

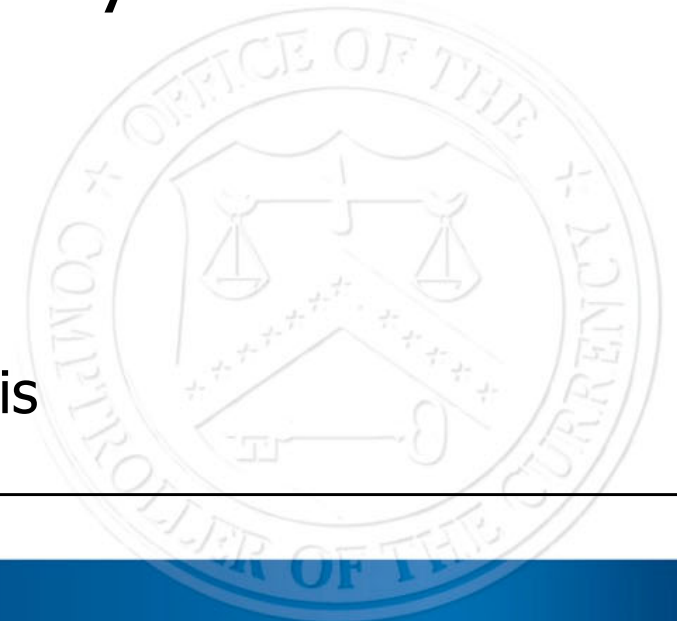
# Economics Update



Mutual Savings Association Advisory Committee

April 19, 2022

Economic & Policy Analysis



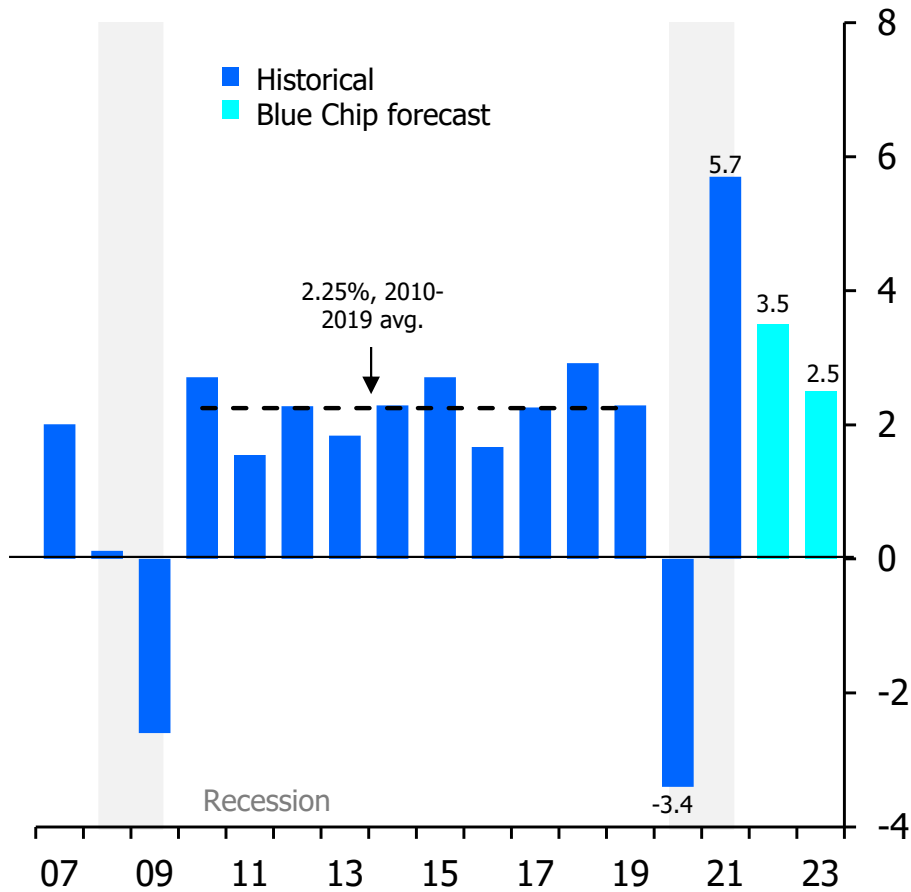
# Agenda

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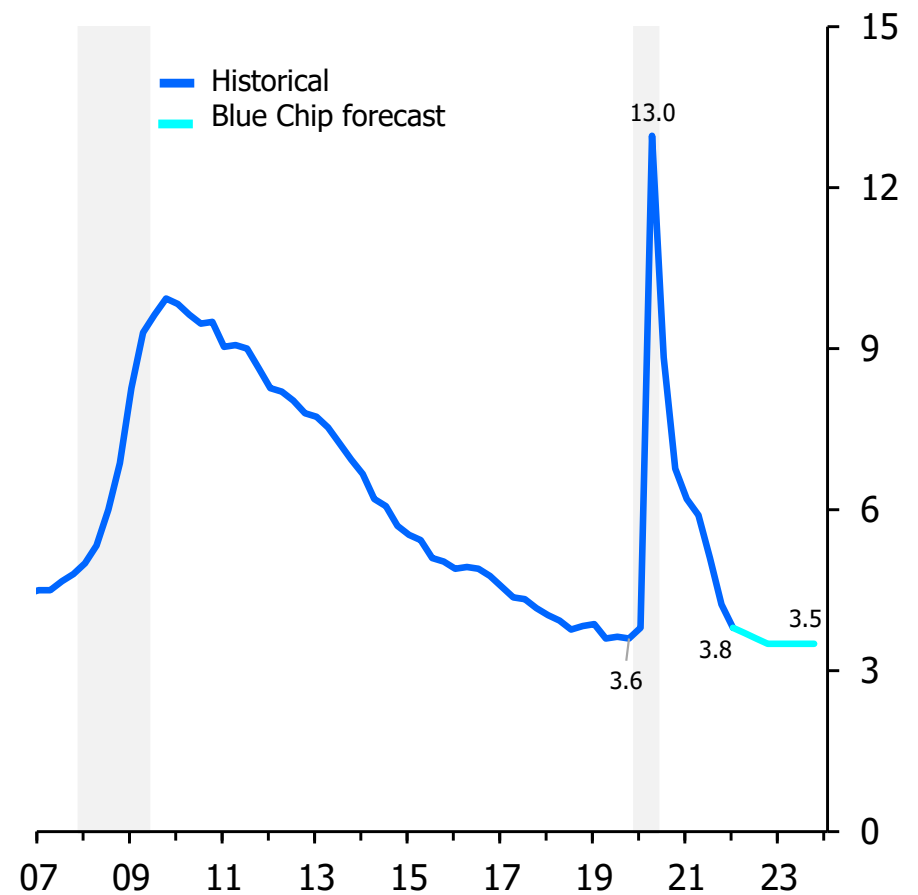
- Strong, but slowing, real GDP growth forecasted for 2022
  - Sustained and elevated inflation rates are the biggest threat to growth
- Longer-term interest rates hit 3-year high as market anticipates tightening monetary policy
  - Forecasted flattening yield curve may pressure net interest margins
- Home price appreciation boosted by low interest rates, limited supply, and higher inflation
  - Rising interest rates may cool home prices; however, prior periods of sustained rising rates are not associated with nationwide price declines

