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# Macro and Housing Outlook: Housing Slows Amid Affordability Pressures

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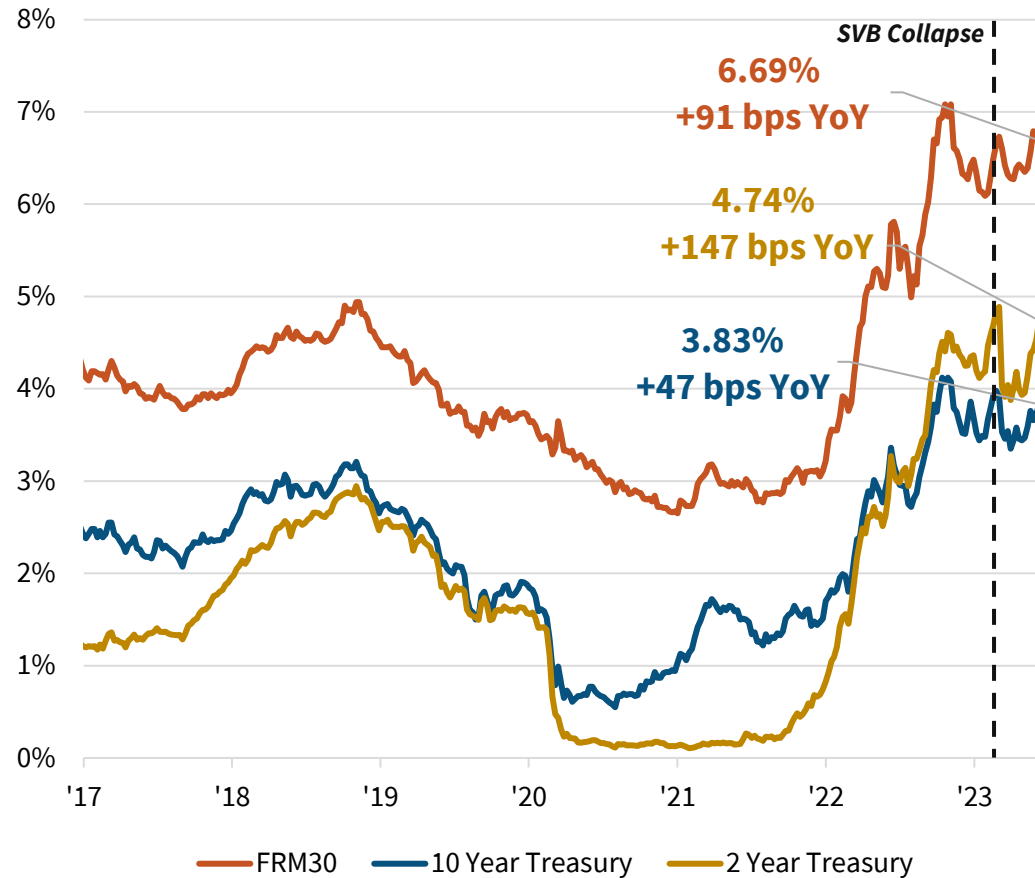


# Macroeconomic Outlook

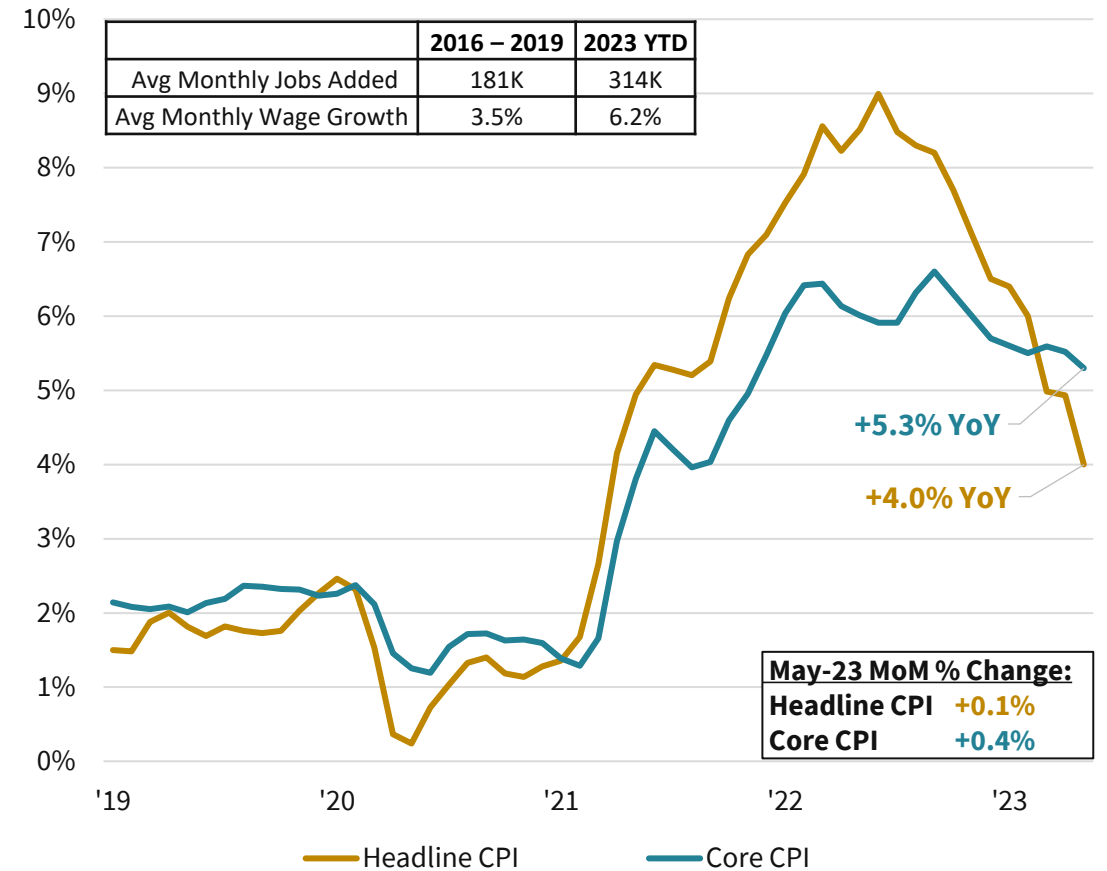
# Long-term rates remain elevated amid persistent inflation

Mortgage rates up meaningfully year over year, and yield curve remains inverted

### Weekly Interest Rates

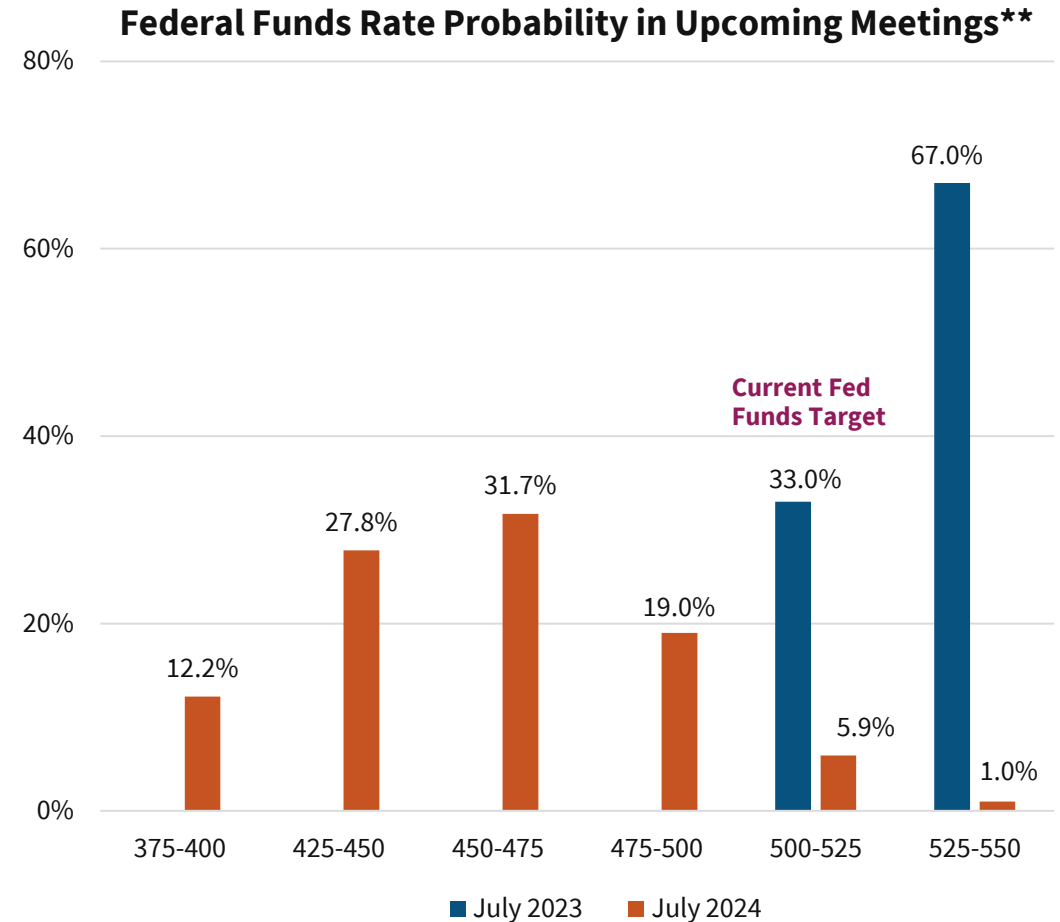
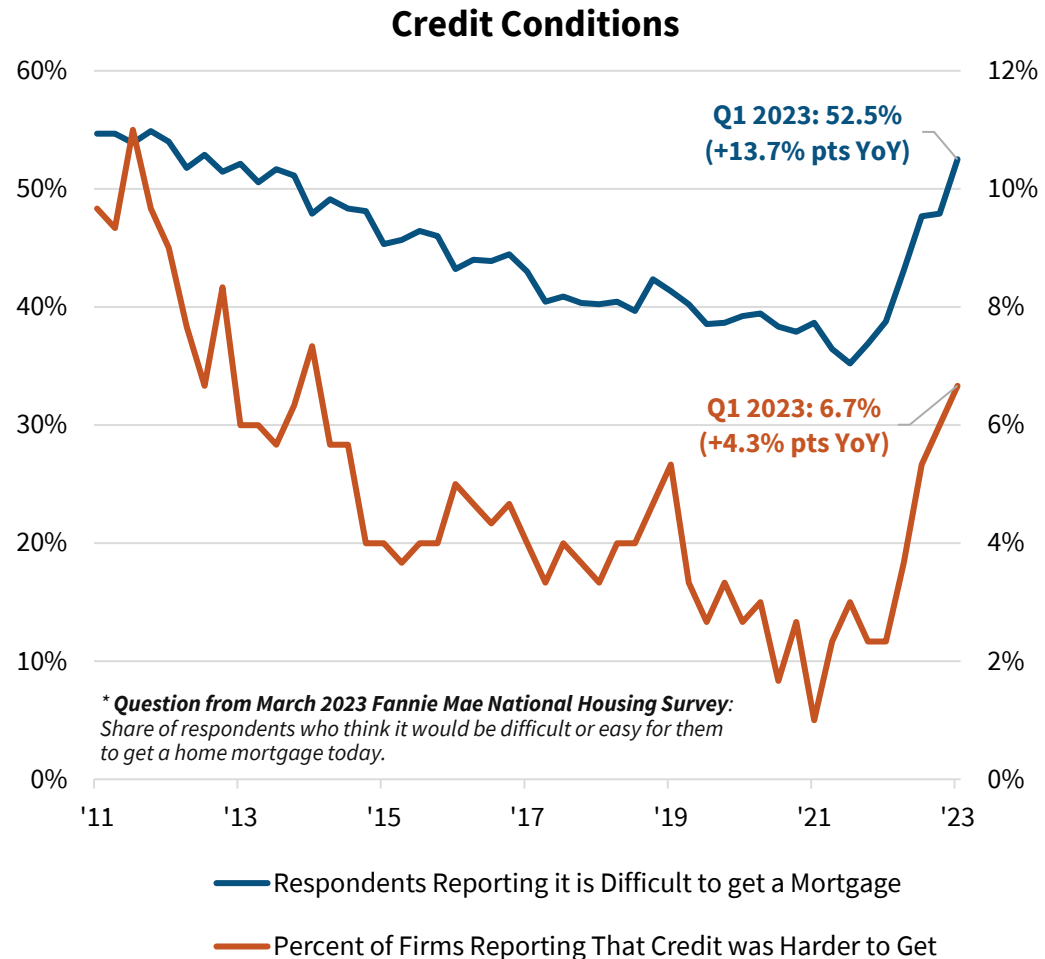


### YoY % Change in CPI



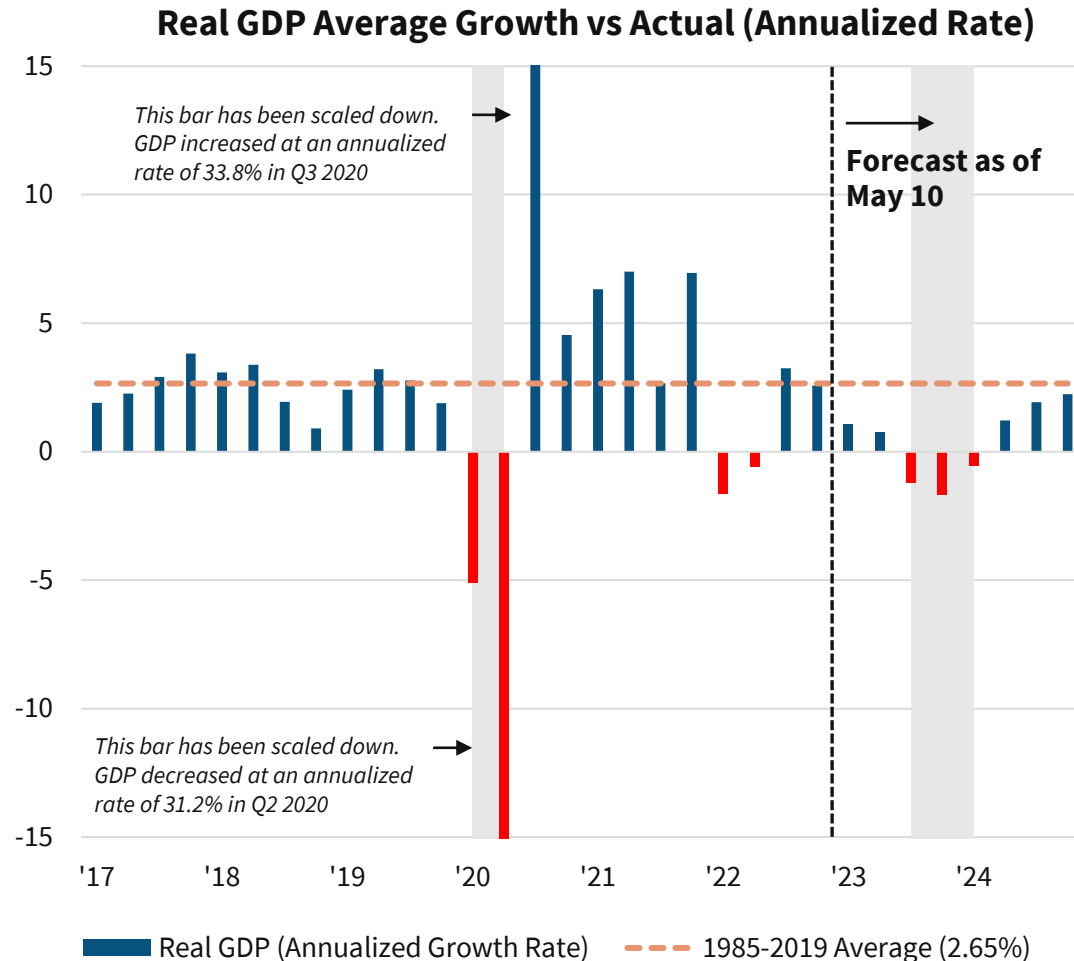
# Credit conditions tighten amid economic uncertainty

Market expects Fed to keep rates at current levels coming out of their June meeting



# Moderate recession expected to begin in second half of 2023

Housing expected to continue to contract along with the broader economy



## 2023 Recession Call

- ❖ **Production/Income Declines**
  - Real GDP to decline annually in 2023 by 0.3% and peak-to-trough (from 2023 Q2 – 2024 Q1) by 0.9%.
- ❖ **Labor Market Weakens**
  - Unemployment rate to increase steadily throughout the year reaching 4.2% in Q4 (and 5.3% in 2024 Q4).
- ❖ **Consumption/Spending Slows**
  - Real personal consumption expenditures to decline by an annualized rate of 1.4% in Q3 and 1.9% in Q4.
- ❖ **Home Sales Fall**
  - New and existing homes sales to decrease annually by 0.2% and 16.1%, respectively in 2023.
- ❖ **Home Prices Decline**
  - Home prices to decrease annually by 1.2% in 2023 and decrease by 2.2% in 2024.
- ❖ **Declining Inflation and Long-term Rates**
  - Headline CPI to decelerate to 3.0% YoY in Q4 as mortgage and Treasury rates fall to 5.3% and 3.3%, respectively, by the end of the year.



