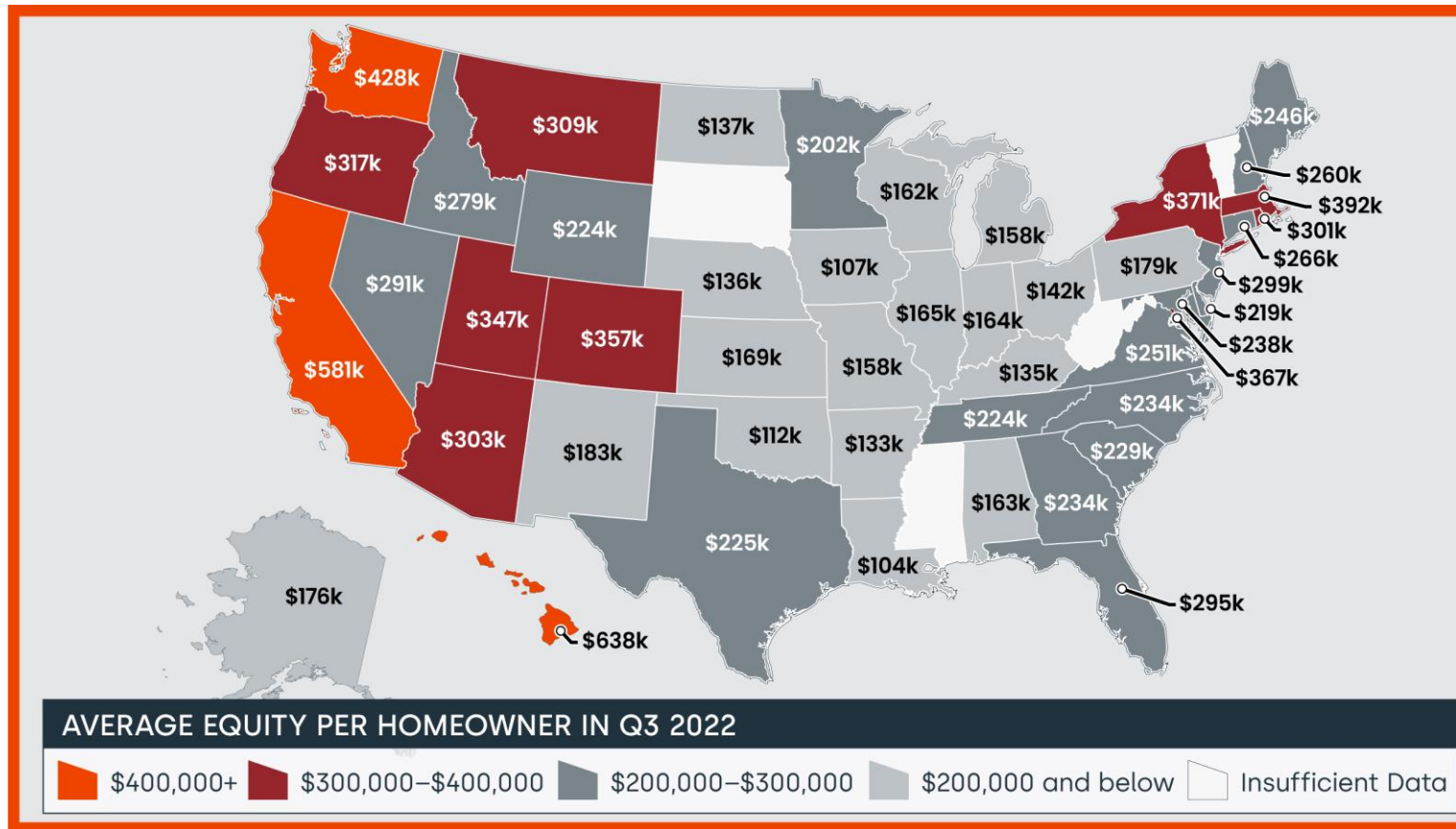
But Home-Equity Offers Financial Buffer for Homeowners

Home prices would have to fall 40% to reach 2010 negative equity shares



Total Home Equity Varies By Location

Average Borrower has nearly \$300K in home equity



Average Equity Per Borrower Highest 5 Metros	
San Rafael, CA	\$ 1,172,833
San Francisco-Redwood City-South San Francisco, CA	\$ 1,102,726
San Jose-Sunnyvale-Santa Clara, CA	\$ 1,040,952
Santa Cruz-Watsonville, CA	\$ 863,605
Anaheim-Santa Ana-Irvine, CA	\$ 781,866
Lowest 5 Metros	
Springfield, IL	\$ 89,897
Peoria, IL	\$ 83,739
Ottawa-Peru, IL	\$ 81,647
Huntington-Ashland, WV-KY-OH	\$ 75,832
Shreveport-Bossier City, LA	\$ 73,650

