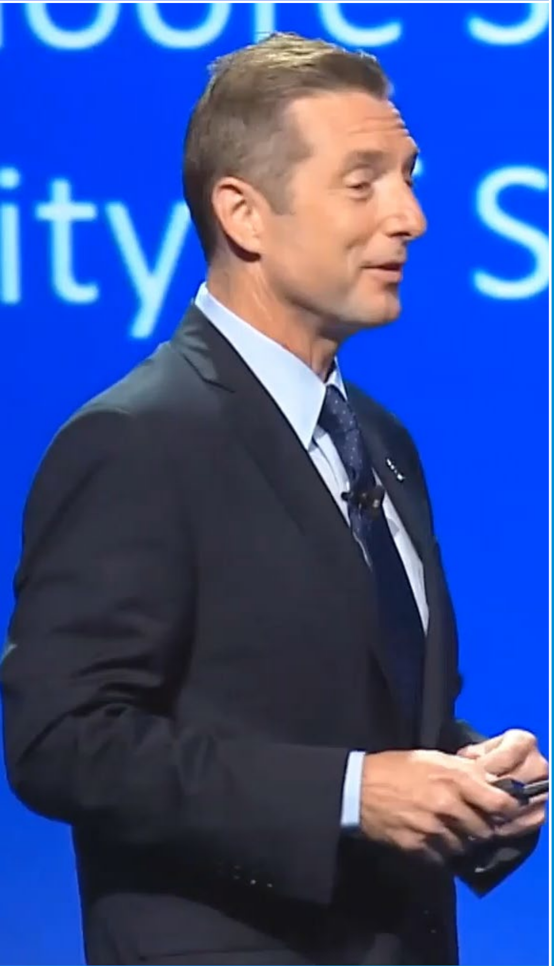
The Source You Trust



Top 5 Ways COVID Changed the Economics of Workers Compensation—For Better or Worse

Robert P. Hartwig, PhD, CPCU
Clinical Associate Professor of Finance,
Darla Moore School of Business,
University of South Carolina

The Economics of Workers Comp and COVID: Outline

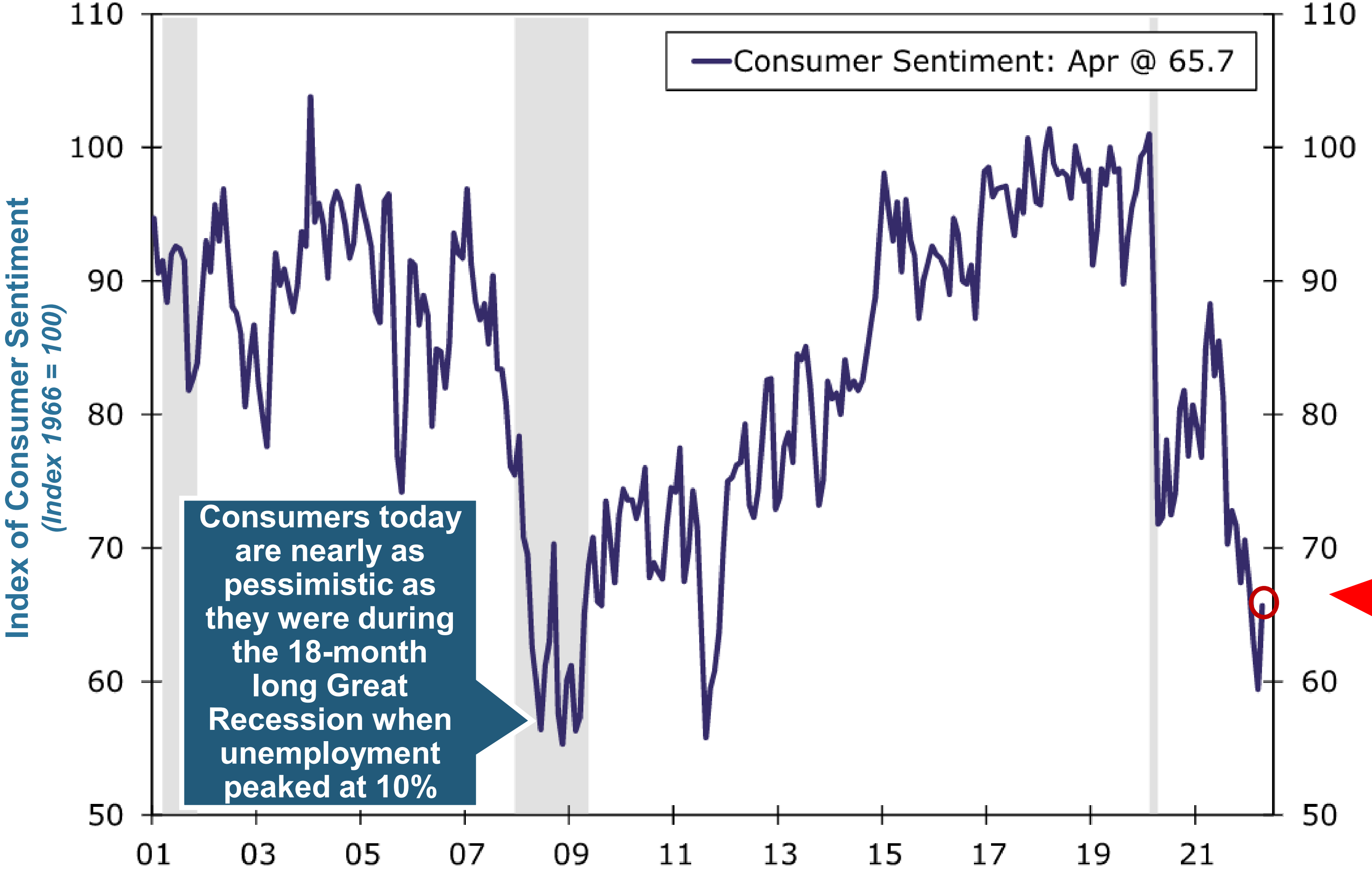
- **Not That '70s Show**
  - Despite what you hear, things aren't that bad.
- **The Post-COVID Labor Force: Sick, Tired and Grumpy**
  - Take that job and shove it!
- **Show Me the Money: COVID's Financial Market Rollercoaster**
  - Wall Street doesn't like higher interest rates. Insurers do.
- **We Are Living in a Material World**
  - Consumers splurged during the pandemic … *the economic hangover has begun.*
- **The Post-COVID Worker**
  - On a collision course with economic reality?