# Strong GDP growth still expected this year; unemployment rate nearing pre-COVID level

Real GDP, % change annual rate



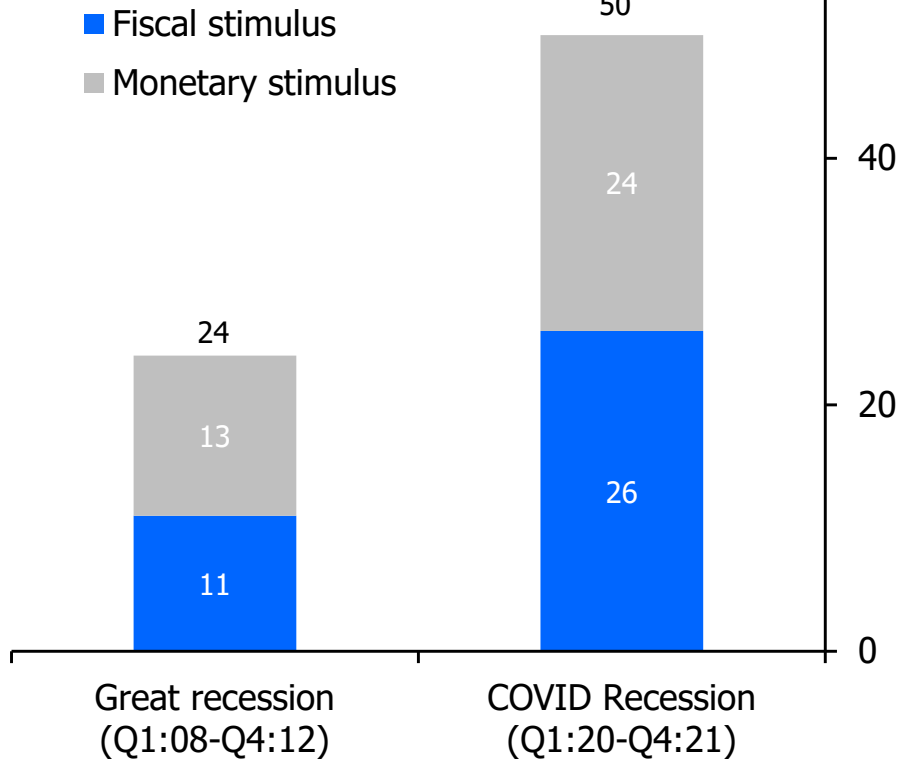
Quarterly average unemployment rate, %



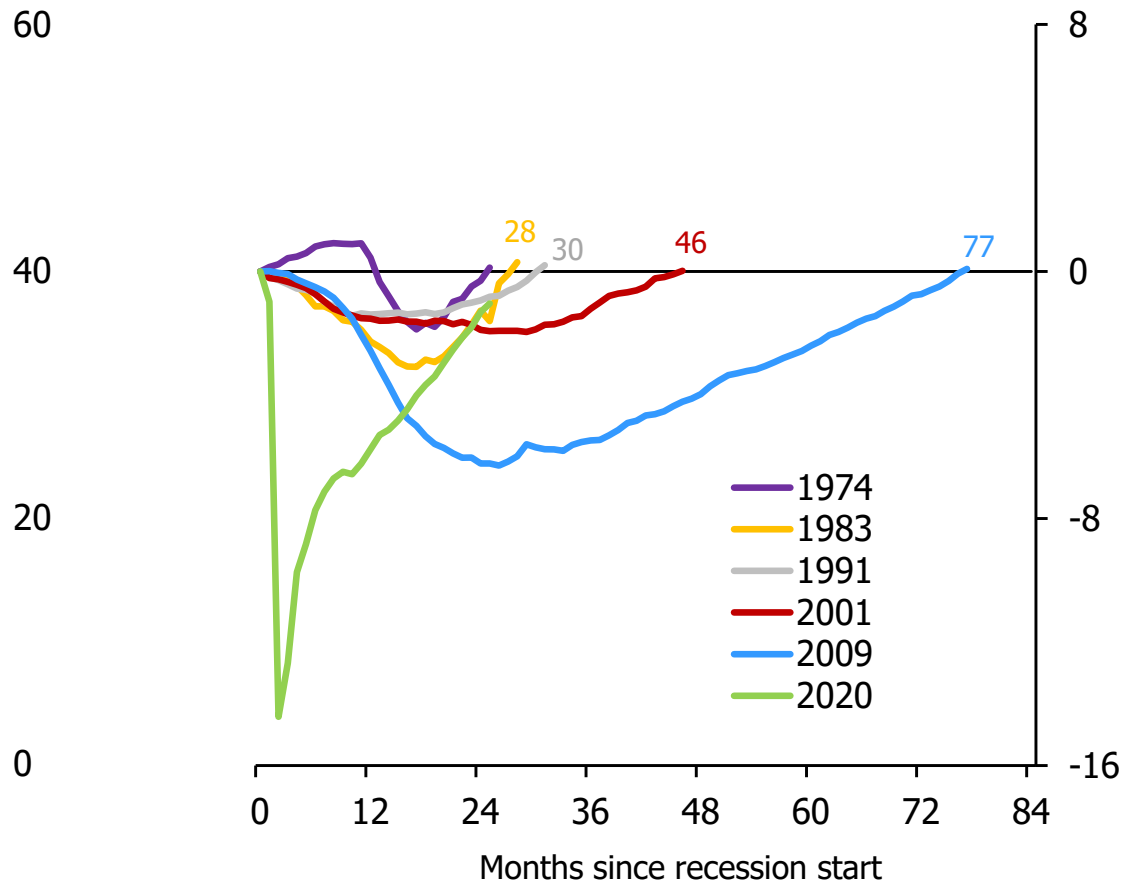
Sources: BEA (data through 4Q:2021); BLS (data through Mar. 2022) Blue Chip Economic Indicators (Mar. 2022)

# Labor market recovery assisted by larger government response to 2020 recession

Govt stimulus as a percent of pre-recession GDP, %



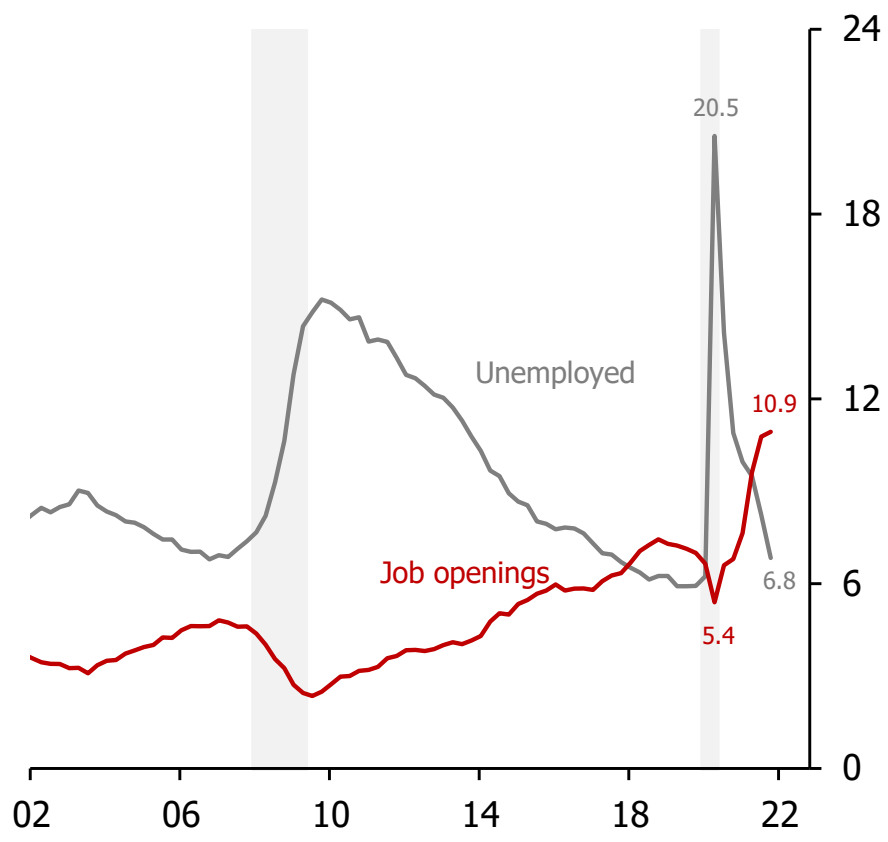
Percent change in nonfarm employees from start of recession, %



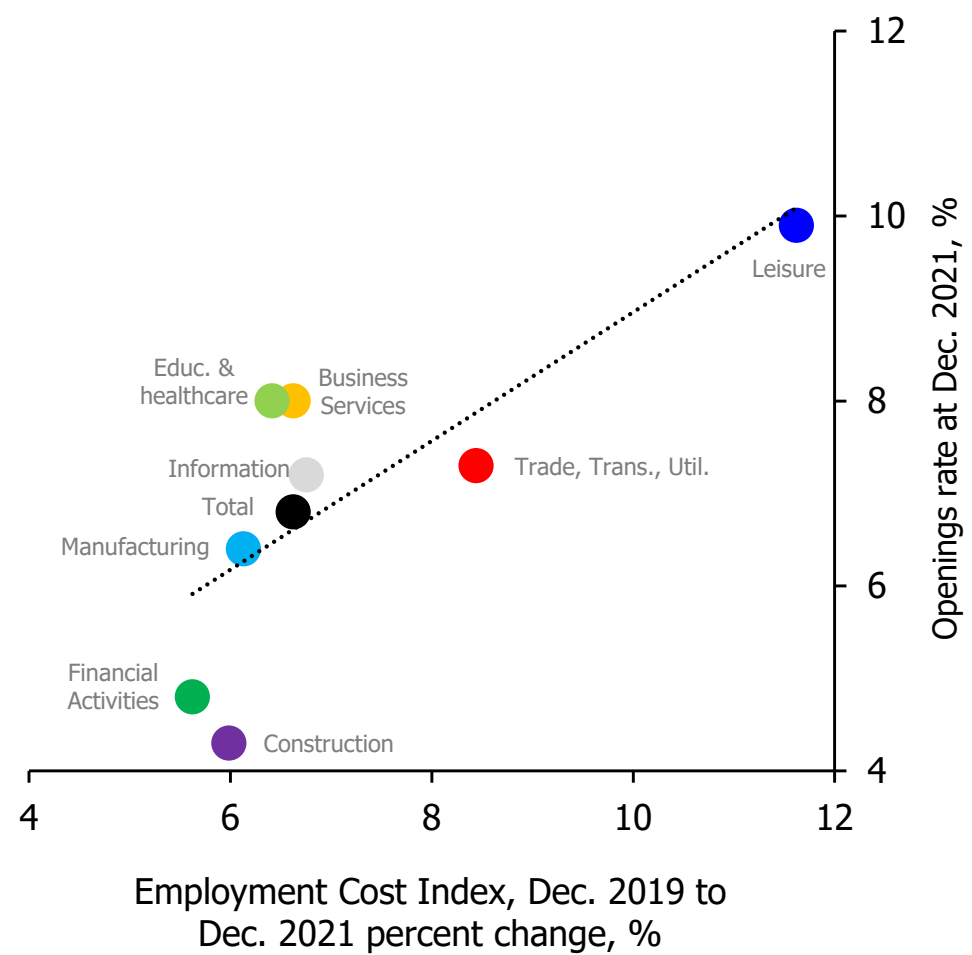
Sources: BEA (data through Dec. 2021); Federal Reserve (Jan. 2022); BLS (data through Feb. 2022)

# Four million more job openings than unemployed people; intense labor demand pushing up wages

Quarterly average job openings and unemployed persons, in millions



Employment Cost Index\* vs. job openings rate

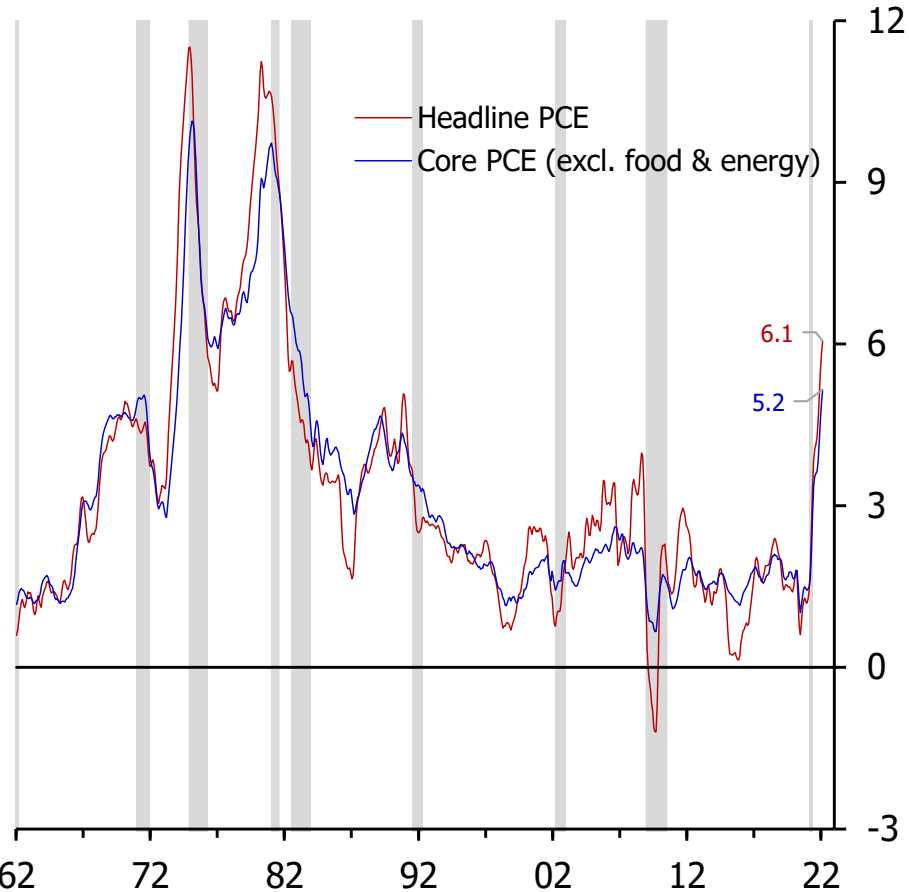


Source: BLS (data through Dec. 2021)