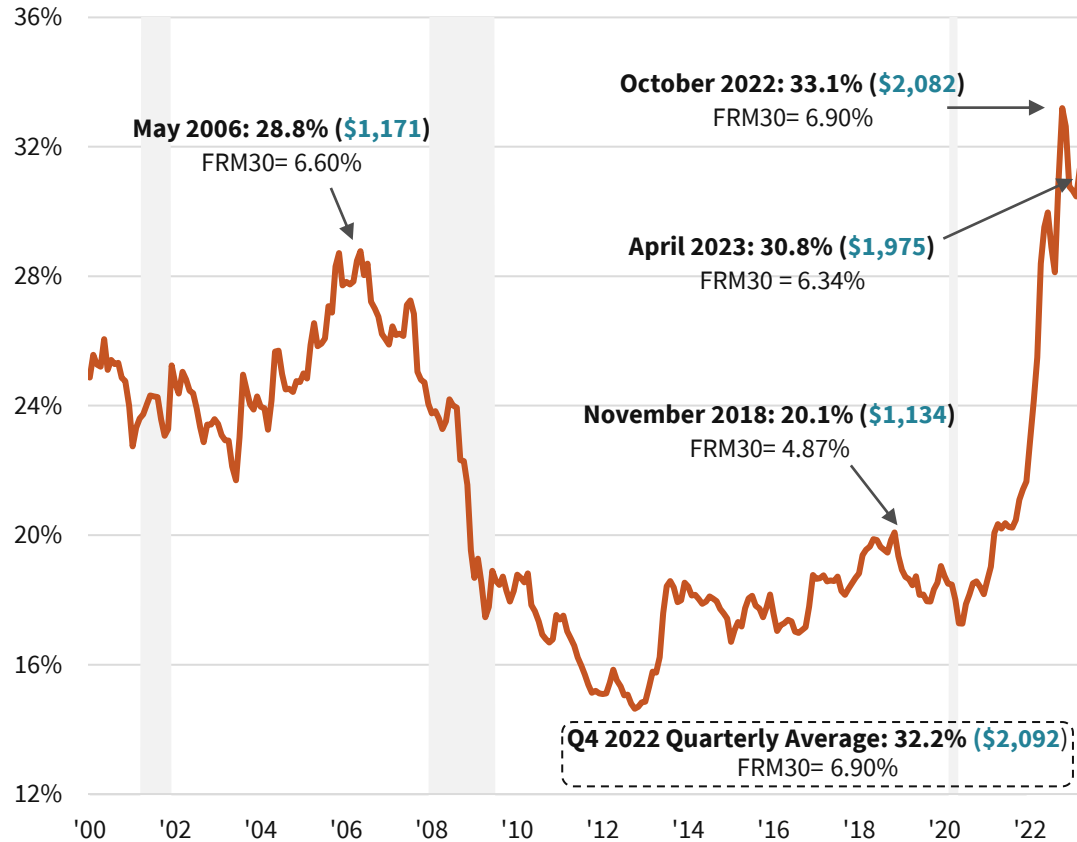


# Single-Family Housing and Mortgage Markets

# Affordability pressures remain at historic highs

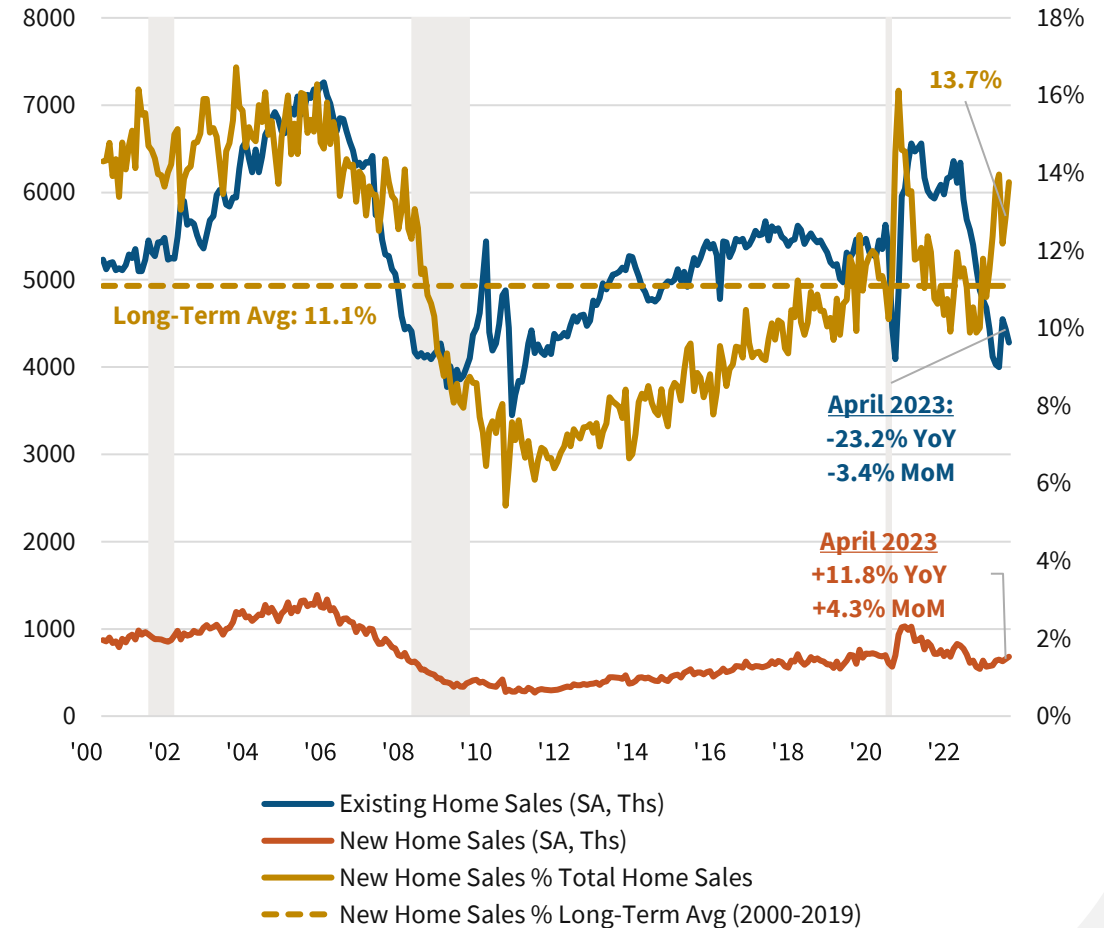
Housing sales and mortgage activity fell dramatically in 2022

Percent of Income Spent on Mortgage Payment for Homebuyers\*



\*Assumes 20% down payment, average 30-yr fixed-rate mortgage, median existing sales price, nominal median household income. Average monthly payments in parentheses.

New and Existing Home Sales

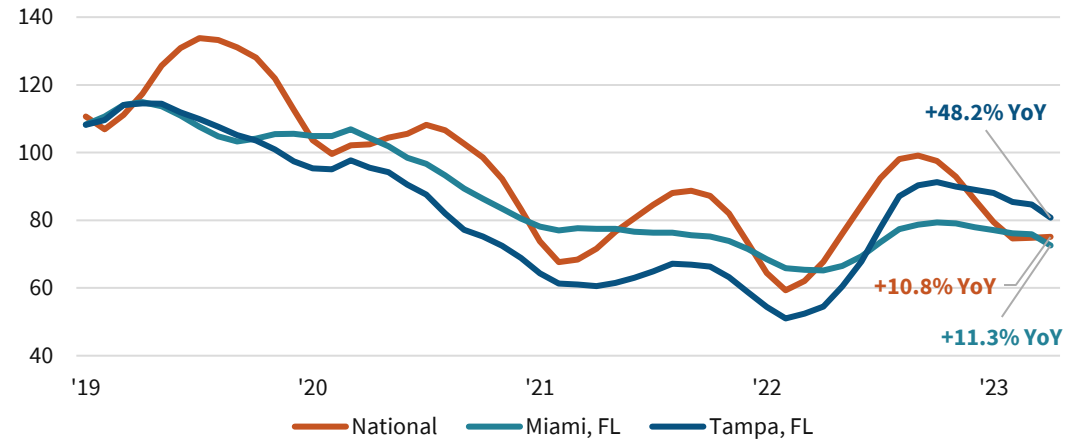




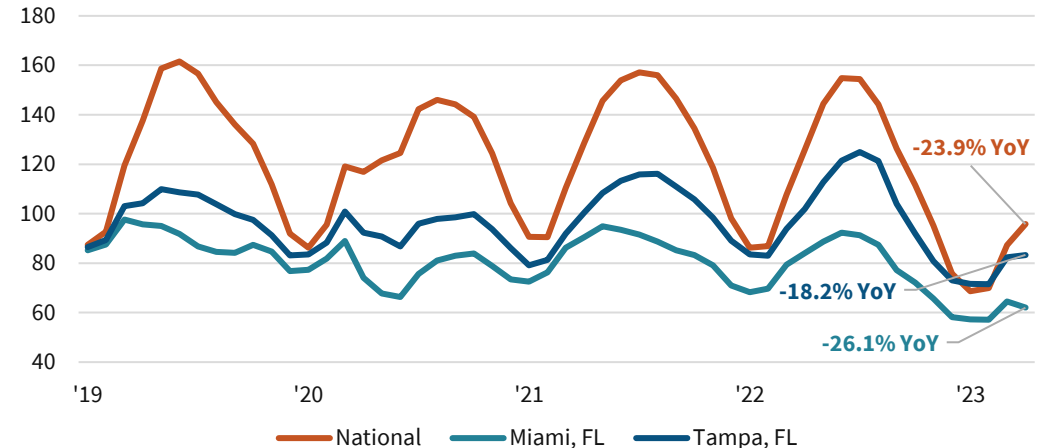
# Inventories pick up but still below pre-pandemic levels

Nationally listings have declined while homes are staying on the market longer amid weaker housing demand

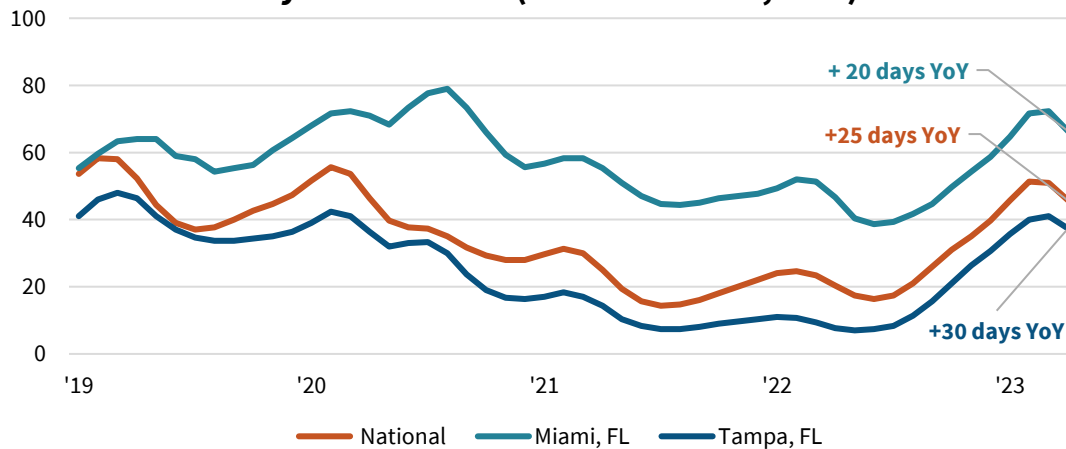
Active Listings\* (SF Residential, NSA, Index Jan 2018=100)



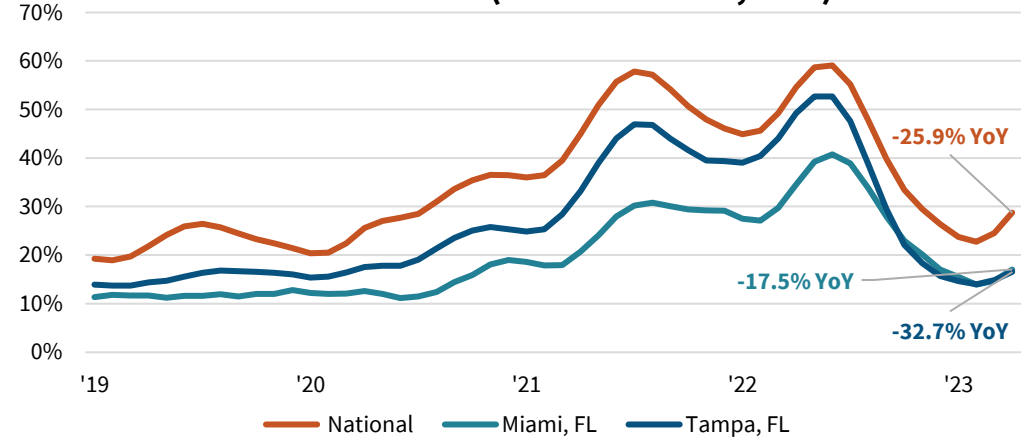
New Listings\* (SF Residential, NSA, Index Jan 2018=100)



Days on Market\* (SF Residential, NSA)