Not That ‘70s Show

Are We About to Return to Bad Old Days of the 1970s (and Early 1980s)?

… *Unlikely!*

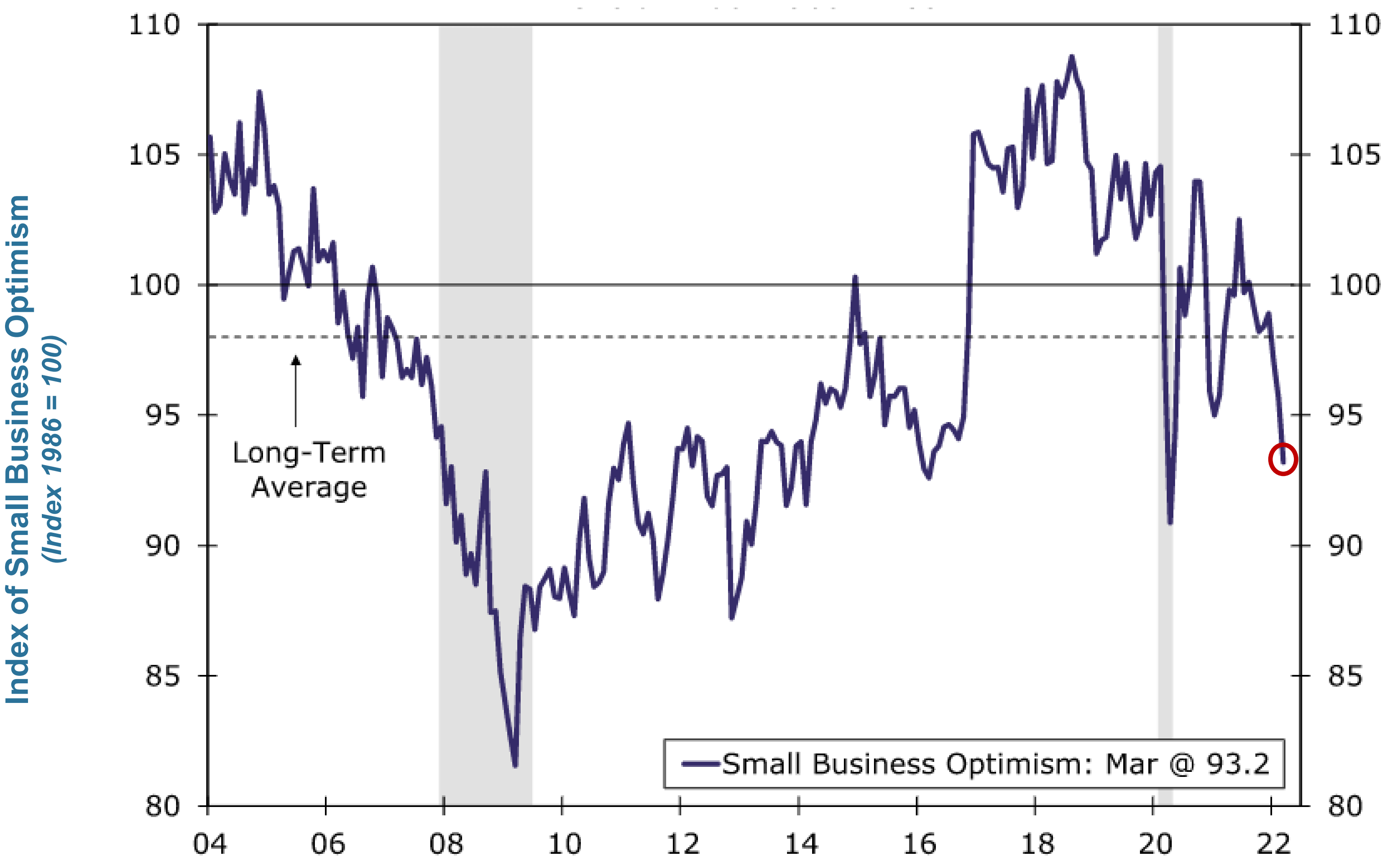
Consumer Sentiment: Near 20-Year Low Despite Strong Jobs Markets



Despite unemployment rates that are among the lowest in 50+ years and the "end" of the COVID pandemic, consumers are *GRUMPY*

Sources: University of Michigan and Wells Fargo Economics.