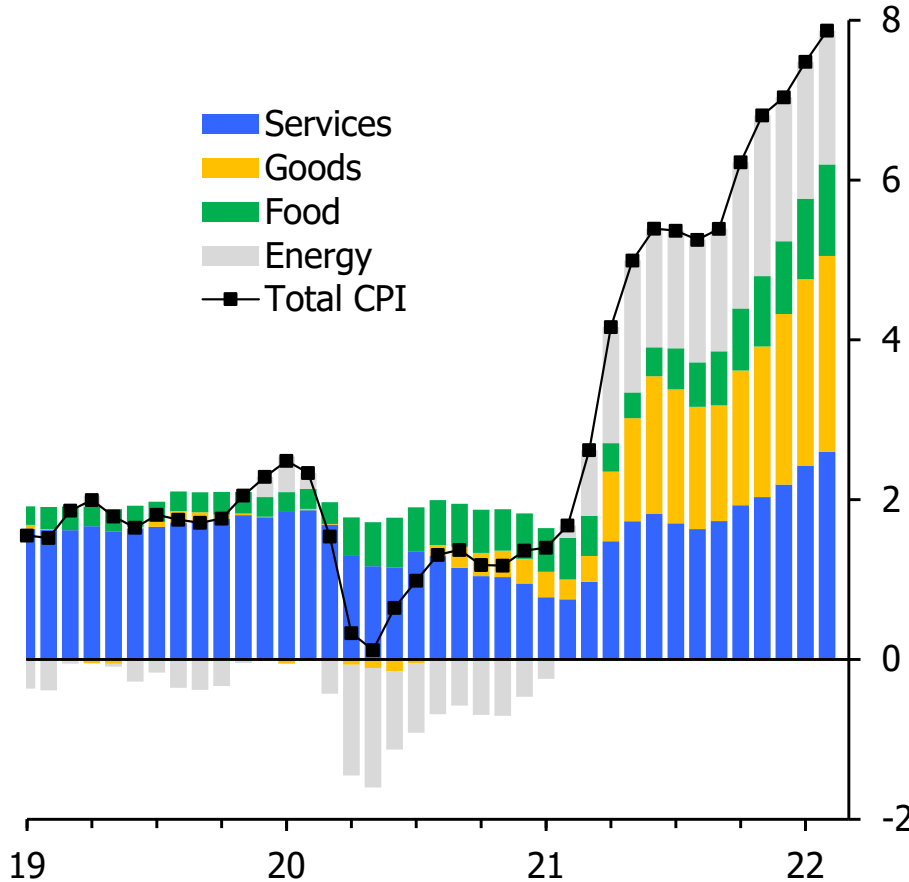
\*Employment Cost Index = measure of the change in the cost of labor, independent of the influence of employment shifts among occupations

# Fed's preferred inflation gauge hits 40-year high; services added 2.6% points to Feb. 2022 CPI

Personal consumption expenditure (PCE) index, 3mo moving avg, Y/Y % change



Contribution to monthly headline CPI year-over-year growth by item, %



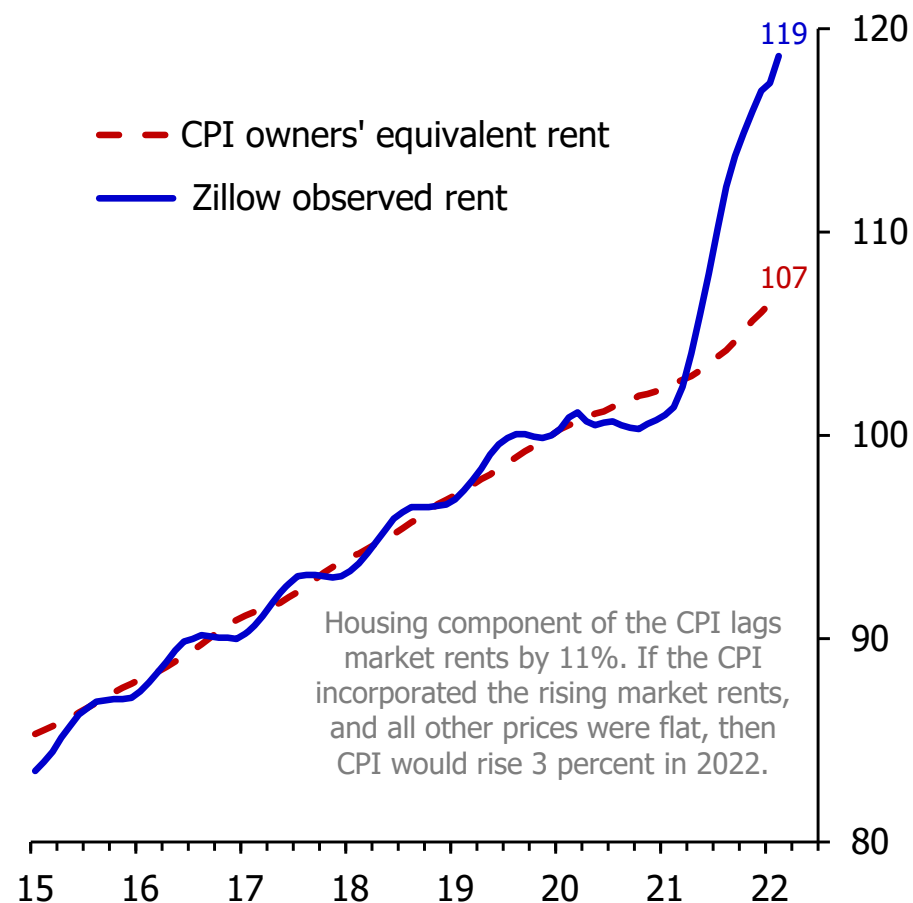
Source: BLS (Mar. 2022); EBC calculations

# Broad-based inflation occurring in many services unrelated to COVID-19 or the supply chain

Selected service items, year/year change at Feb. 2022, %

Service items	yr/yr % chg
Tax return preparation	9.8
Dry cleaning	9.5
Auto repair	6.7
Apparel services	6.5
Veterinarian services	5.8
Residential telephone services	5.8
Haircuts	5.6
Legal services	4.9
Cable TV	4.4
Trash collection	4.1
Day care	2.8

Residential rental prices, Dec. 2019 = 100

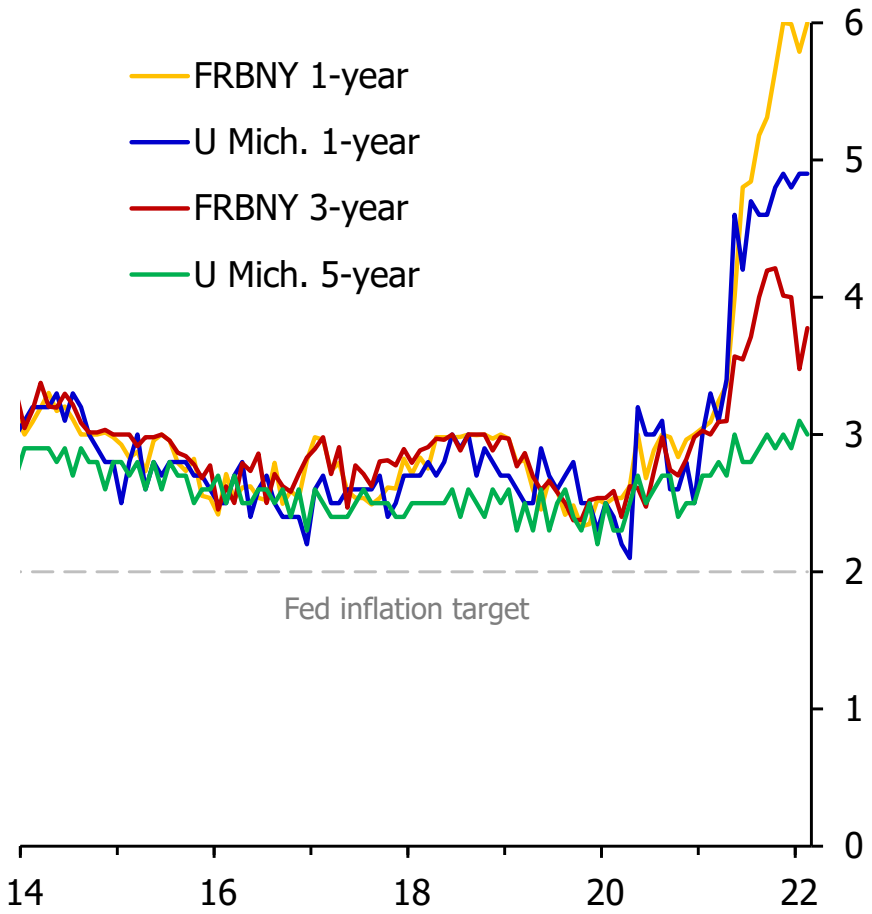


Source: BLS (data through Feb. 2022); Zillow (Feb. 2022)

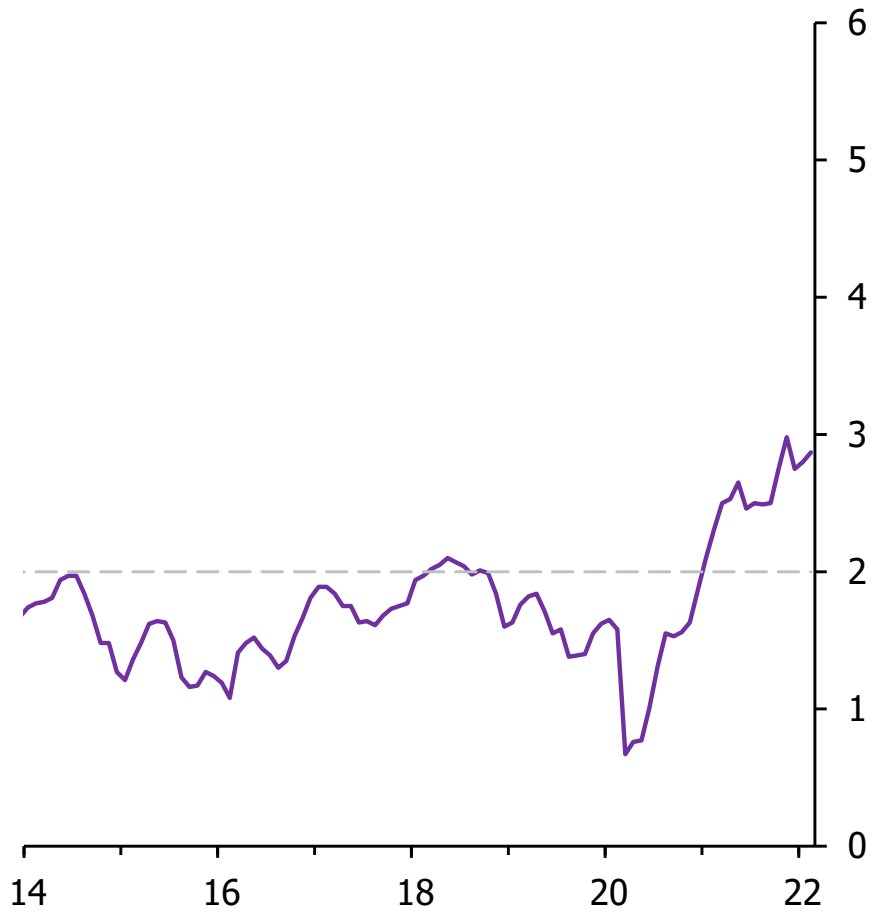
Note: Zillow's observed rent index is a smoothed measure of the typical observed market rate rent across a given region. It is a repeat-rent index that is weighted to the rental housing stock to ensure representativeness across the entire market, not just those homes currently listed for-rent. Owners' equivalent rent is the hypothetical amount a homeowner could get for their house if they rented it out.