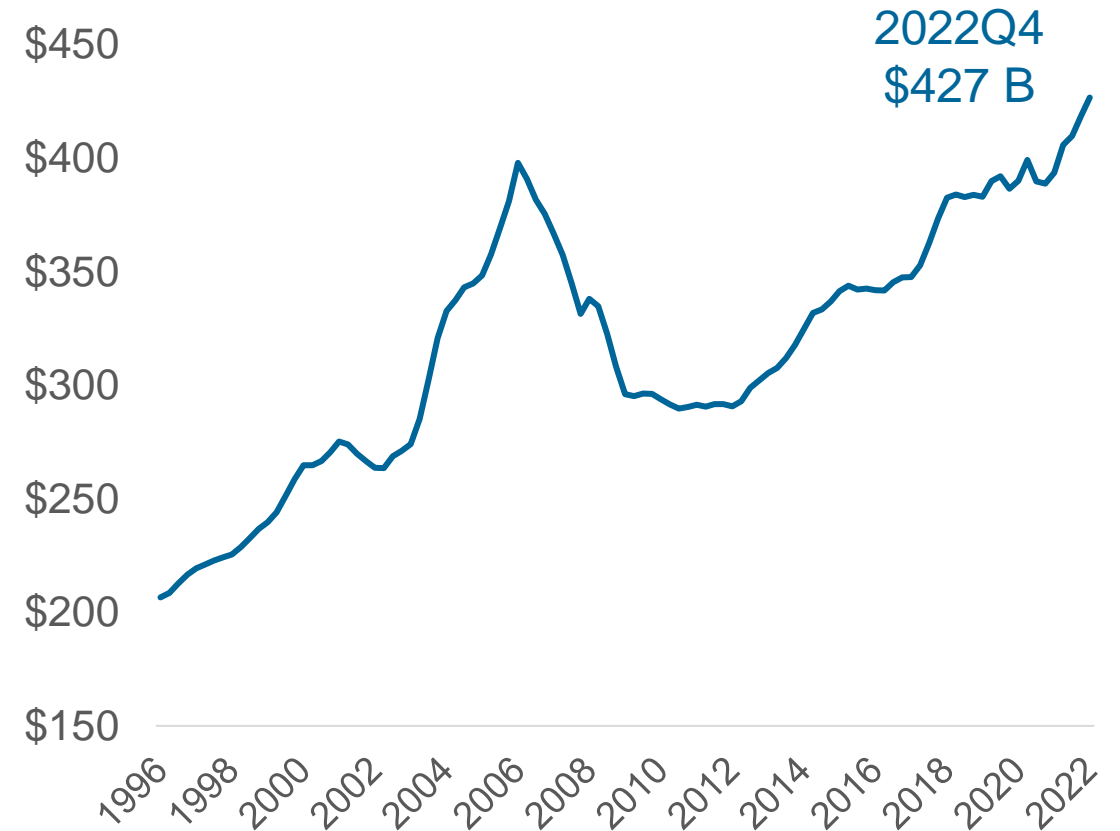
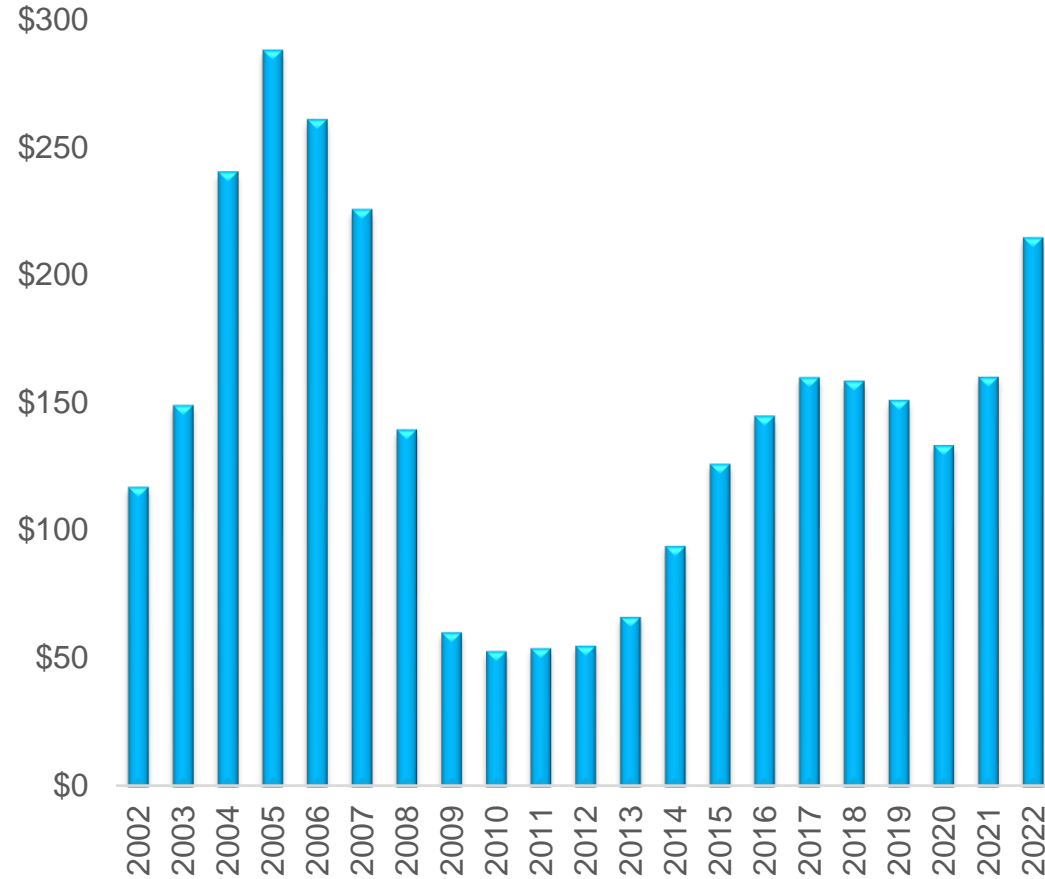
Source: CoreLogic Home Equity Report for 2022Q2 (December 9, 2022)

