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REALTORS' ASSOCIATION OF SOUTH CENTRAL WISCONSIN

2022 Macroeconomic and Real Estate Update and Forecast

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SCHOOL OF BUSINESS

UNIVERSITY OF WISCONSIN-MADISON

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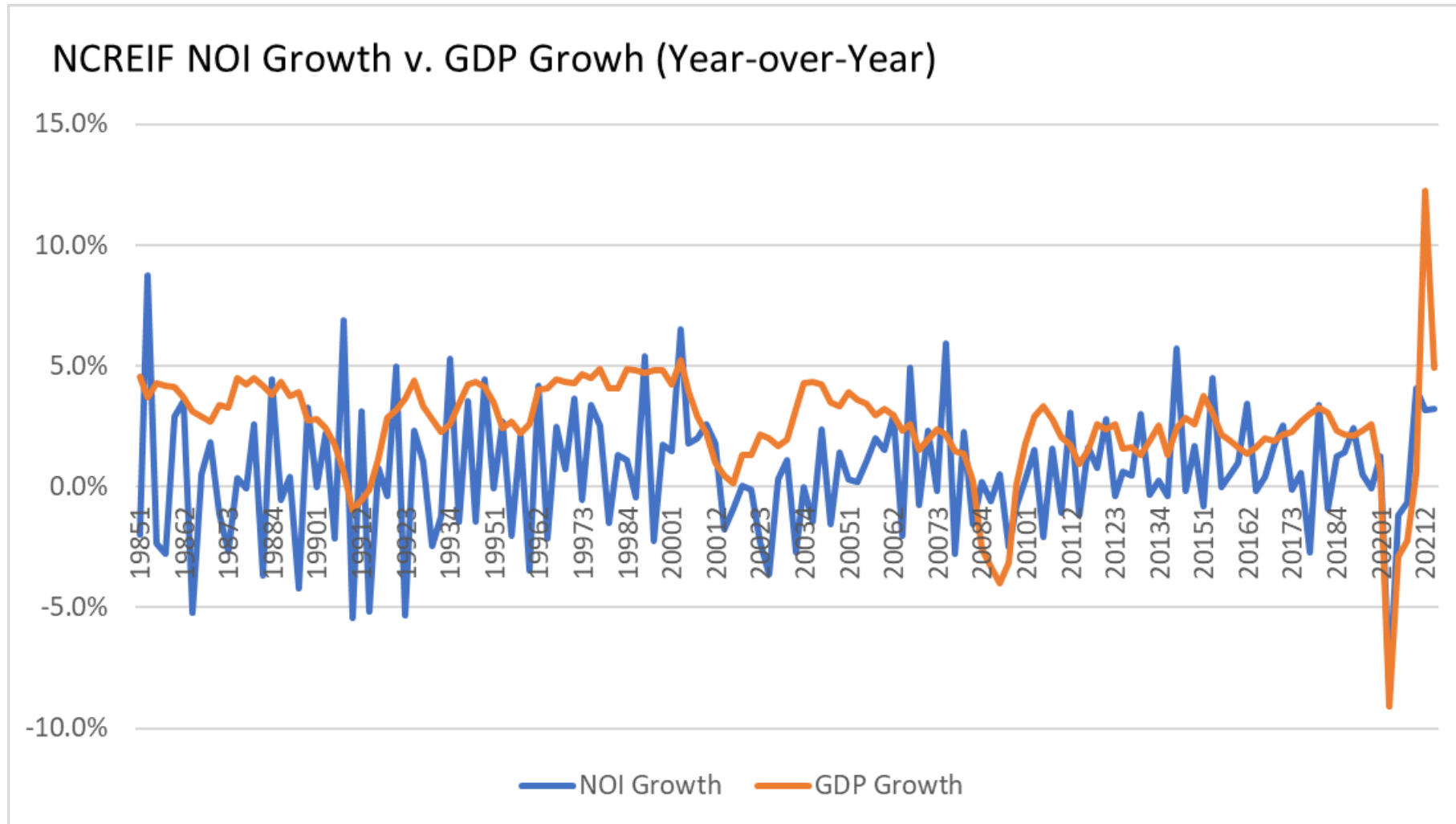
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2022 Macroeconomic and Real Estate Update and Forecast

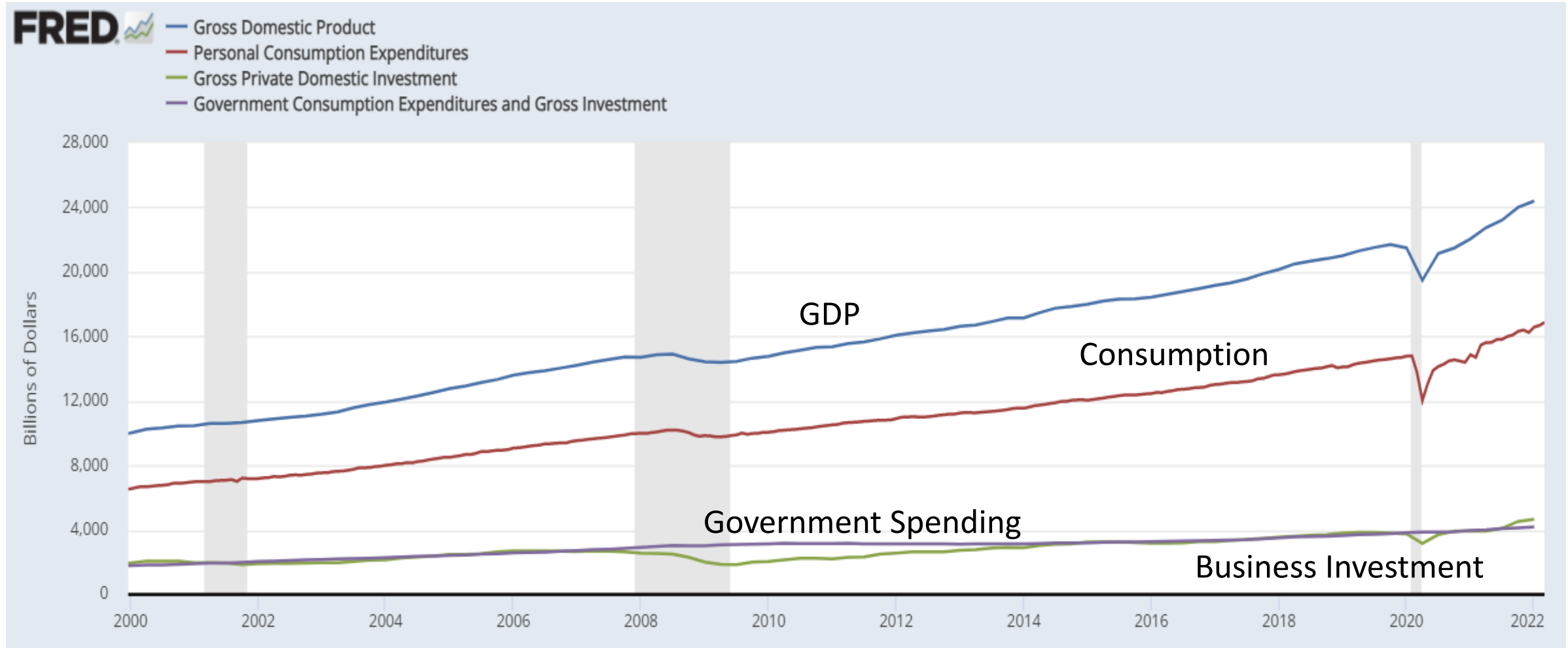
- I. Covid (oops, Covid is no longer seems to be an issue!)
- II. Economy
 - A. GDP/Household Finances
 - B. Fiscal Stimulus/Monetary Stimulus
 - C. Rates/Inflation
- III. Demographics, Migration, and Behaviors
- IV. Commercial Real Estate
 - A. Capital Markets
 - B. Cap Rates
 - C. Property Markets

Economy

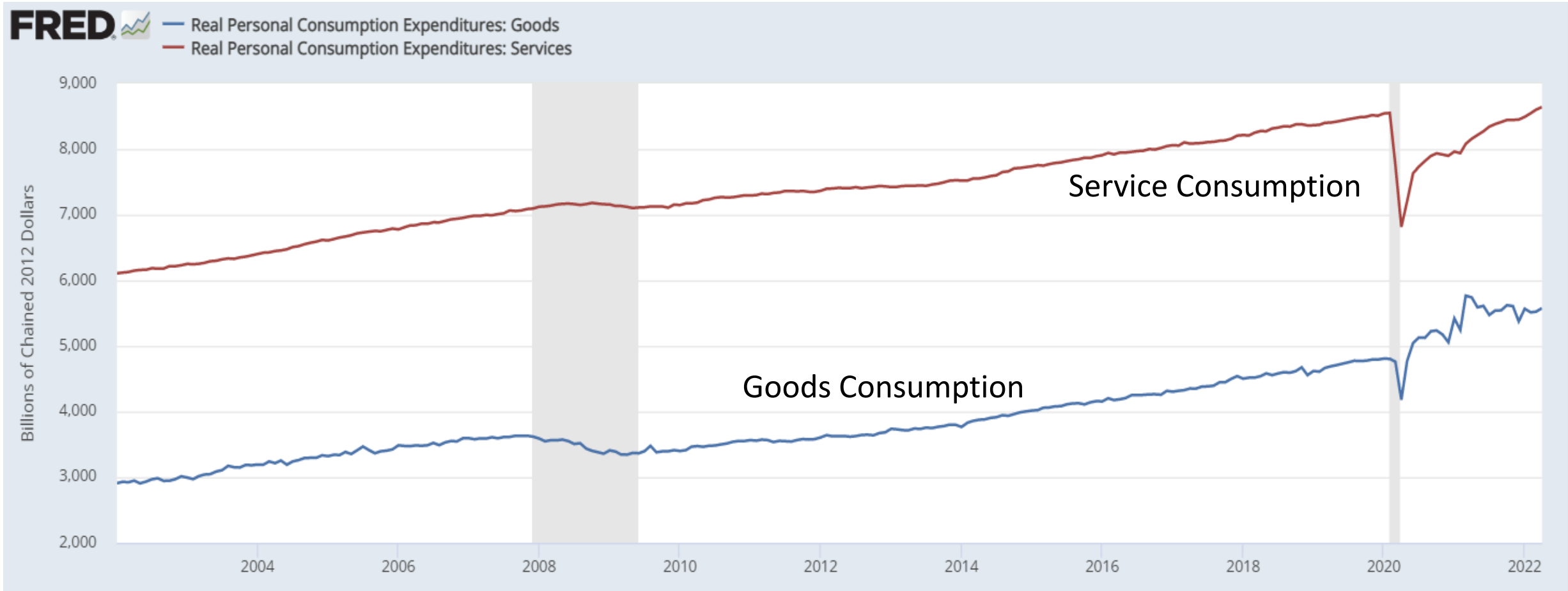
GDP growth impacts and leads NOI(Net Operating Income) growth . . .



... nominal GDP growth was disrupted by the pandemic ...



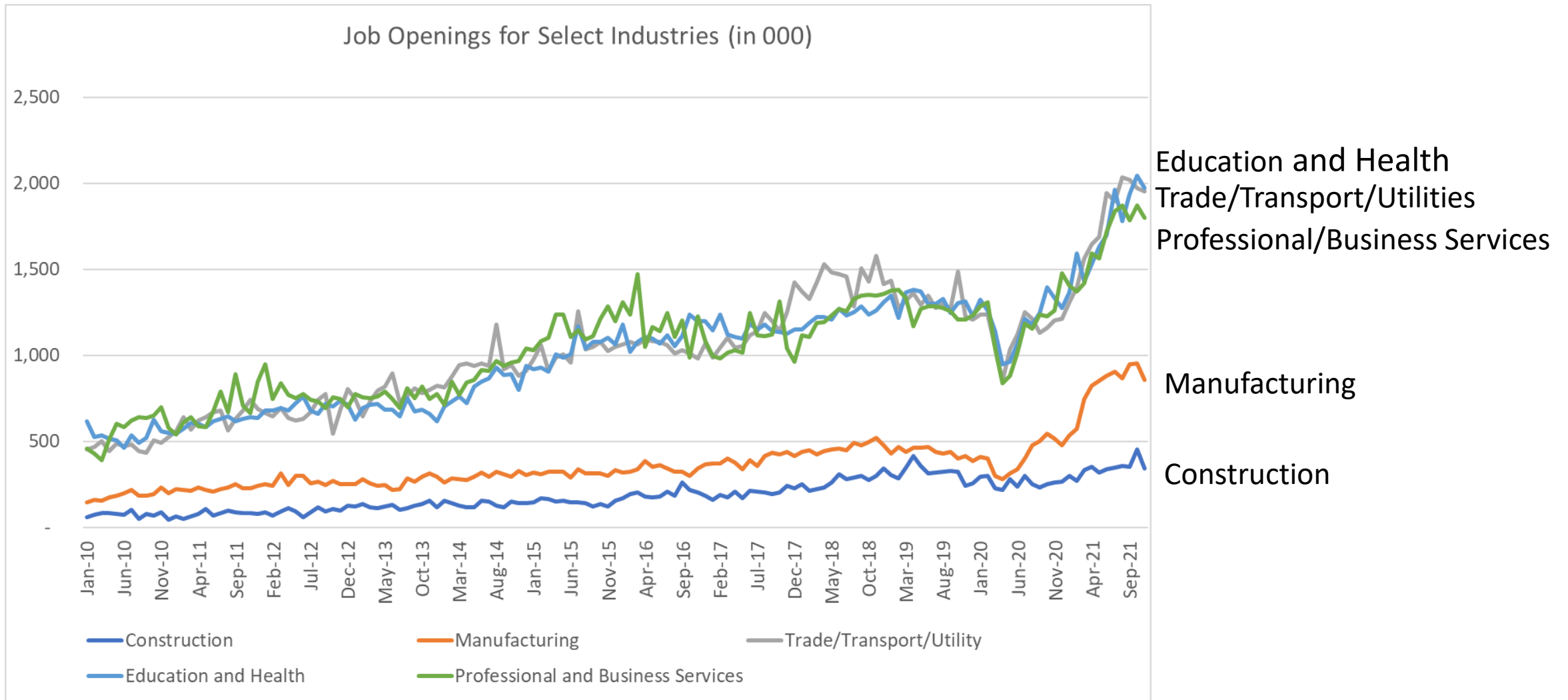
. . . . the level of goods and service consumption was driven by Covid . .



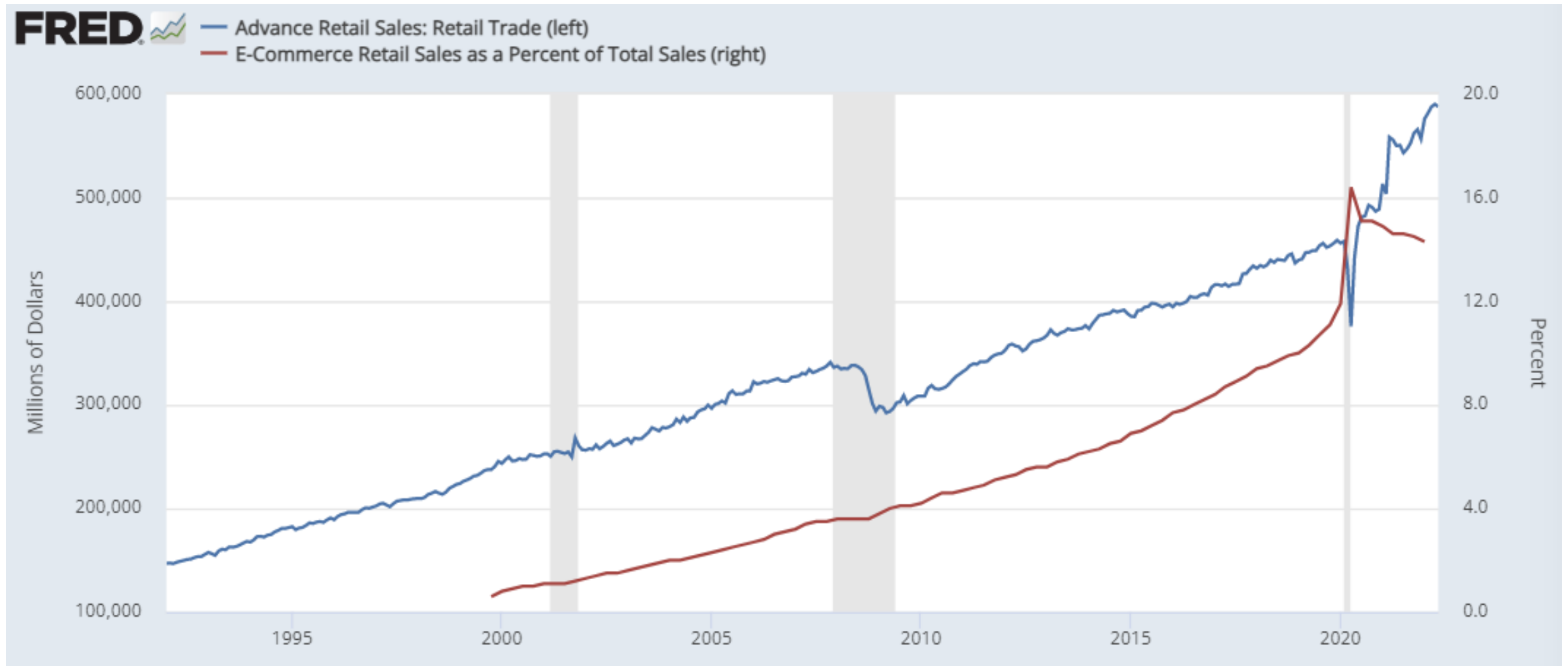
. . . . labor force growth is not keeping pace with job openings (think worker confidence)



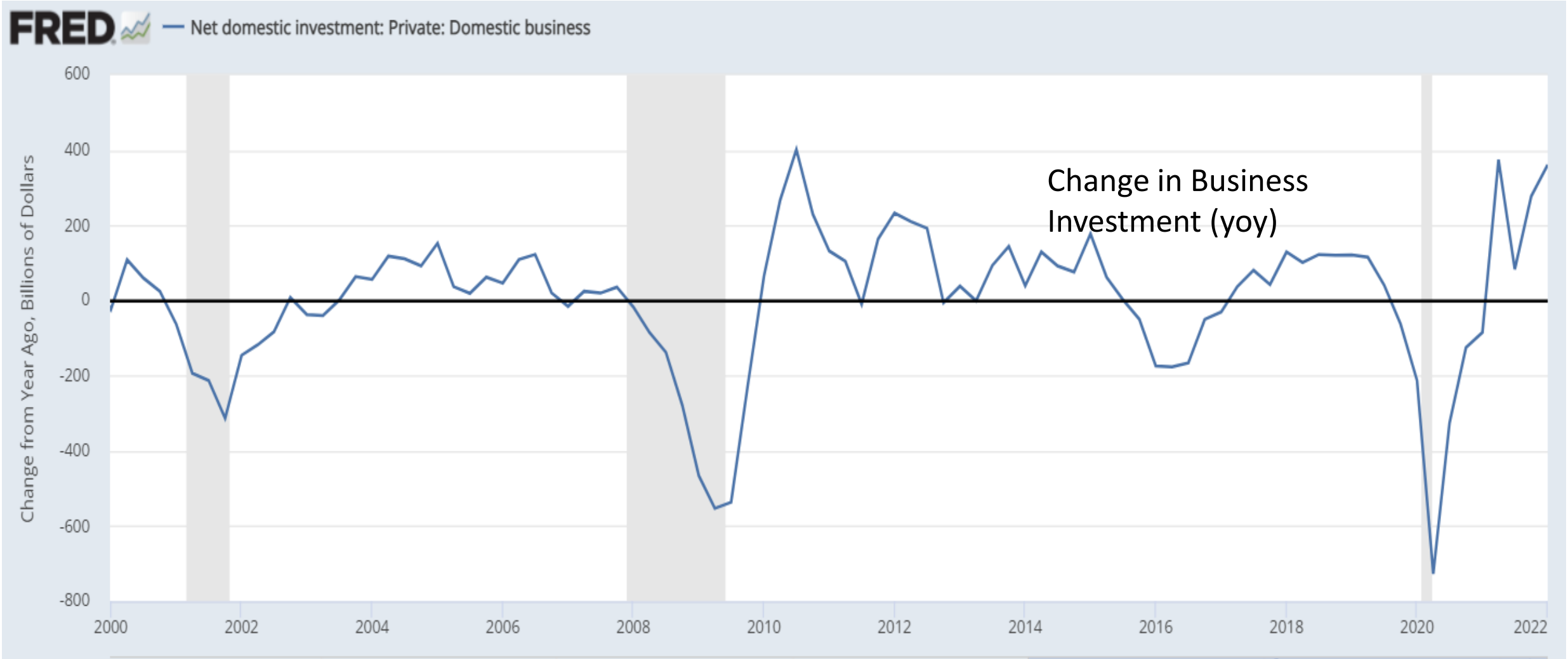
... the worker shortage is broad-based ...