# Five-year consumer and bond market inflation expectations rise to 3%

Consumer one-year ahead expected inflation rate, %



5-year breakeven inflation rate, %



Sources: FRBNY (data through Feb. 2022); University of Michigan (Mar. 2022); HAVER (Mar. 2022)

Note: Breakeven inflation rate is the expected inflation rate in 5-years derived from nominal and real U.S. Treasuries



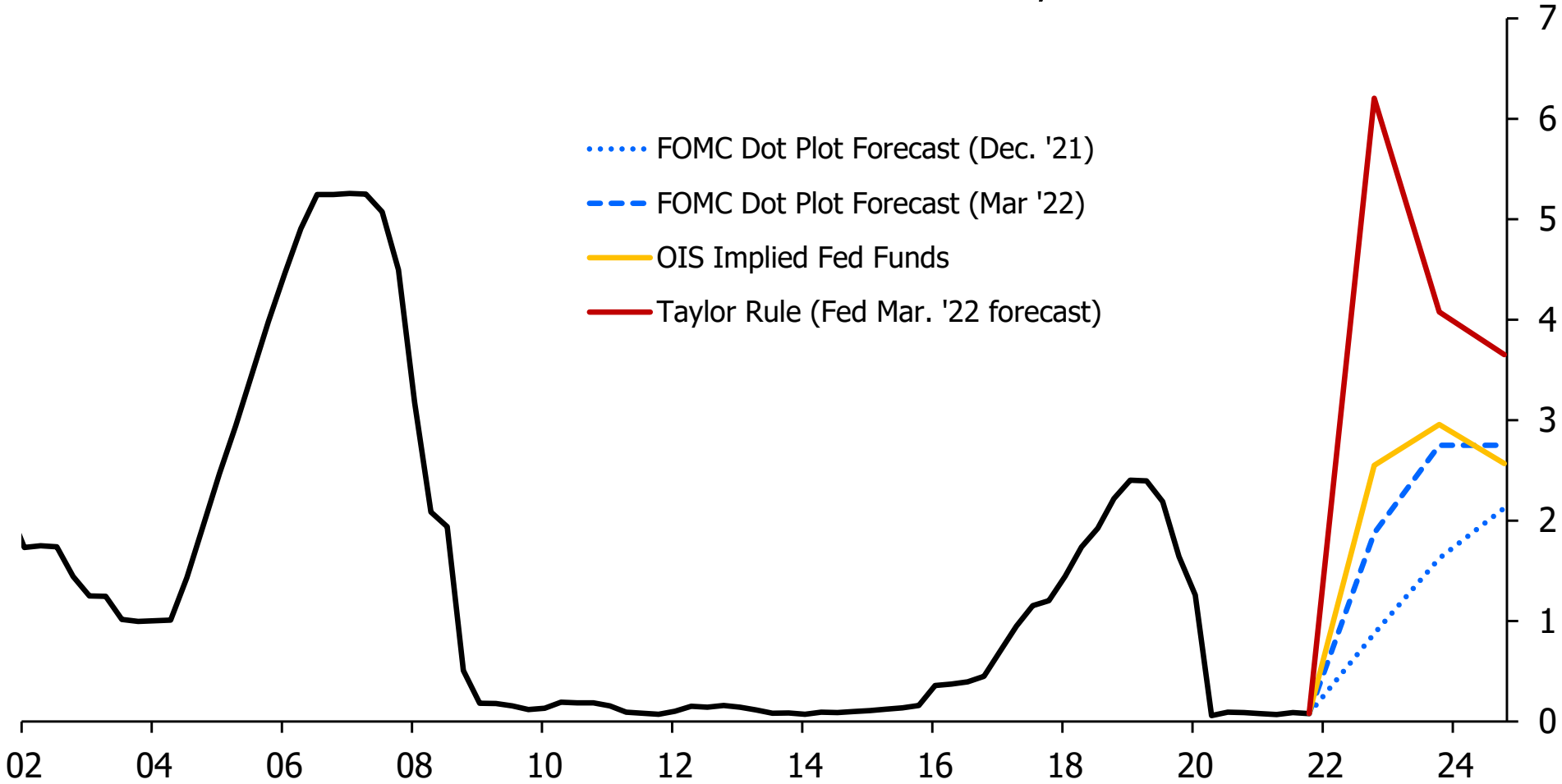
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- Longer-term interest rates hit 3-year high as market anticipates tightening monetary policy
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- Home price appreciation boosted by low interest rates, limited supply, and higher inflation
  - Rising interest rates may cool home prices; however, prior periods of sustained rising rates are not associated with nationwide price declines

# Markets and Fed expect interest rates to stay below the path suggested by popular policy rule

Effective federal funds rate, %

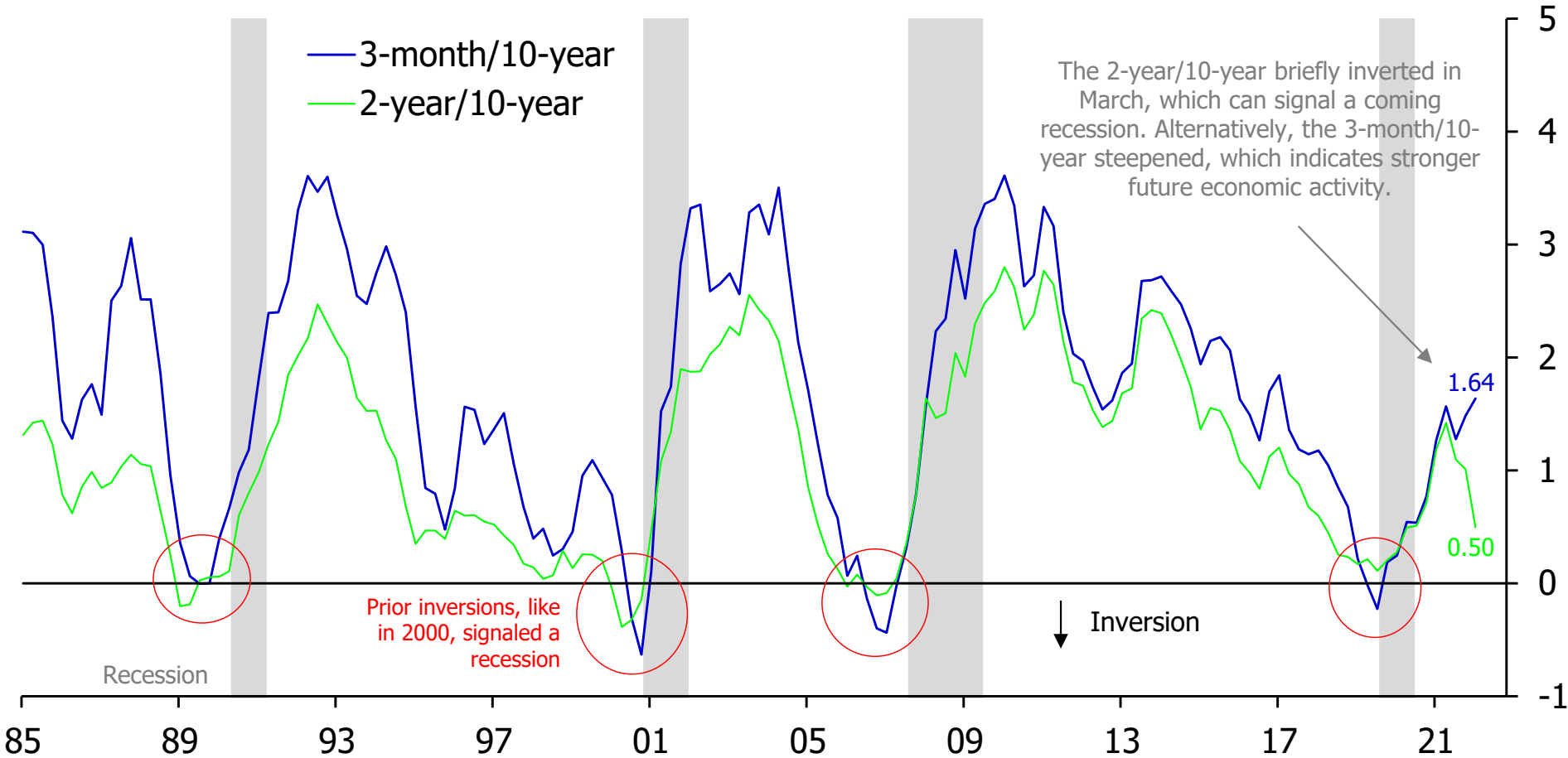


Source: Federal Reserve Board; Bloomberg; HAVER  
 Note: Overnight index swap rate as of March 16, 2022. FOMC Dot Plot projection as of March 16, 2022. Taylor Rule estimated using Fed's median projections of core PCE and real GDP growth under the balanced approach and  $r^* = 2$ .