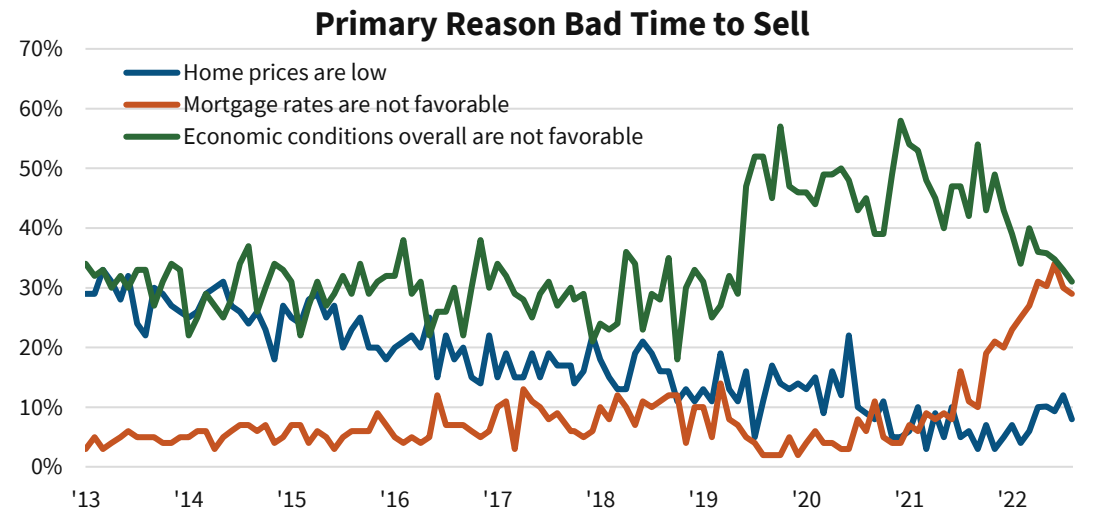
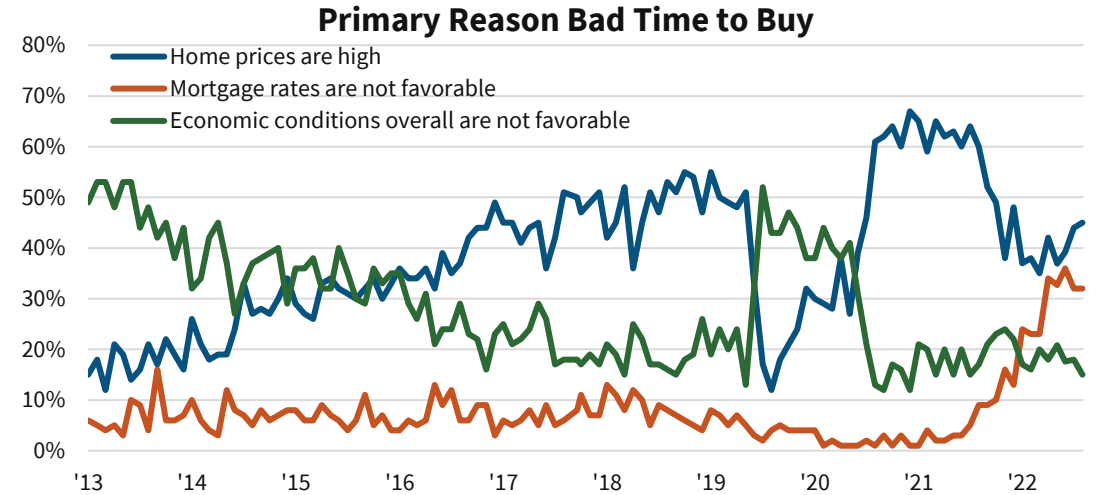
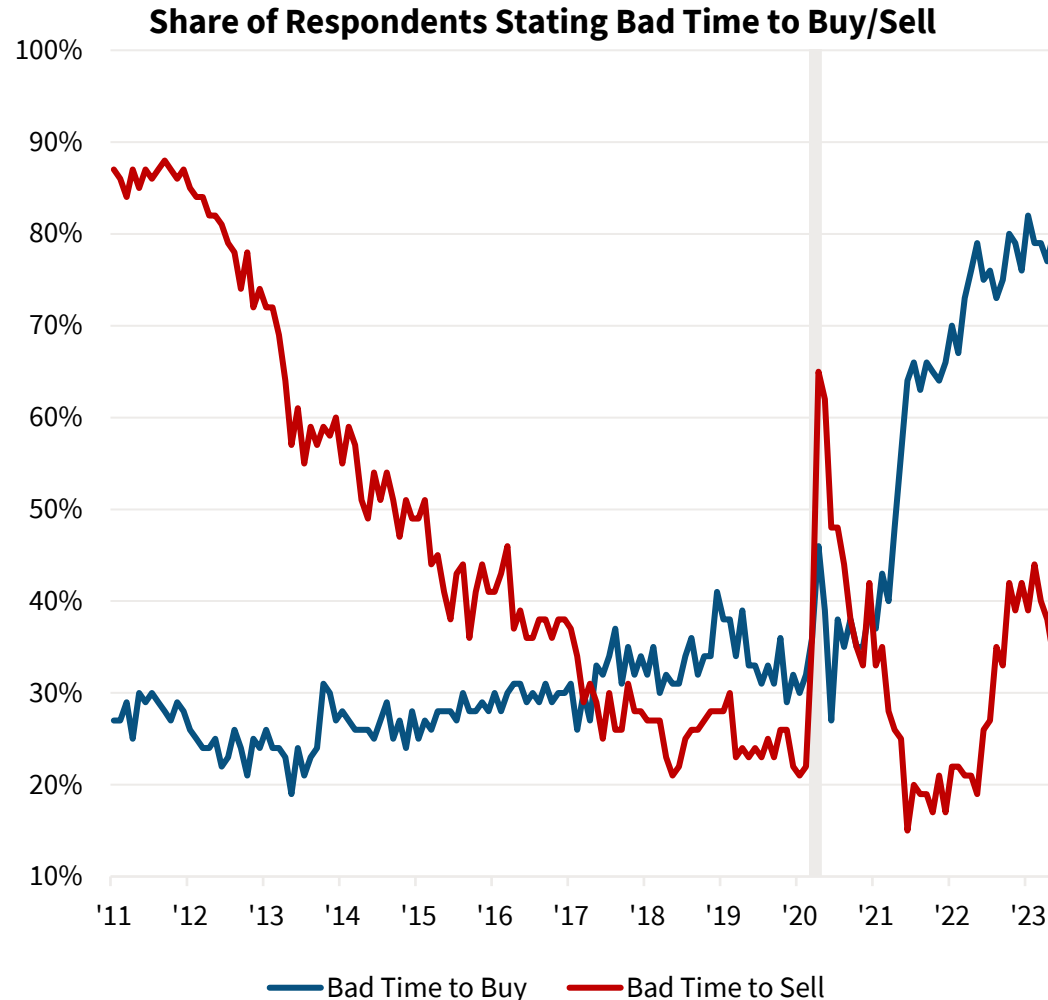


Sold Above List\* (SF Residential, NSA)



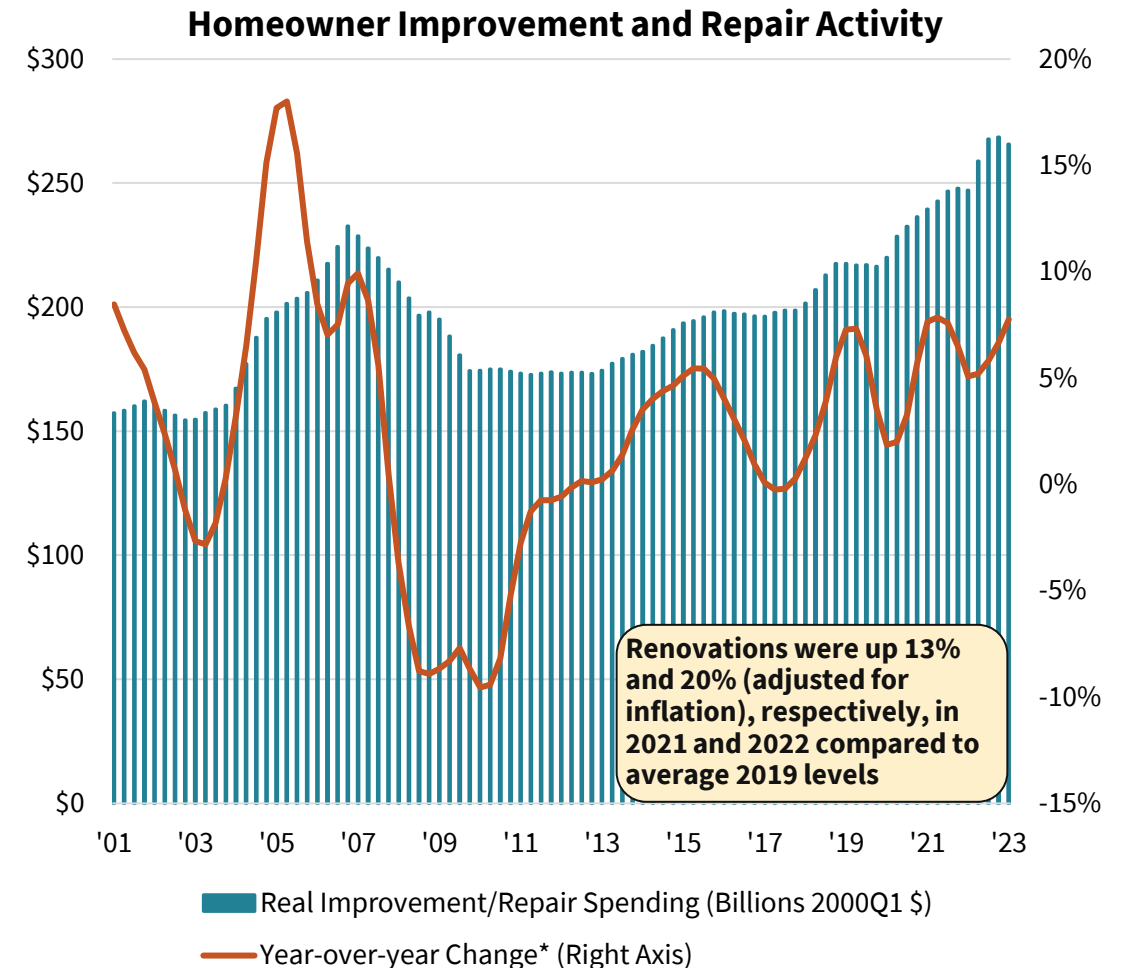
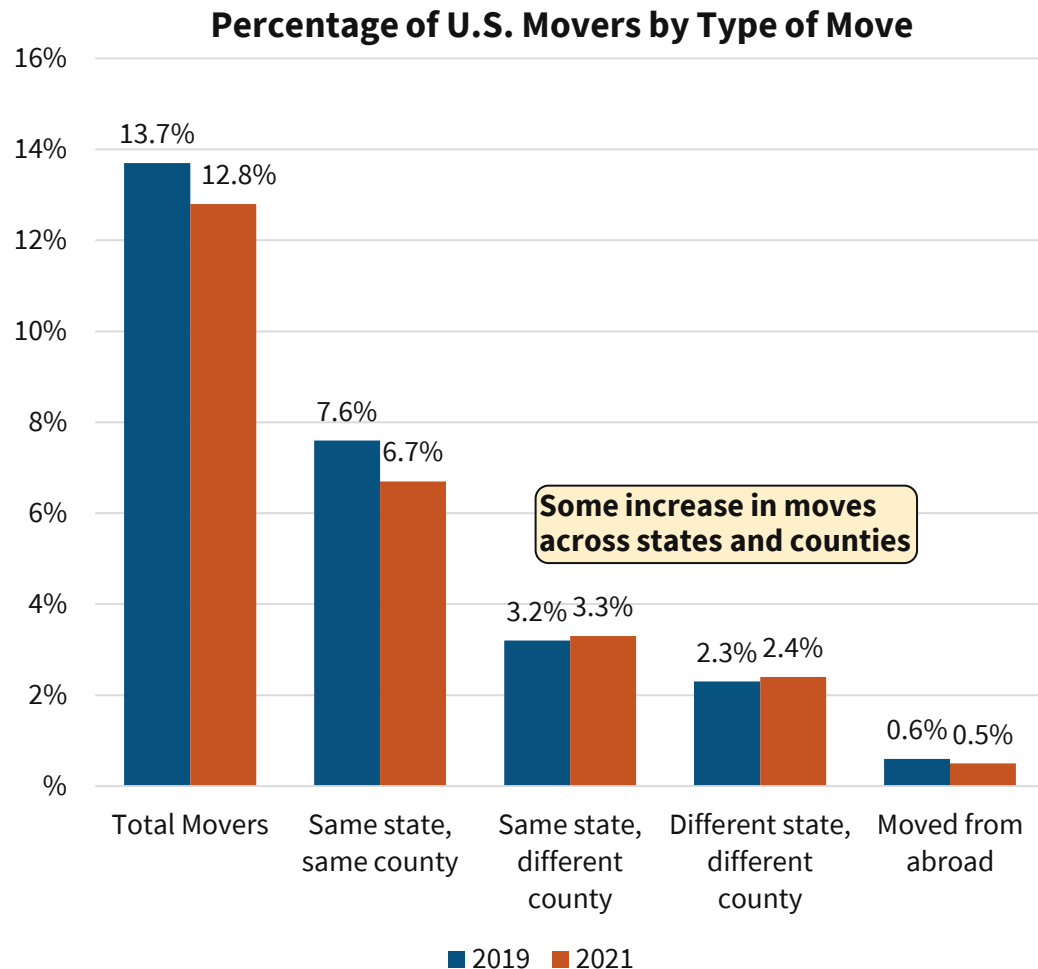
# Homebuyer sentiment worsens

Higher interest rates increasingly indicated as impediment to buying and selling



# Percentage of US movers down from 2019 to 2021

Home renovations and repairs increased during the pandemic



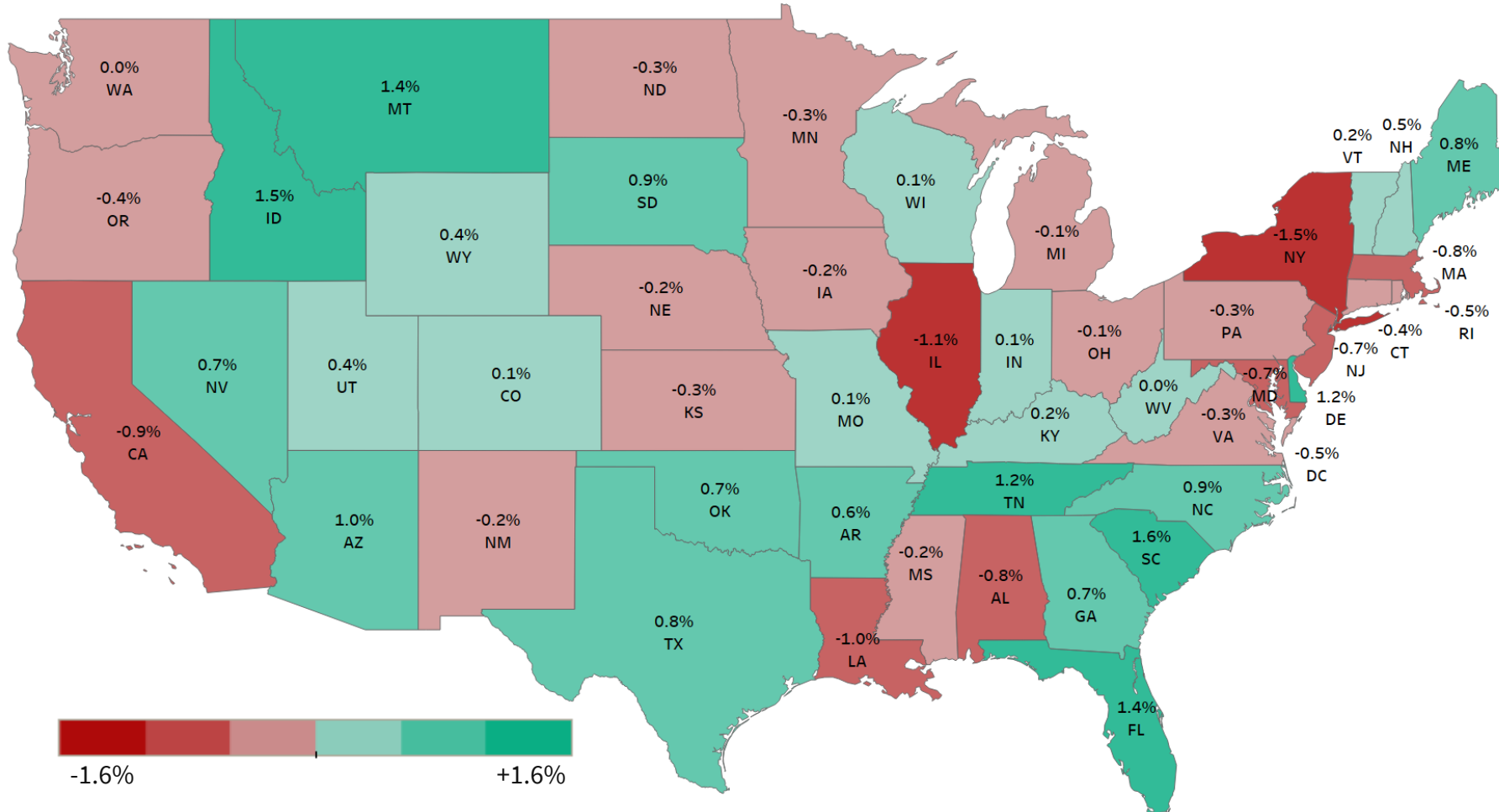
\*Adjusted to 2000-Q1 dollars using CPI level as a deflator