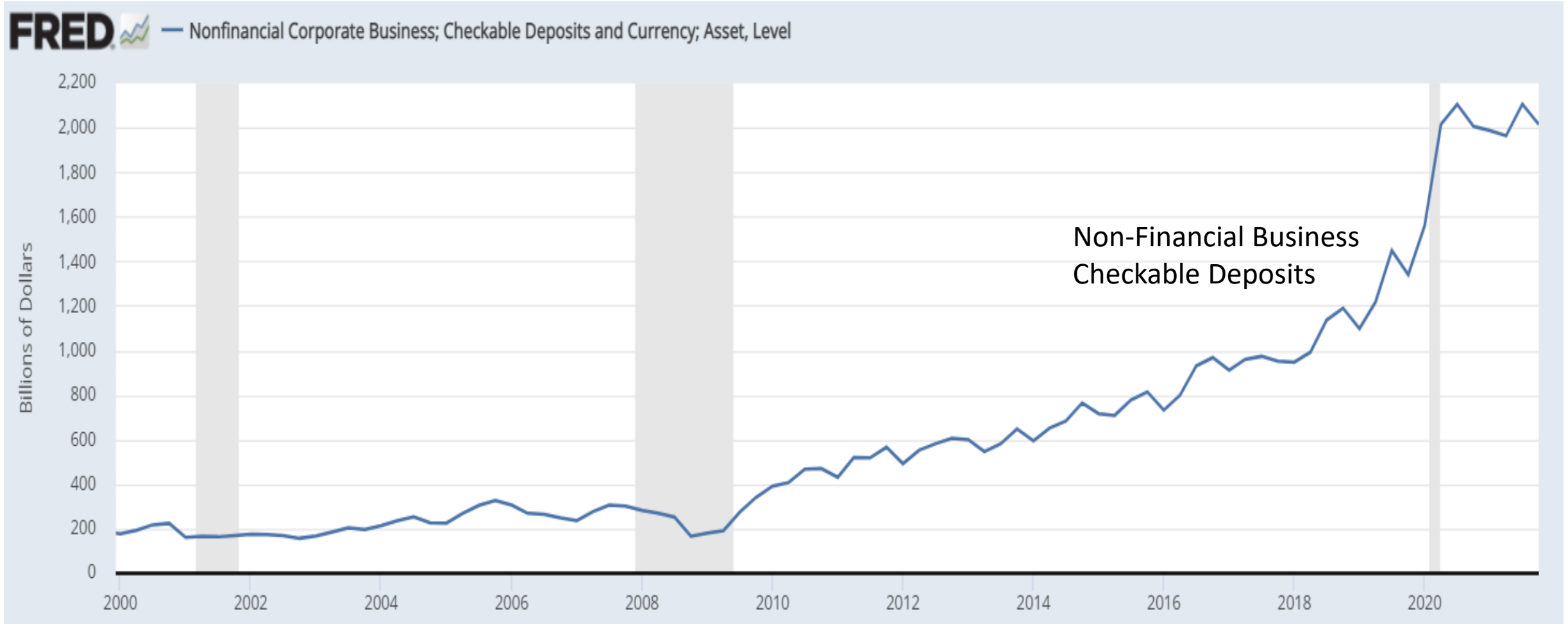
... goods spending jumped with Covid concerns with moderating e-sales ...



... business investment, a relatively small contributor to GDP, is very volatile. . .



Shifting to Business: many PPP funds remain unspent.



Fiscal Stimulus

Real Estate Investment

Value = Net Operating Income / Cap Rate

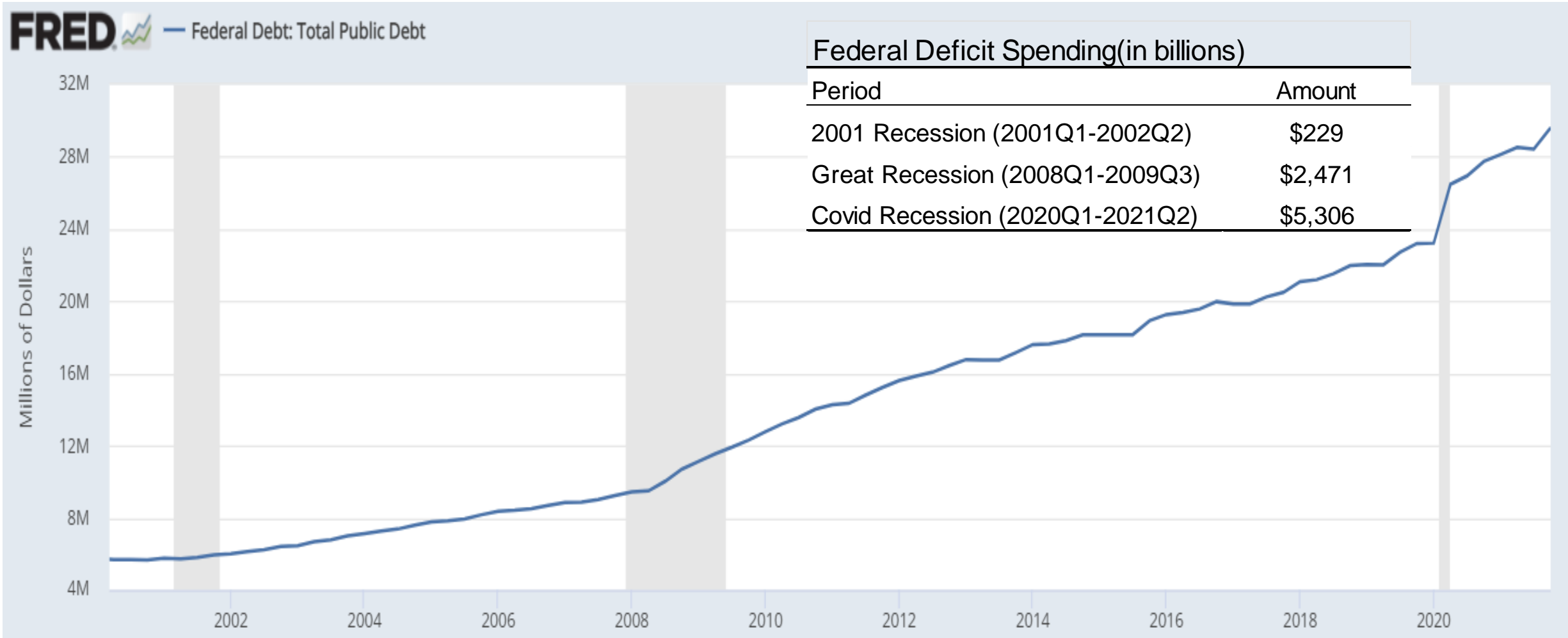
= Main Street / Wall Street

= Property Markets / Capital Markets

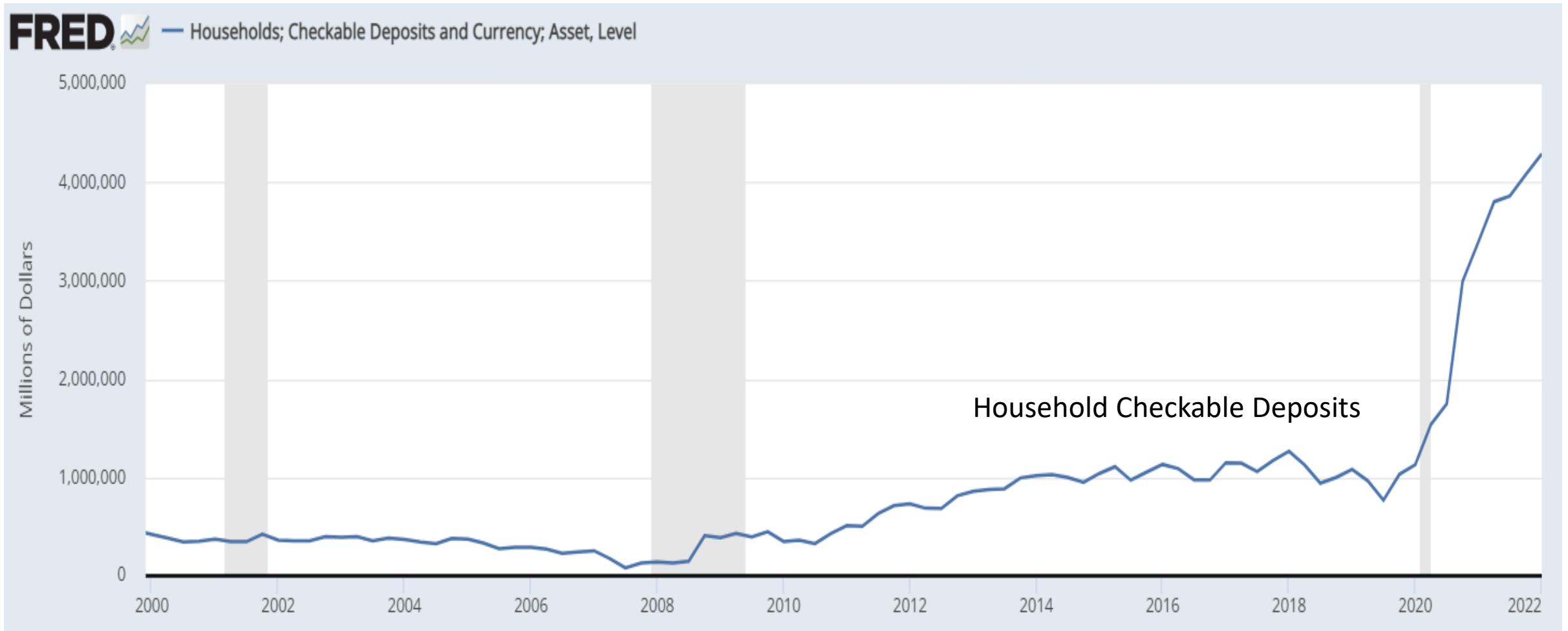
= Urban Economics / Financial Economics

= Fiscal Stimulus/ Monetary Stimulus

Covid fiscal stimulus is unprecedented



. . . .most Covid consumer stimulus remains unspent. . . .



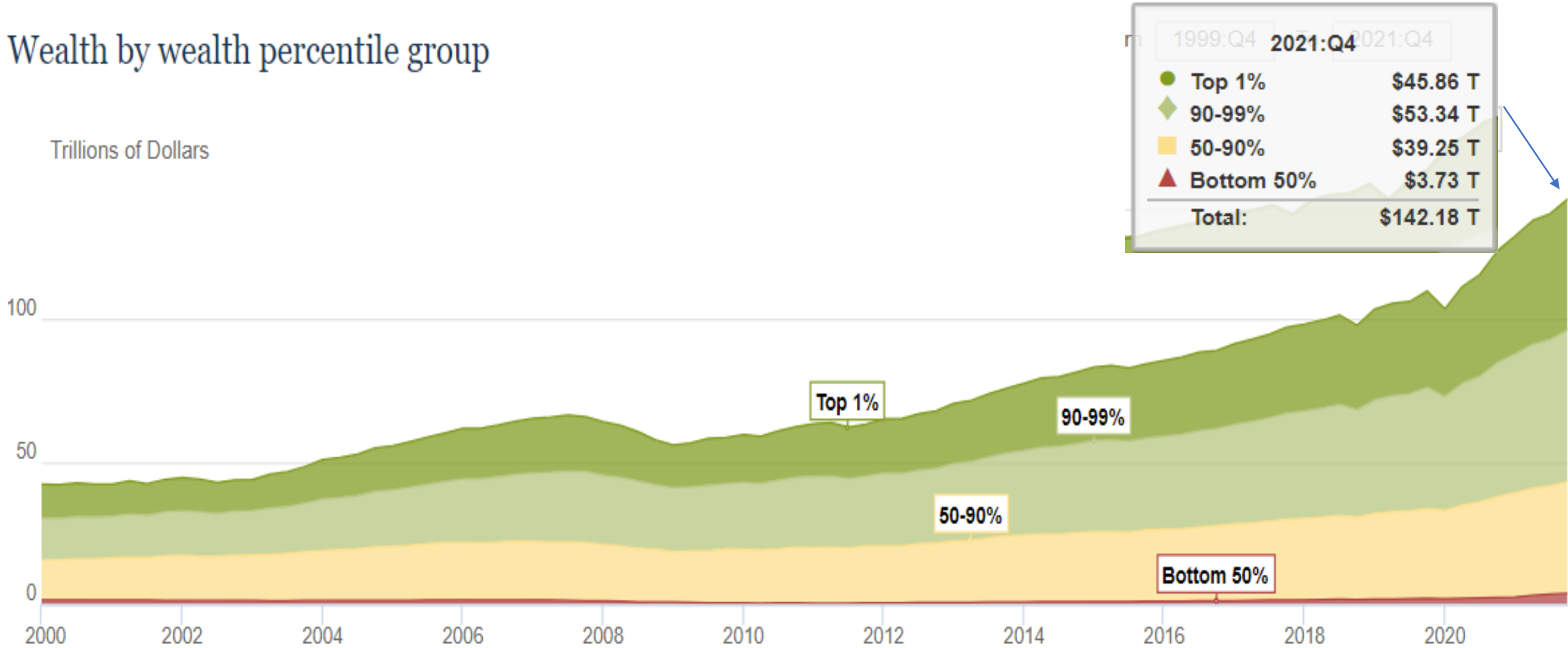
. . . . Covid relief funds reside in checking accounts of all income levels. . . .

Percent change (relative to 2019) in median weekly checking account balances, by income quartile



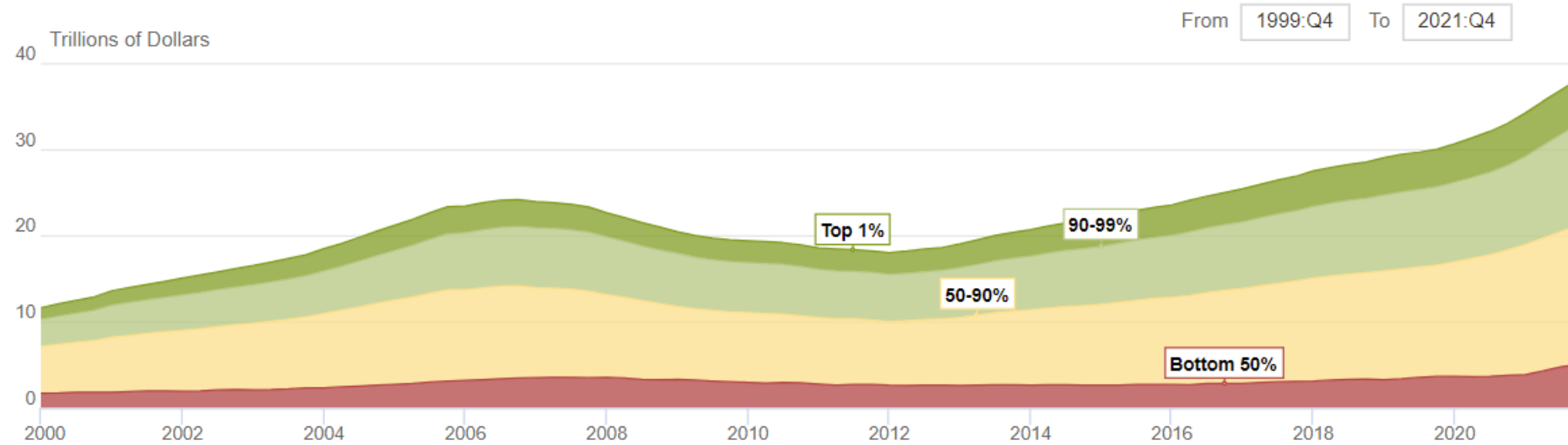
... wealth is up \$39 trillion since 2020Q1 and is concentrated among the rich. ...

Wealth by wealth percentile group

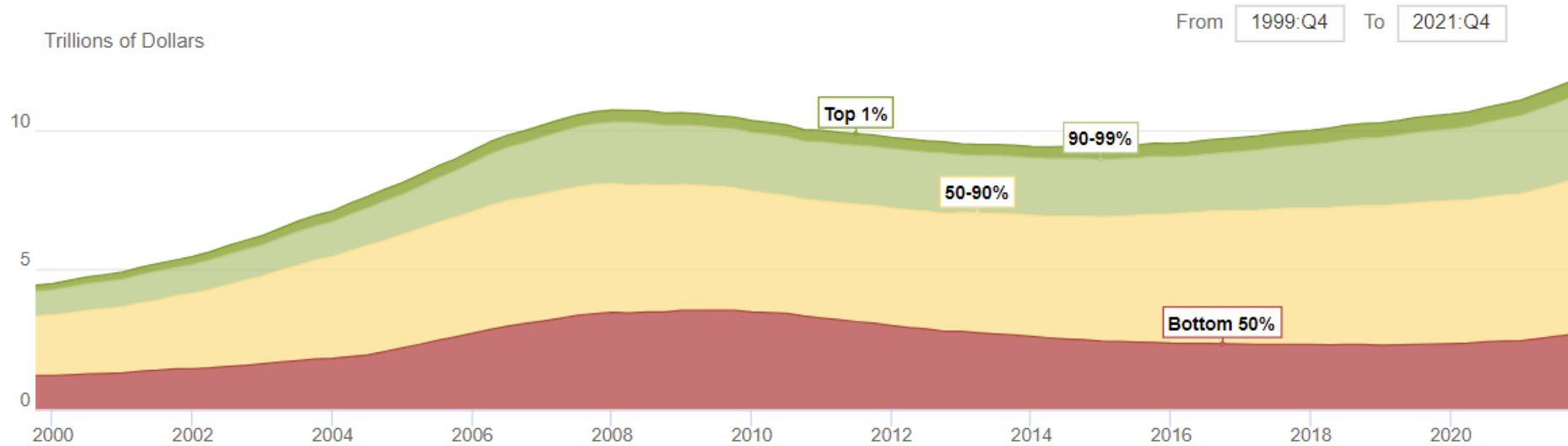


... since the Great Recession, real estate wealth is up \$16T, mortgage debt up \$1T.