Note: Taylor rule suggests how central banks should change interest rates to account for inflation and other economic conditions

# U.S. yield curve divergence in 1Q:22 sends mixed economic signals

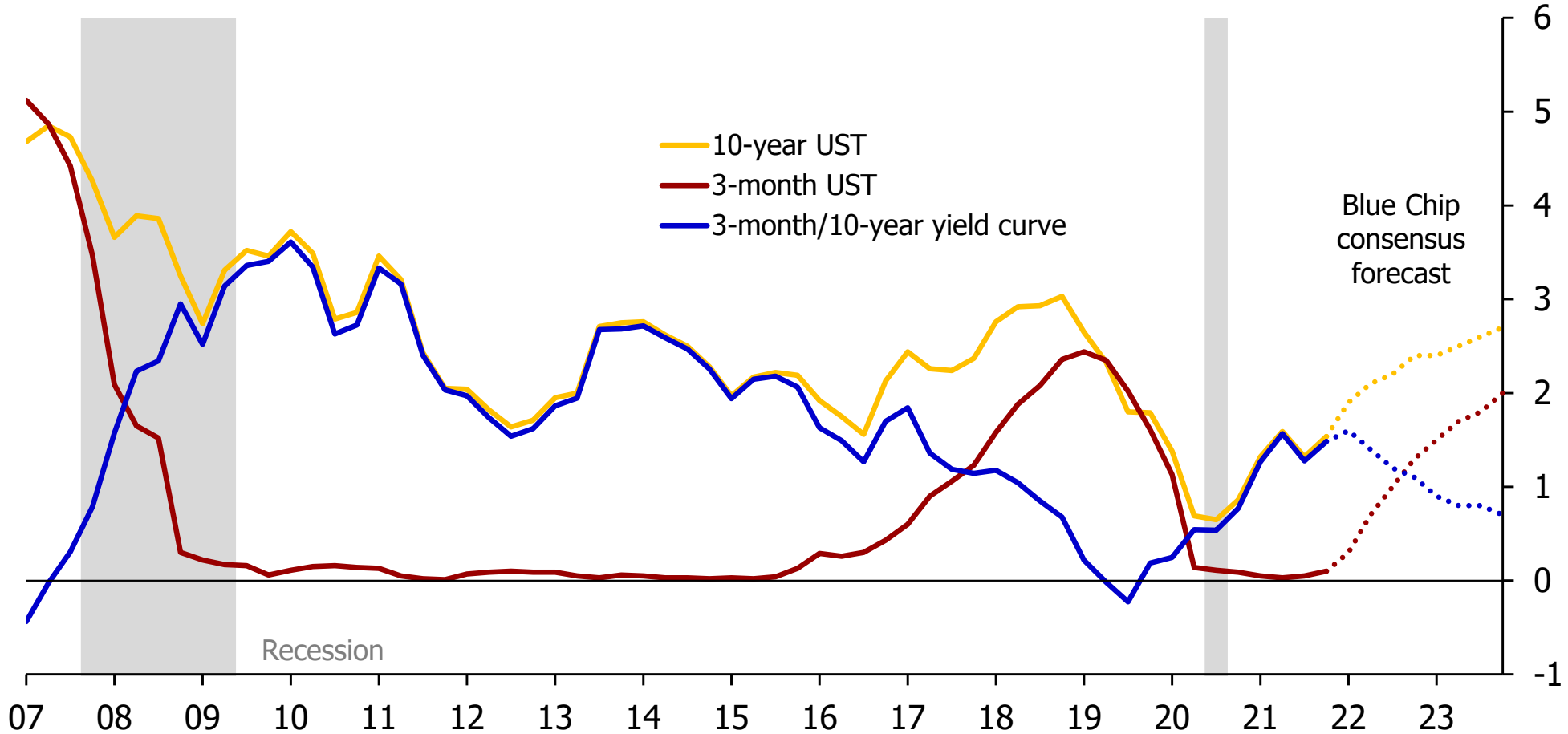
Average quarterly U.S. yield curve, %



Source: Federal Reserve Board (data through Mar. 2022).

# Forecasters expect yield curve to flatten as 3-month treasury rates rise faster than 10-year

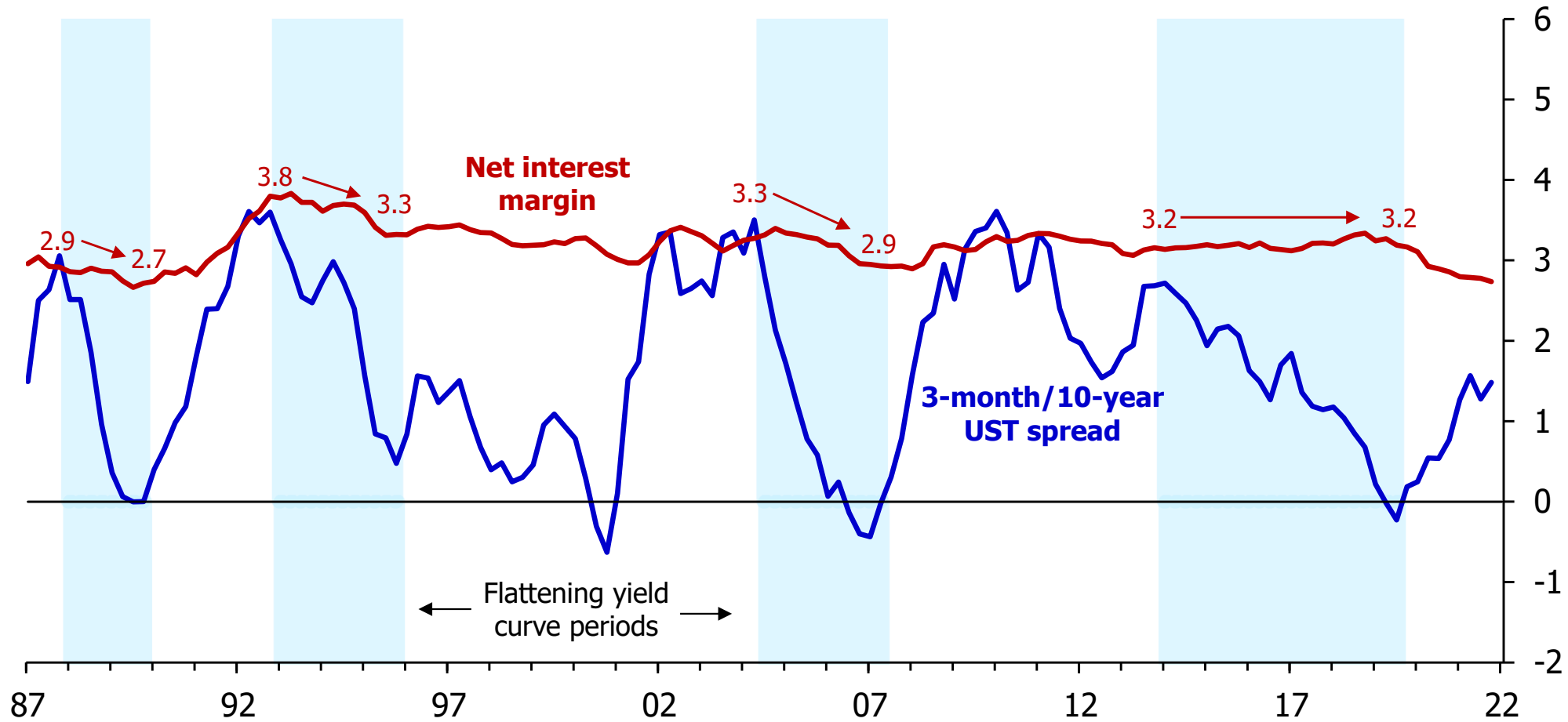
Treasury yields, quarterly average, %



Sources: Federal Reserve Board (historical through 4Q:2021); Blue Chip Economic Indicators (Mar. 2022);

# Mutuals' net interest margins held steady during recent flattening yield curve period ('14-'19)

Median mutual institution NIM vs. yield curve, quarterly average, %



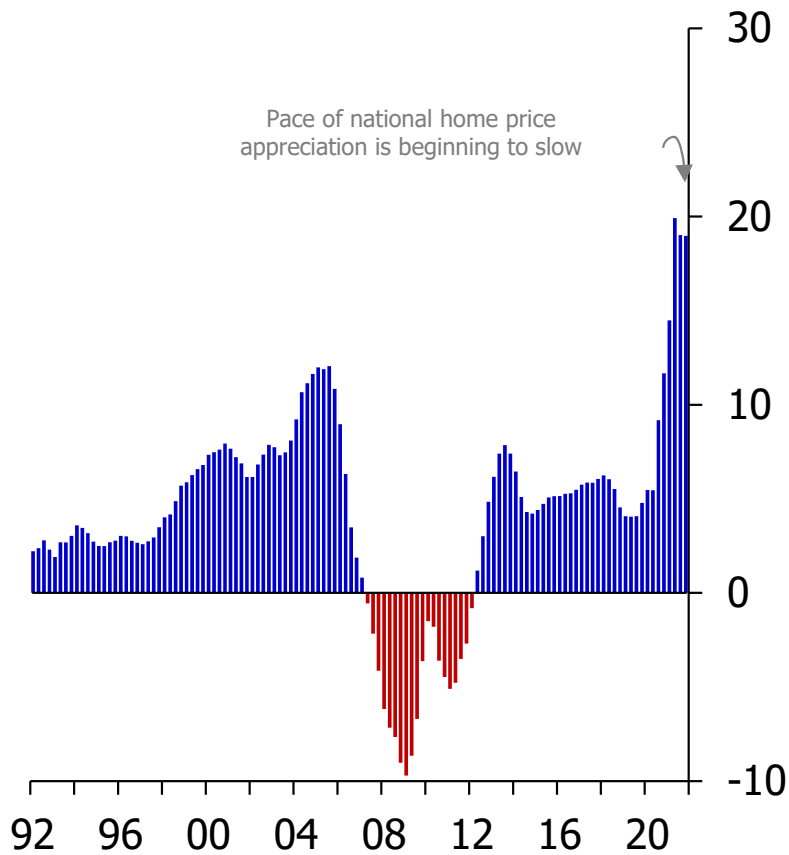
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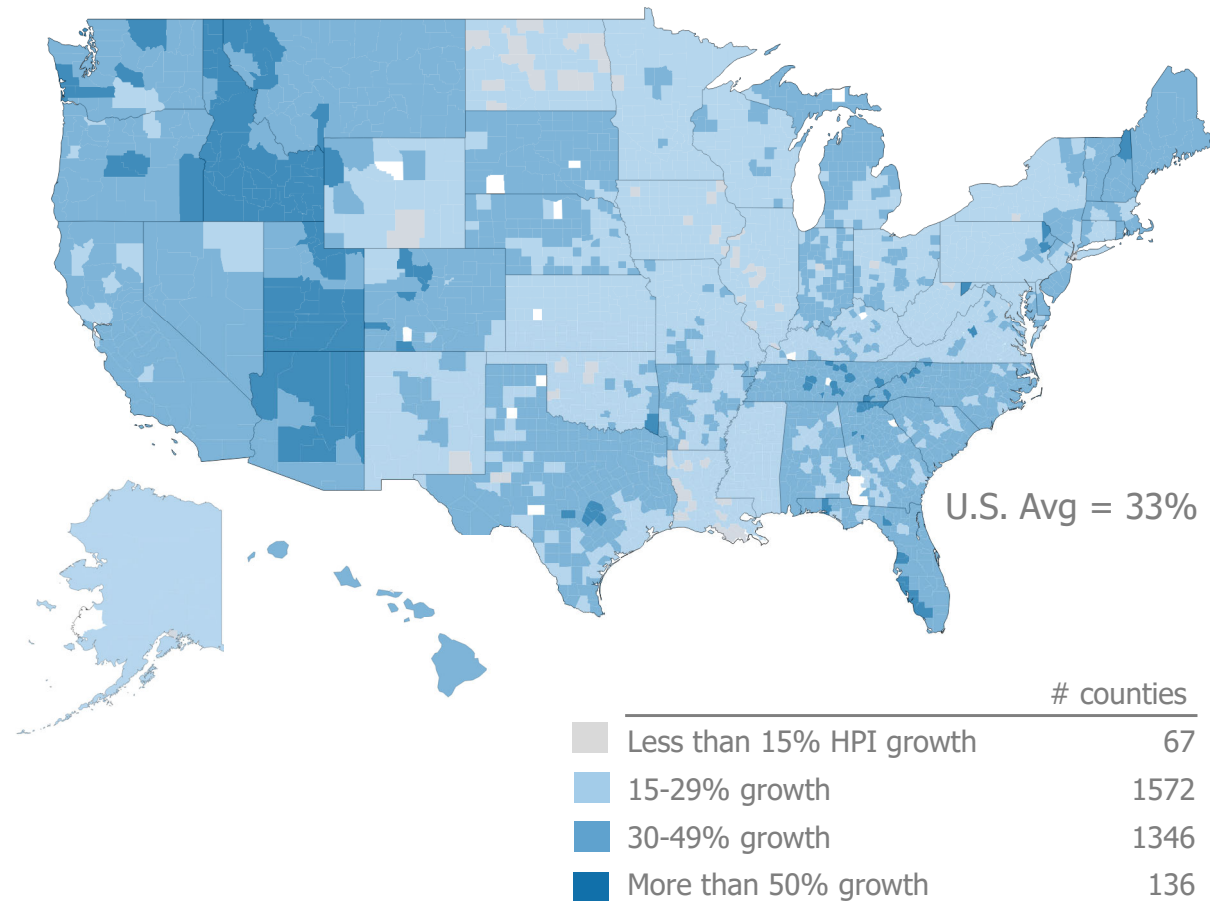
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# National home price growth slowed during 2H:21; half of counties had price growth >30%