# Mountain and southern states saw largest in-migration in 2022

South Carolina and Idaho saw the largest domestic in-migration in 2022

2022 Net Domestic Migration as % of 2022 Total Population



2022 Net Domestic Migration as % of 2022 Total Population

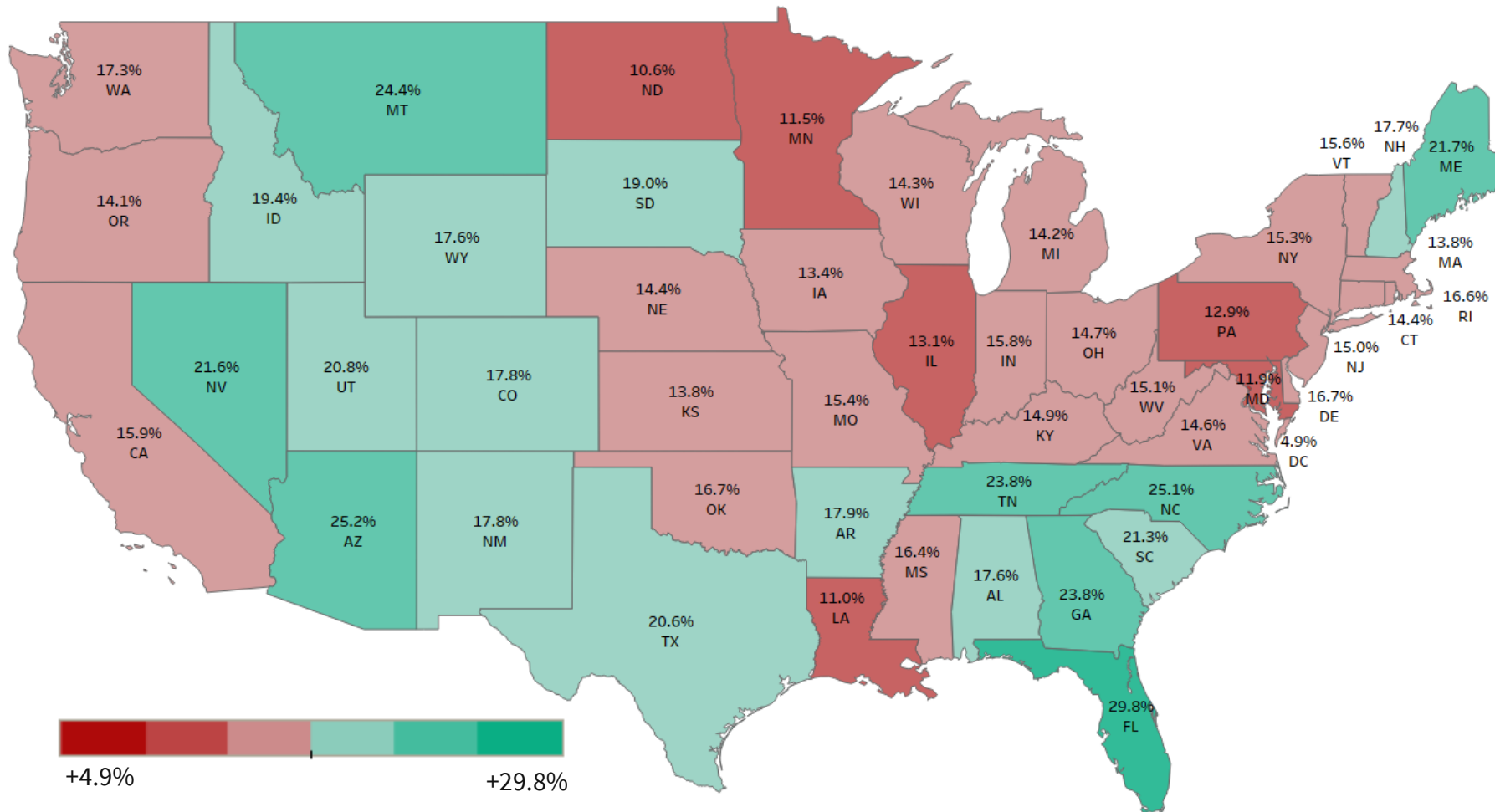
State	Net Migration
South Carolina	1.6%
Idaho	1.5%
Florida	1.4%
Montana	1.4%
Delaware	1.2%
Tennessee	1.2%
Arizona	1.0%
North Carolina	0.9%
South Dakota	0.9%
Maine	0.8%



# Mountain and southern states saw largest HP growth through early 2022

West coast and Midwest states saw the slowest home price growth over the period

Year over Year FHFA HPI Growth (Q2 2022 vs. Q2 2021)



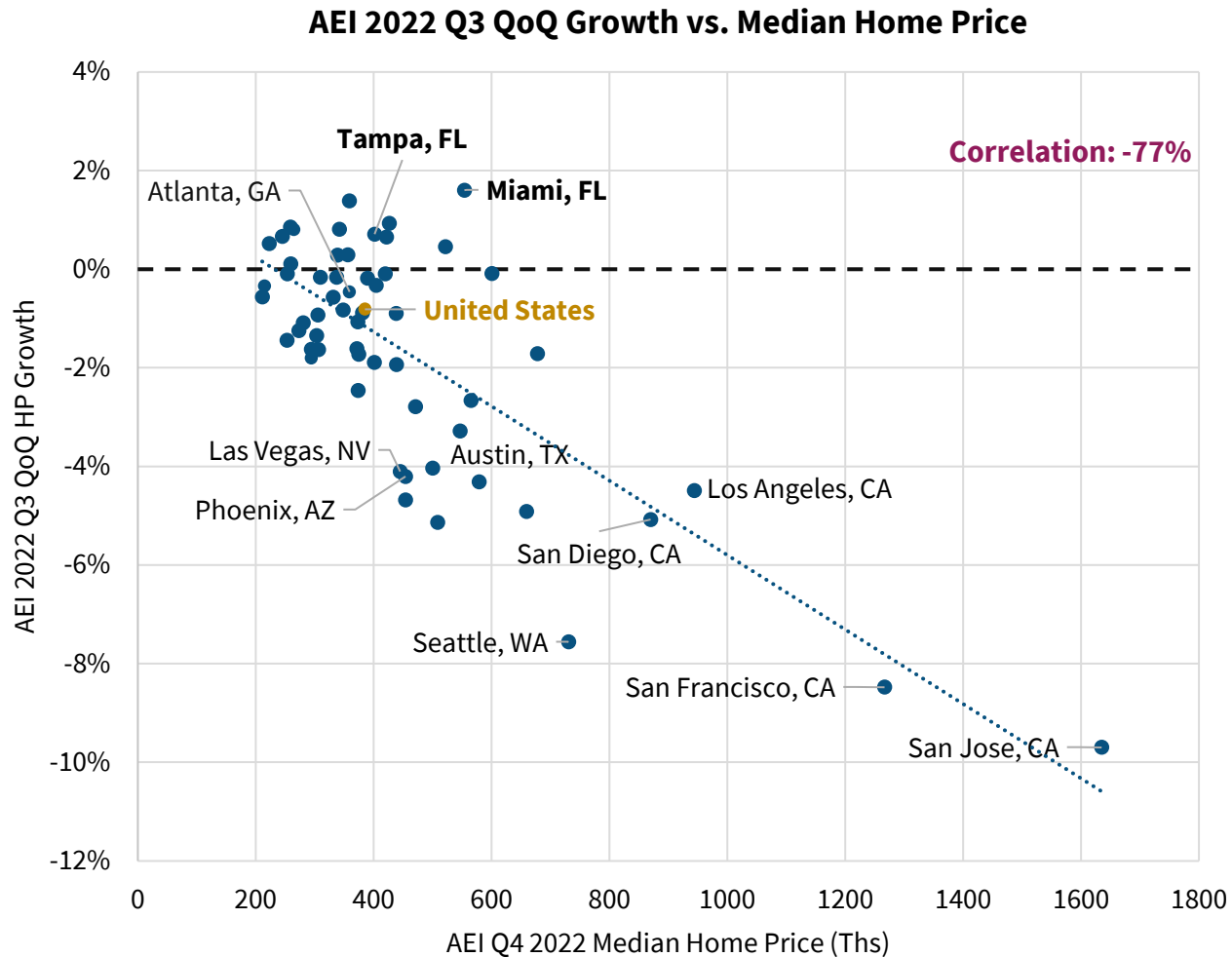
Year over Year FHFA HPI Growth (Q2 2022 vs. Q2 2021)

State	HPI Growth
Florida	29.8%
Arizona	25.2%
North Carolina	25.1%
Montana	24.4%
Tennessee	23.8%
Georgia	23.8%
Maine	21.7%
Nevada	21.6%
South Carolina	21.3%
Utah	20.8%
<b>United States</b>	<b>17.7%</b>



# Home prices decline across regions beginning in second half of 2022

Initial declines largest in least affordable metros

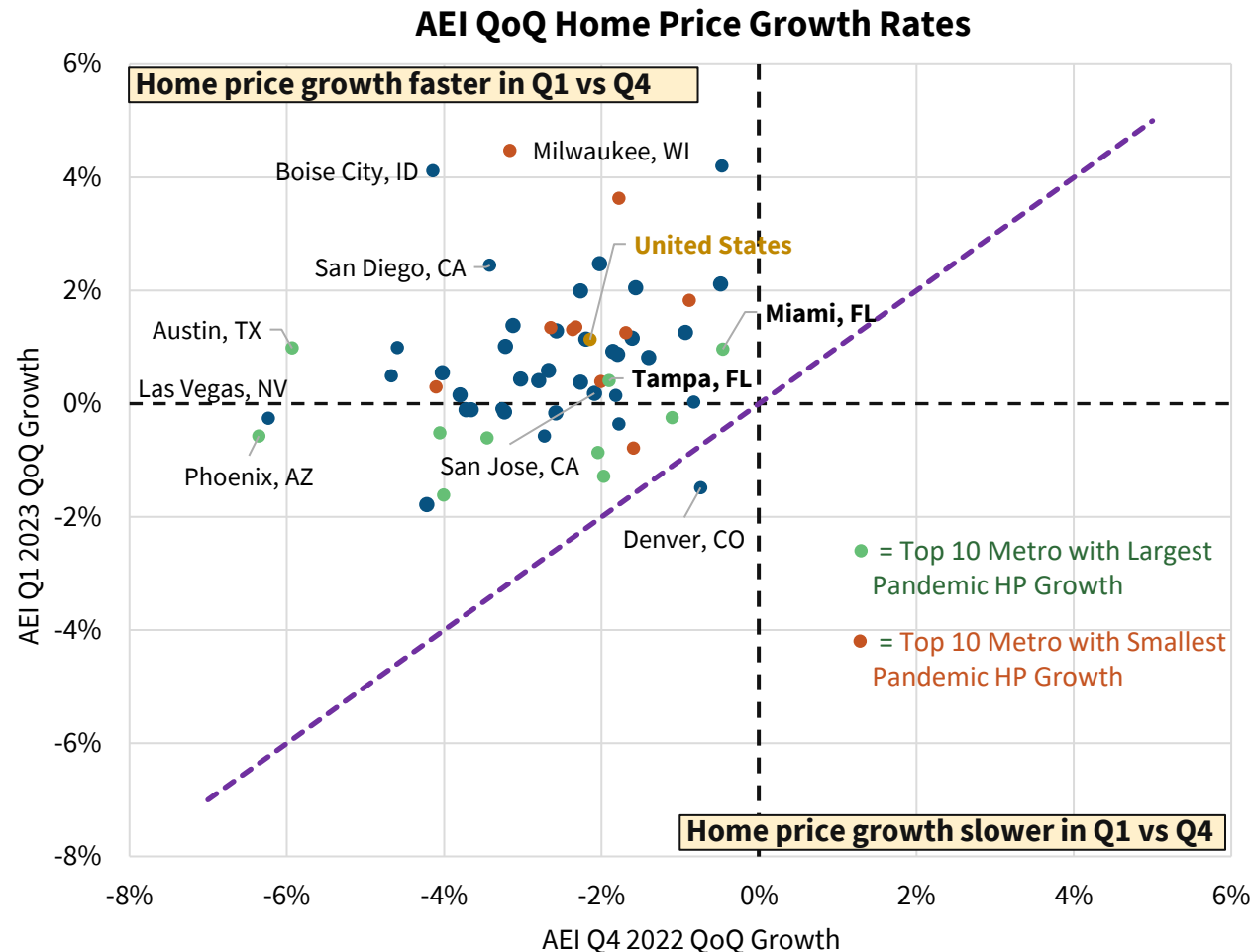


<b>Metro</b>	<b>Q4 2019 Median Home Price (Ths)</b>	<b>Q4 2022 Median Home Price (Ths)</b>	<b>2022 Q3 QoQ Growth</b>
San Jose, CA	1,291	1,635	-9.7%
San Francisco, CA	1,017	1,267	-8.5%
Los Angeles, CA	700	944	-4.5%
San Diego, CA	665	870	-5.1%
Seattle, WA	545	731	-7.6%
<b>Tampa, FL</b>	<b>252</b>	<b>402</b>	<b>0.7%</b>
<b>Miami, FL</b>	<b>371</b>	<b>554</b>	<b>1.6%</b>
Austin, TX	343	500	-5.1%
Phoenix, AZ	298	454	-4.7%
Las Vegas, NV	311	445	-4.1%
<b>United States</b>	<b>277</b>	<b>385</b>	<b>-0.8%</b>



# Home prices rebounded in Q1 2023

Most metros saw improved home price growth in Q1 2023 relative to Q4 2022



Metro	Q4 2022 QoQ HP Growth	Q1 2023 QoQ HP Growth	Pandemic HP Growth*
Austin, TX	-5.9%	1.0%	59.7%
Phoenix, AZ	-6.4%	-0.6%	59.7%
<b>Tampa, FL</b>	<b>-1.9%</b>	<b>0.4%</b>	<b>56.2%</b>
<b>Miami, FL</b>	<b>-0.5%</b>	<b>1.0%</b>	<b>48.7%</b>
Las Vegas, NV	-6.2%	-0.3%	48.2%
San Diego, CA	-3.4%	2.4%	46.4%
Seattle, WA	-4.7%	0.5%	41.1%
Los Angeles, CA	-2.7%	0.6%	35.1%
San Jose, CA	-2.1%	0.2%	30.2%
San Francisco, CA	-4.6%	1.0%	30.0%
<b>United States</b>	<b>-2.1%</b>	<b>1.1%</b>	<b>35.2%</b>

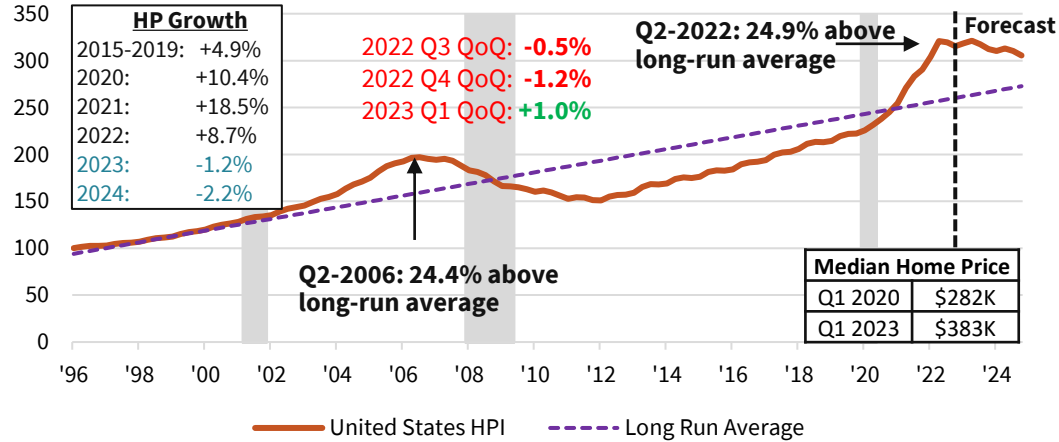
\* Pandemic Growth = Q2 2022 vs. Q2 2020