Real estate by wealth percentile group

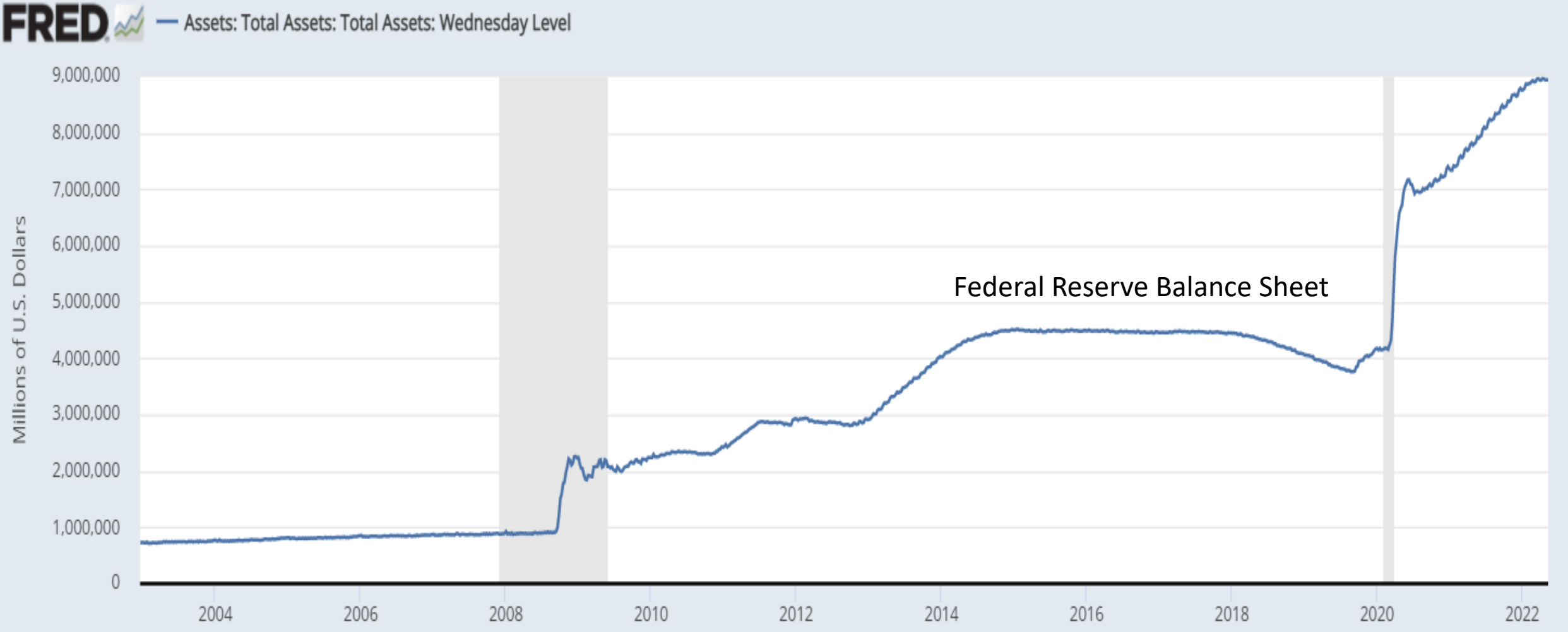


Home mortgages by wealth percentile group

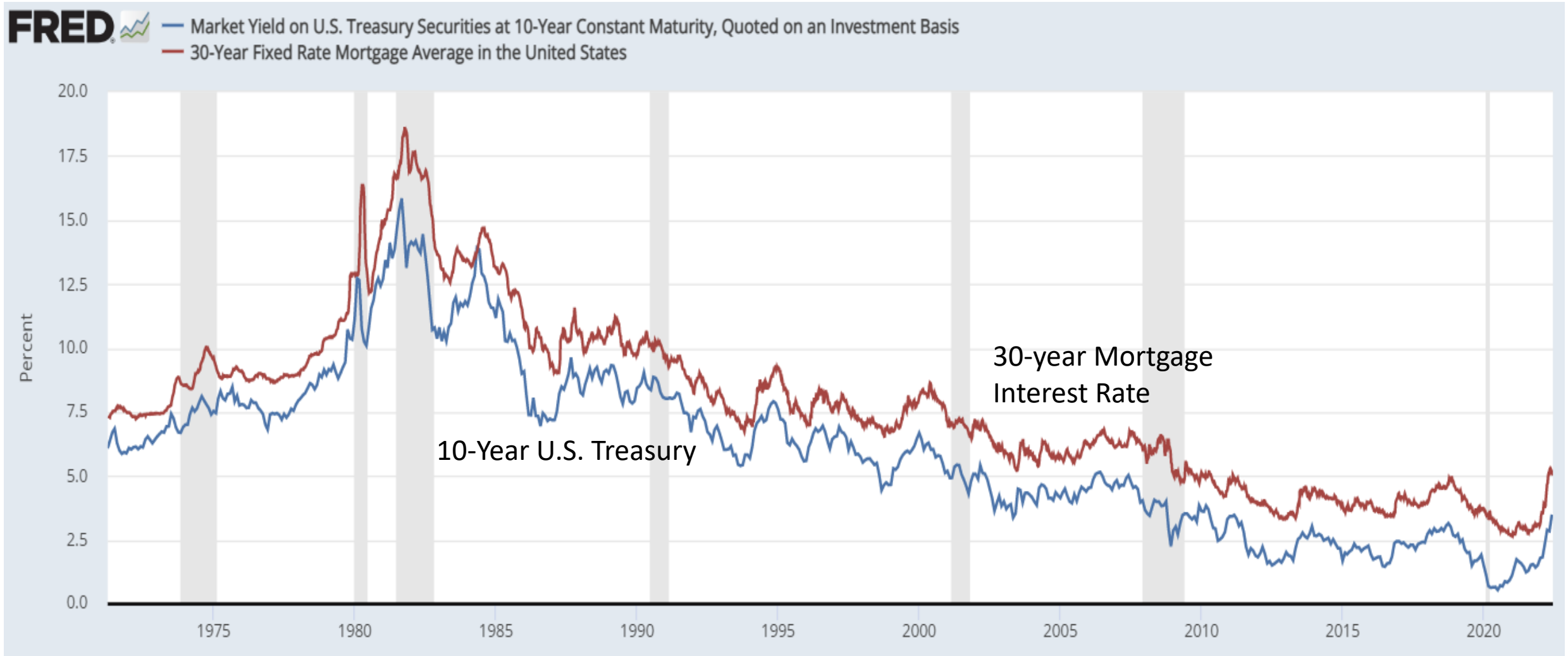


Monetary Stimulus

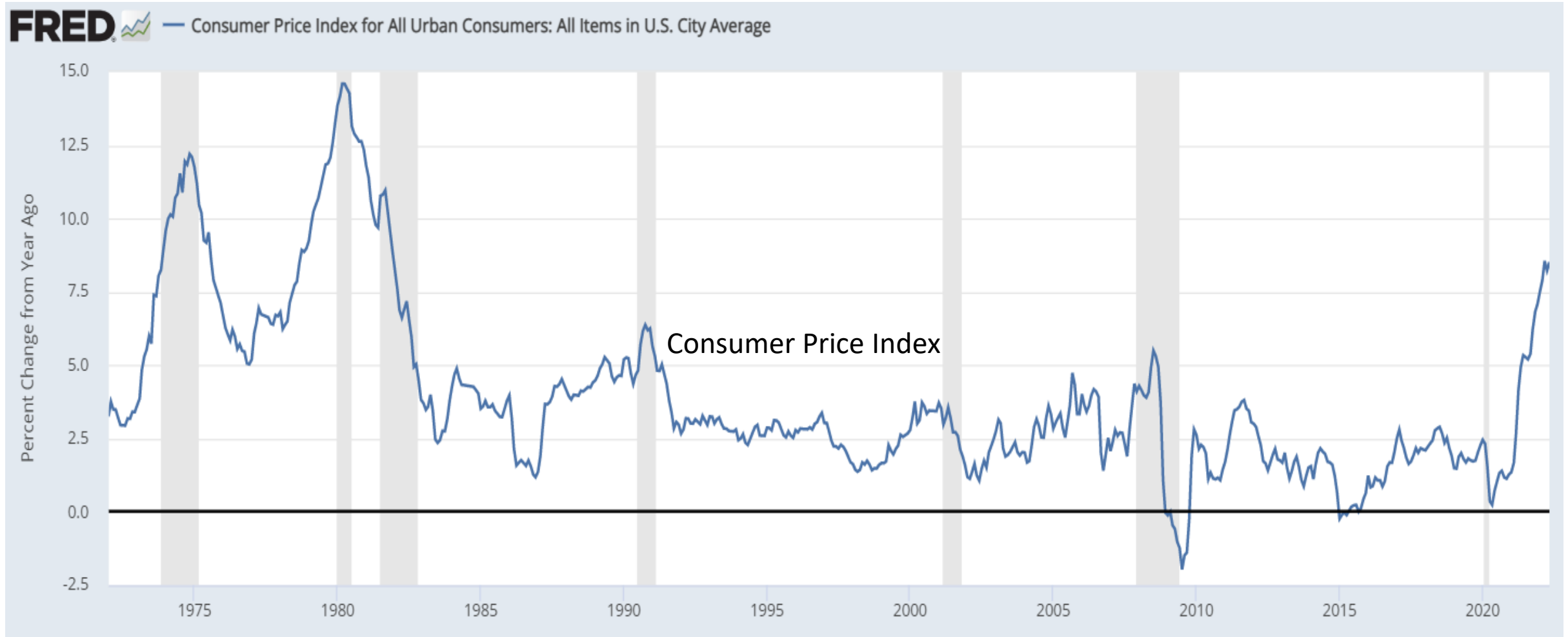
\$4.8 trillion in Fed monetary stimulus since February 2020



. . . . the Fed purchasing pushed down interest rates to near historic lows, until . . .

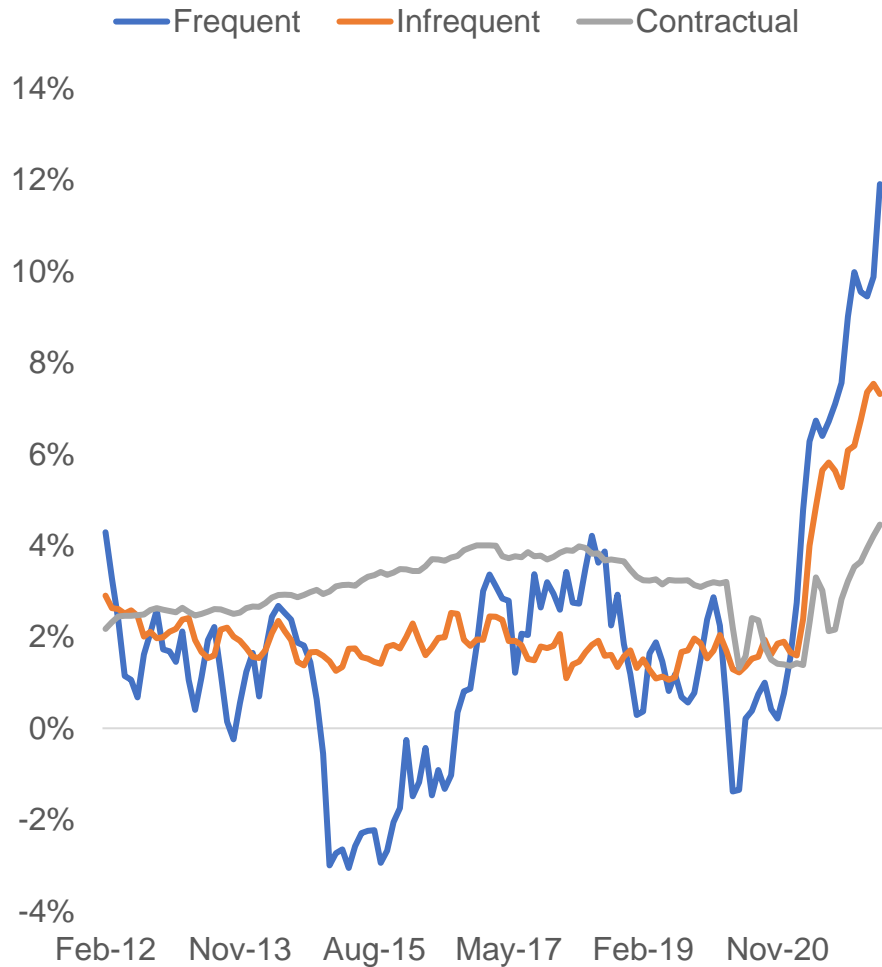


. . . . CPI inflation is 8.5% year-over year (2000-20, CPI=2.1% and PCE=1.8%)

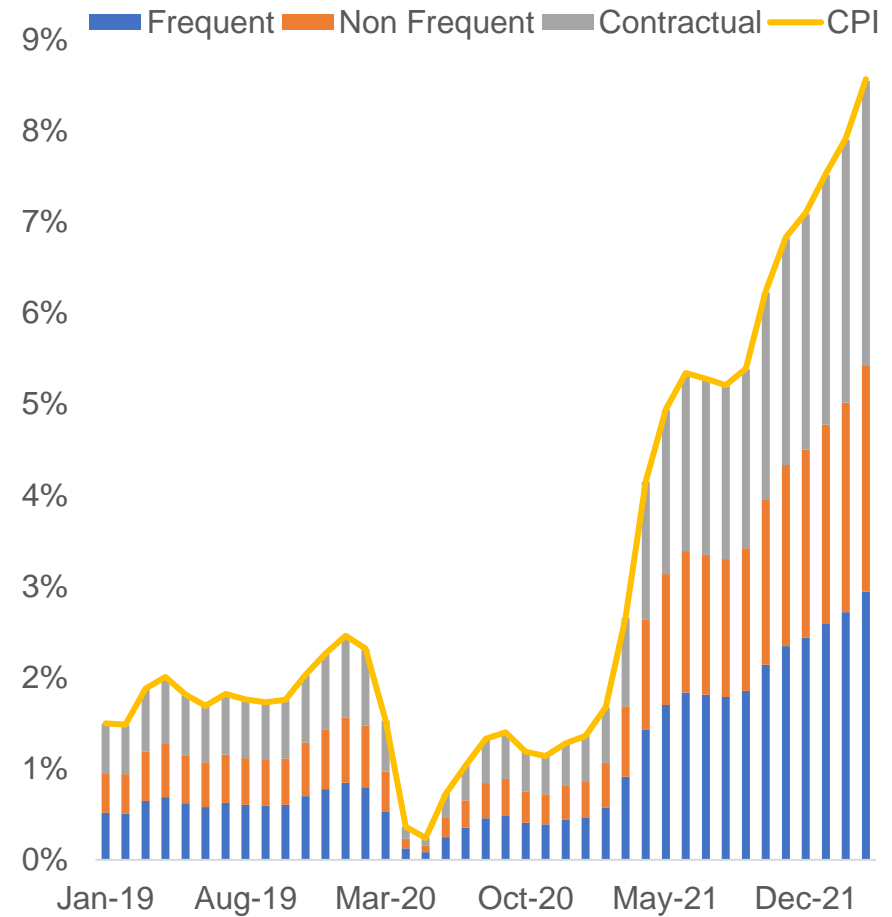


. . . . Inflation pressures will persist . .

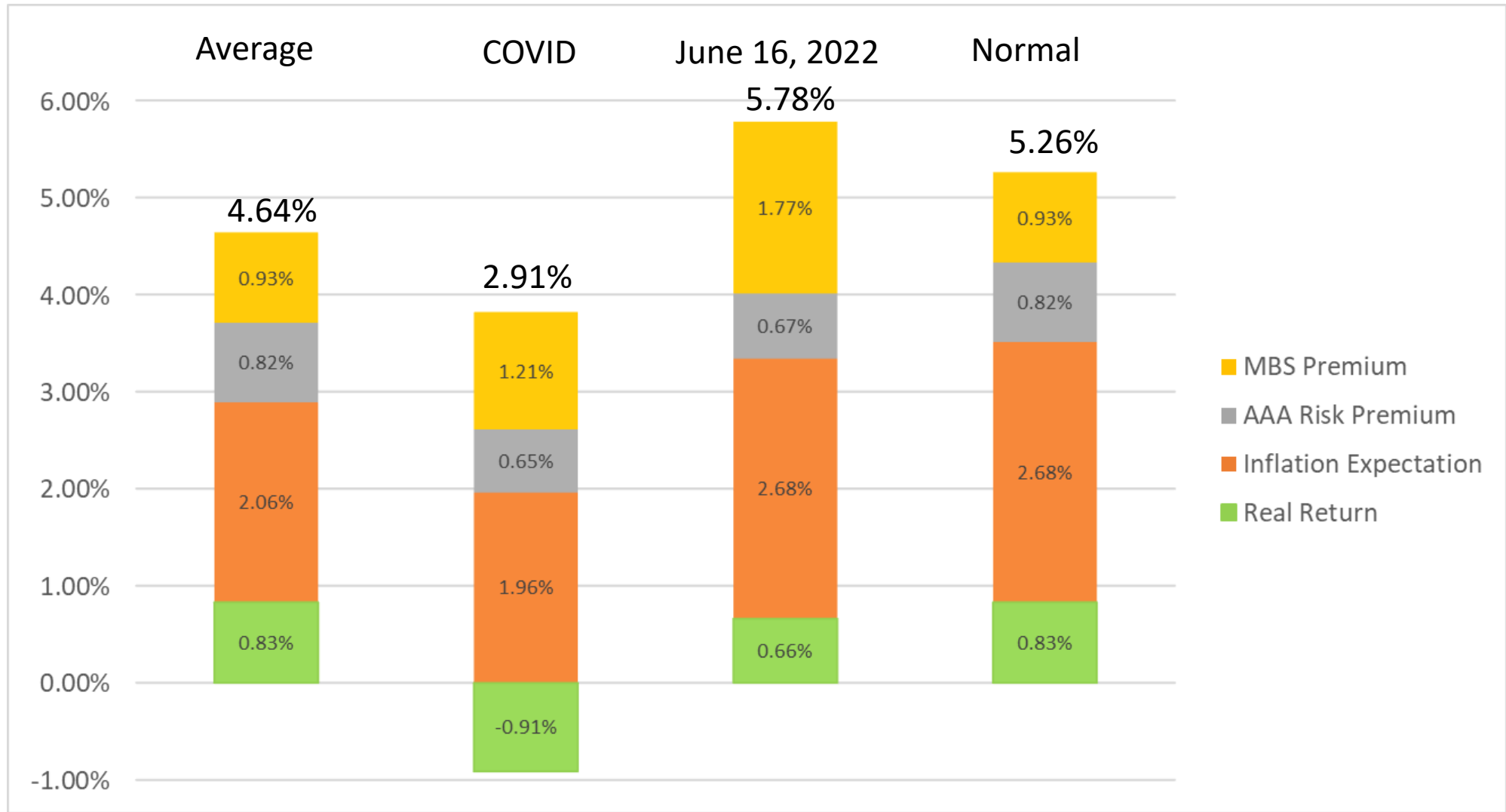
CPI by Frequency of Purchase (YoY%)



Contribution to CPI by Purchase Frequency



... Residential mortgage Interest Rates (2003-June 2022) ...