National home prices, year-over-year percent change, %



Single-family home price change since Dec. 2019 by county

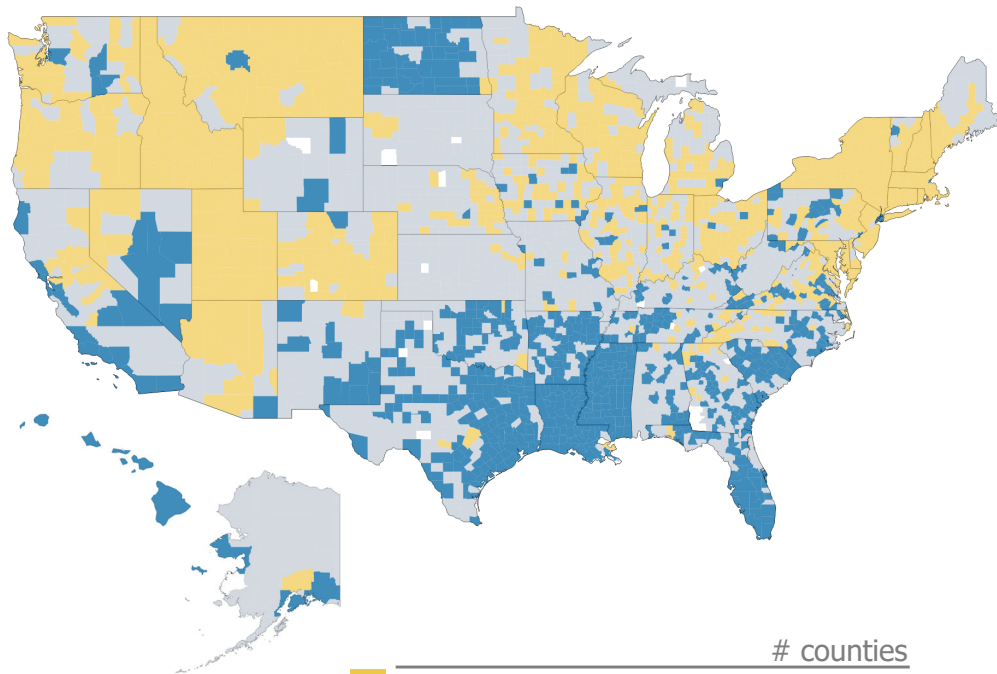


Source: Black Knight (data through Dec. 2021)

Note: All but one of the +3,000 counties experienced negative HPI from Dec. 2019 to Dec. 2021 (Jersey County, IL at -4.8%).

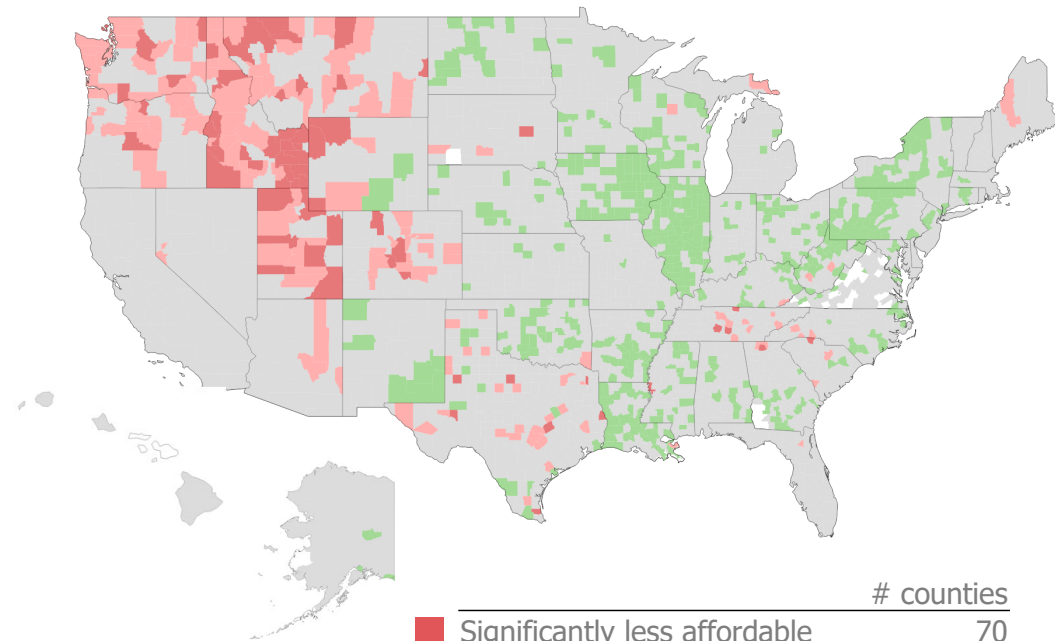
# Home price growth is slowing in most counties; majority of counties near historic affordability

Change in the rate of home price appreciation from Q3:21 to Q4:21



	# counties
Decelerating price growth	944
No change	1,405
Accelerating price growth	772

Mortgage payment to median family income by county at Dec. 2021



	# counties
Significantly less affordable	70
Less affordable	158
Near historic affordability	2,276
More affordable	566
Significantly more affordable	0

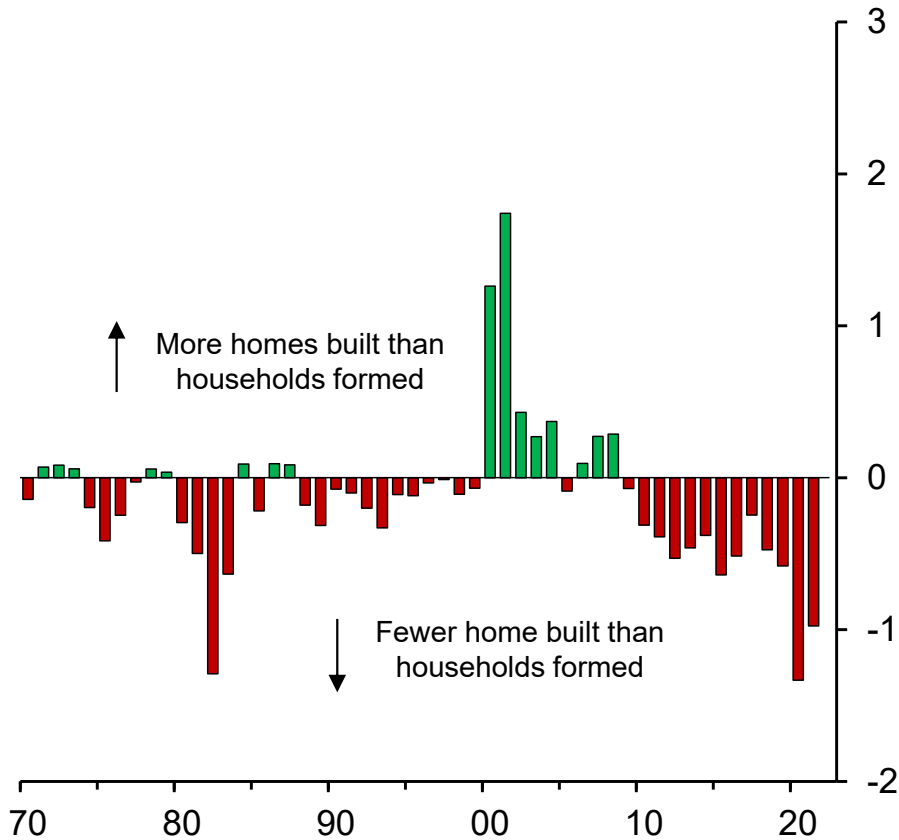
Note: Mortgage payment on average priced home in market using a 30-year fixed-rate mortgage with 20 percent down payment (P & I only) relative to median family household income.