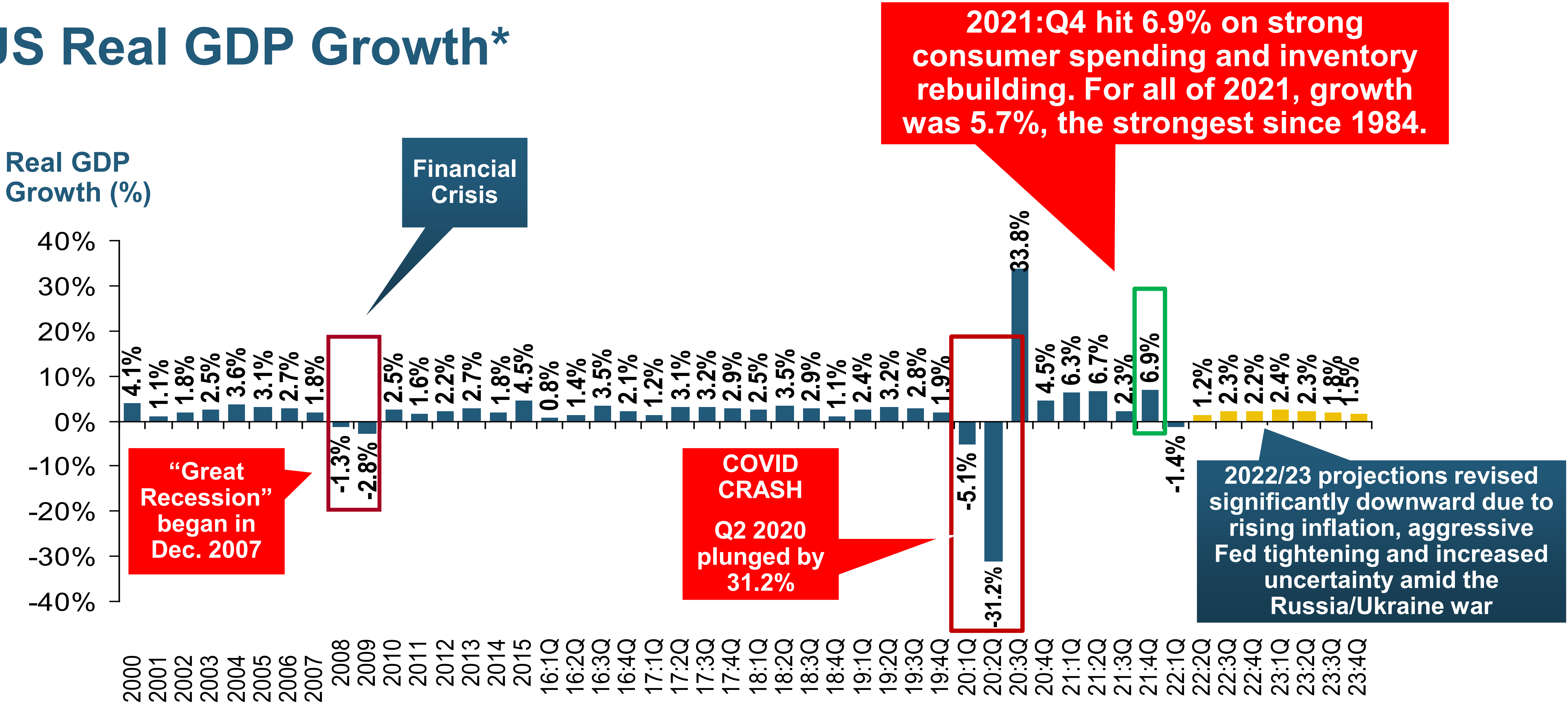
Small Business Sentiment: Falling Sharply Despite Strong Demand



Small businesses are nearly as pessimistic as they were during the depths of pandemic, despite strong sales

Sources: NFIB and Wells Fargo Economics.