Economy – Key Take Aways

- The Fed has never had a soft landing when target inflation is >3.5% higher than desired inflation
- Anticipate persistent inflation as workers demand higher wages and supply chain issues persist
- Workers will emerge as retired workers fear inflation eroding savings, putting a lid on wage inflation and reviving GDP
- Residential mortgage interest rates are peaking at 5.75-6.0%

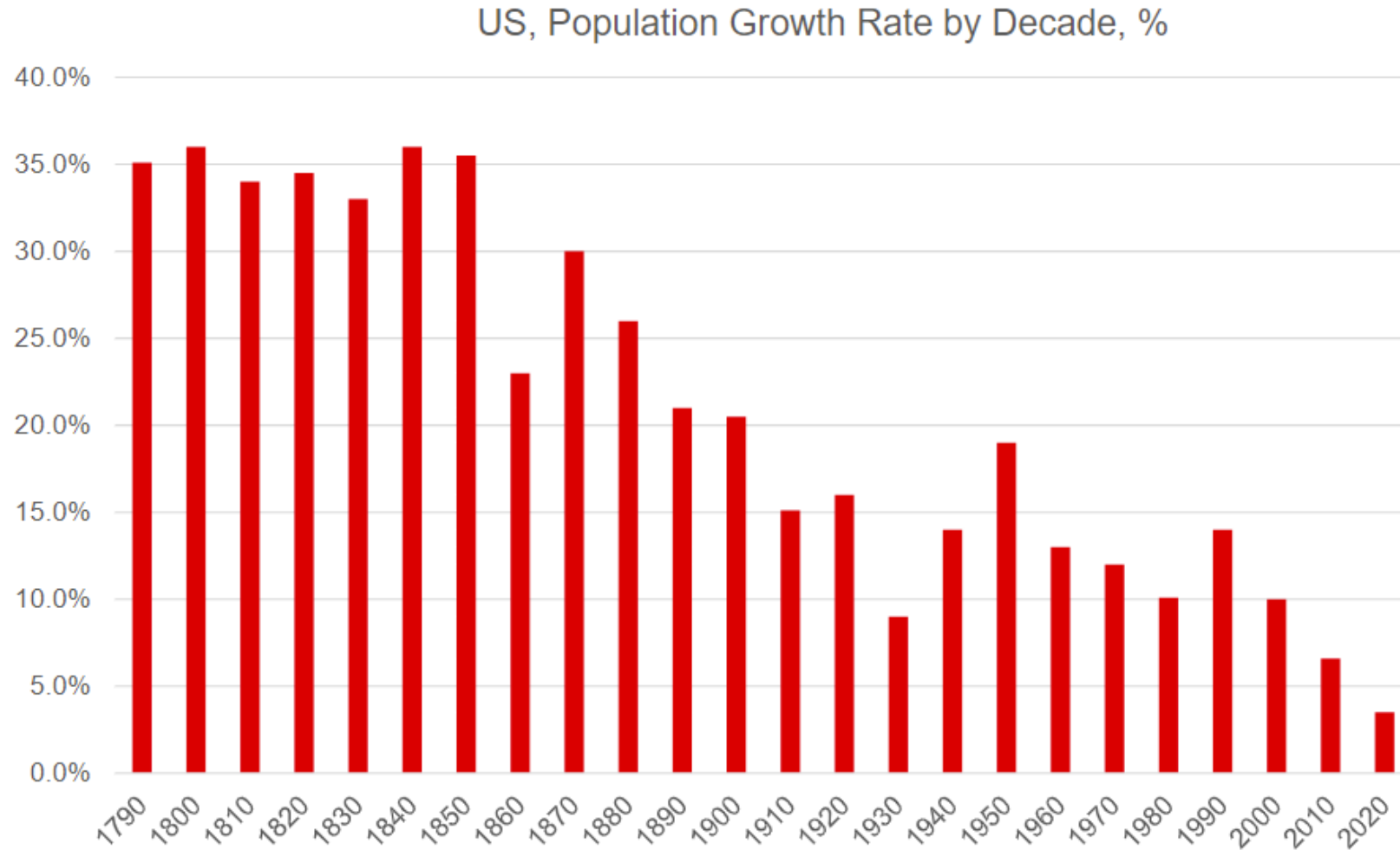
Expect slow growth through 2022 and a soft recession starting in 2023H2

Key Take Aways – The Economy

- Consumption disruptions generate transitory inflation which will subside while service inflation is employment/wage driven – **expect higher inflation than Fed estimates in the short term (2022 and well into 2023)**
- Personal and business balance sheets are limiting the impact of a recession inflation is employment/wage driven, a 3.6% unemployment rate today with 1.2 million fewer workers today than in February 2020 – **expect wage inflation that keeps CPI higher than Fed estimates in the medium term**
- Business investment will keep worker demand strong – CFOs need to invest to grow the bottom line – **expect business investment to remain strong to meet goods and service consumption**

Demographics, Migration, and Employee Behavior

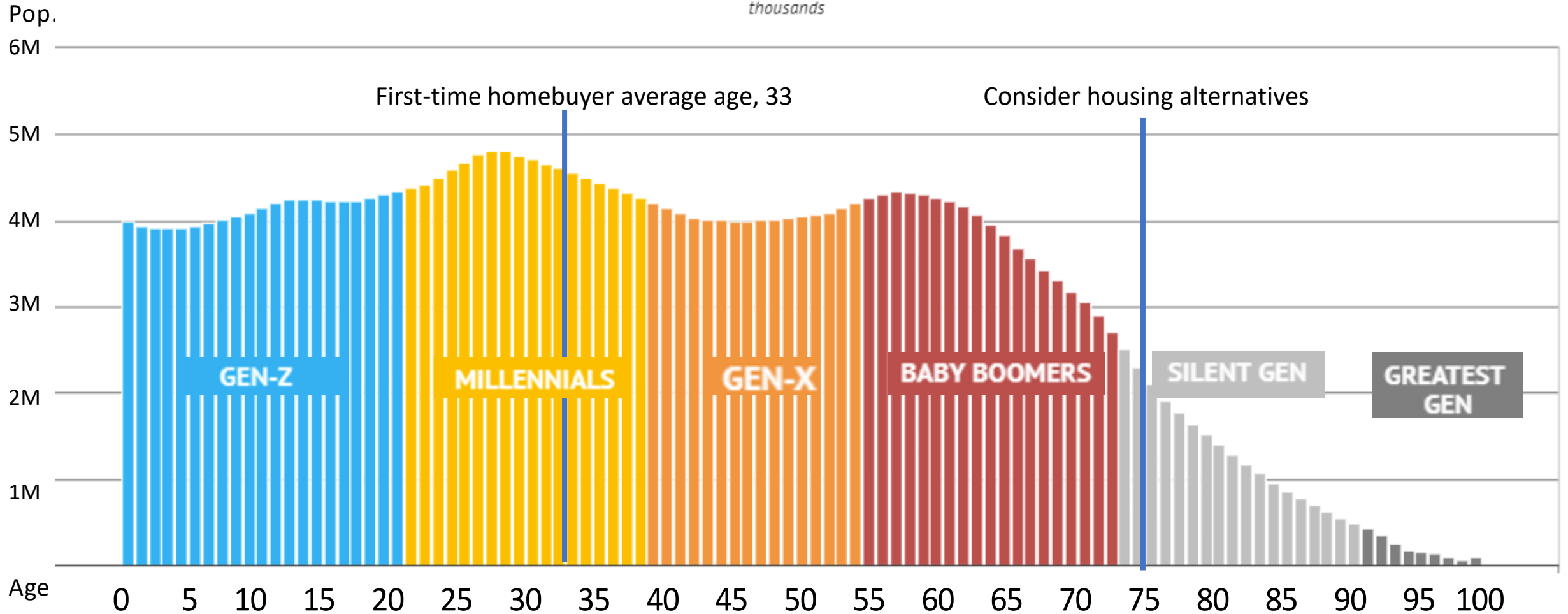
Expected population growth is 3.5% for the coming decade (2020-2021 growth = 0.1%)



... demographics by age cohort ...

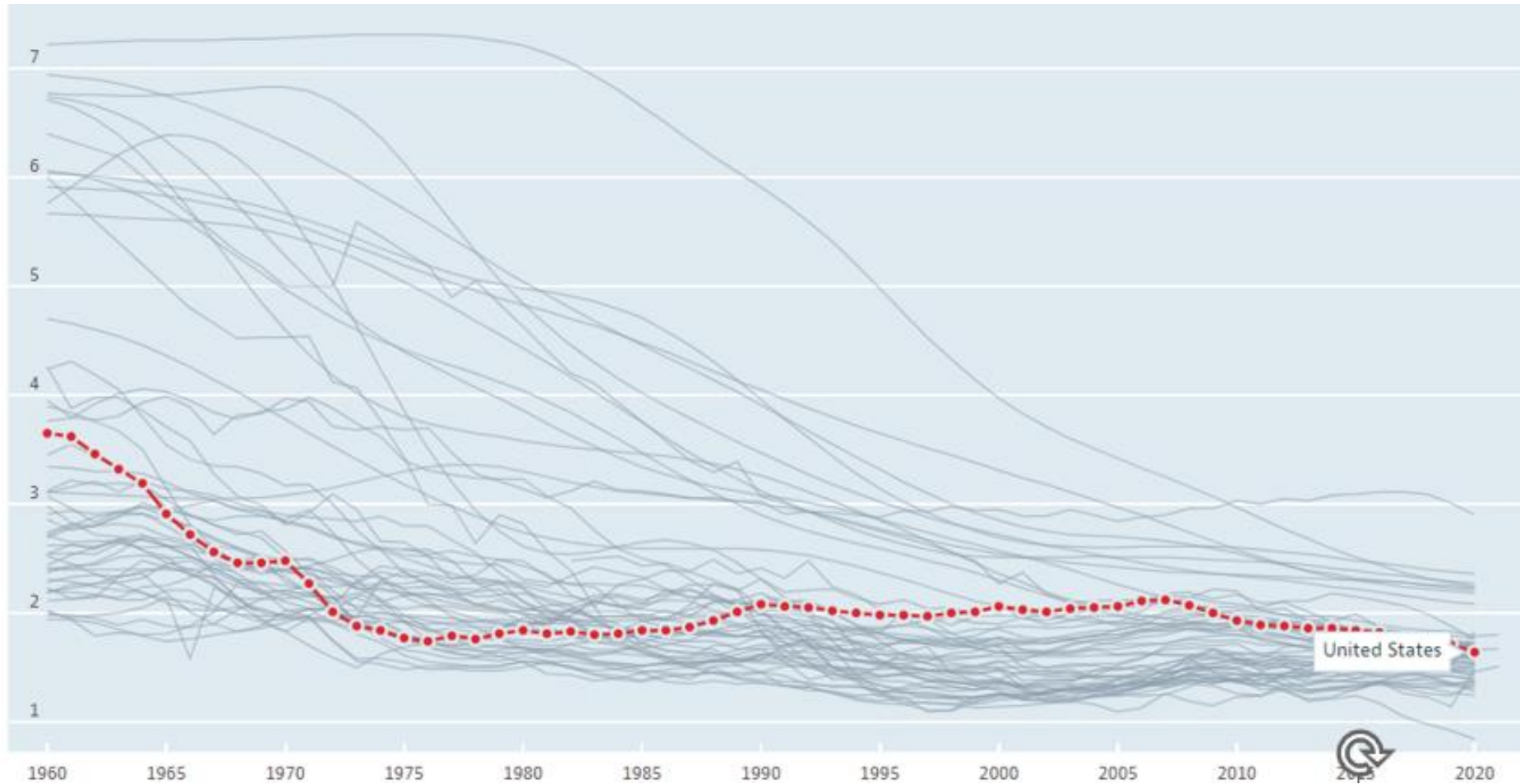
Total US Population by Age in 2020

thousands

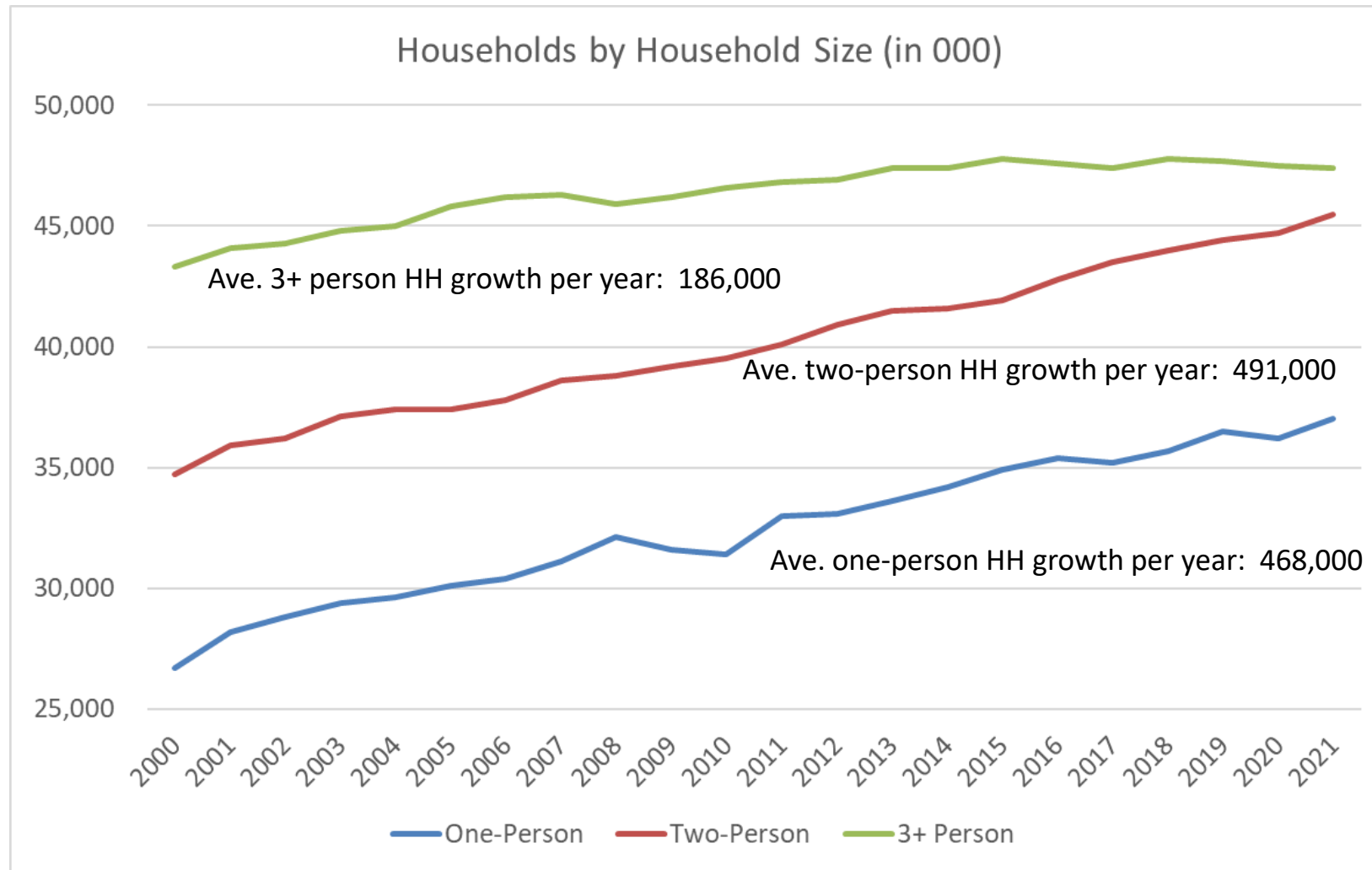


. . . .U.S. and OECD birth rates are 1.6, replacement birth rate is 2.1

Fertility rates Total, Children/woman, 1960 - 2021

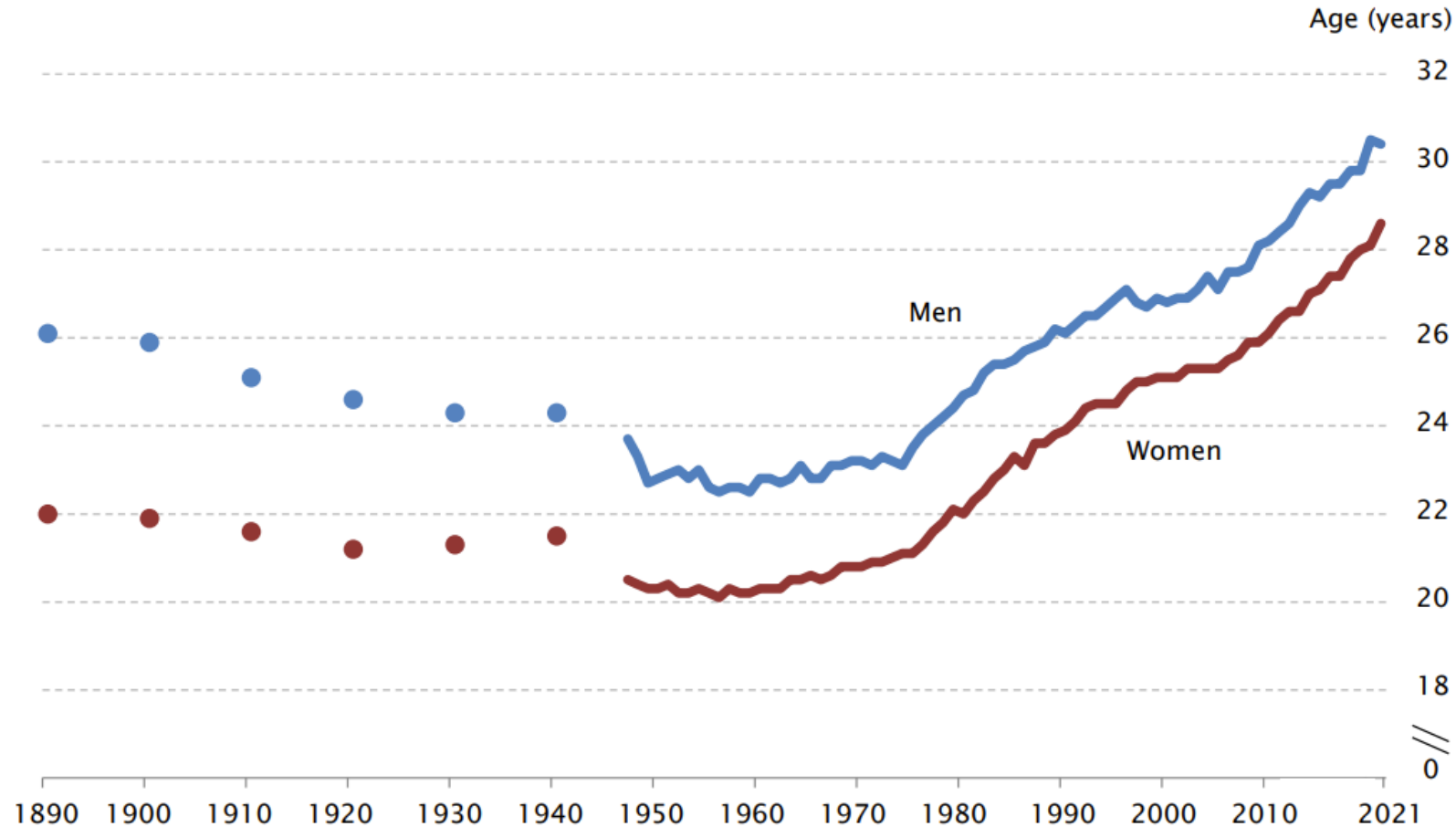


. . . . 84% of household growth is 2-person households or smaller

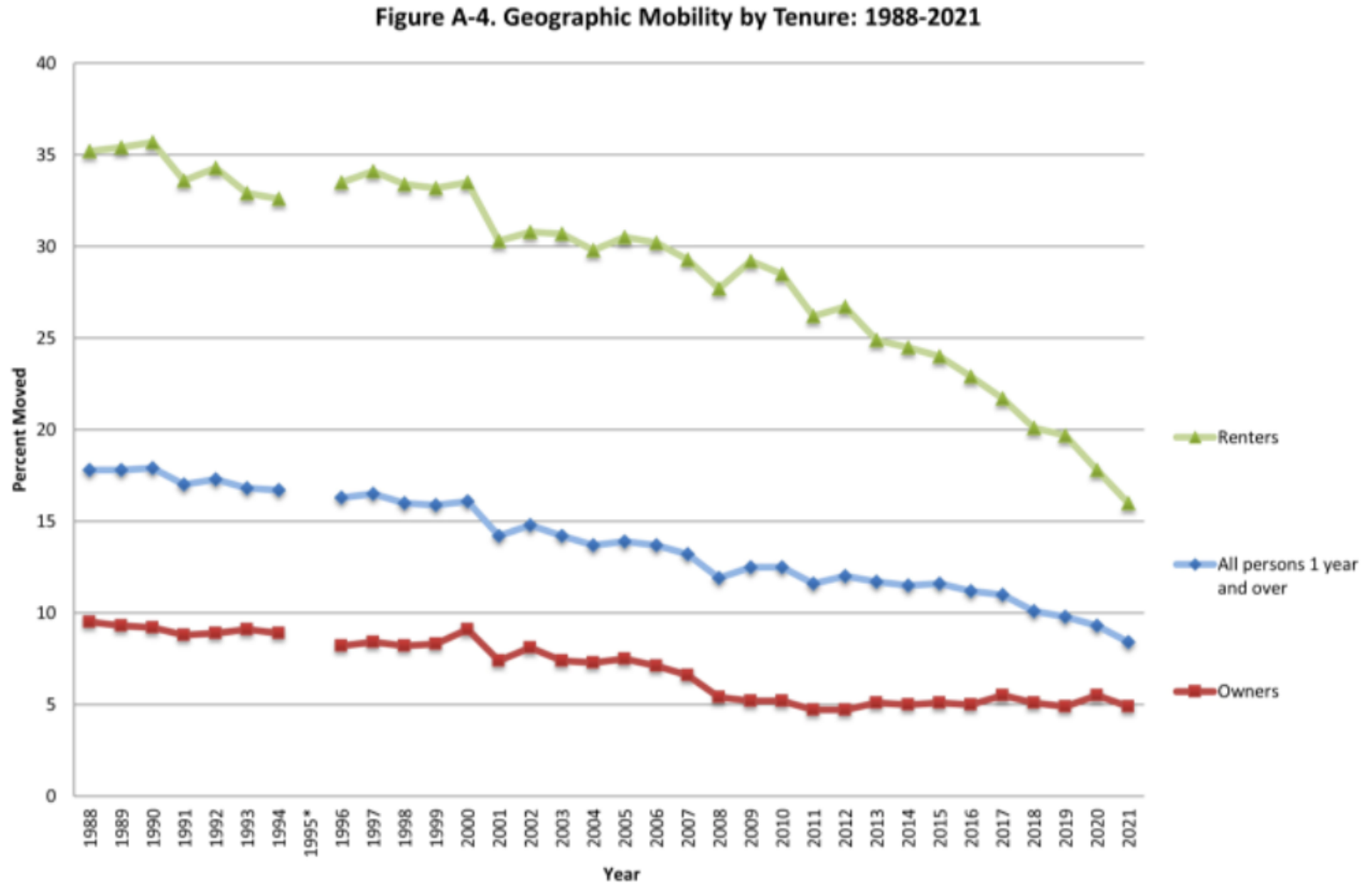


... first-time marriage is being significantly delayed ...