HELOC Activity Grew to the Highest Level Since 2007

Home Equity Funds Home Improvements and Repairs

HELOCs Authorized (billions of \$): During Q1 to Q3

Homeowner Improvements and Repairs (billions of \$)

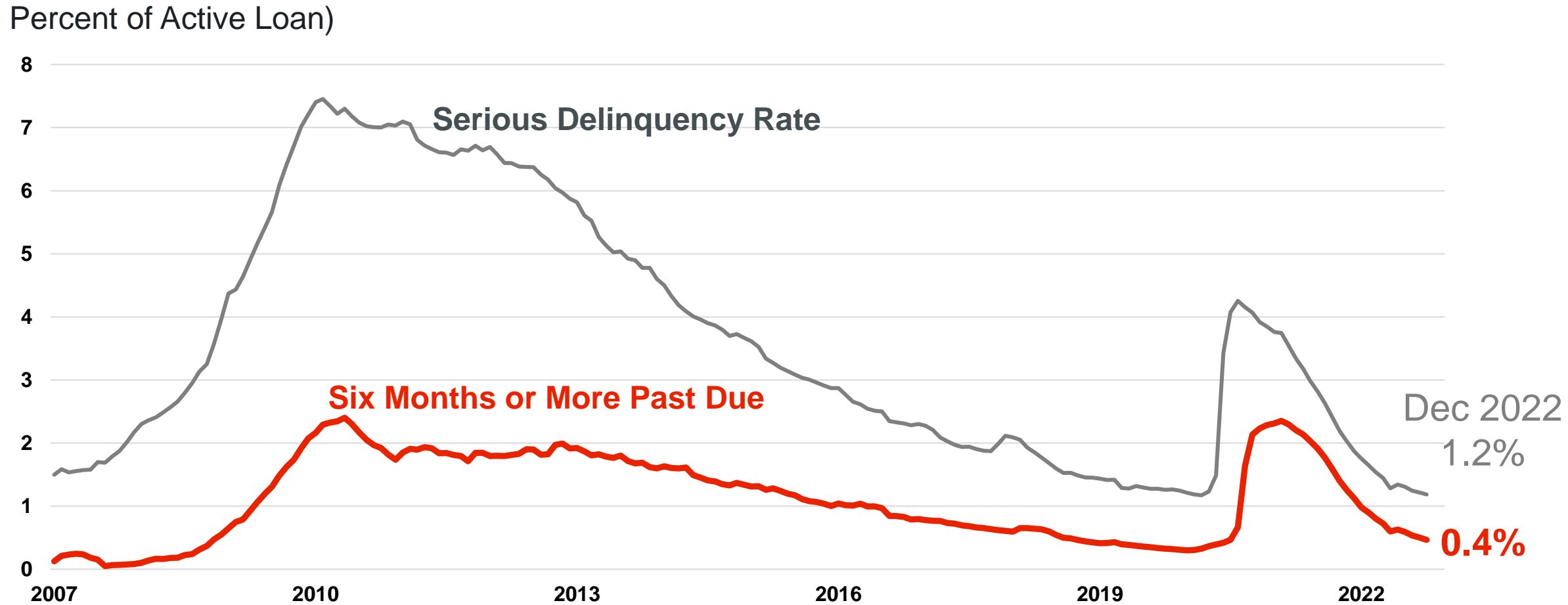


Source: CoreLogic Public Records, Harvard University Joint Center for Housing LIRA, Bureau of Labor Statistics CPI Less Shelter.

Improvements include remodels, replacements, additions, and structural alterations that increase the value of homes. 2022 Dollars in Billions, 4-quarter moving total

Serious Delinquencies Back to Pre-COVID Level