US Real GDP Growth*

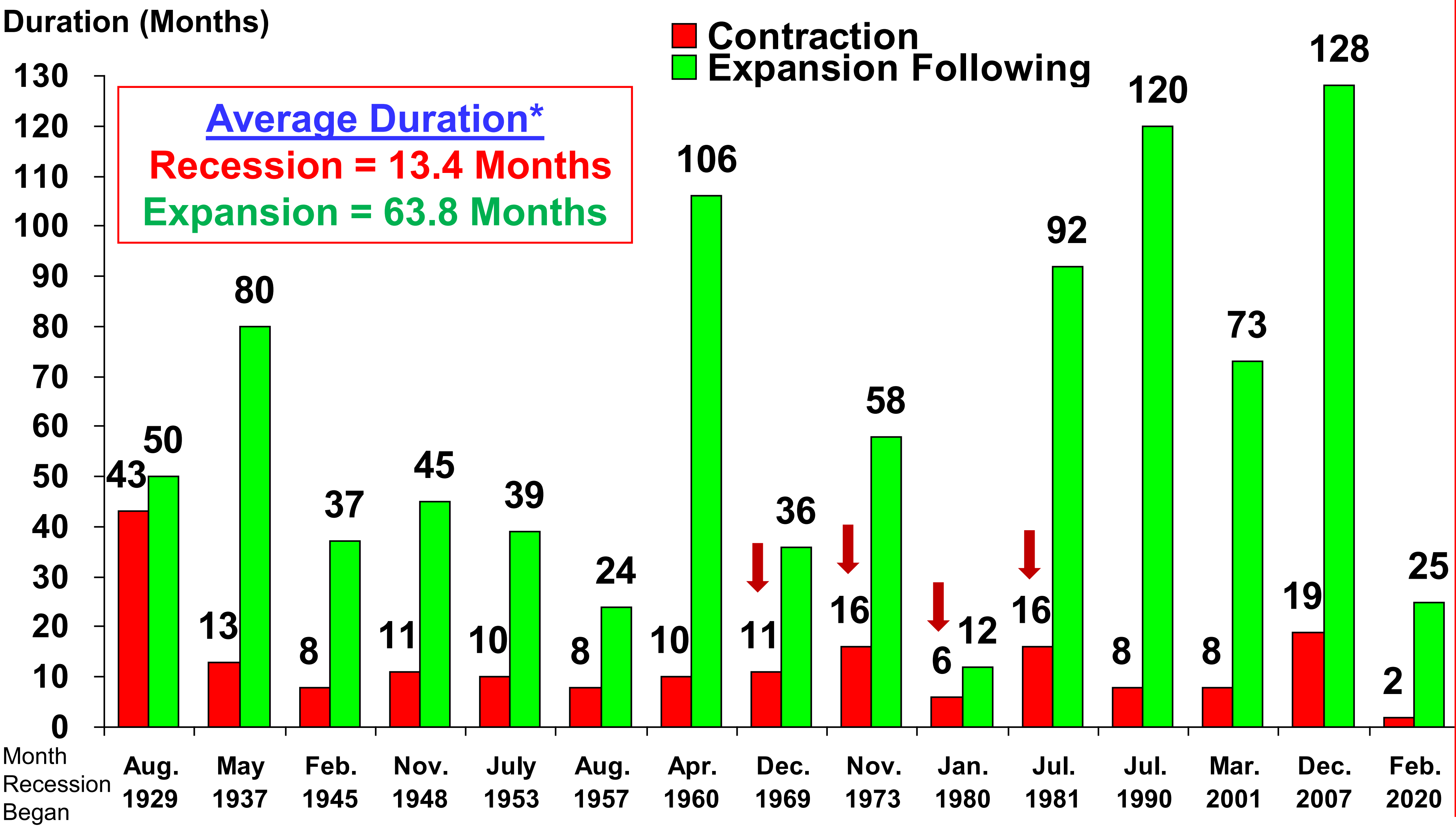


GDP Recovered to Q4 2019 Level in Q1 2021. Demand for Insurance Increased Materially in 2021/22—Particularly in Economically Sensitive Commercial Lines Such as WC.

* Estimates/Forecasts from Wells Fargo Securities.

Sources: US Department of Commerce, Wells Fargo Securities 4/22; Center for Risk and Uncertainty Management, University of South Carolina.