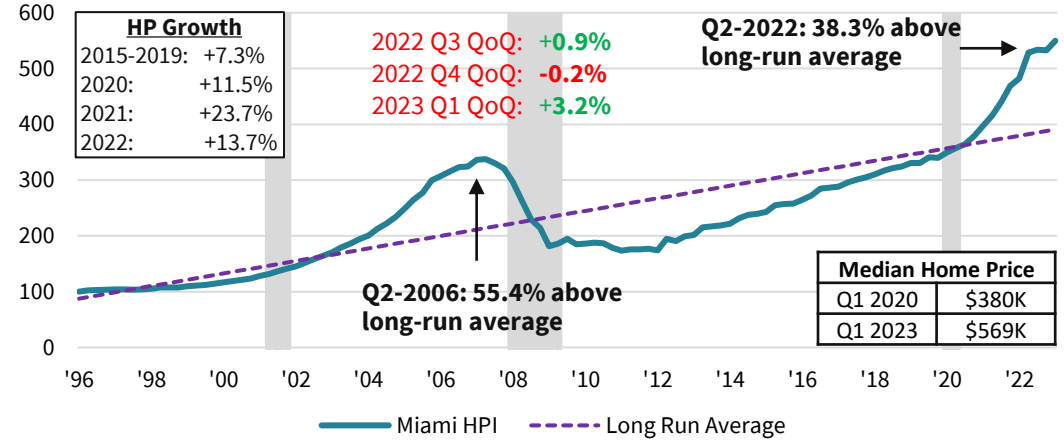
# Home prices decline nationally to end 2022

Prices expected to continue to decline nationally in 2023

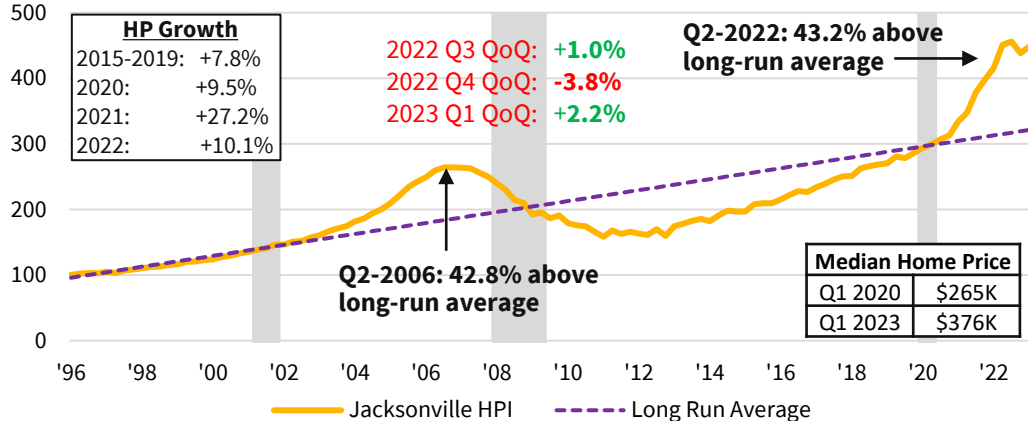
### United States: Fannie Mae HPI



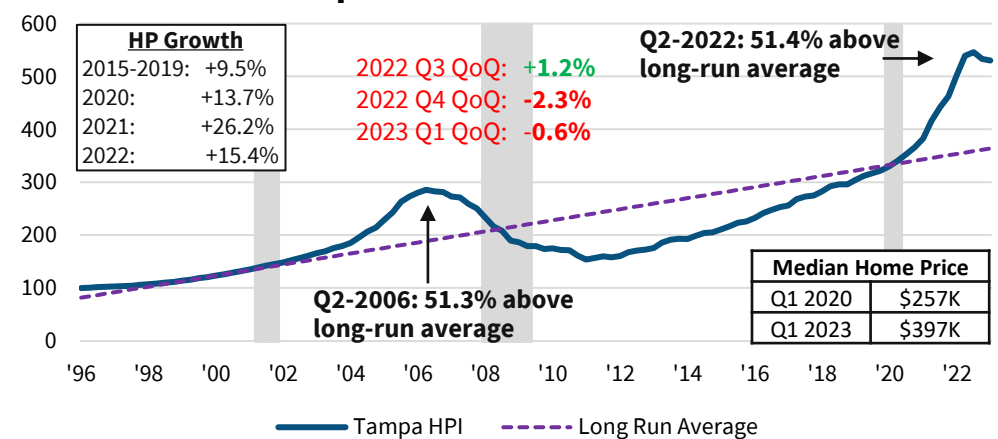
### Miami: FHFA Home Price Index



### Jacksonville: FHFA Home Price Index



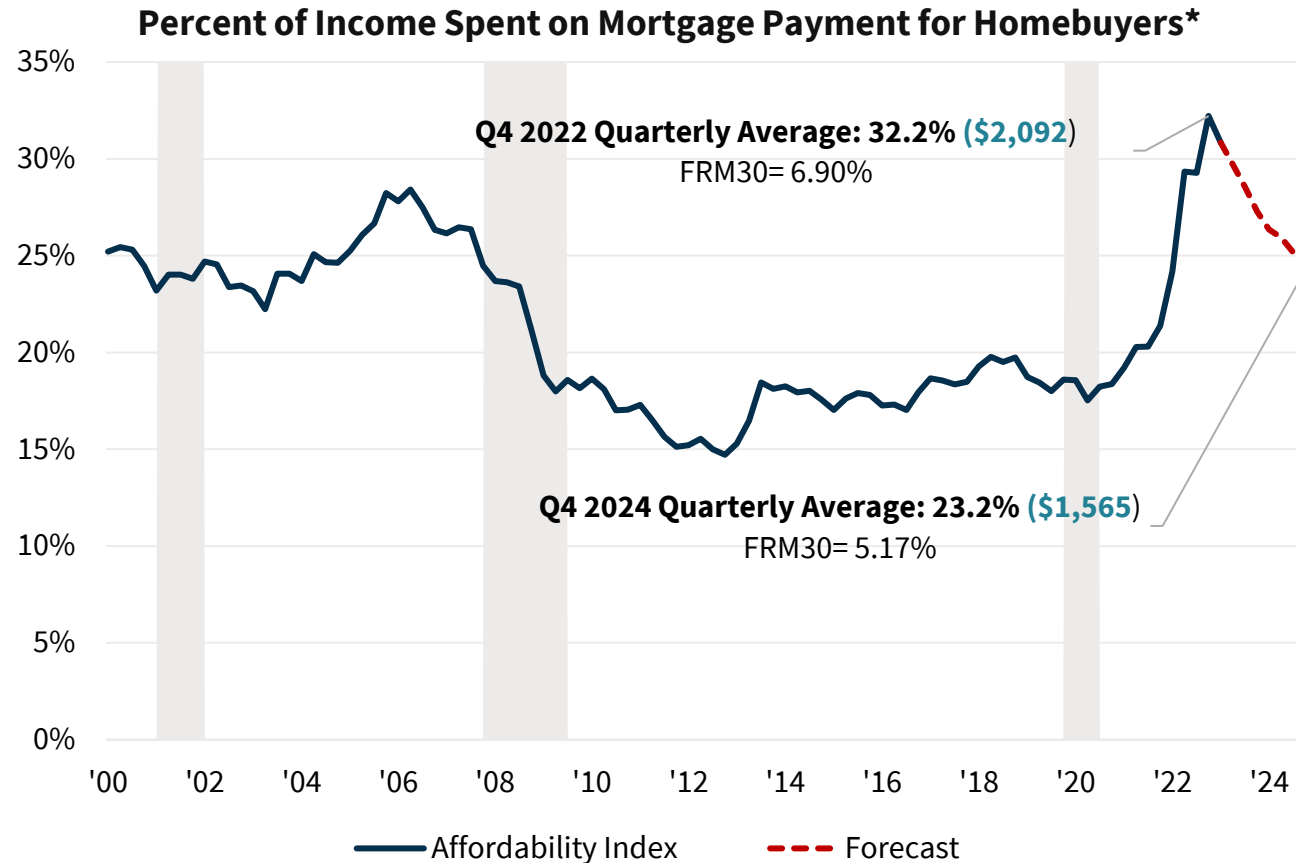
### Tampa: FHFA Home Price Index





# Affordability expected to improve from recent extremes

Home price softening, rate declines and income growth will help drive improvements



- **Home price declines** expected through 2024. **-3.4%**
- **Mortgage rate declines** expected through 2024. **-1.2% pts**
- **Nominal income growth** expected through 2024 **+7%\*\***

*\*\*Note: ESR does not produce a monthly nominal income forecast. This estimate is based on a nominal GDP approximation using the published CPI and real GDP forecasts.*

*\*Assumes 20% down payment, average 30-yr fixed-rate mortgage, median existing sales price, nominal median household income. Average monthly payments in parentheses.*



# Housing and mortgage market outlook

	2020	2021	2022	Forecast	
				2023	2024
Real GDP (SAAR, % Change)	-1.5%	5.7%	0.9%	-0.3%	1.2%
Unemployment Rate (%)	8.1%	5.4%	3.6%	3.8%	5.0%
Housing Starts (Percent Change Year-Over-Year)	1.380 million 6.9%	1.601 million 16.0%	1.553 million -3.0%	1.294 million -16.7%	1.246 million -3.7%
New Single-Family Home Sales (Percent Change Year-Over-Year)	822 thousand 20.4%	771 thousand -6.2%	641 thousand -16.9%	640 thousand -0.2%	629 thousand -1.8%
Total Existing Home Sales (Percent Change Year-Over-Year)	5.644 million 5.7%	6.120 million 8.5%	5.026 million -17.9%	4.217 million -16.1%	4.381 million 3.9%
Fannie Mae HPI (Annual Percent Change Q4/Q4)	10.4%	18.5%	8.7%	-1.2%	-2.2%
Purchase Mortgage Originations (Percent Change Year-Over-Year)	\$1,572 billion 18.5%	\$1,900 billion 20.9%	\$1,664 billion -12.4%	\$1,359 billion -18.3%	\$1,468 billion 8.0%
Refinance Mortgage Originations (Percent Change Year-Over-Year)	\$2,802 billion 146.7%	\$2,670 billion -4.7%	\$753 billion -71.8	\$291 billion -61.4%	\$558 billion 91.8%
Refinance Share (%)	64%	58%	31%	18%	28%
30-Year Fixed-Rate Mortgage (Annual Average)	3.1%	3.0%	5.3%	6.3%	5.6%
10-Year Treasury (Annual Average)	0.9%	1.4%	3.0%	3.4%	3.3%

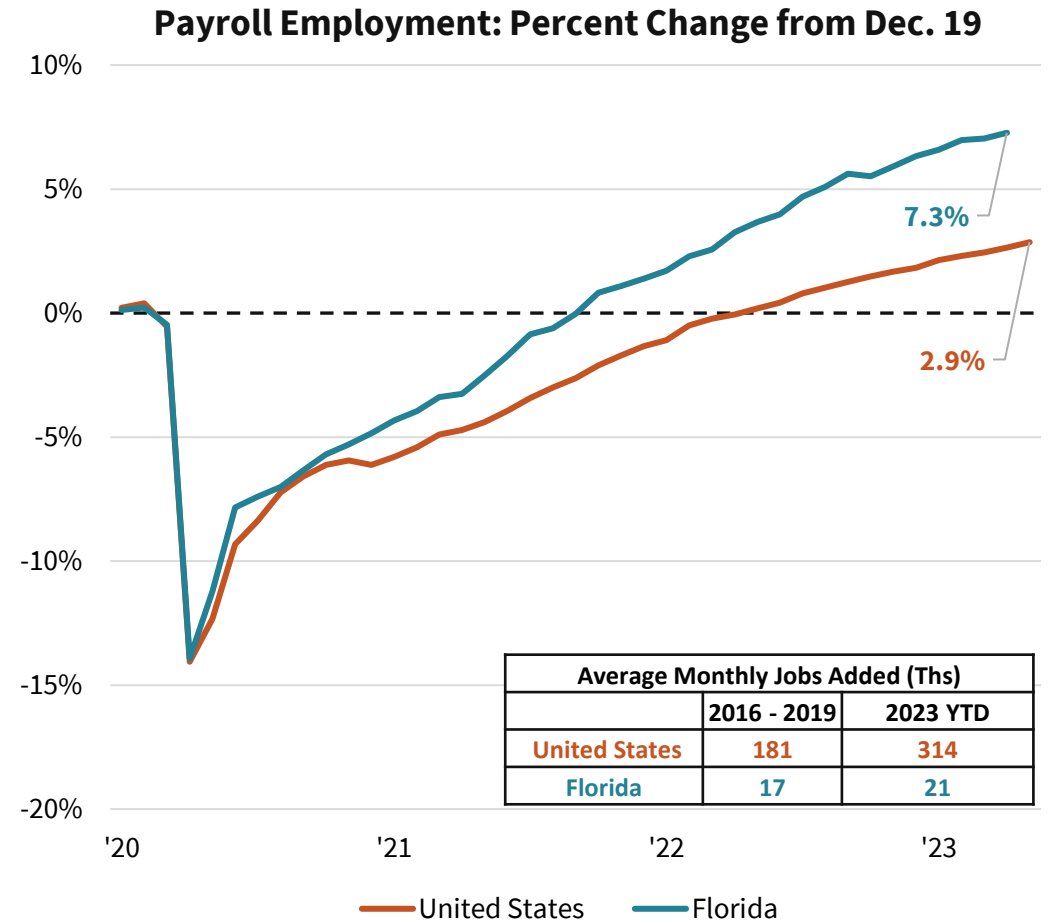
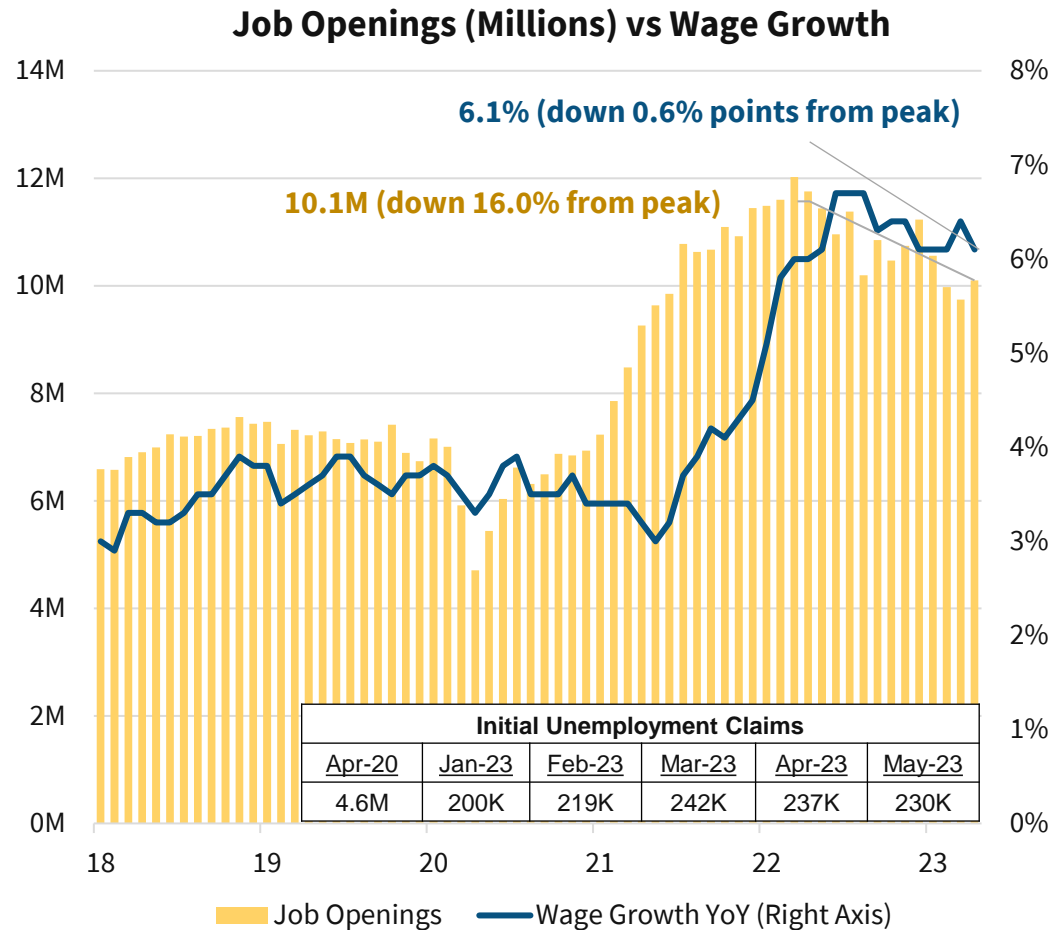