Significantly less affordable = 2 or more standard deviations more affordable county's 1Q:91 to 3Q:21 history; Less affordable = 1 to 1.99 standard deviations less affordable; Near historic affordability = Within 1 standard deviation of county's affordability; More affordable = 1 to 1.99 standard deviations more affordable; Significantly more affordable = 2 or more standard deviations more affordable

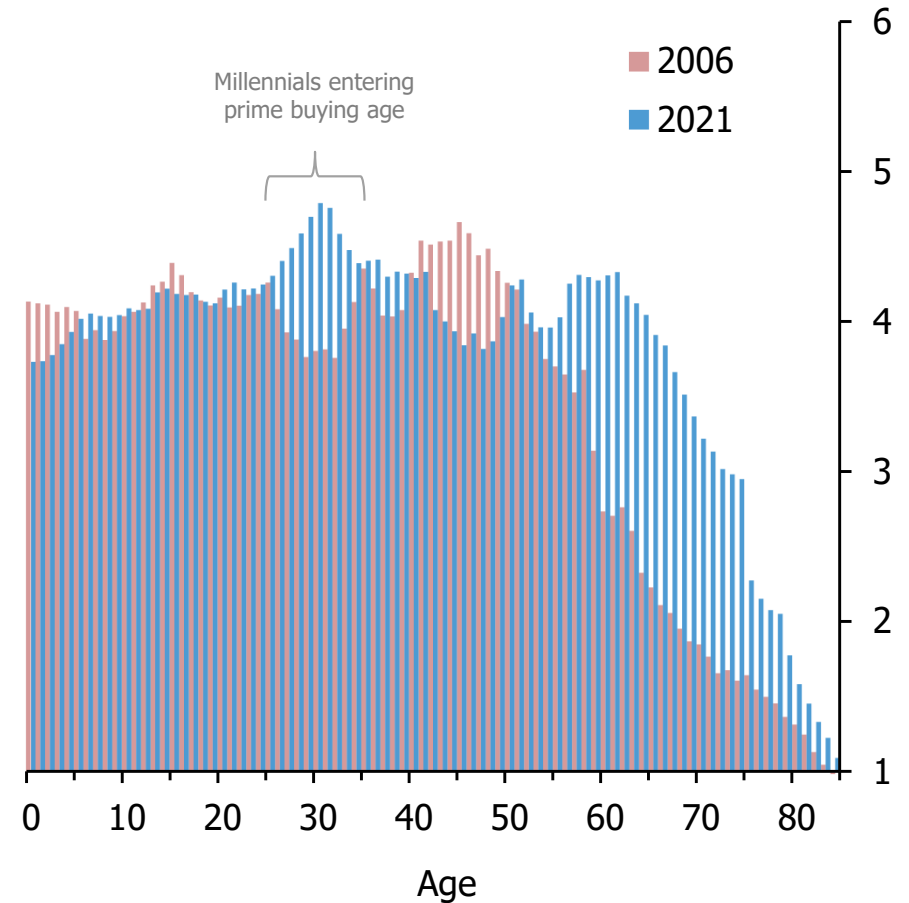


# Homebuilding has not kept pace with household formations; millennials age into homebuying

Difference between housing unit growth and household formation, millions



U.S. population by age, millions

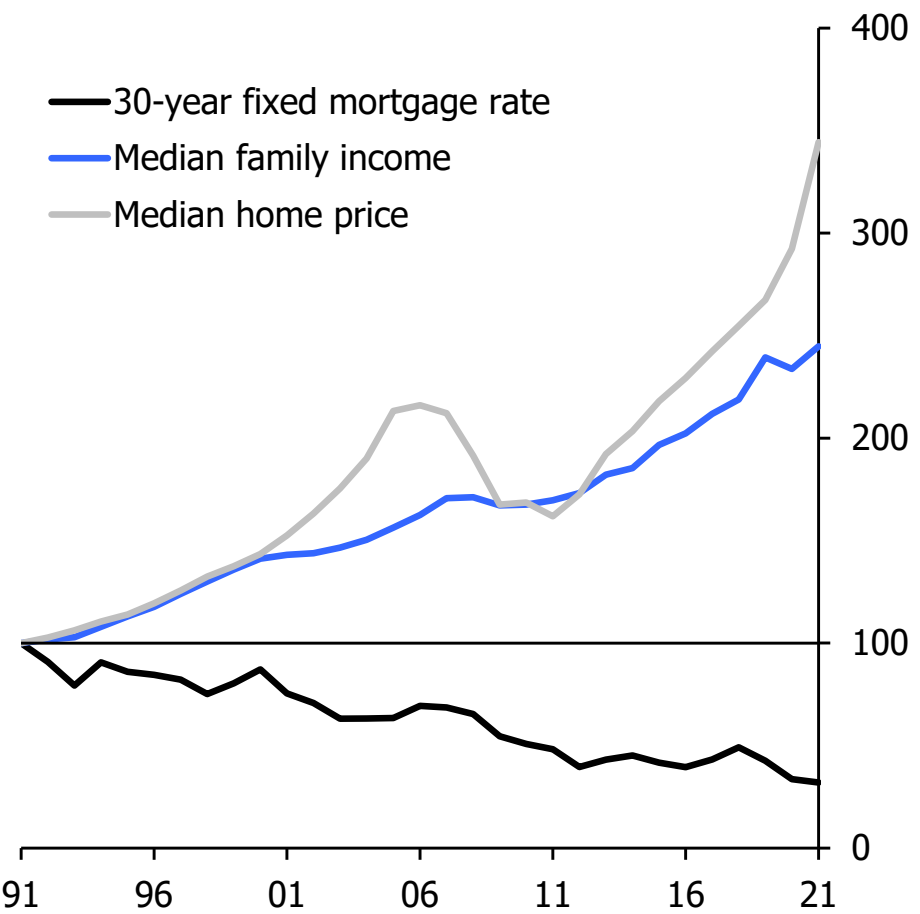


Source: Census; EBC calculations (data through 2021)

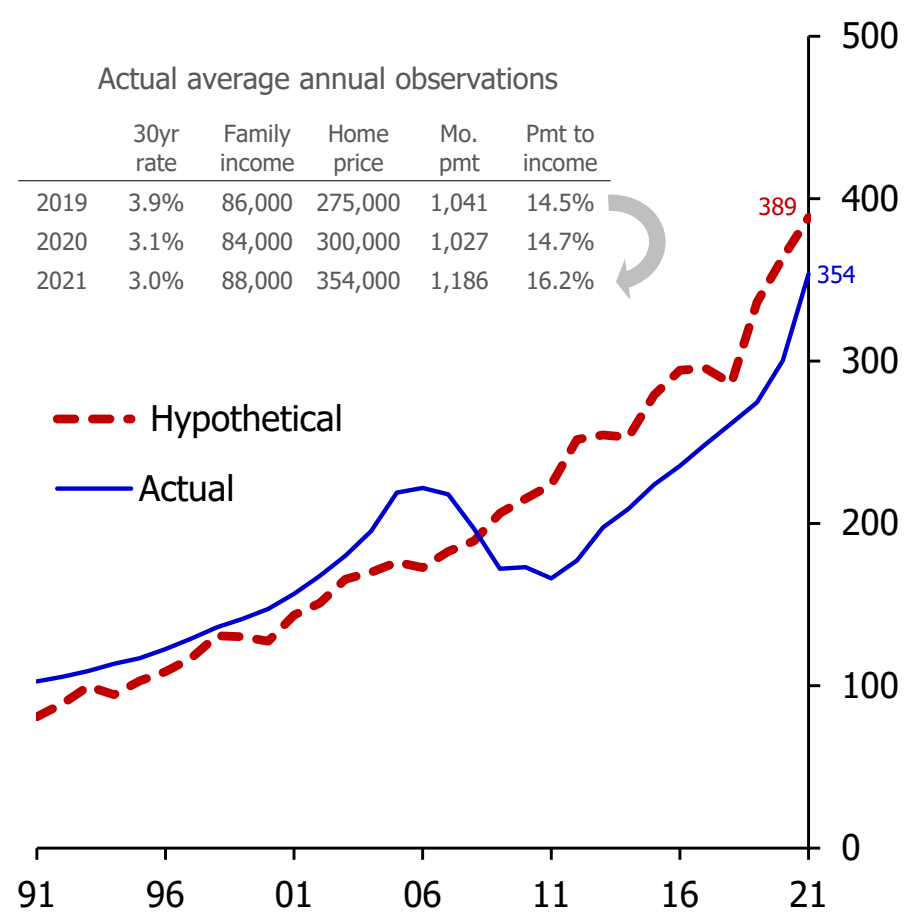
Note: Household formations is estimated as the change in total U.S. households with a 2yr moving average. Household unit growth is the difference between annual completed homes built (all types) and 0.31% obsolescence rate of the prior year's existing stock.