Length of US Business Cycles, 1929-Present

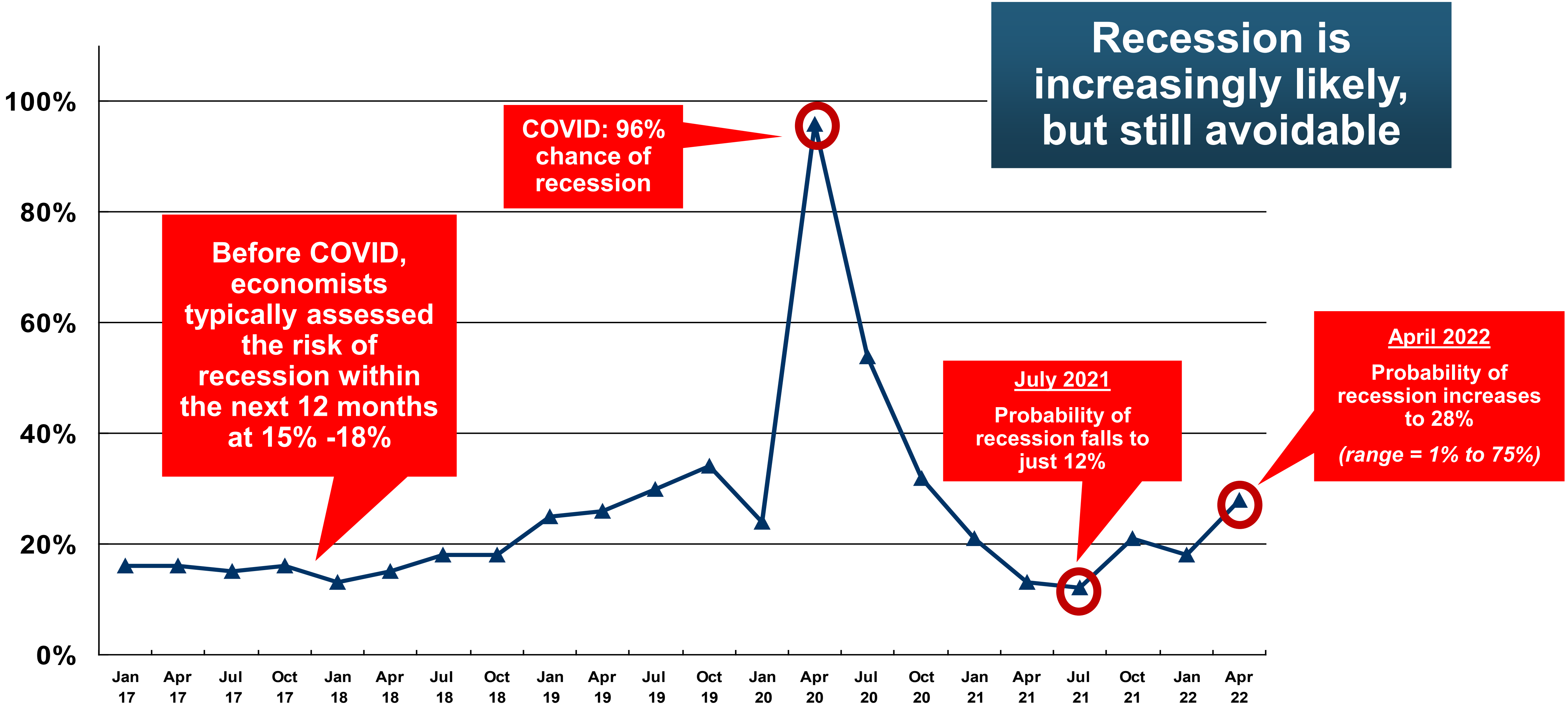


- **The COVID recession lasted just 2 months, ending in April 2020, the shortest on record**
- **COVID abruptly ended the longest economic expansion in US history, which spanned nearly 11 years**
- ***From 1970 – 1982, the economy was in recession for 48 months through 4 recessions (vs. just 4 months over the past 13 years)***

*Excluding COVID-19 recession.

Sources: National Bureau of Economic Research; Risk and Uncertainty Management Center, University of South Carolina.

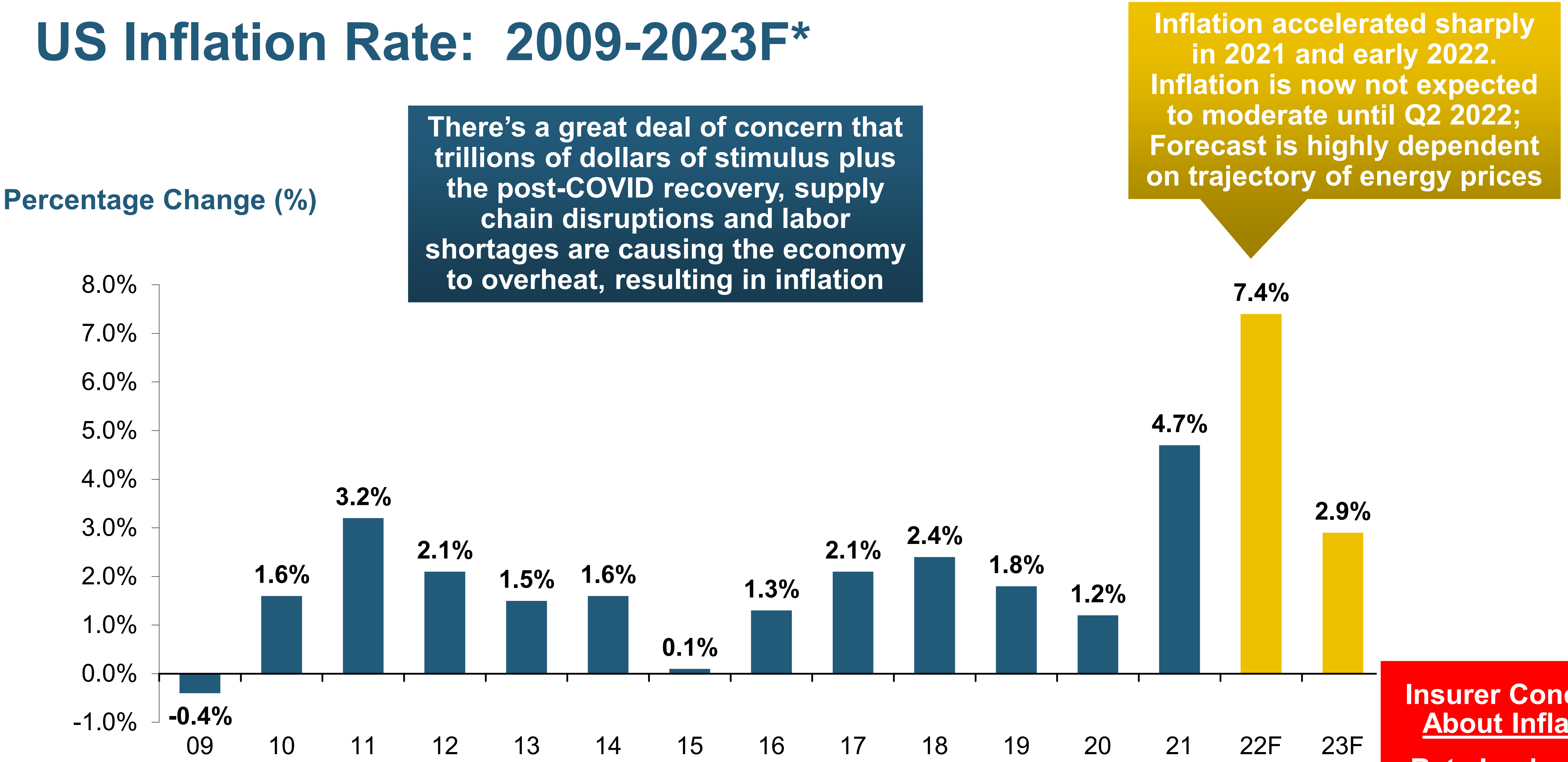
Probability the US Is in a Recession Within Next 12 Months: Jan. 2017 – Apr. 2022*



*April 2022 survey included the responses of 75 economists.

Sources: Wall Street Journal surveys of economists: https://www.wsj.com/articles/recession-risk-is-rising-economists-say-11649592002; Risk and Uncertainty Management Center, University of South Carolina.