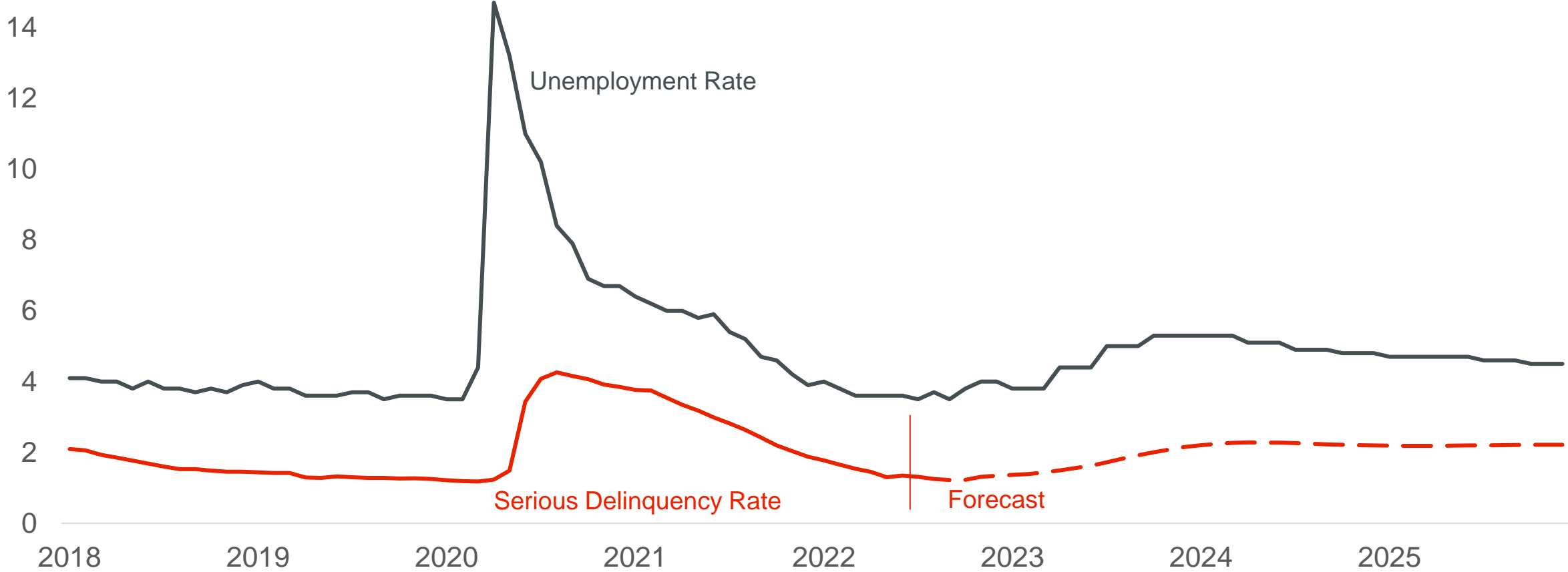
About 232,000 U.S. borrowers still in forbearance programs and declining



Source: CoreLogic TrueStandings Servicing; serious delinquency is at least 90 days delinquent or in foreclosure proceedings

Increase In Unemployment Could Drive Mortgage Defaults

Serious delinquencies peak at 2.3% in 2024, up from 1.2% now, but more than 3x lower than peak at 7.5% in 2010



Source: CoreLogic TrueStandings Servicing; serious delinquency is at least 90 days delinquent or in foreclosure proceedings

Where to find more information

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