# Appendix

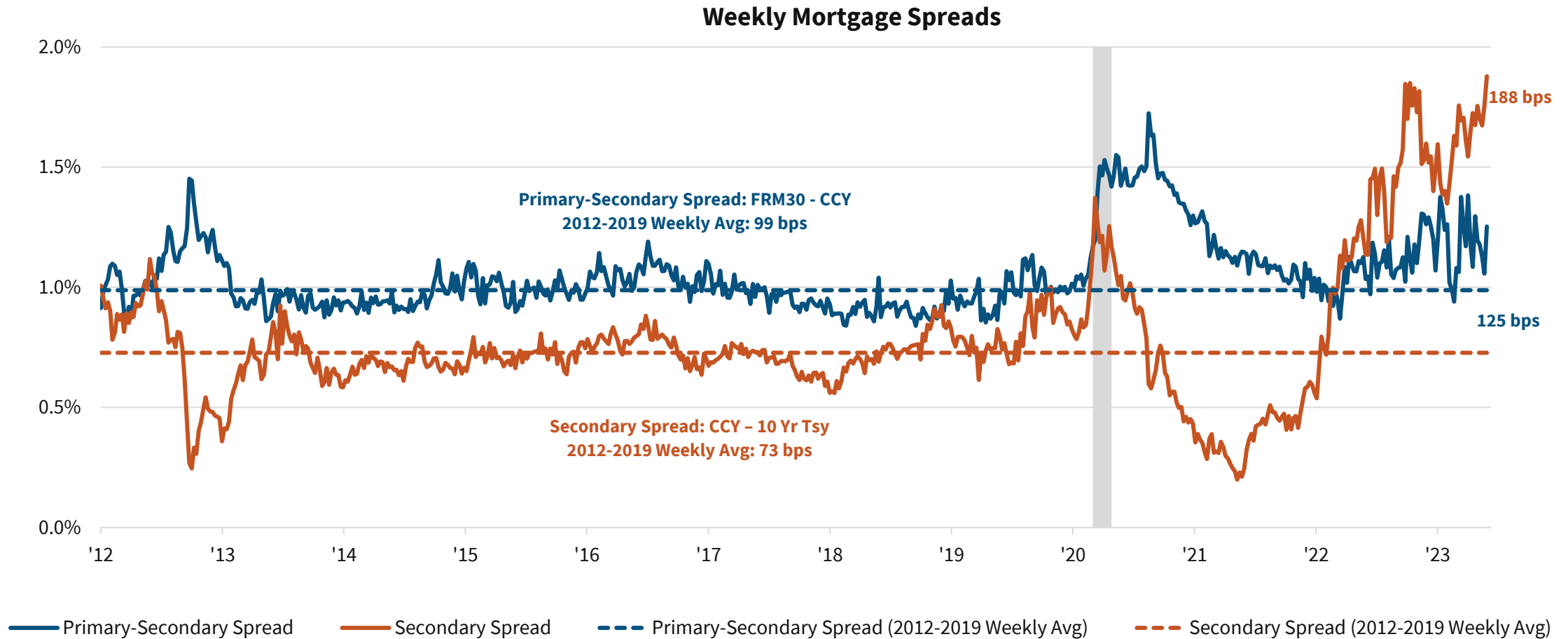
# Labor market remains strong but showing some signs of slowing

Job openings tick up in April as wage growth declines



# Long-term rates remain elevated amid persistent inflation

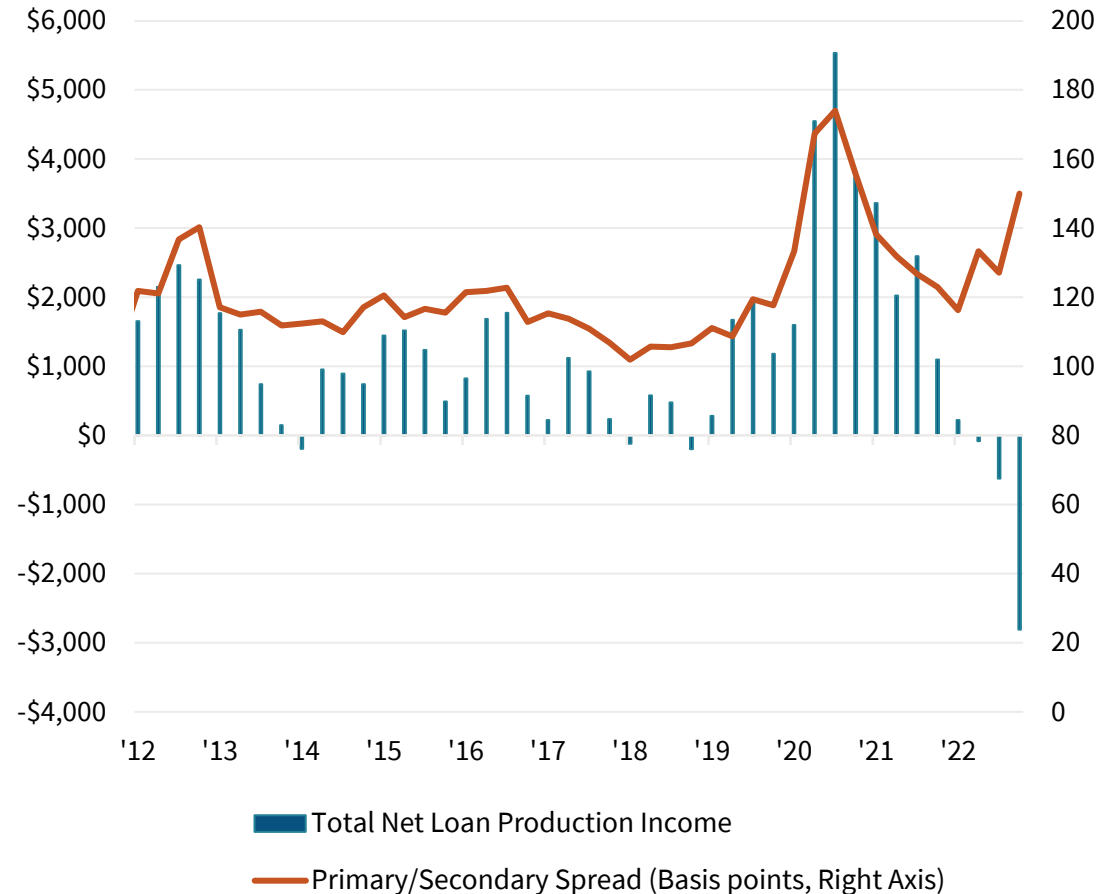
Mortgage spreads widen further following recent banking industry stress



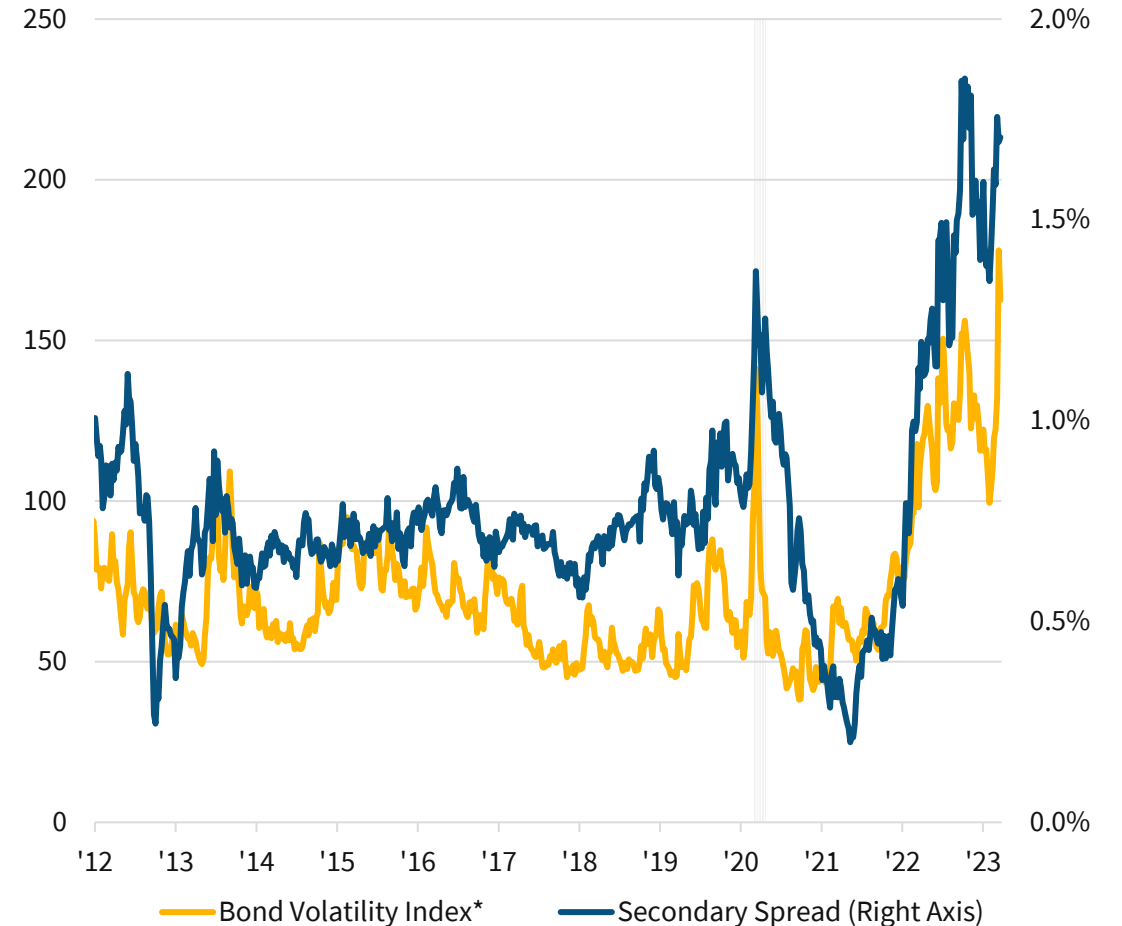
# Mortgage spreads remain wide amid elevated volatility

Lender profitability declines as volumes remain limited

### Total Net Loan Production Income vs. Primary/Secondary Spread



### Bond Volatility Index and Secondary Spread

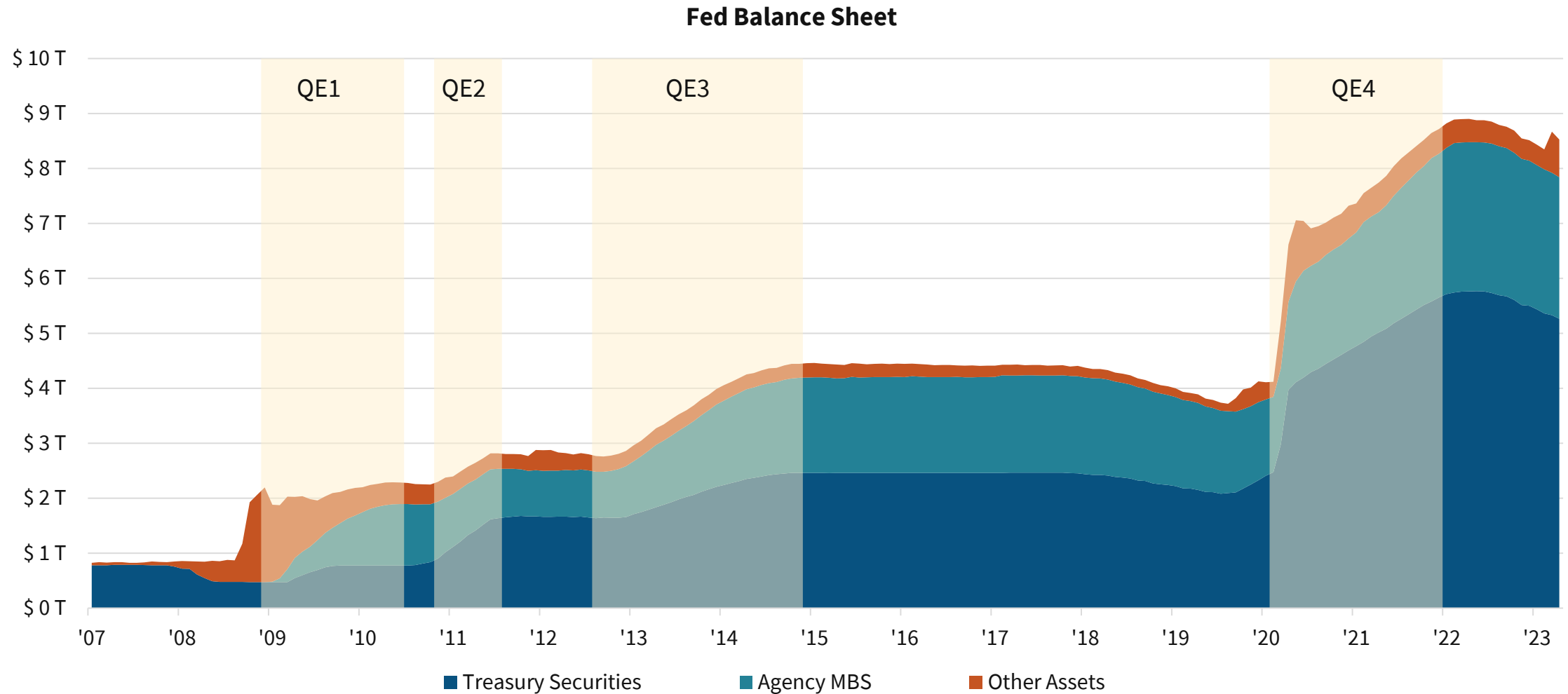


\* The MOVE (Option Volatility Expectations) is a Bofa/Merrill Lynch index that tracks Treasury yield volatility