US Inflation Rate: 2009-2023F*



Insurer Concerns About Inflation

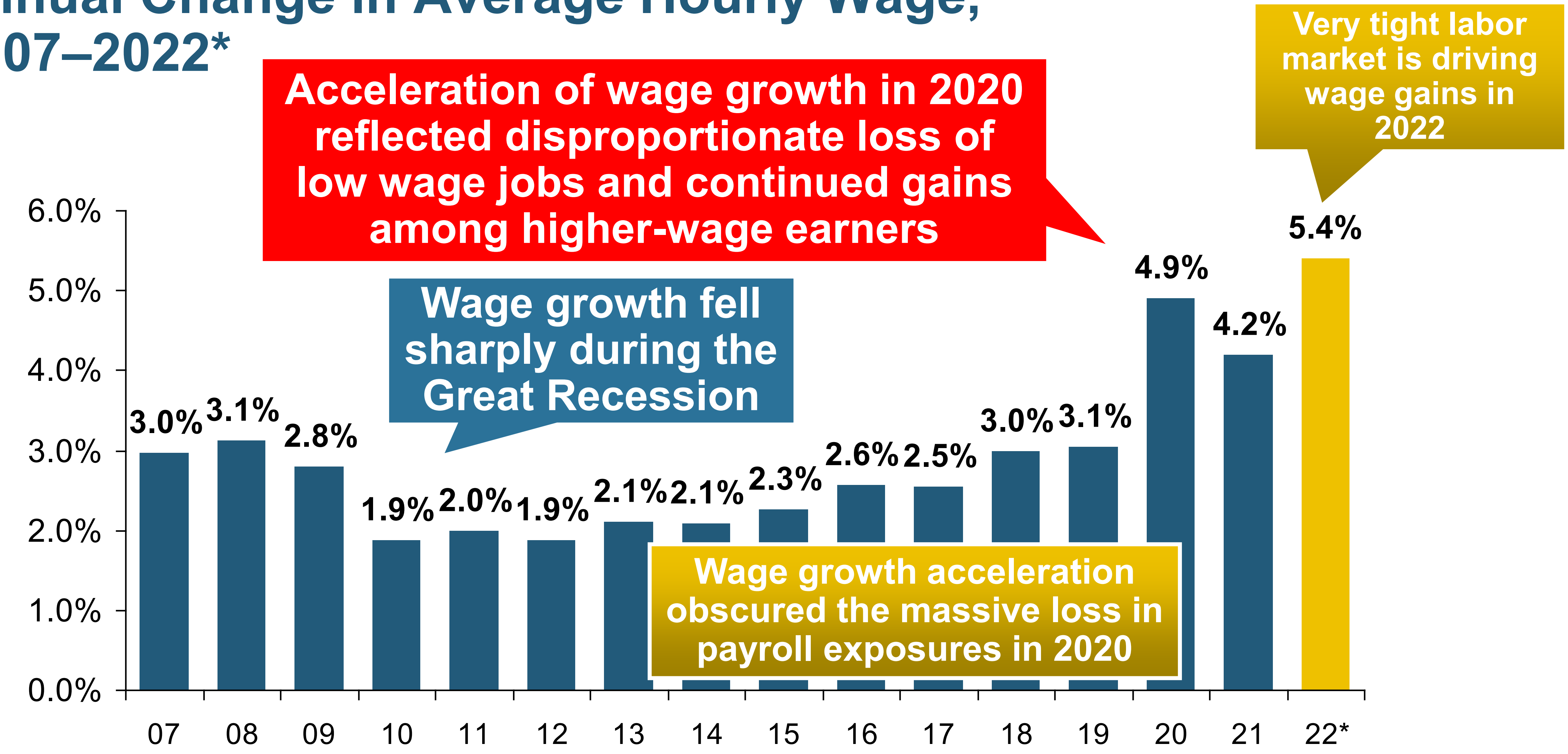
Rate Inadequacy

Reserve Inadequacy

*Annual change in Consumer Price Index for All Urban Consumers (CPI-U).

Sources: US Bureau of Labor Statistics; Wells Fargo Securities (4/22); USC Center for Risk and Uncertainty Management.