Median age at first marriage: 1890 to present

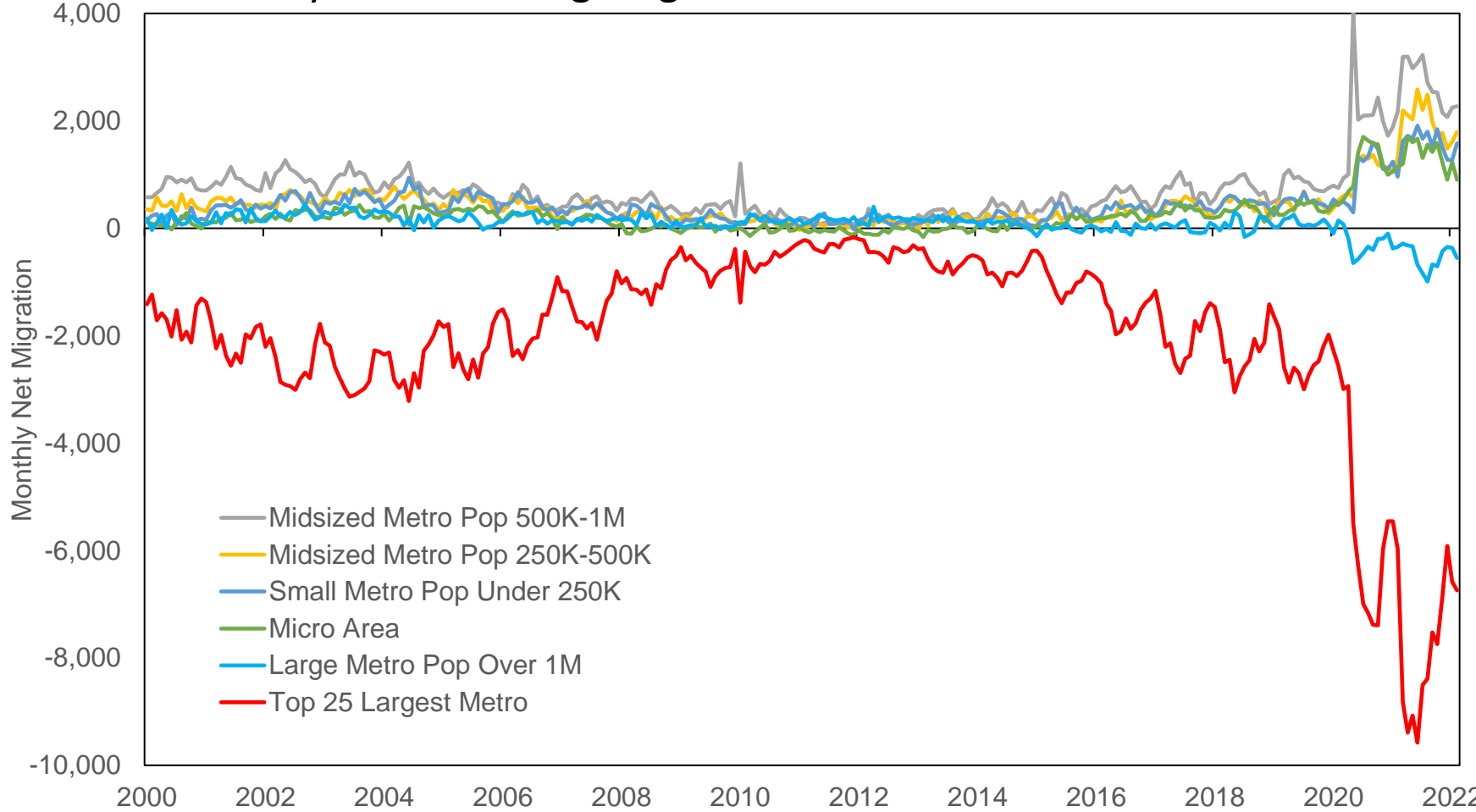


. . . . U.S. mobility rates are the lowest since the data was first collected in 1947

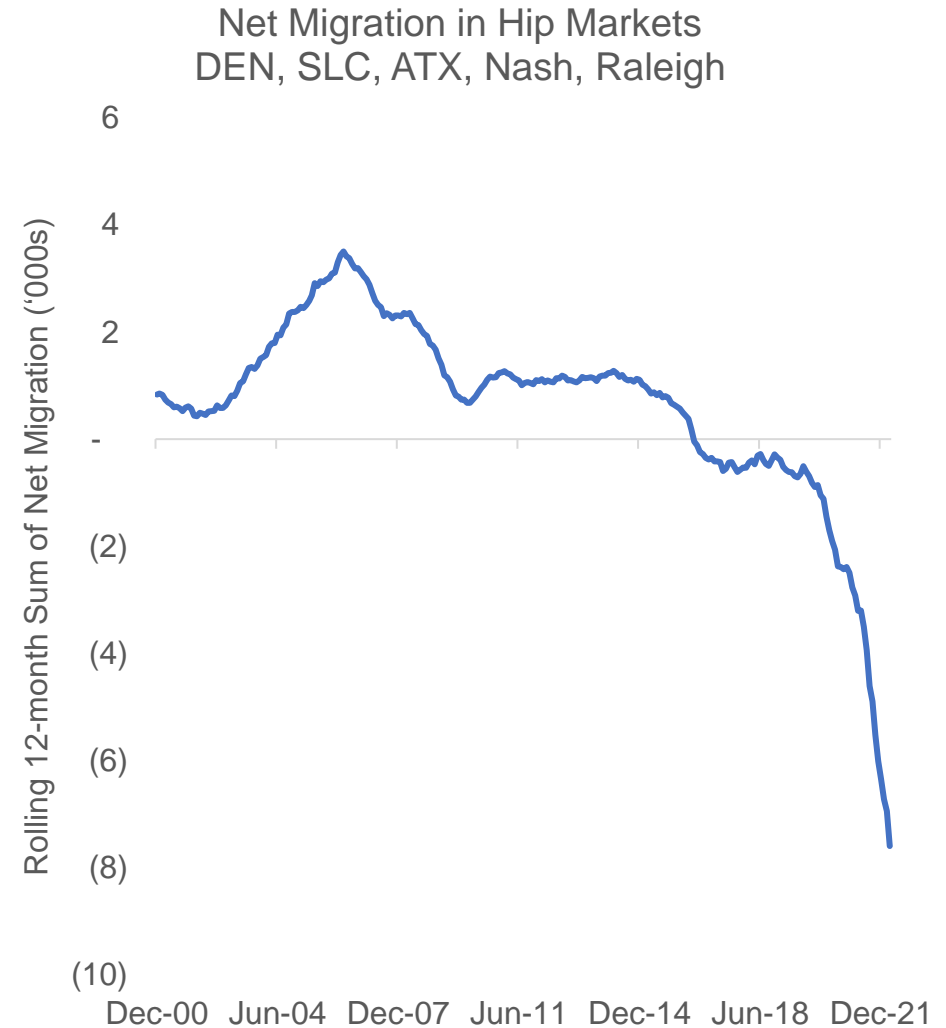
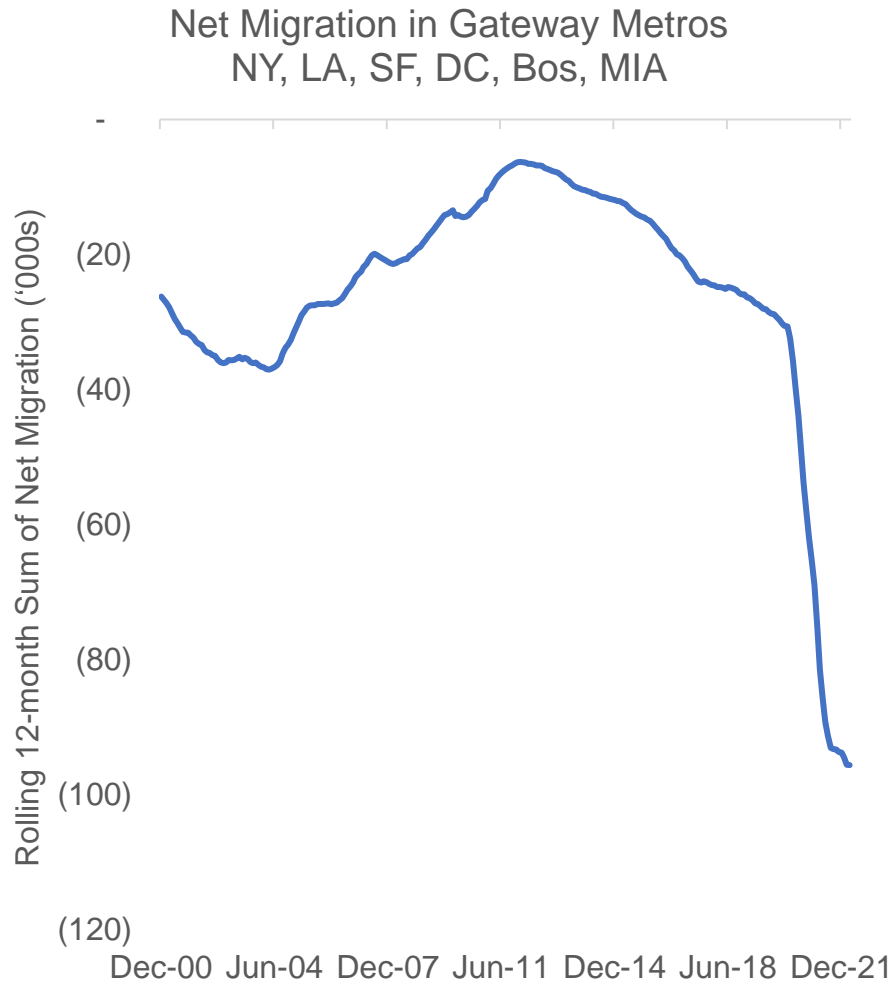


. . . . since the start of the Covid pandemic, large metro areas have lost population

Homebuyers are Fleeing Large Cities



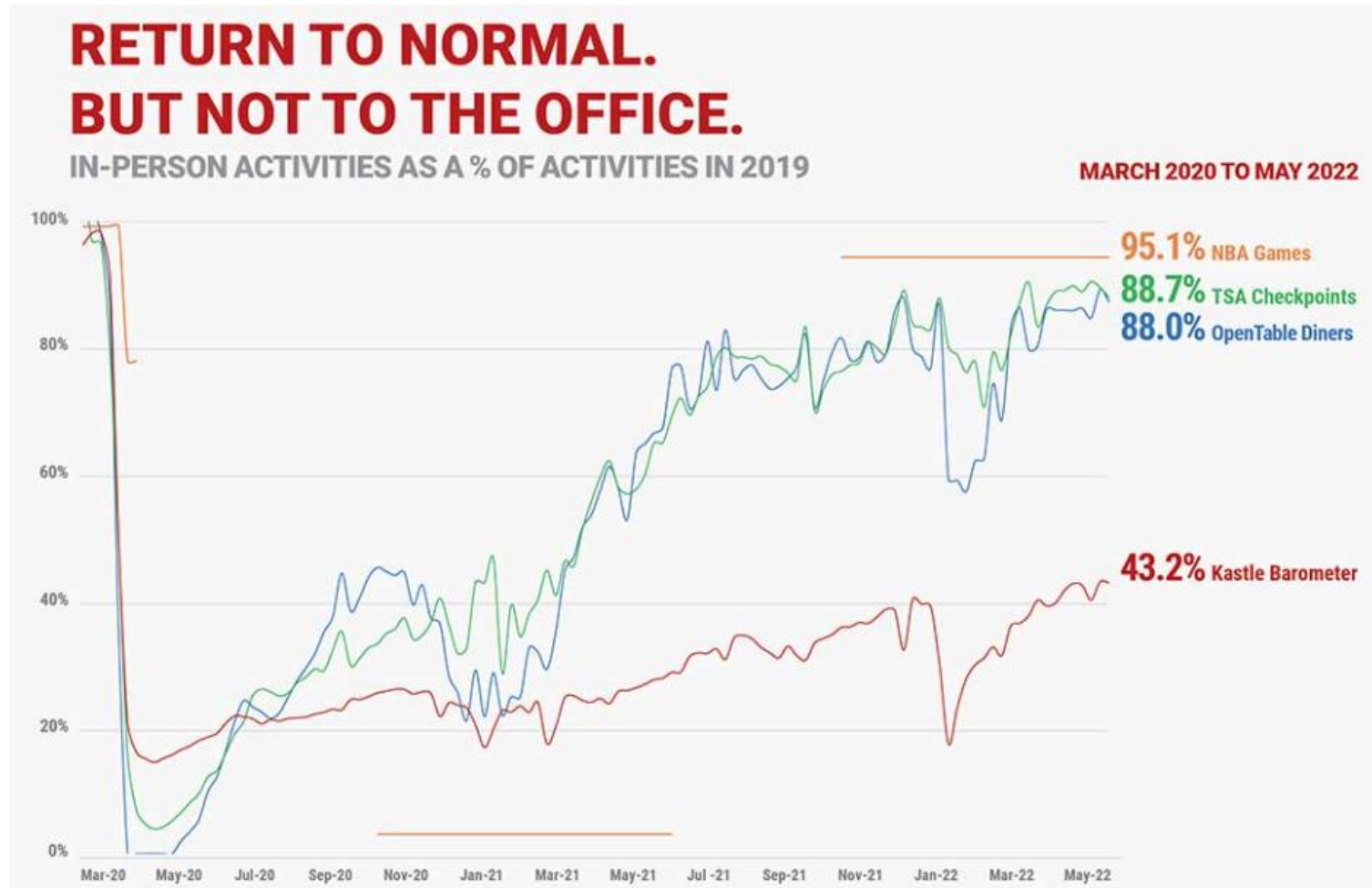
. . . . expensive gateway cities are out of fashion, but so are the hipster cities



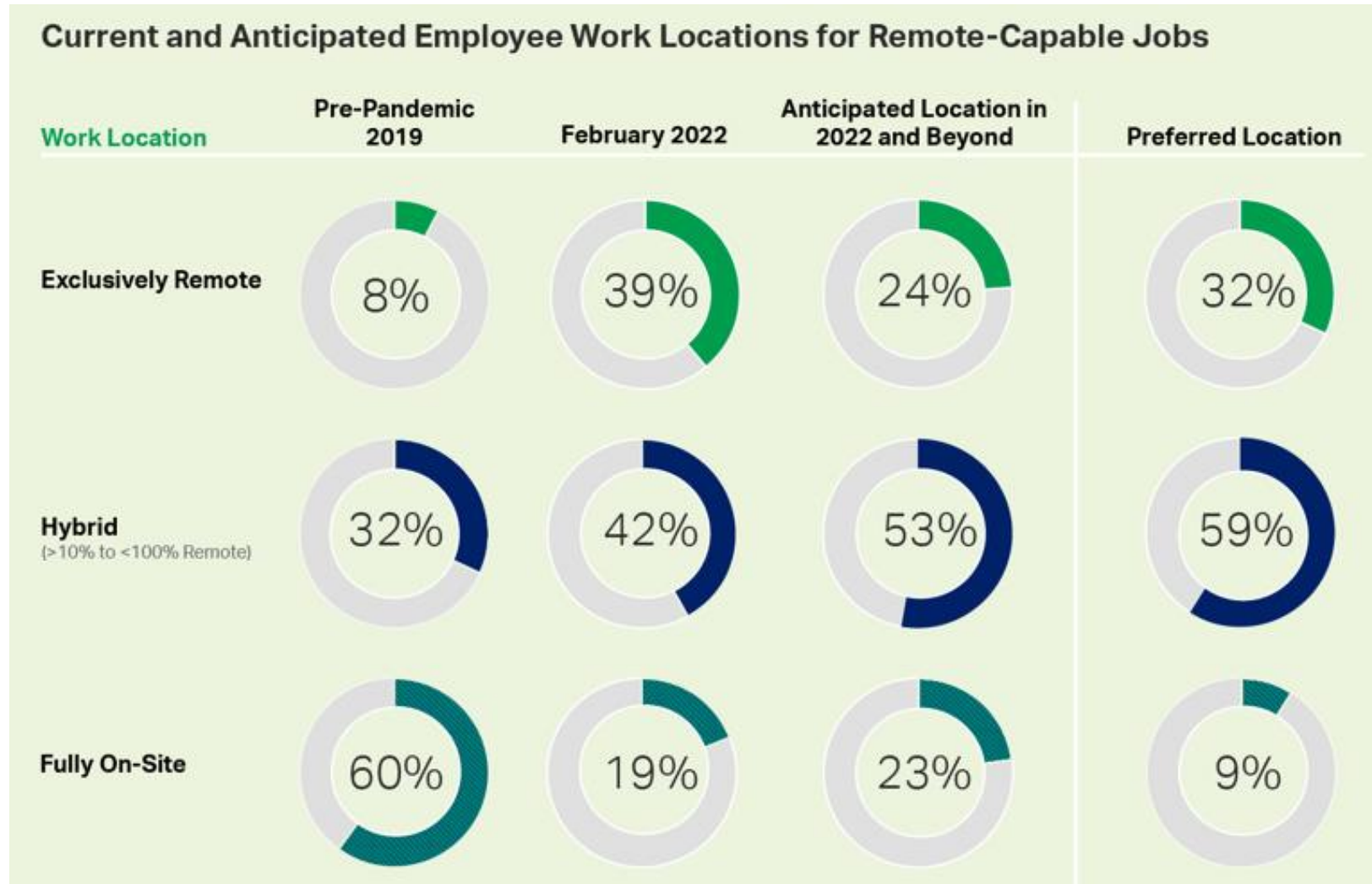
. . . . back to the office or work from home



. . . . back to the office hesitation is not found elsewhere

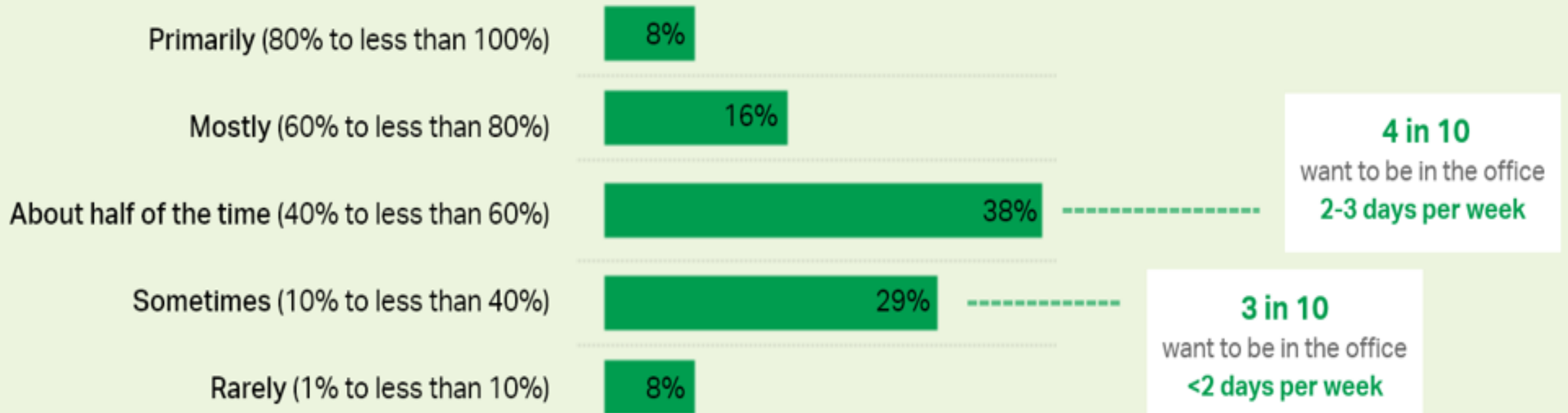


. . . . employees prefer a hybrid environment or to work from home. . . .