# Fed balance sheet runoff continues

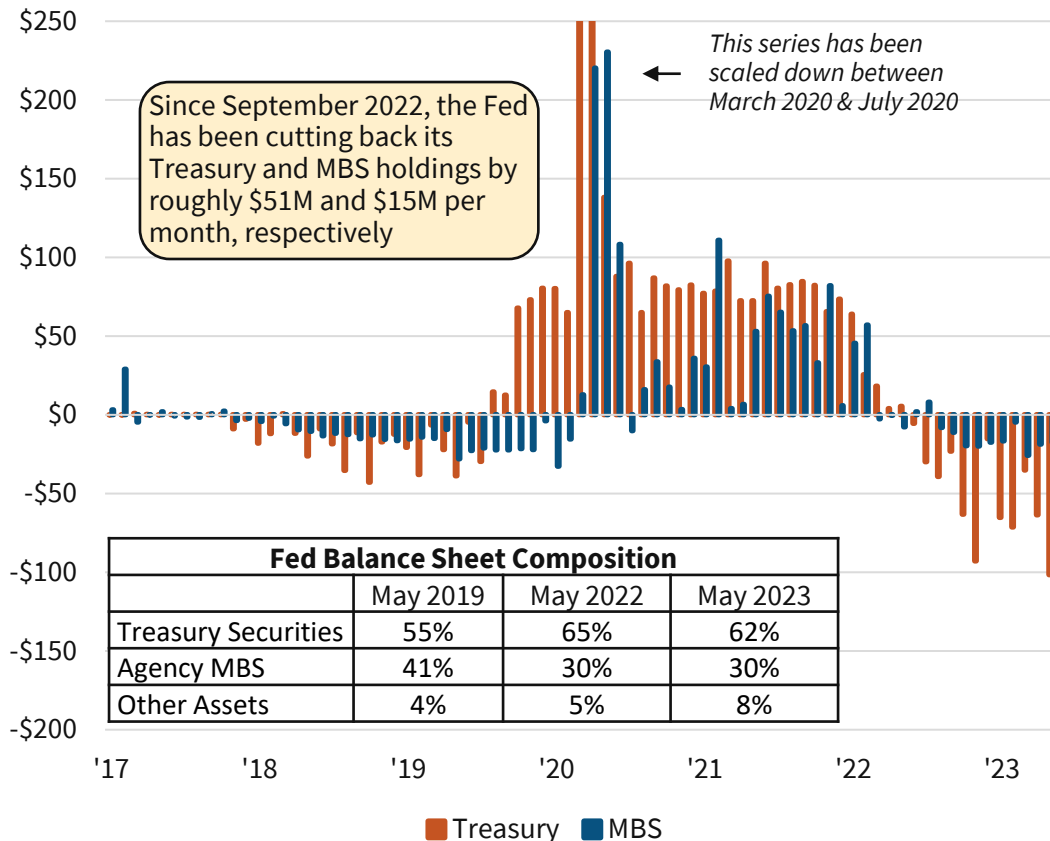
Fed Treasury and MBS holdings down from recent peaks



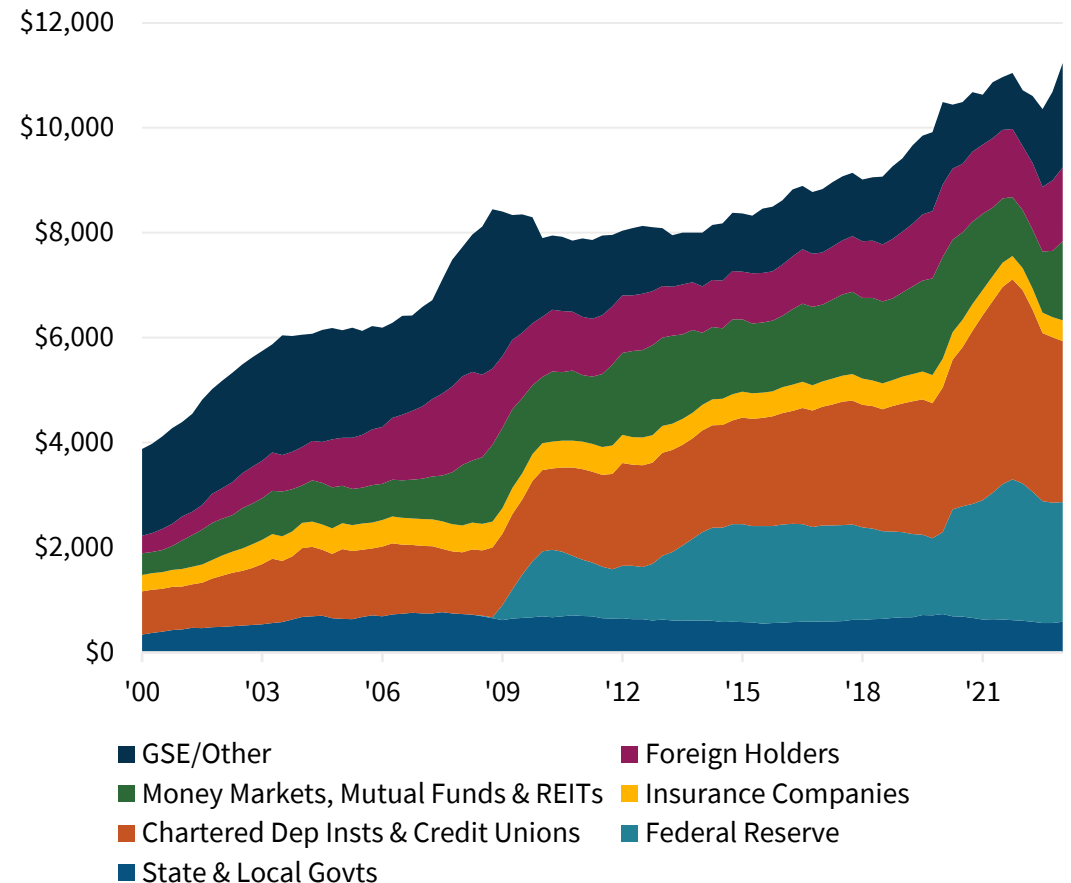
# Fed's Treasury and MBS holdings have begun to shrink

Fed still holds roughly 20% of all outstanding Agency MBS

### Change in Monthly Treasury and MBS Holdings on Fed Balance Sheet (\$B)



### Holders of Outstanding Agency MBS (\$B)

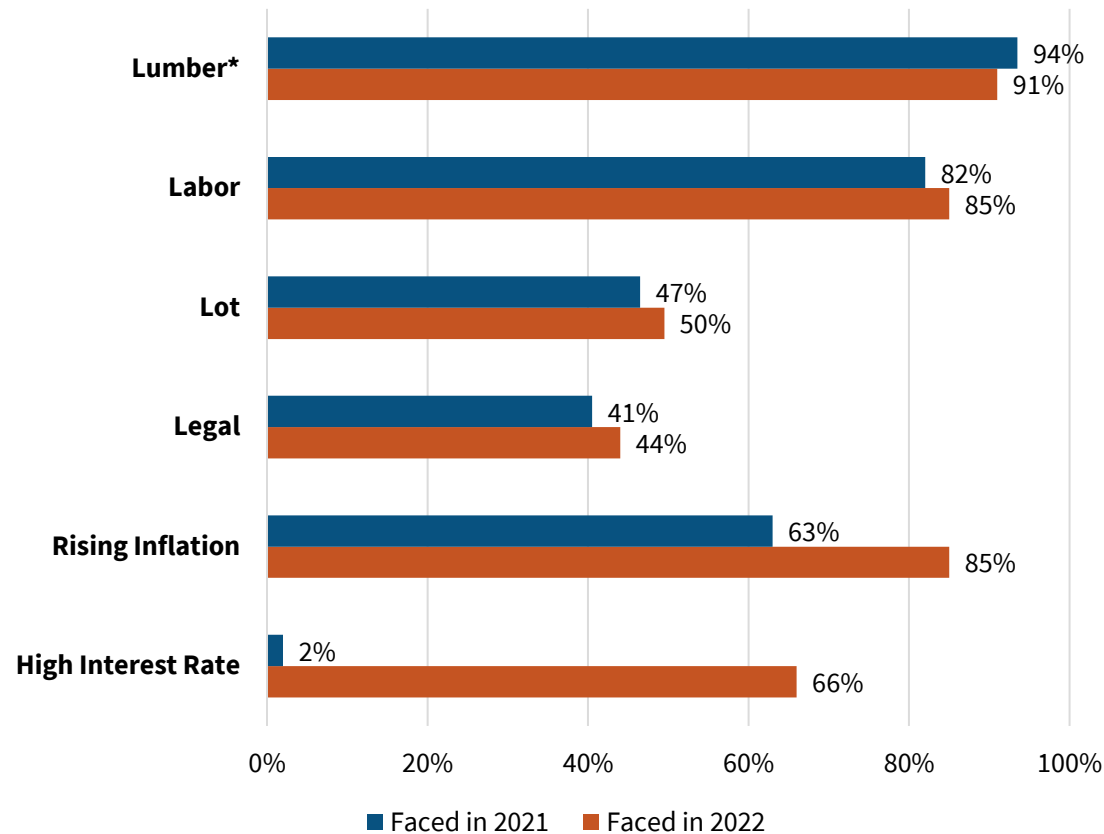




# Home builders face continued challenges

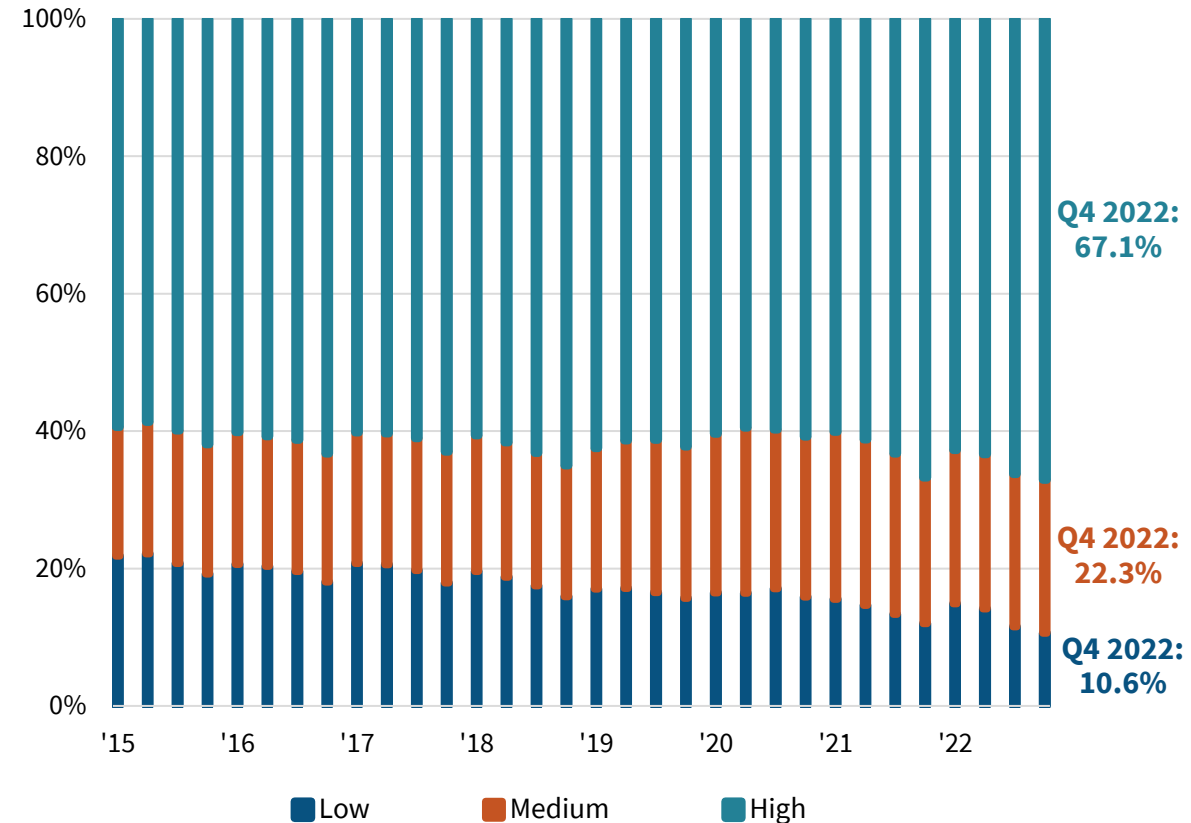
New home construction still concentrated in higher priced segments of the market

### Top Significant Problems Faced by Builders



\*Cost/availability of materials

### National New Construction Share of New Home Sales

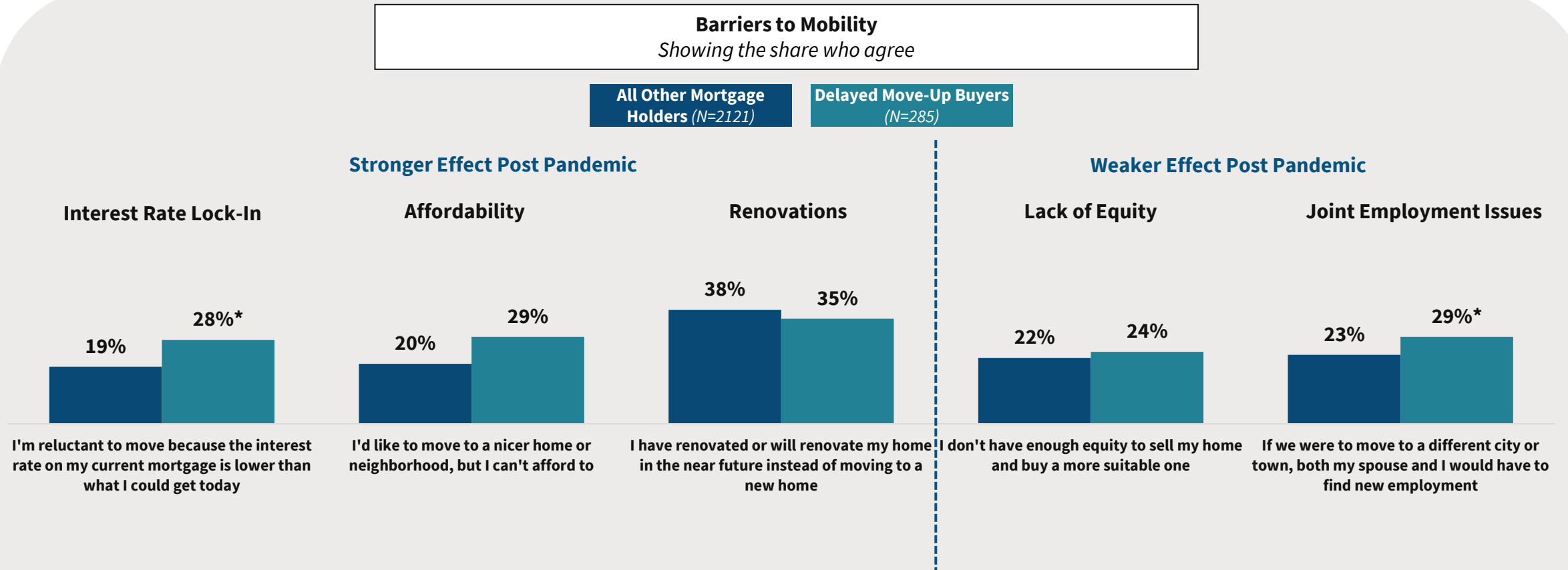


Price Tier Methodology	
Low	All sales at or below the 40th percentile of FHA sales prices
Medium	All sales at or below the 80th percentile of FHA sales prices
High	All other sales



# Rate lock-in among key barriers to moving prior to the pandemic

Joint employment considerations and affordability constraints also among key barriers to mobility



**Delayed move up buyers** are defined as age 30-44, owners with a mortgage, living in their first home, and have lived there at least 5 years

Q: Please tell me how strongly you agree or disagree with each of the following statements.