# Low mortgage rates over last 2 years offset rising home prices and slower income growth

Average annual interest rates, family income and home prices, 1991=100



Median home prices vs hypothetical\* median family purchasing power, \$000's

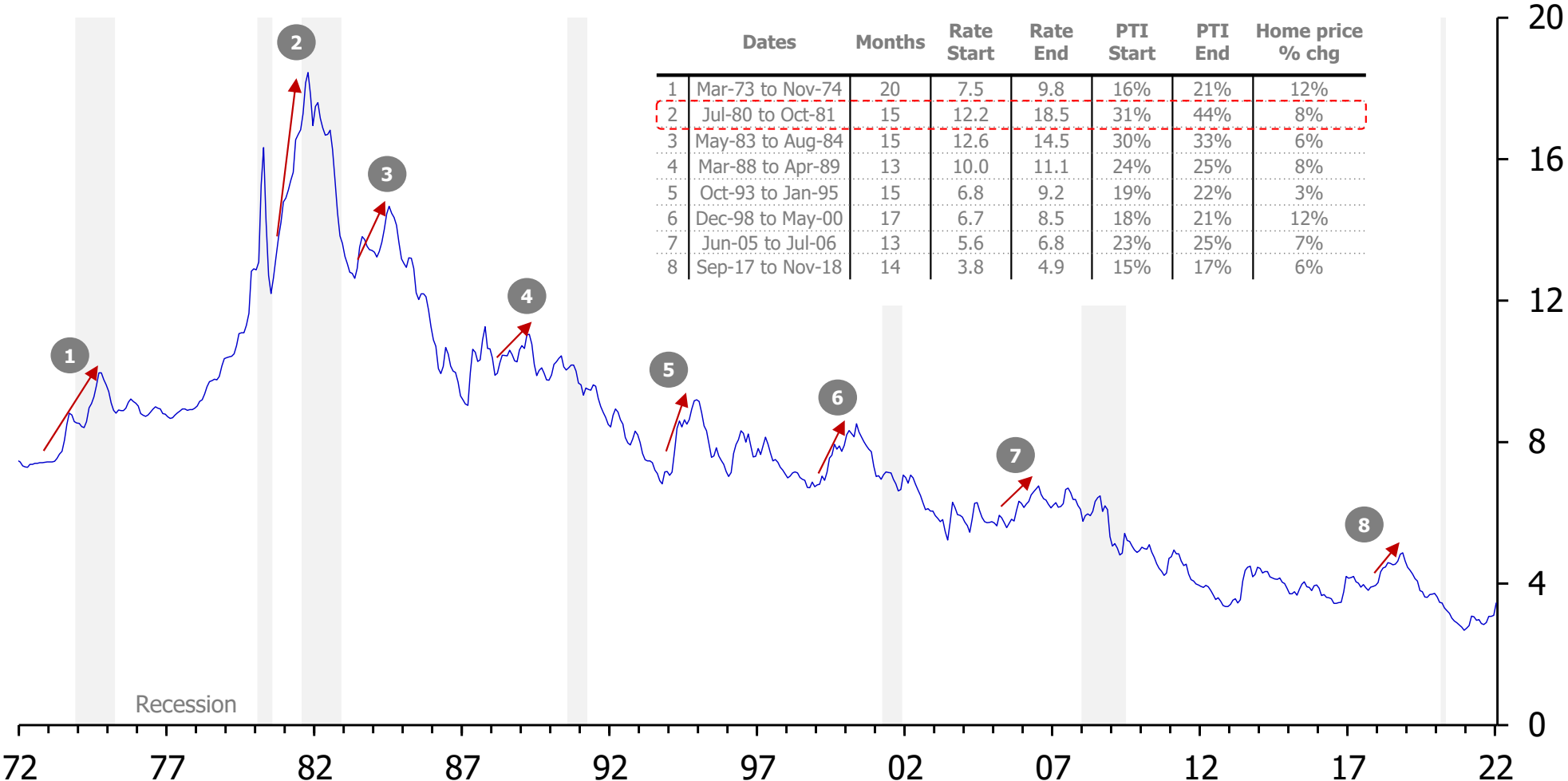


Source: Census (data through 2021); Freddie Mac (2021); National Association of Realtors (2021); & OCC calculations

\*Hypothetical median family purchasing power was calculated by estimating how much the median family income could purchase if they put a 10% down payment on the median priced home, at the prevailing 30yr fixed mortgage interest rate, and apportioned 20% of their gross monthly income toward the mortgage principal and interest payment.

# Prior periods of sustained rising mortgage rates are not associated with declining home prices

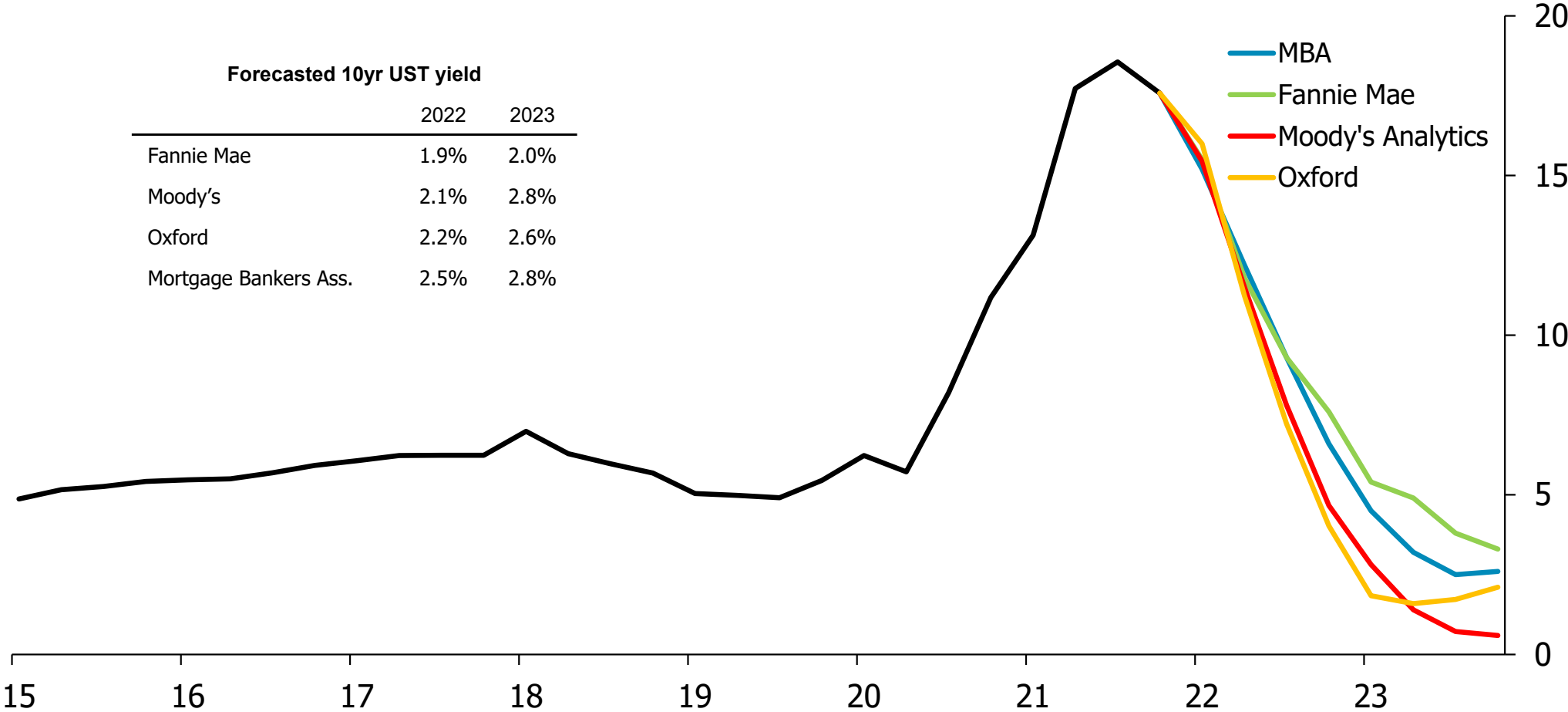
Monthly average 30-year fixed mortgage rates, %



Sources: Freddie Mac (data through Jan. 2022); Case-Shiller (Jan. 2022)

# Home price growth is forecasted to decelerate in 2022 and 2023

Forecasted single-family year-over-year home price percent change, %



Forecasted 10yr UST yield		
	2022	2023
Fannie Mae	1.9%	2.0%
Moody's	2.1%	2.8%
Oxford	2.2%	2.6%
Mortgage Bankers Ass.	2.5%	2.8%

Sources: FHFA (data through Dec 2021); Black Knight; Fannie Mae (Mar. 2022); Moody's Analytics (Mar. 2022 Baseline); Oxford (Mar. 2022)

Note: Historical HPI is based on FHFA single-family purchase-only index.

# Conclusion

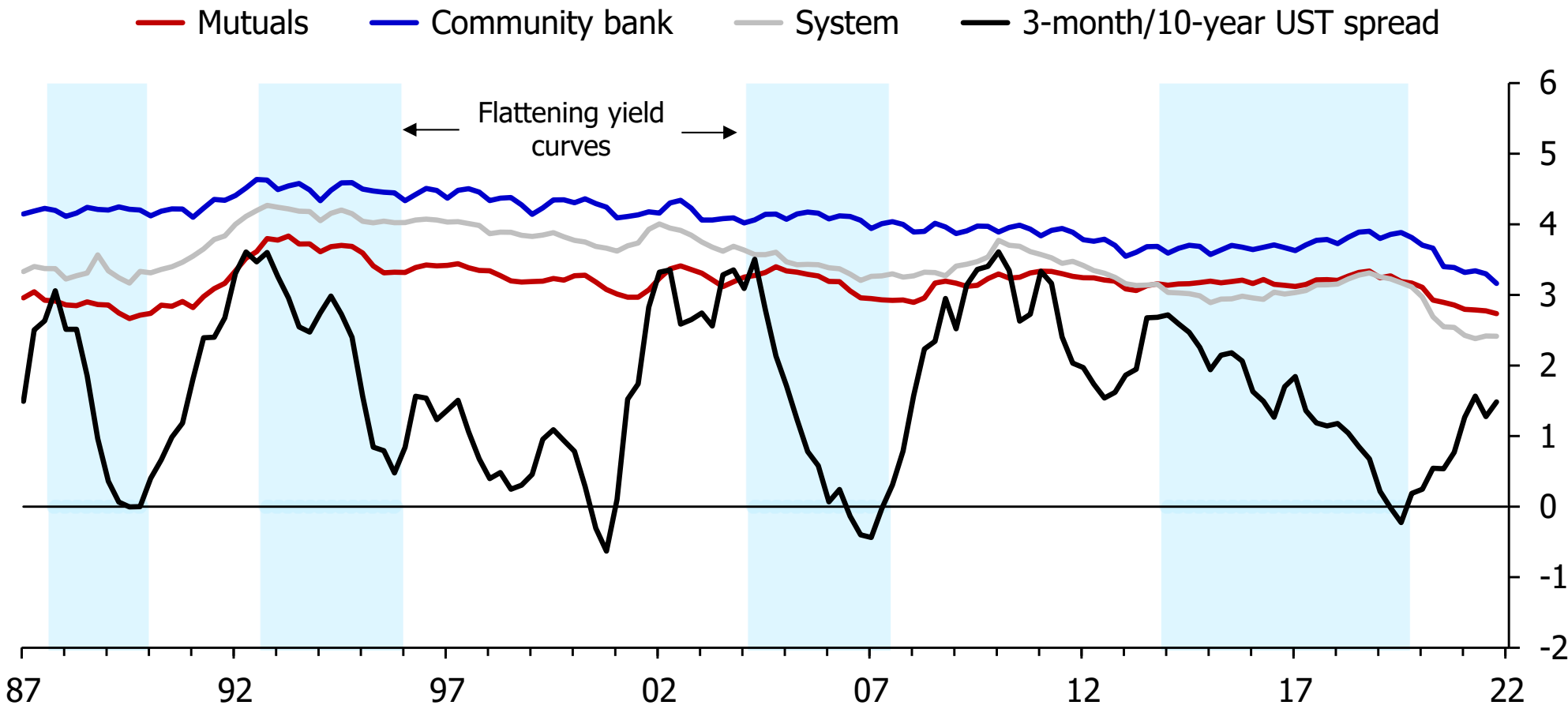
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- Strong GDP growth expected, but inflation risk looms
- Forecasted yield curve flattening will challenge NIMs
- Significant national home price declines unlikely given major mismatch between supply and demand

# Appendix

# Forecasters expect yield curve to flatten as 3-month treasury rates rise faster than the 10-year

Net interest margin and yield curve, quarterly average, %



Sources: Call/Thrift Reports from OCC Integrated Banking Information System, Federal Reserve Board, Haver Analytics

Note: Community banks are defined as non-specialty institutions with less than \$2B in assets