... do workers work *independently* or *interdependently*.

If Given the Option to Work Partially Remote, How Often Would You Prefer to Work at the Office?



Demographics/Migration/Behavior Take Aways

- Peak Millennial population cohorts are reaching peak first-time homebuyer age, expect continued housing demand
- 84% of new households are 2-person households or smaller, a more modest sized, but nicely appointed house may be the market sweet spot
- Employment trends suggest a hybrid workplace with prospective homebuyers willing to travel greater distances less frequently to go to work and seek more remote affordable housing

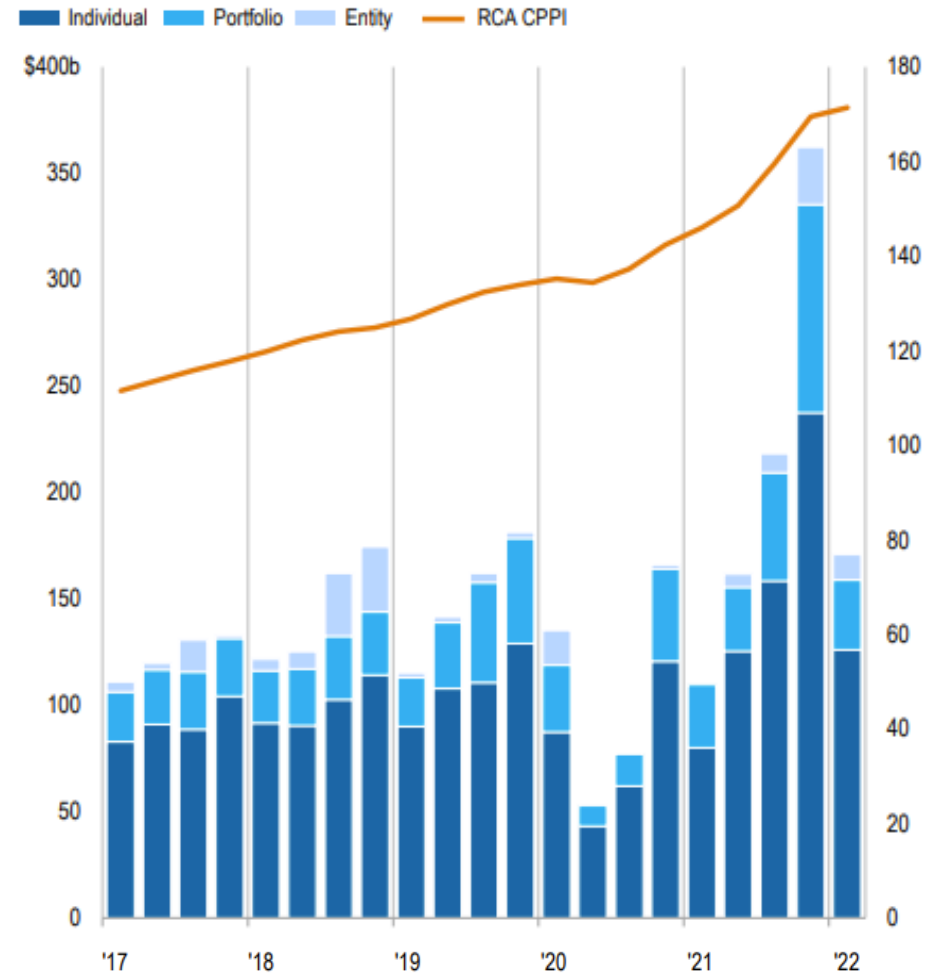
Expectation: Housing demand/household growth fundamentals are strong with the exception of limited migration, expect a push for suburban/exurban affordability and space

Real Estate

Capital Markets

Real estate transaction volume is strong, but maybe tailing off

Quarterly Transaction Volume & Pricing



. . . . private equity is abundant



CALPERS' Allocation to Equity Real Estate

Year	Real Estate Allocation (in billions)	Assets Under Management (in billions)	Percent Allocation to Equity Real Estate
2002	\$13	\$143	9.3%
2004	\$11	\$133	8.3%
2006	\$11	\$164	6.9%
2008	\$20	\$205	9.8%
2010	\$22	\$199	11.0%
2012	\$23	\$212	10.9%
2014	\$24	\$232	10.1%
2016	\$31	\$293	10.6%
2017	\$34	\$326	10.5%
2018	\$38	\$353	10.8%
2019	\$41	\$385	10.6%
2020	\$43	\$392	11.0%
2021	\$62	\$479	12.9%
2022+			15.0%

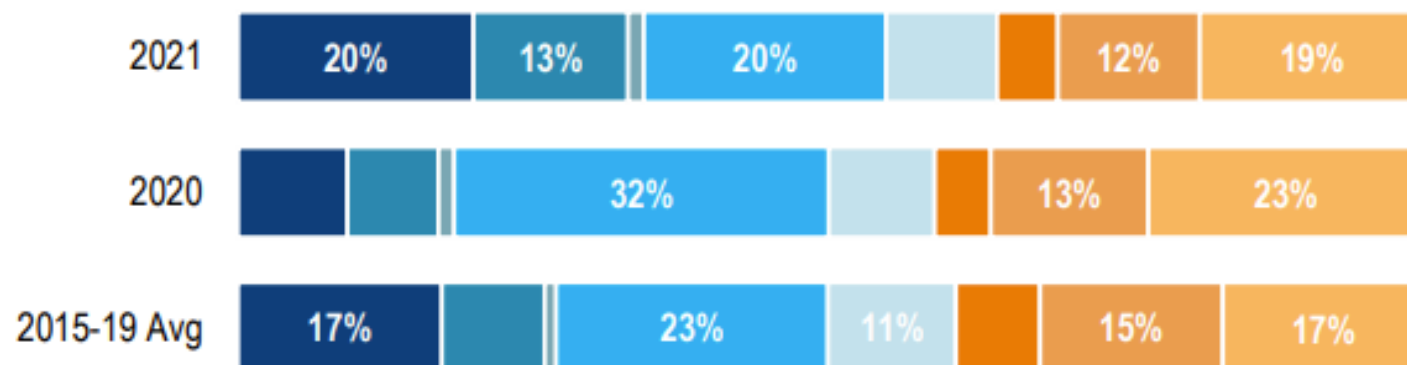
..... CALPERS
allocation to
real estate

. . . . debt is available and balanced across a range of providers

Lender Composition



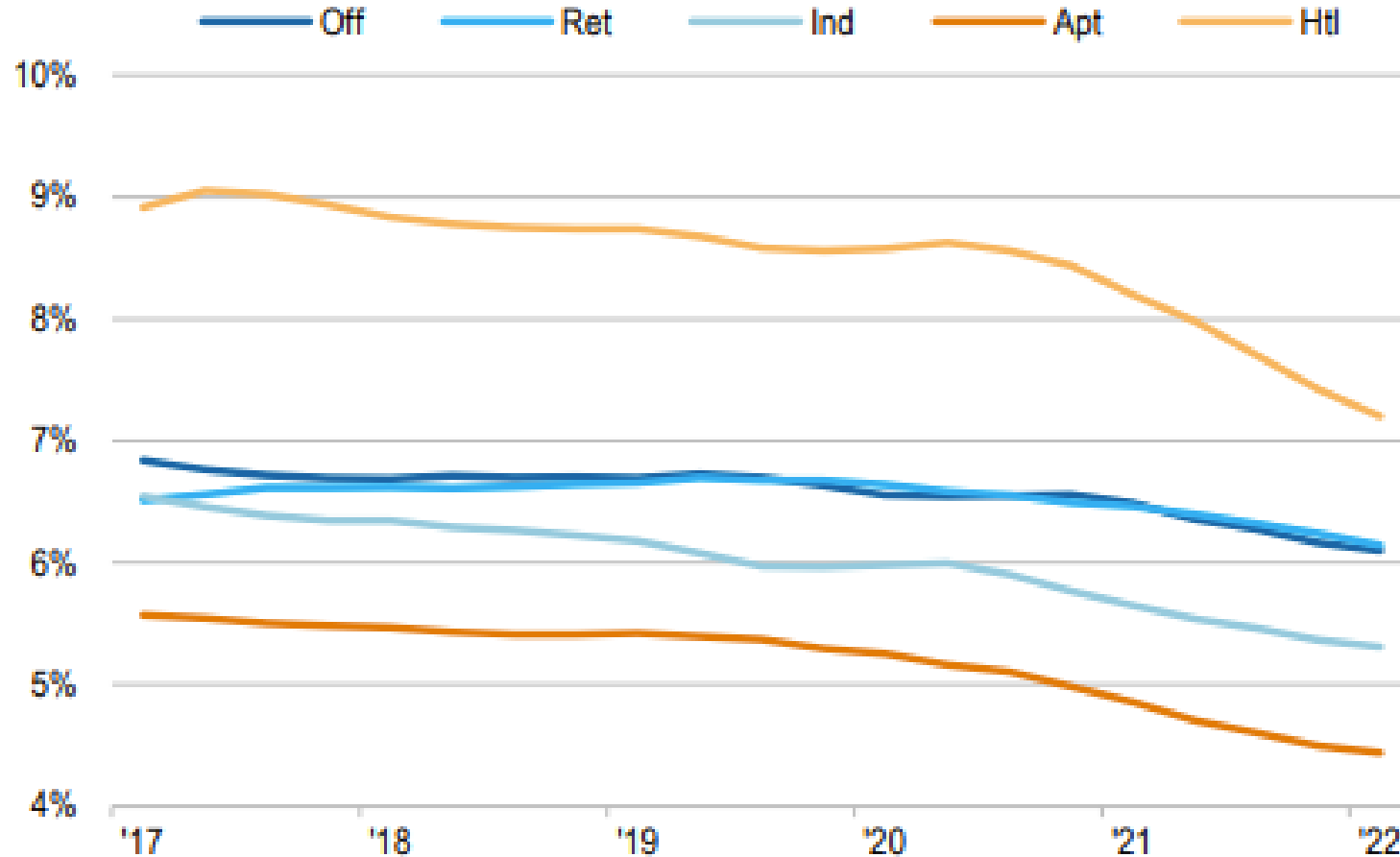
By Year



Cap Rates

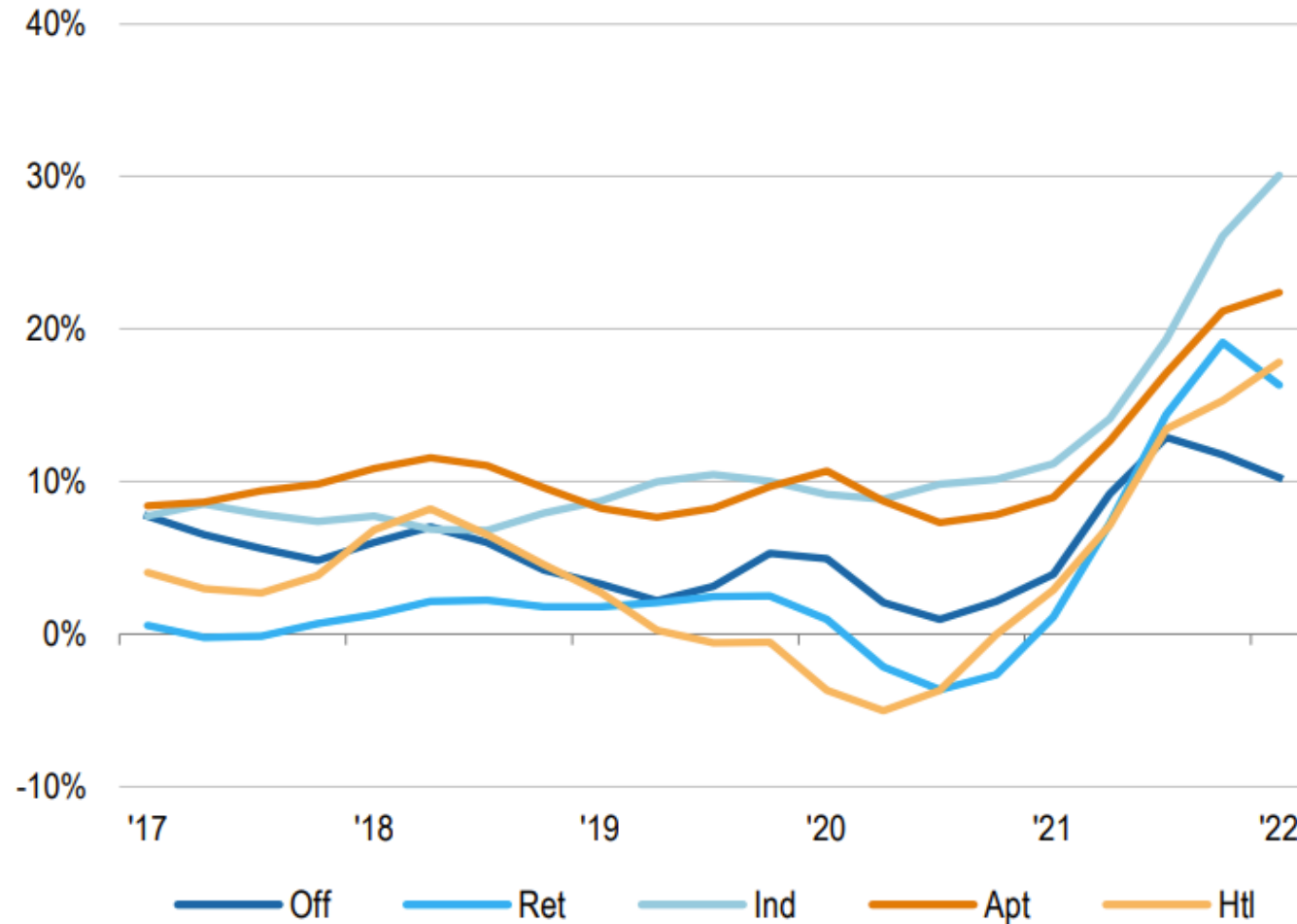
Property cap rates (y-o-y) continue to drift lower. . . .

Cap Rates



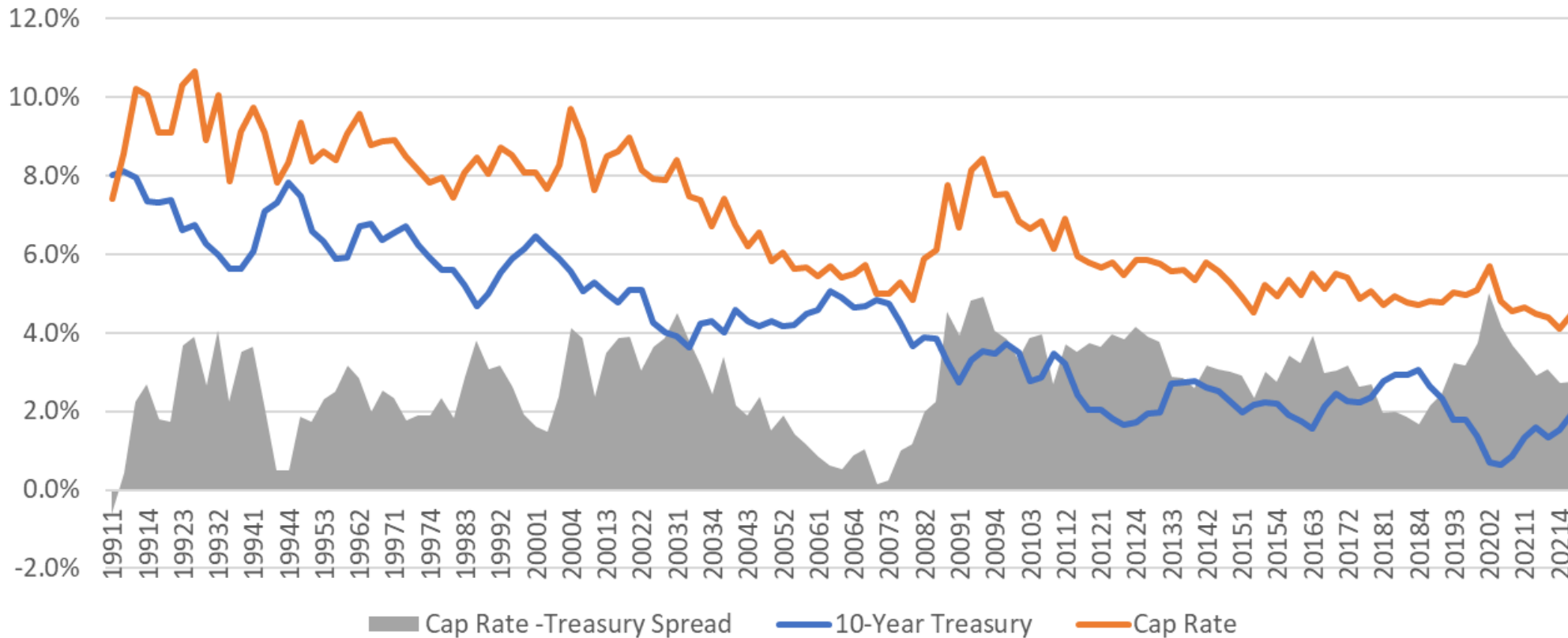
. . . . cap rate compression and NOI growth have increased prices.

Year-Over-Year Price Change



. . . . real estate cap rates over Treasuries (4.50% - 3.1% = 1.4% current spread). . . .

Cap Rate Spreads to U.S. Treasuries (four quarter moving average)



Average Spread: 2.7%
2022Q1 Spread: 2.7%

... commercial property cap rates are under pressure to rise.

Investor Equity Yield (Cash-on-Cash Ratio) for a Range of Cap Rates and Interest Rates

Cap Rates	Mortgage Interest Rates (Interest-Only)						
	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%
3.50%	5.00%	3.50%	2.33%	1.85%	1.59%	1.43%	1.31%
4.00%	7.00%	5.50%	4.00%	2.77%	2.22%	1.91%	1.71%
4.50%	9.00%	7.50%	6.00%	4.50%	3.21%	2.61%	2.25%
5.00%	11.00%	9.50%	8.00%	6.50%	5.00%	3.67%	3.00%
5.50%	13.00%	11.50%	10.00%	8.50%	7.00%	5.50%	4.13%

Loan-to-Value Ratios for a Range of Cap Rates and Interest Rates

Cap Rates	Mortgage Interest Rates (Interest-Only)						
	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%
3.50%	75.0%	75.0%	70.0%	62.2%	56.0%	50.9%	46.7%
4.00%	75.0%	75.0%	75.0%	71.1%	64.0%	58.2%	53.3%
4.50%	75.0%	75.0%	75.0%	75.0%	72.0%	65.5%	60.0%
5.00%	75.0%	75.0%	75.0%	75.0%	75.0%	72.7%	66.7%
5.50%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	73.3%

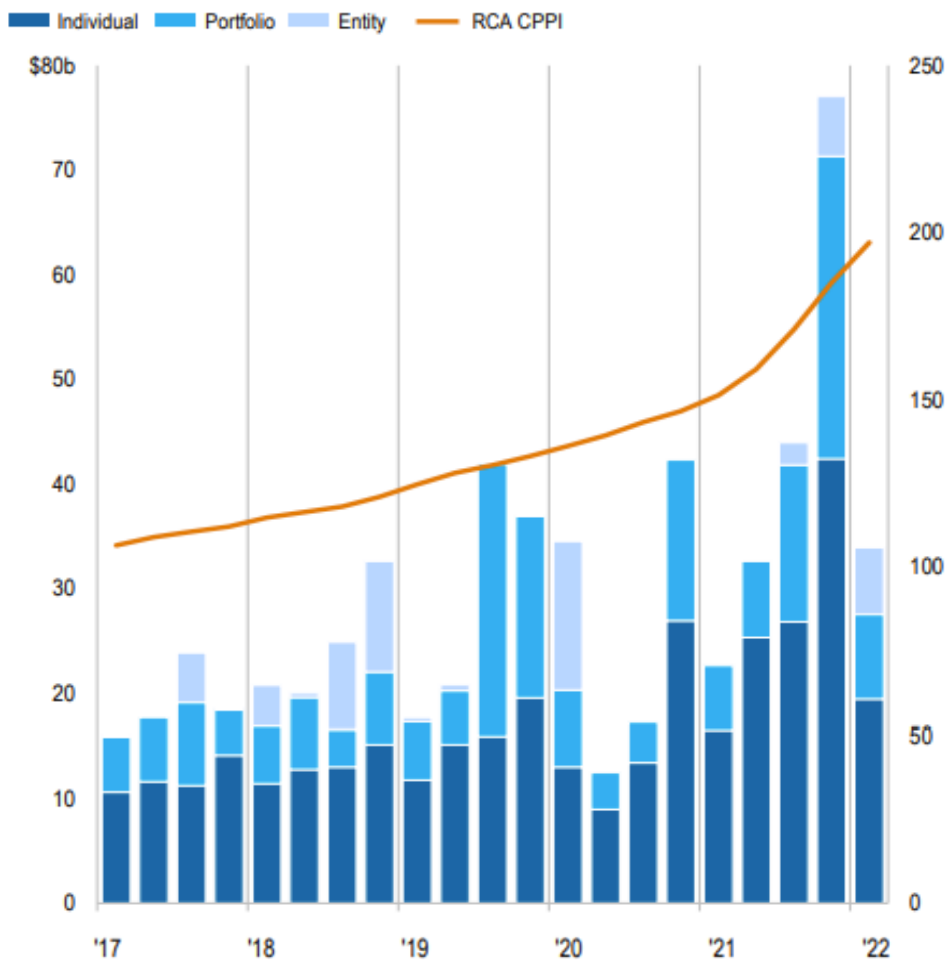
Note: Loan amount assumes a 75% LTVR or a 1.25 DCR.