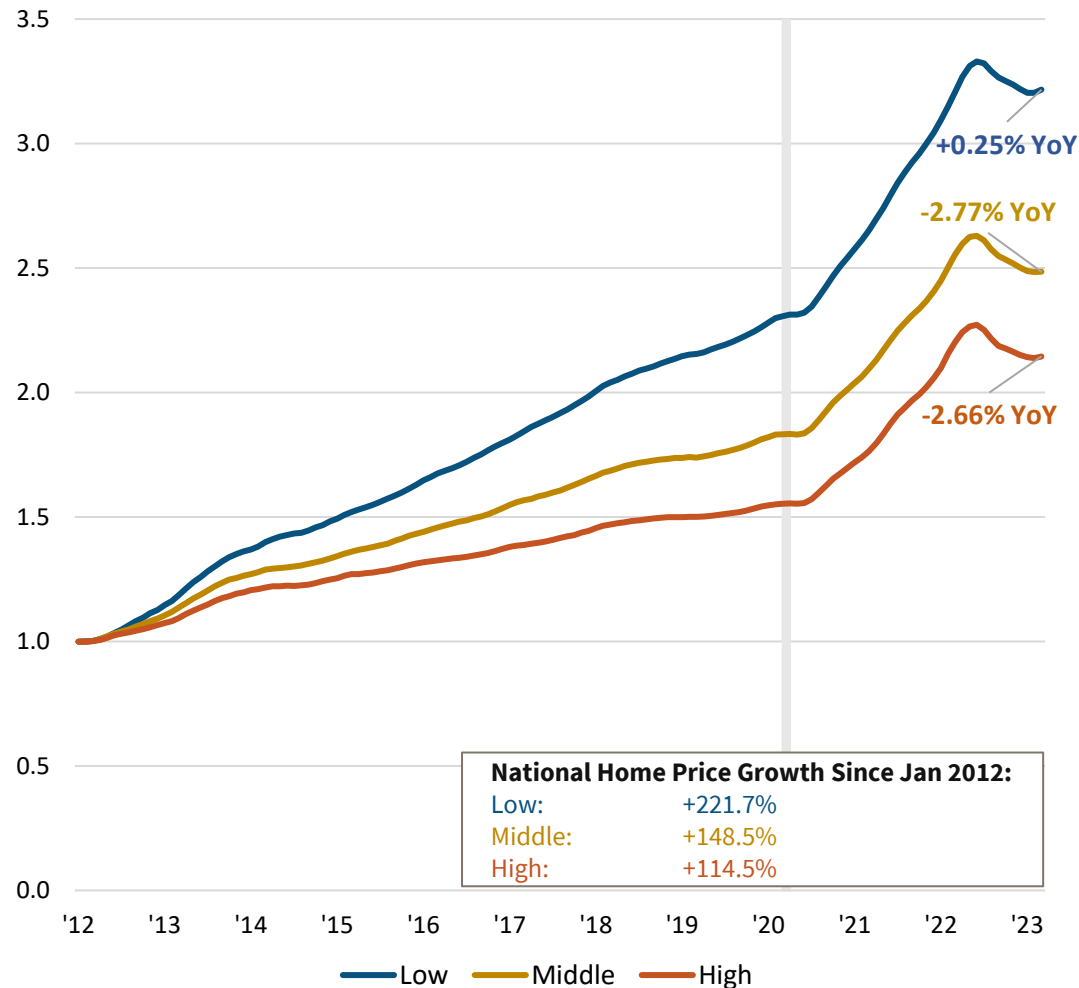
Asterisks (\*) denote a % is significantly higher between delayed move-up buyers and all other mortgage holders at the 95% confidence level



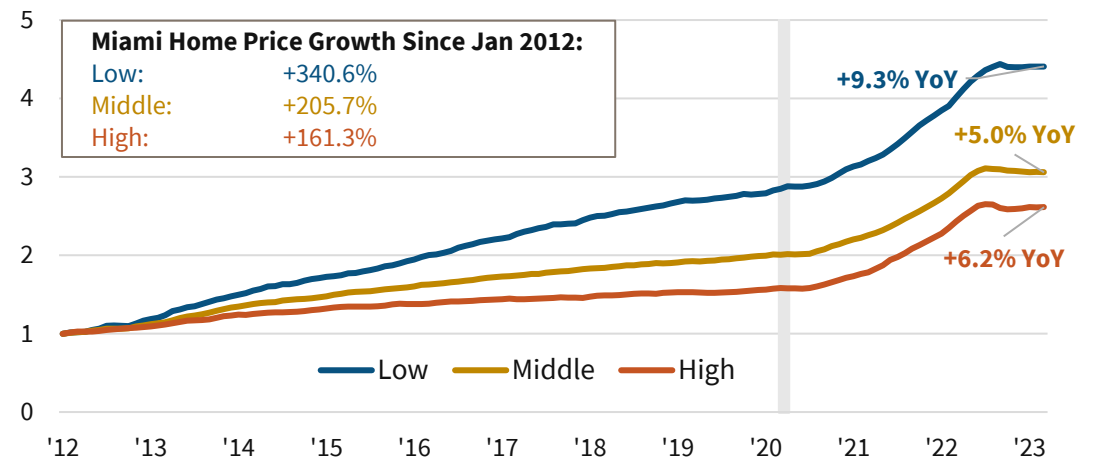
# Home price growth has been higher at lower price tiers

Likely affecting affordability more for first-time and lower-income homebuyers

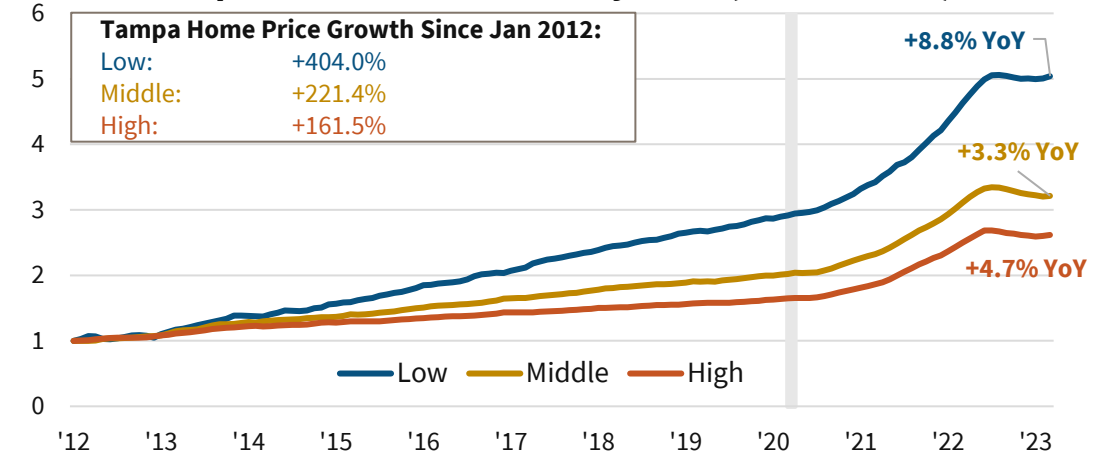
### National Cumulative Home Price Growth by Tiers (Jan 2012 = 1)



### Miami Home Price Growth by Tiers (Jan 2012 = 1)



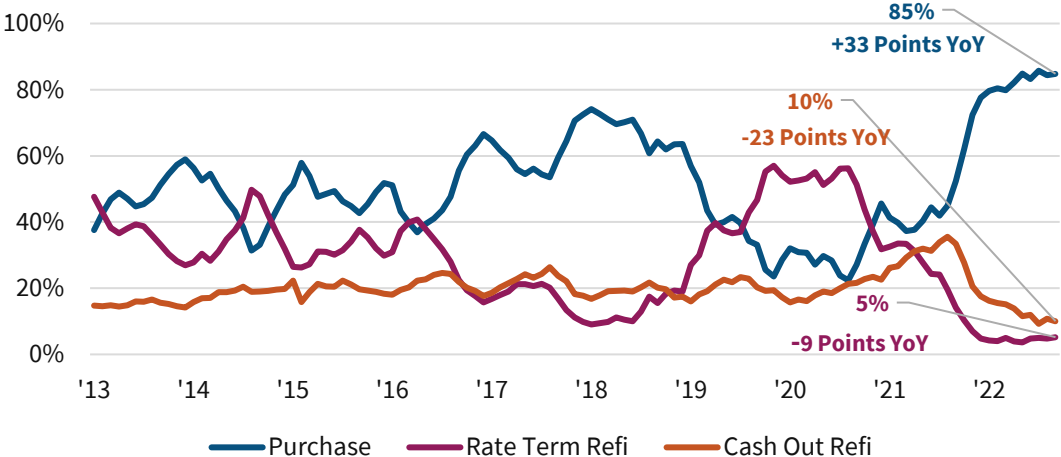
### Tampa Home Price Growth by Tiers (Jan 2012 = 1)



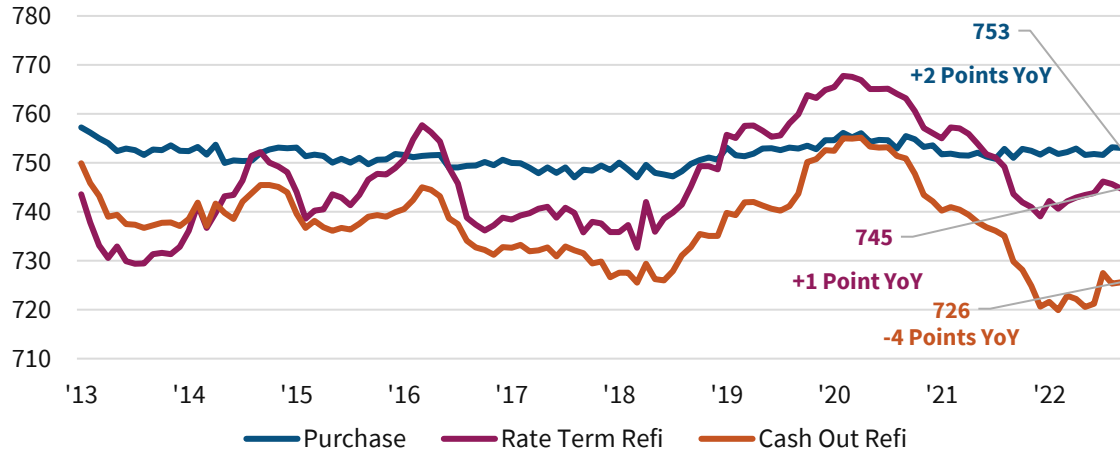
# Purchase credit scores remain strong

Refi credit scores up from recent lows and DTIs down from recent highs

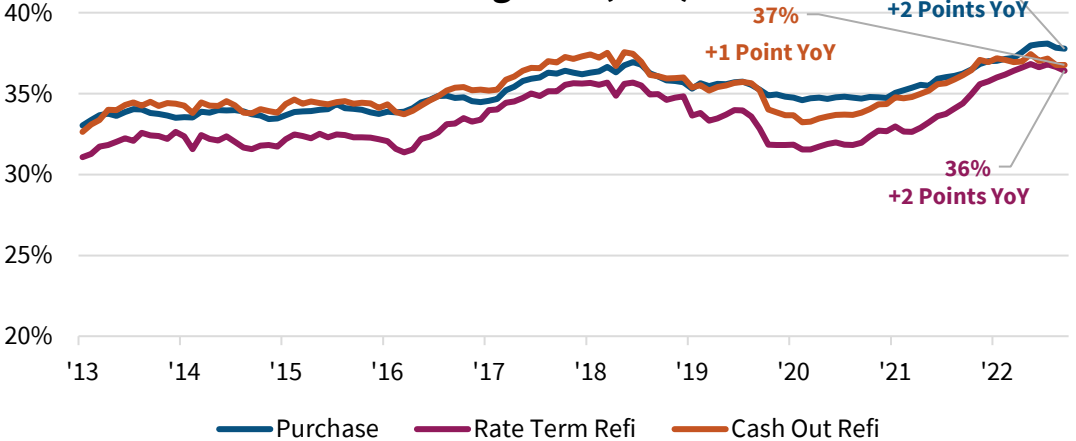
Share of Total GSE Market by Loan Purpose



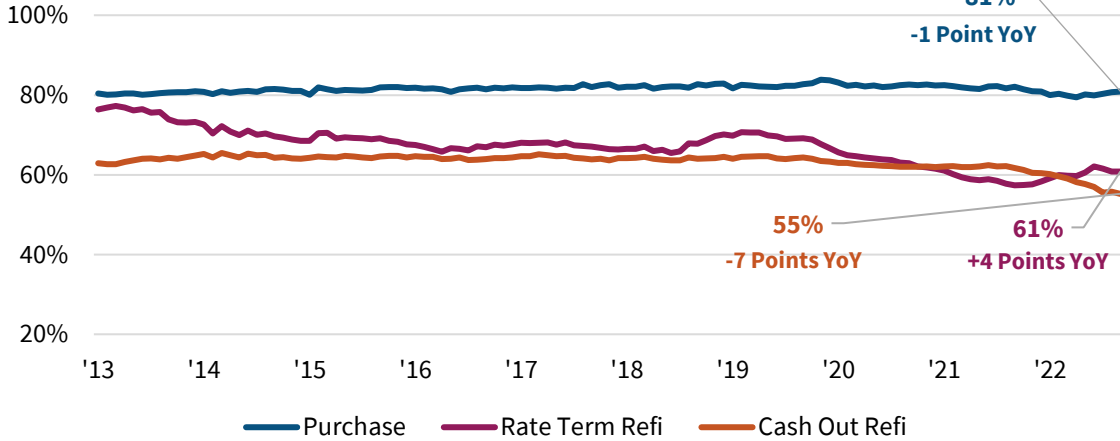
Average FICO (GSE)



Average DTI (GSE)

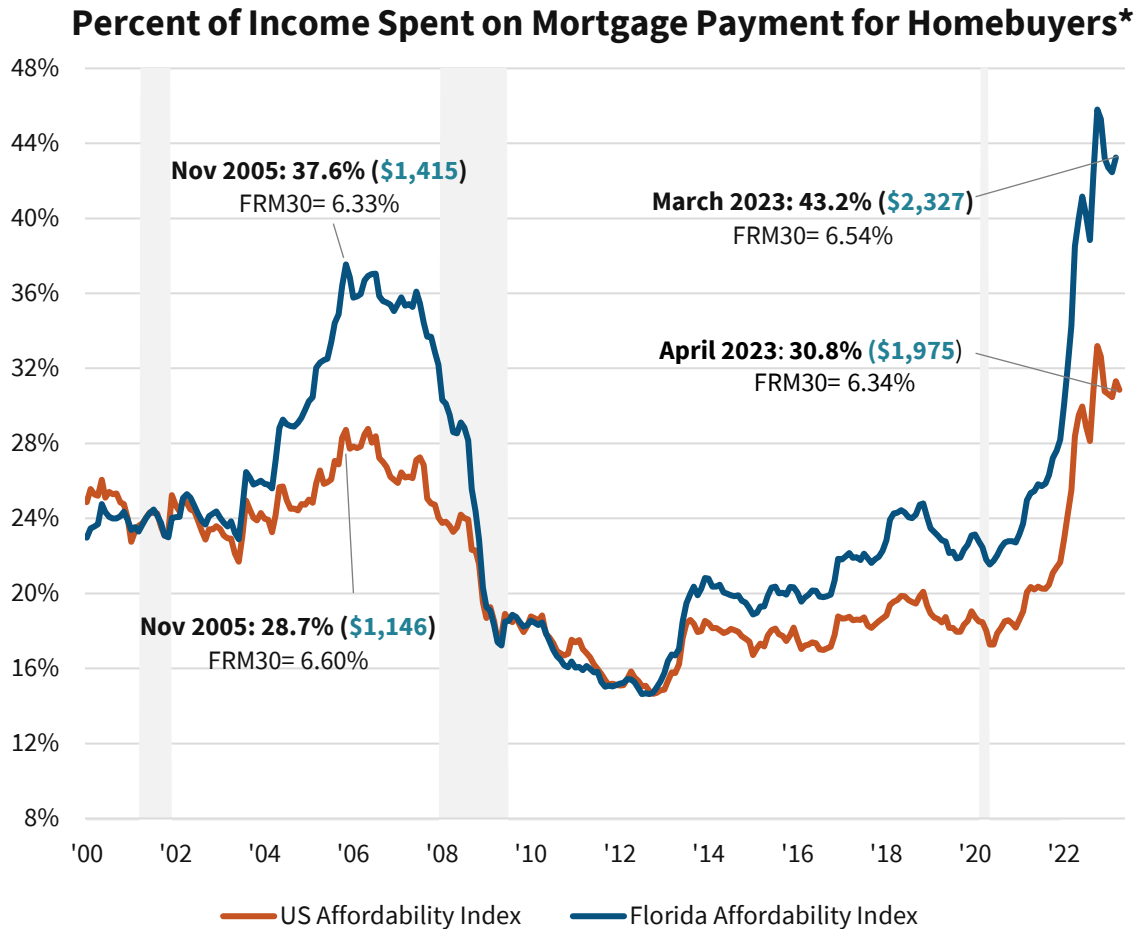


Average LTV (GSE)



# Affordability pressure has increased for Florida homebuyers

Higher home prices increase the percent of income spent on mortgage payments in Florida



\*Assumes 20% down payment, average 30-yr fixed-rate mortgage, median existing sales price, nominal median household income. Average monthly payments in parentheses.