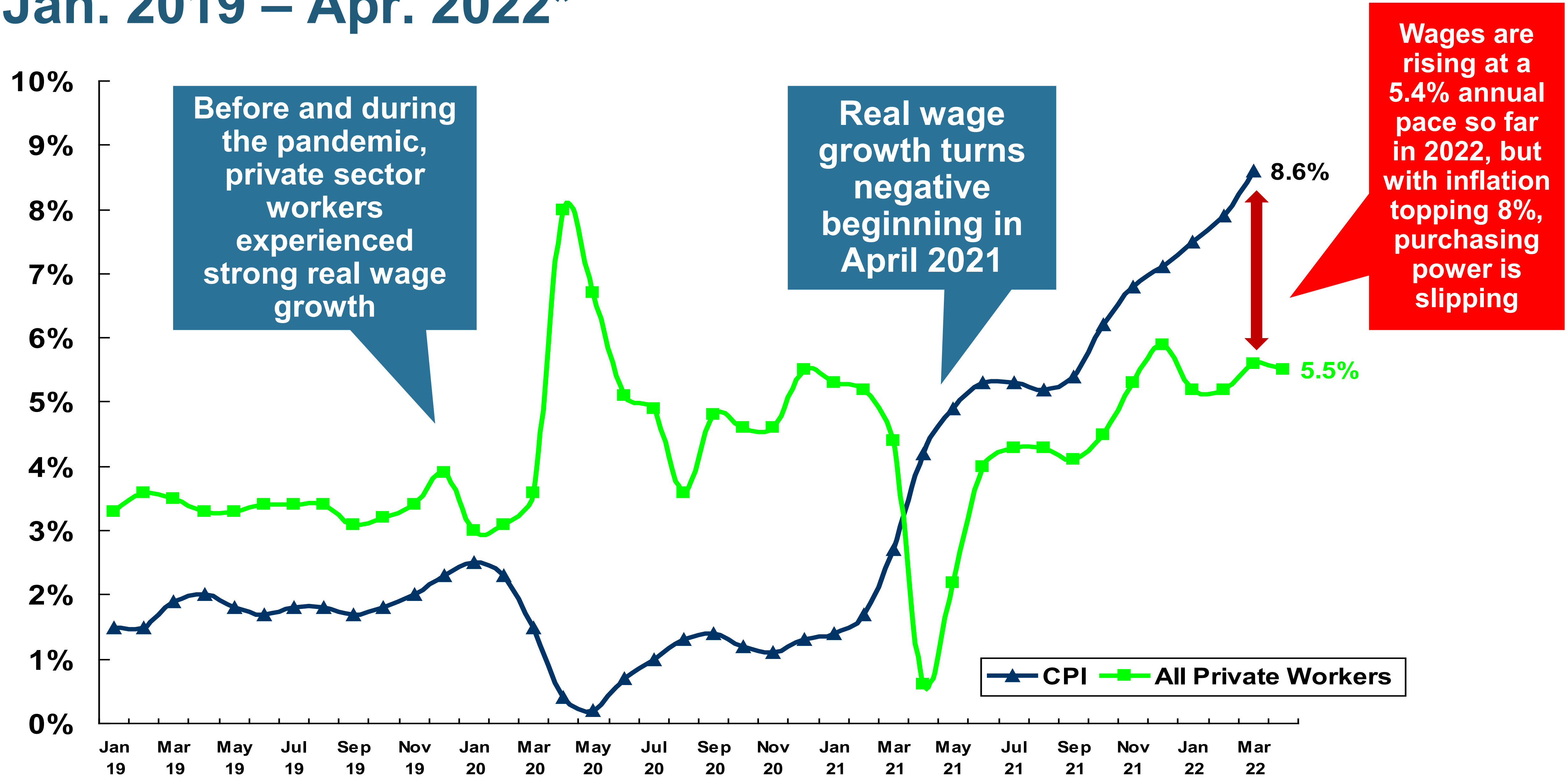
Annual Change in Average Hourly Wage, 2007–2022*



*2022 figure is average of monthly year-over-year increases through April 2022.

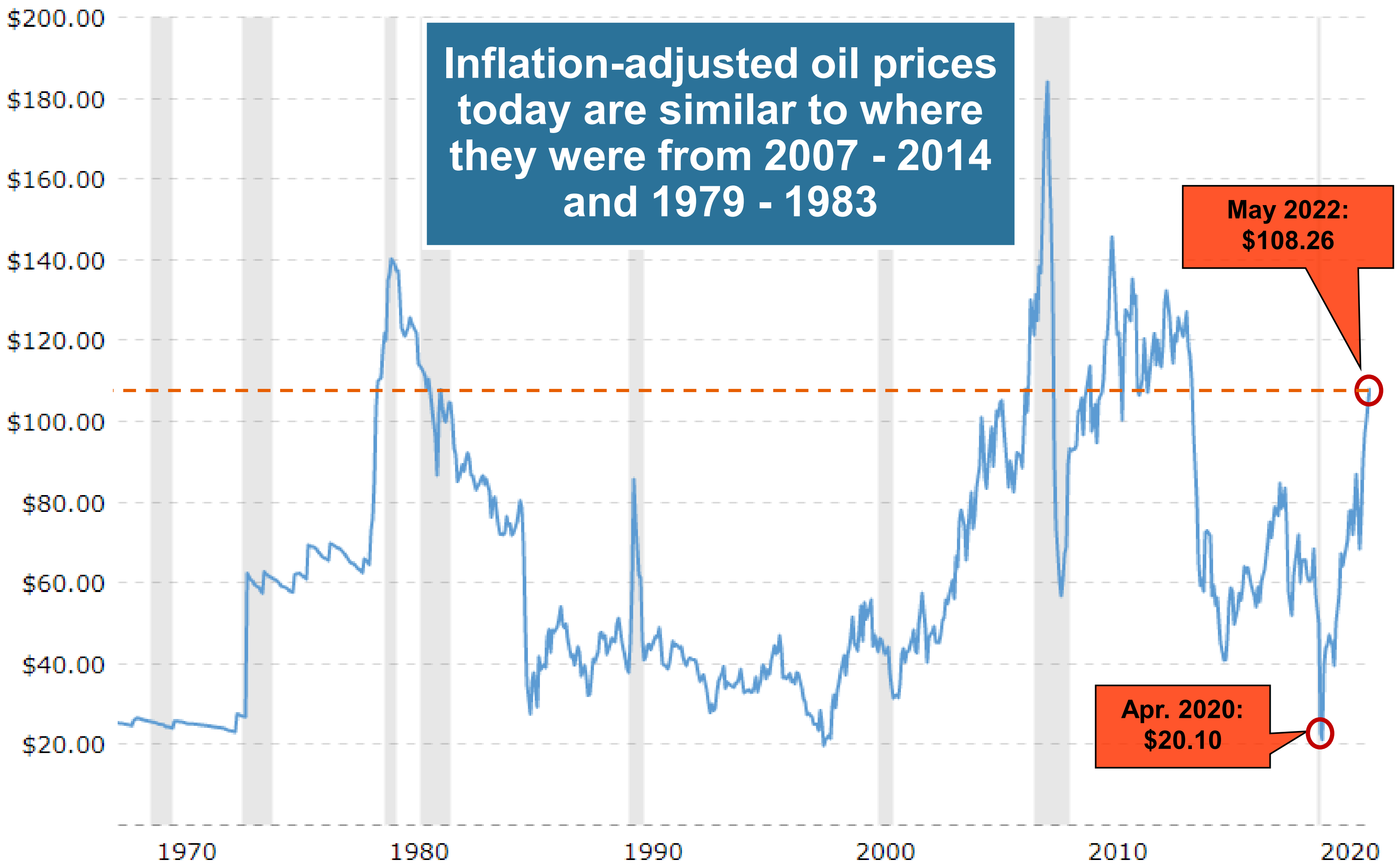
Sources: US Bureau of Labor Statistics at http://www.bls.gov/data/#employment; National Bureau of Economic Research (recession dates); Risk and Uncertainty Management Center, Univ. of South Carolina.