Positive leverage Negative leverage

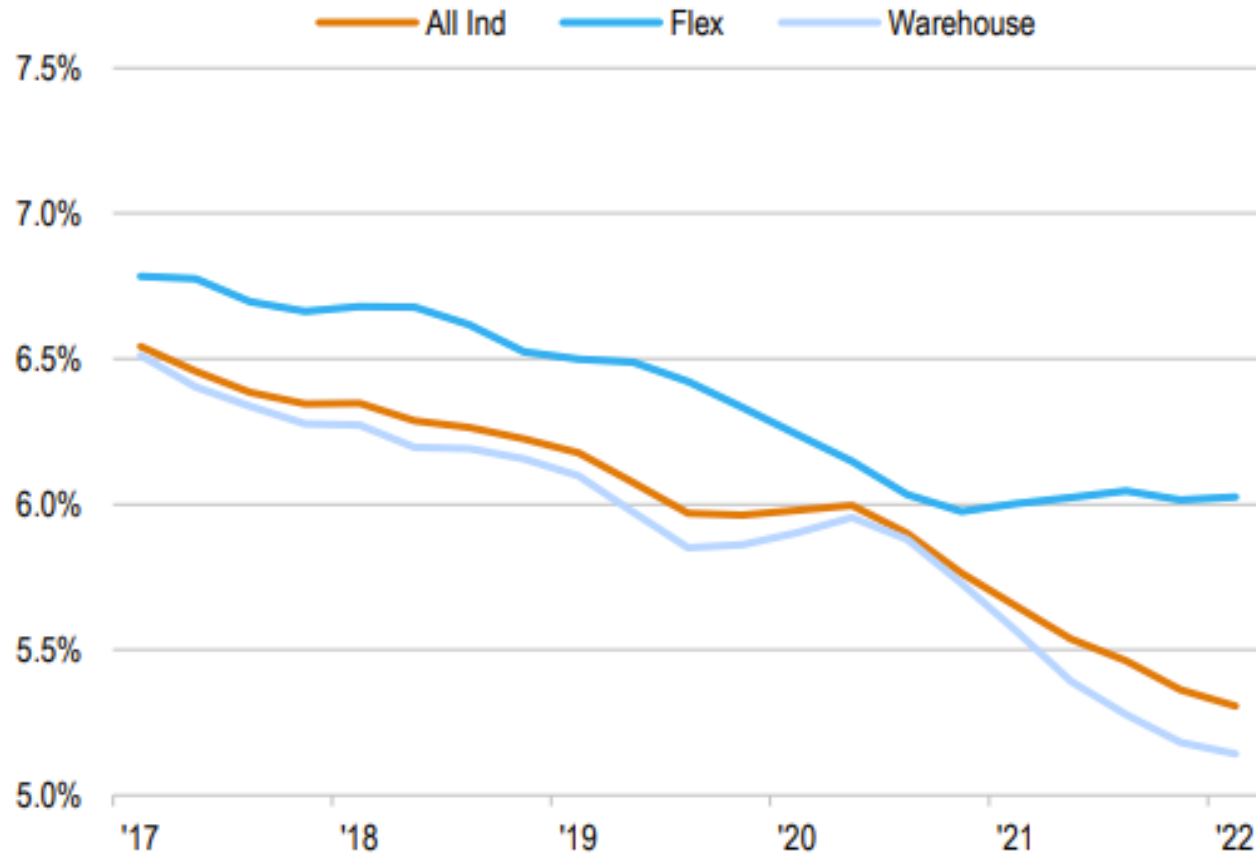
Property Types

Industrial transaction volumes are ramping up (maybe) with declining cap rates

Quarterly Transaction Volume & Pricing

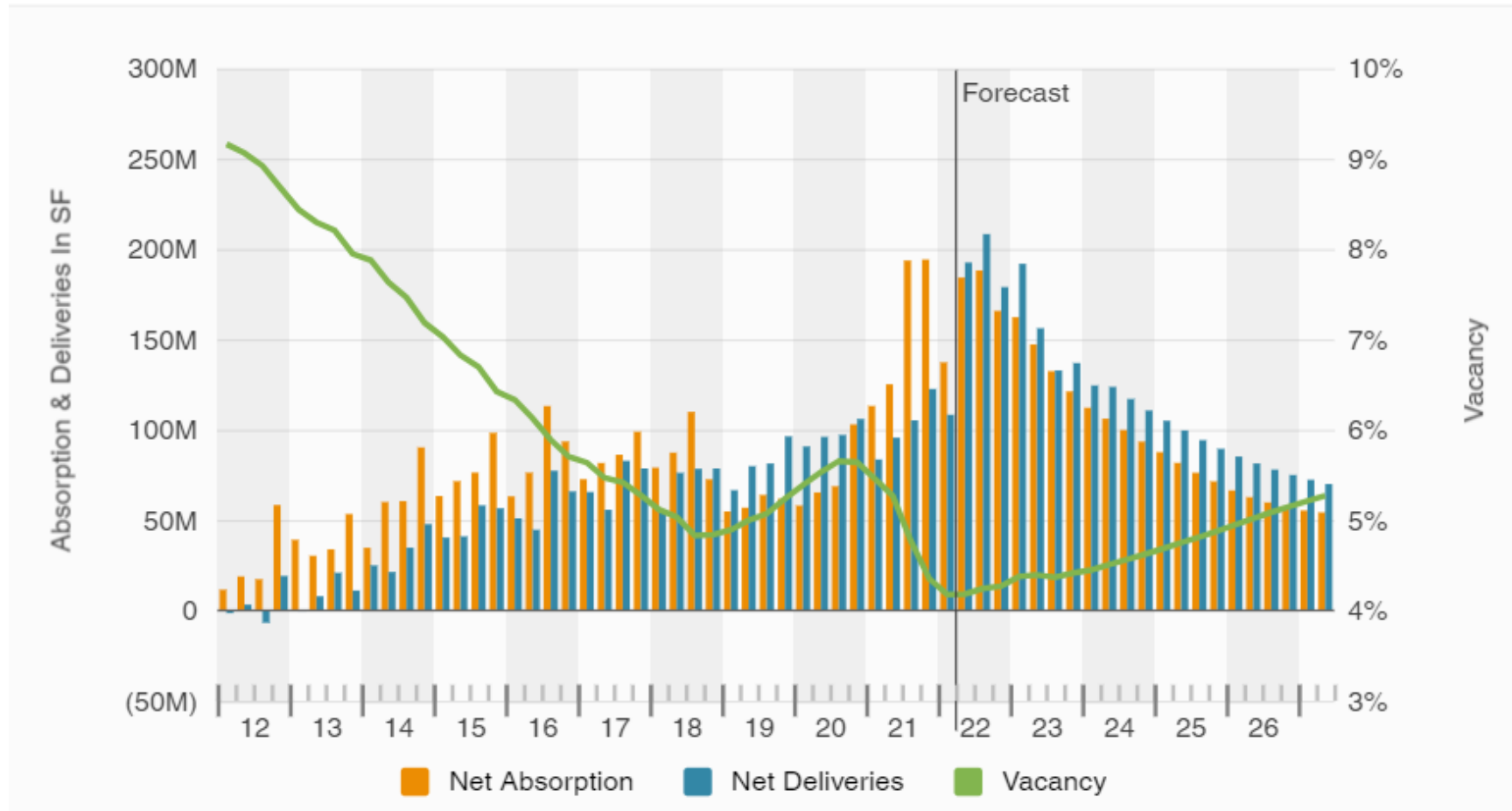


Cap Rates



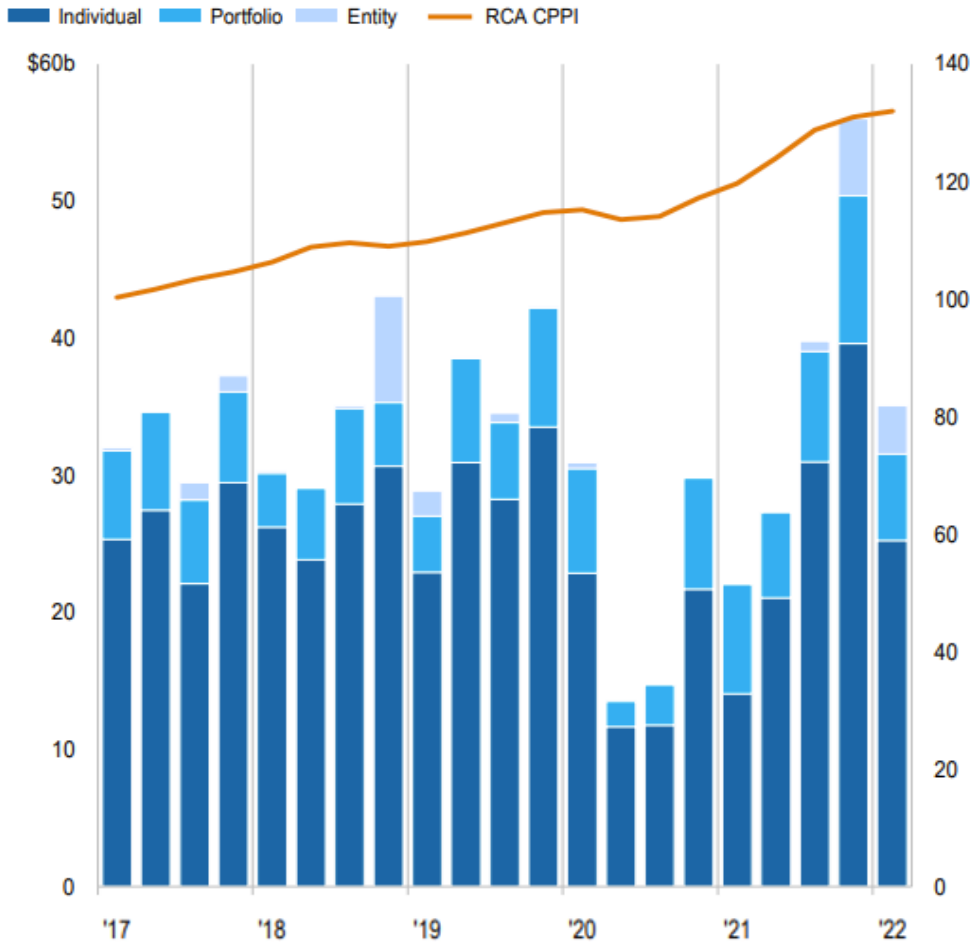
. . . . industrial absorption is strong with strength expected to continue

Net Absorption, Net Deliveries & Vacancy

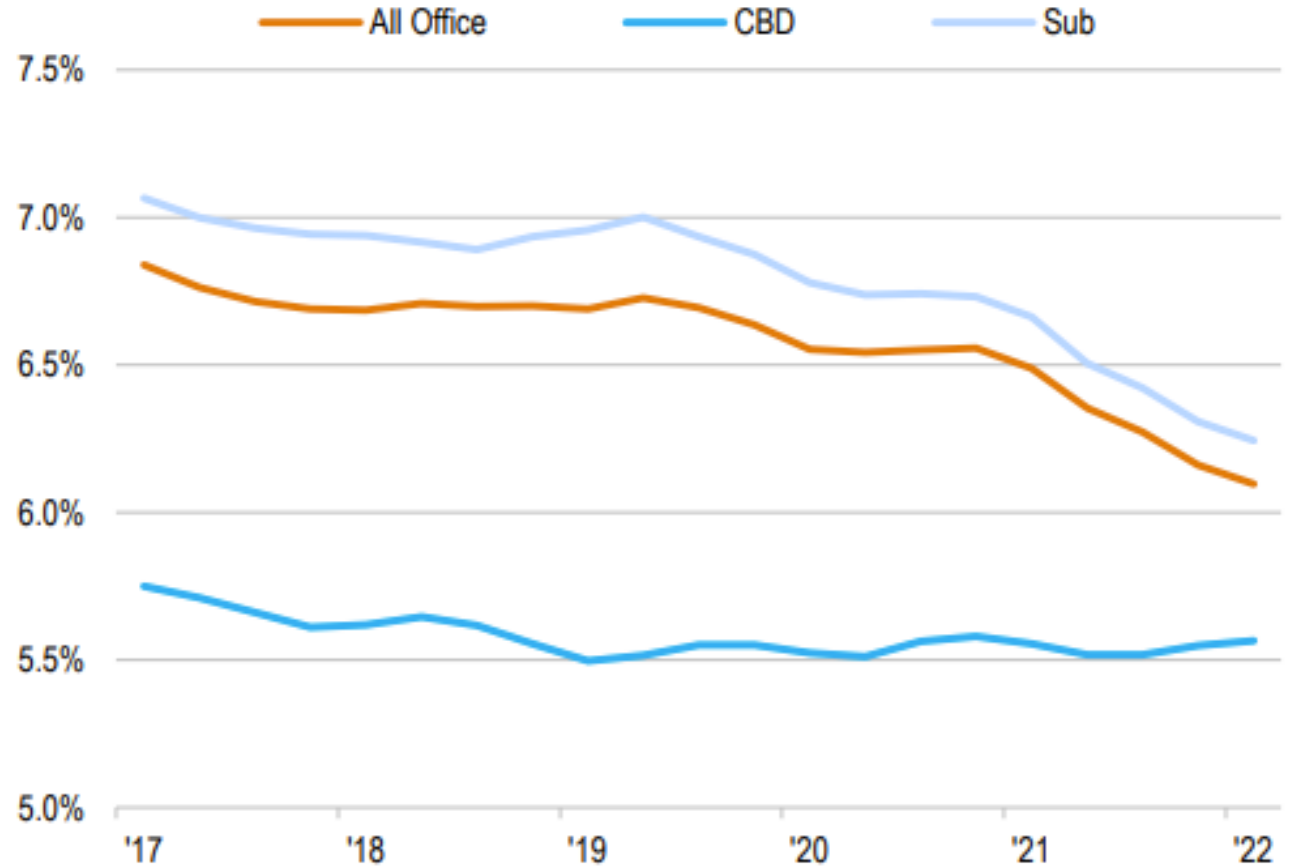


. . . . office sales volume is murky, with cap rates edging lower

Quarterly Transaction Volume & Pricing

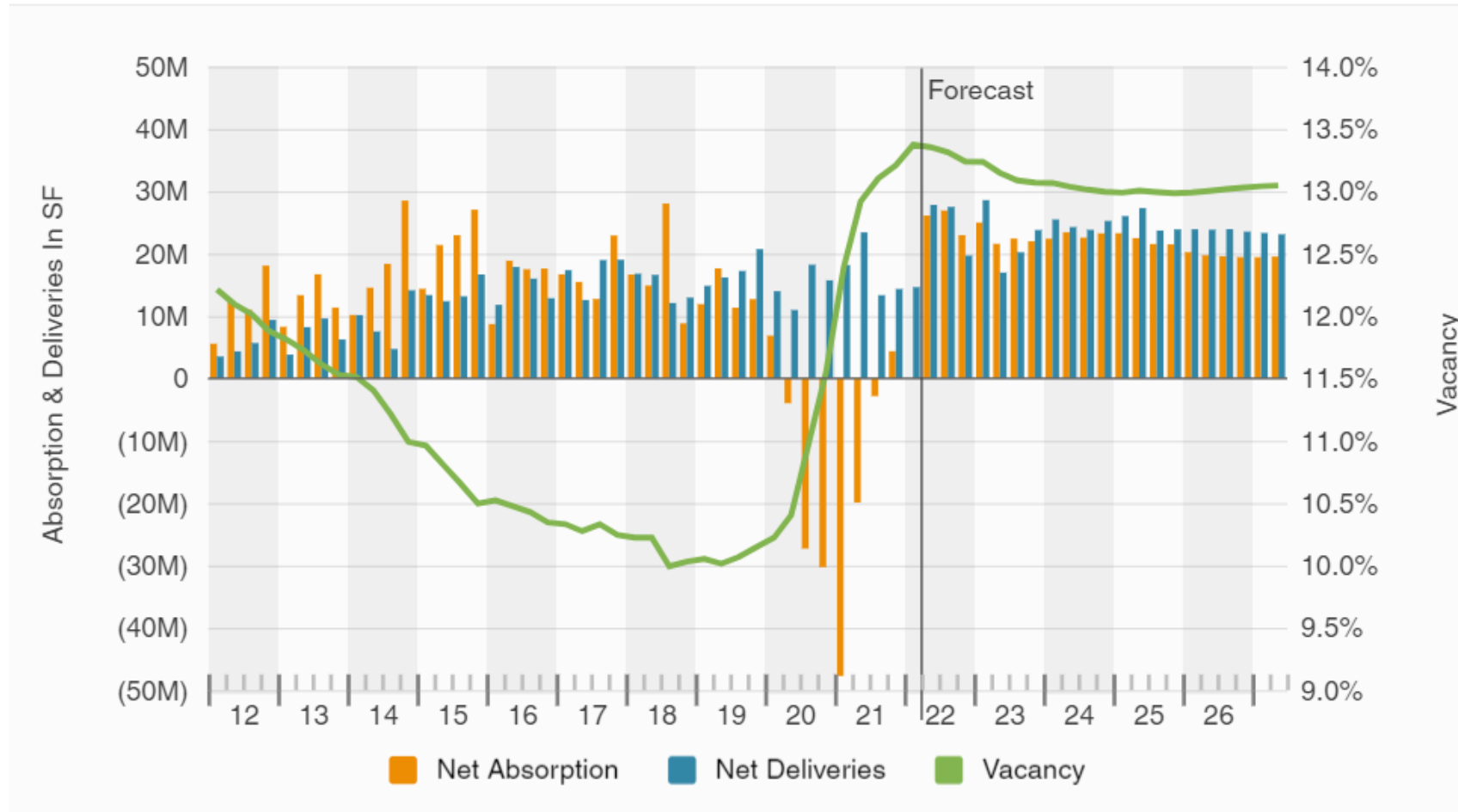


Cap Rates



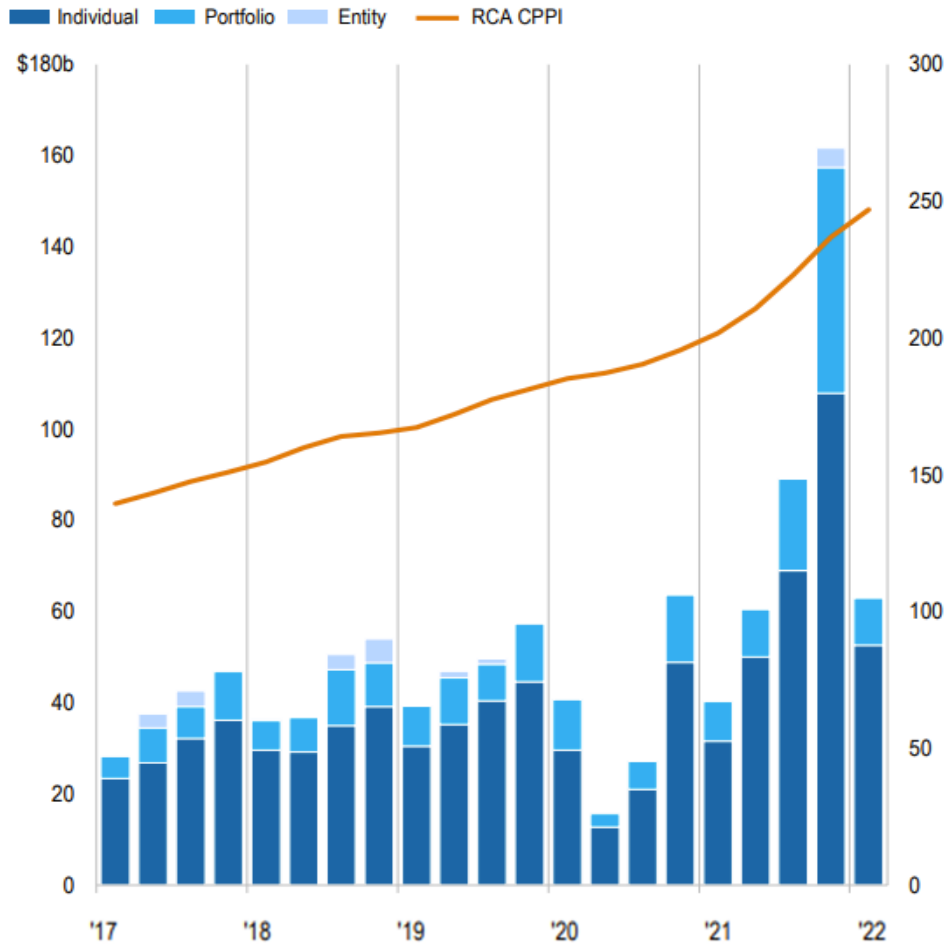
. . . . office absorption is uncertain

Net Absorption, Net Deliveries & Vacancy

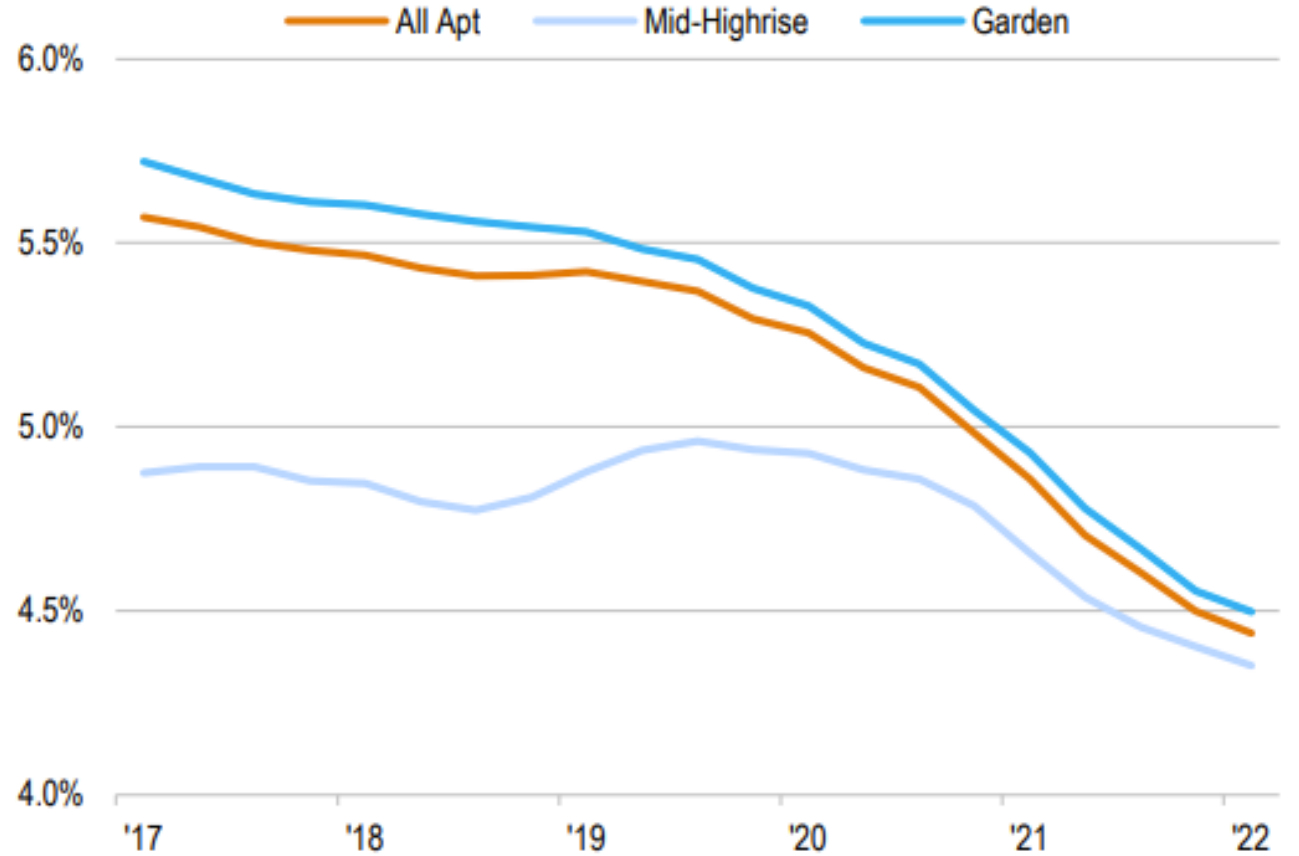


. . . . multifamily transaction volumes are way up with declining cap rates . . .

Quarterly Transaction Volume & Pricing

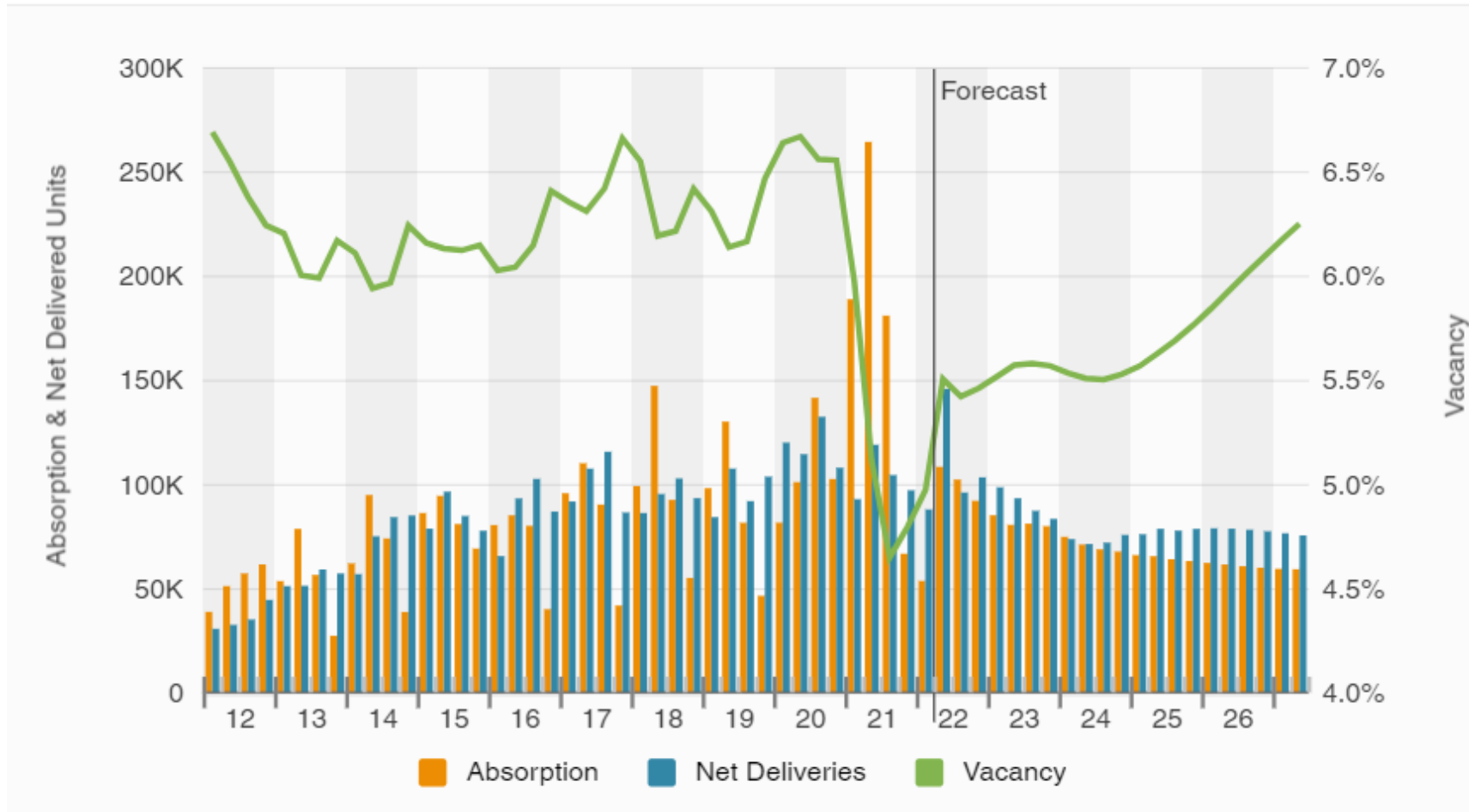


Cap Rates



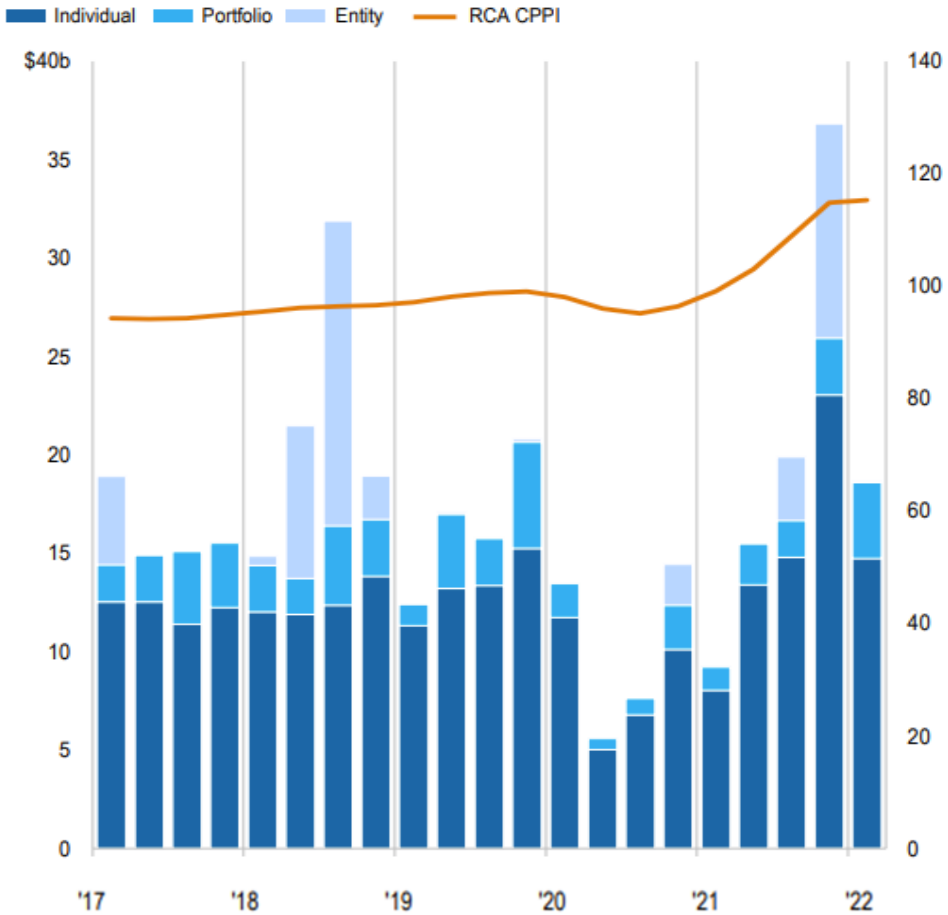
. . . . multifamily absorption is strong, but recent quarters slowed

Absorption, Net Deliveries & Vacancy

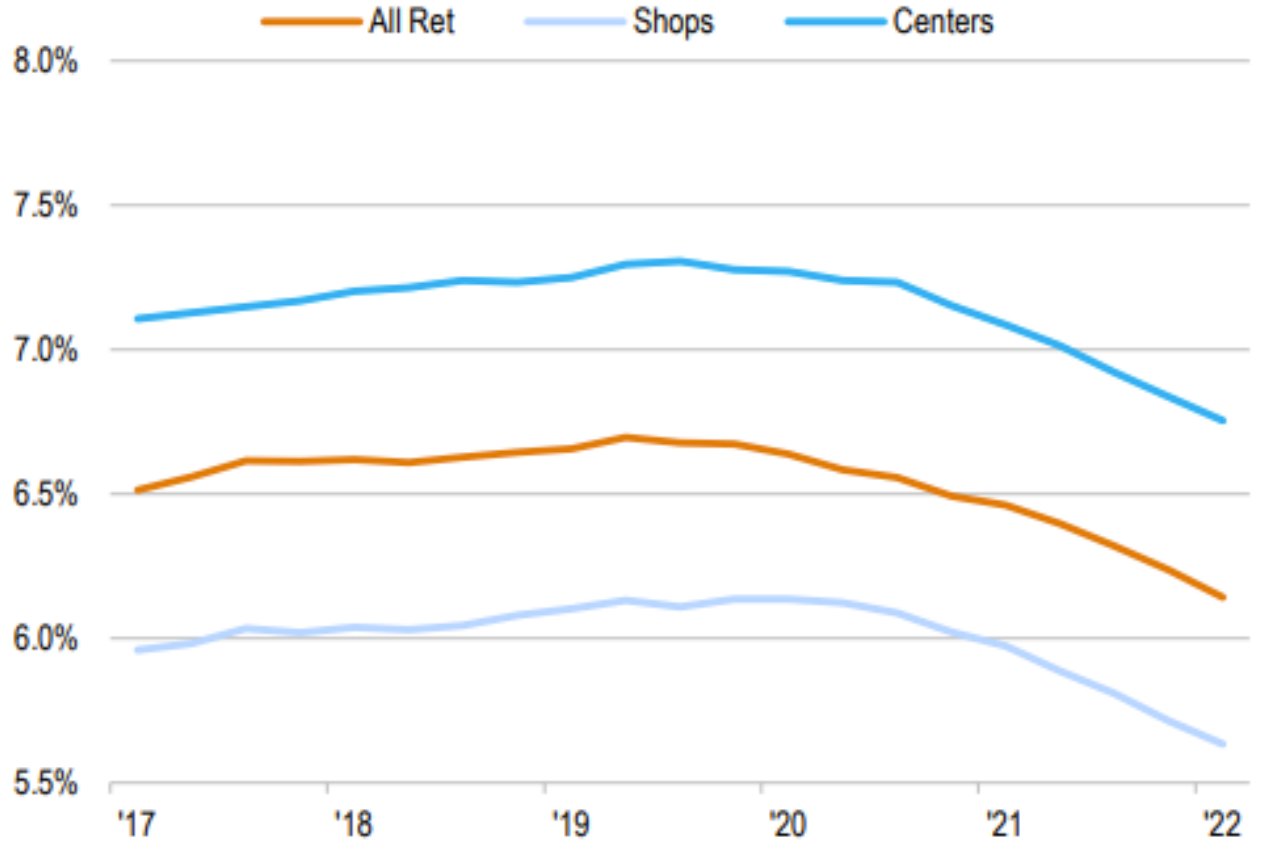


. . . . retail transactions are solid (maybe) with stable cap rates

Quarterly Transaction Volume & Pricing

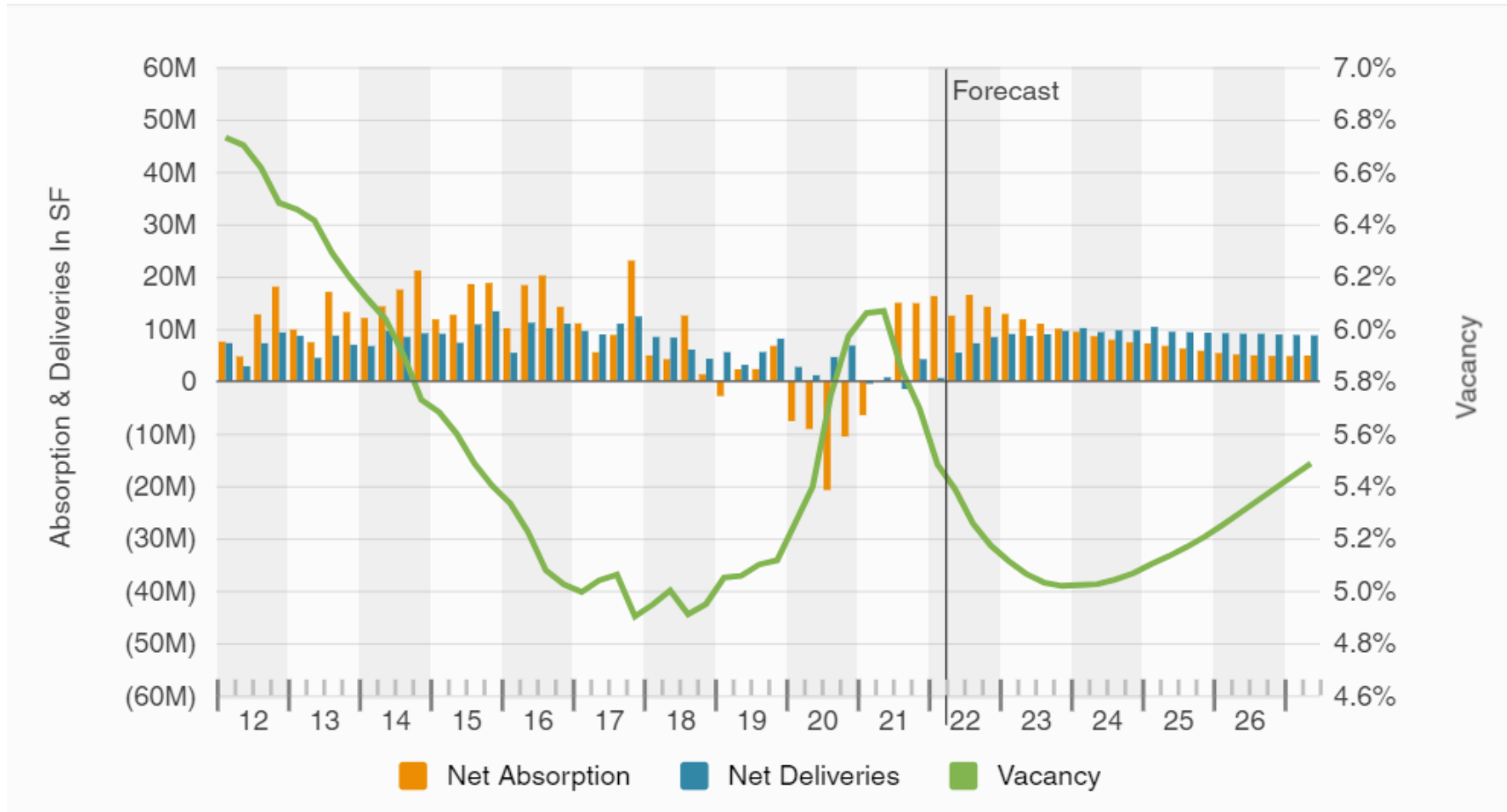


Cap Rates



. . . . recent retail absorption turned positive with strength expected to continue

Net Absorption, Net Deliveries & Vacancy



Key Real Estate Take Aways

Capital Markets

- Debt and Equity sources are plentiful and are remaining relatively disciplined
- Cap rates will drift higher (50 bp) with asset prices stable from NOI growth

Property Markets

Consumers and Businesses will spend/invest through 2023

- Industrial – distribution outperforms through 2023 into 2024, then a shift to flex space
- Office – likely significant underperformance due to limited demand (WFH) and high capex costs
- Multifamily – fundamentals are solid and will remain strong for 3-4 years
- Retail – has been unduly beat down, has upside potential with high current yields



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