Inflation (CPI) vs. Hourly Earnings Growth: Jan. 2019 – Apr. 2022*



Sources: U.S Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

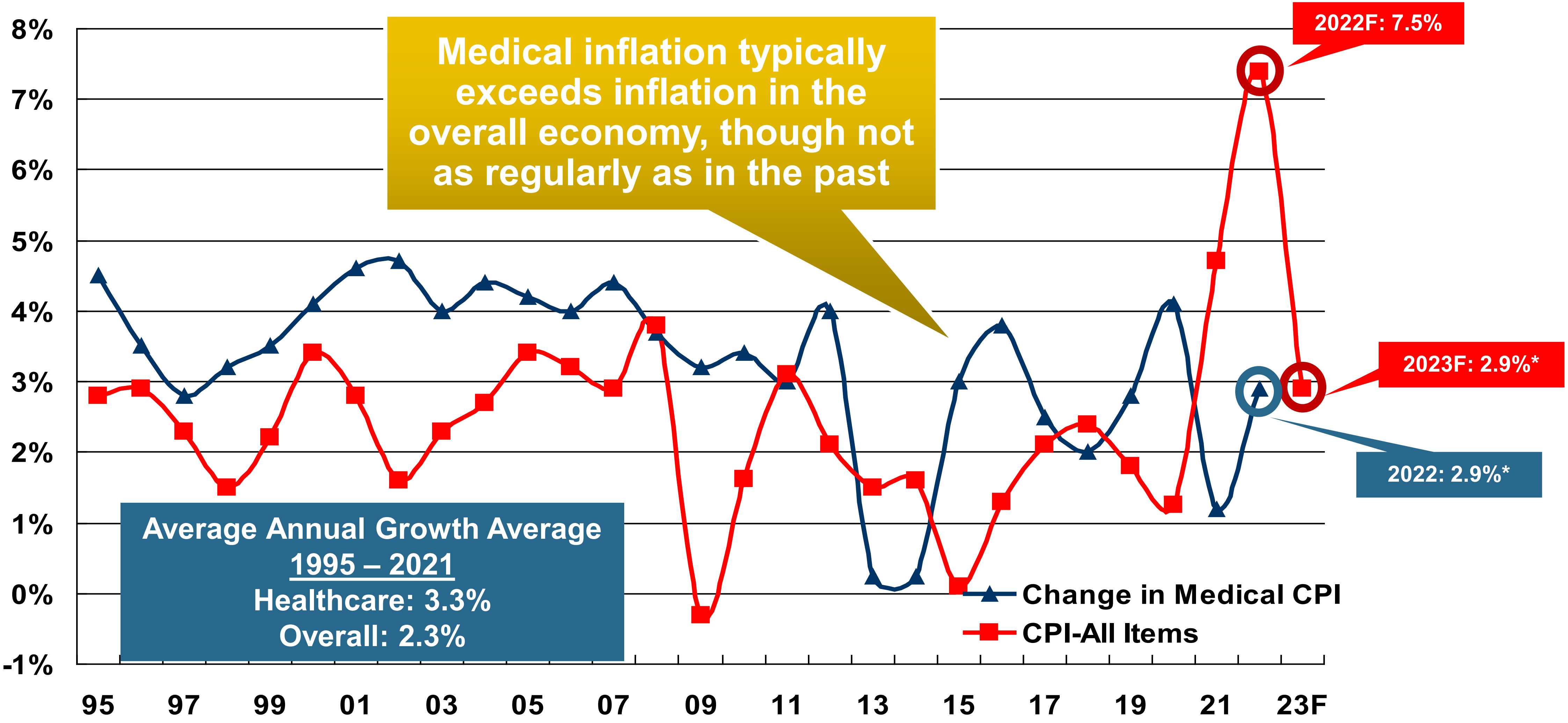
Crude Oil Prices: Price per Barrel, Mar. 2002 – May 2022 (Inflation Adjusted)



Crude above $100/bbl—a quintupling from its pandemic low—causing market panic and fueling inflation fears. The Russian invasion of Ukraine, US ban of Russian oil is exacerbating oil price pressures.

Sources: Macrotrends.net accessed 5/6/22 at: https://www.macrotrends.net/1369/crude-oil-price-history-chart; Risk and Uncertainty Management Center, University of South Carolina.

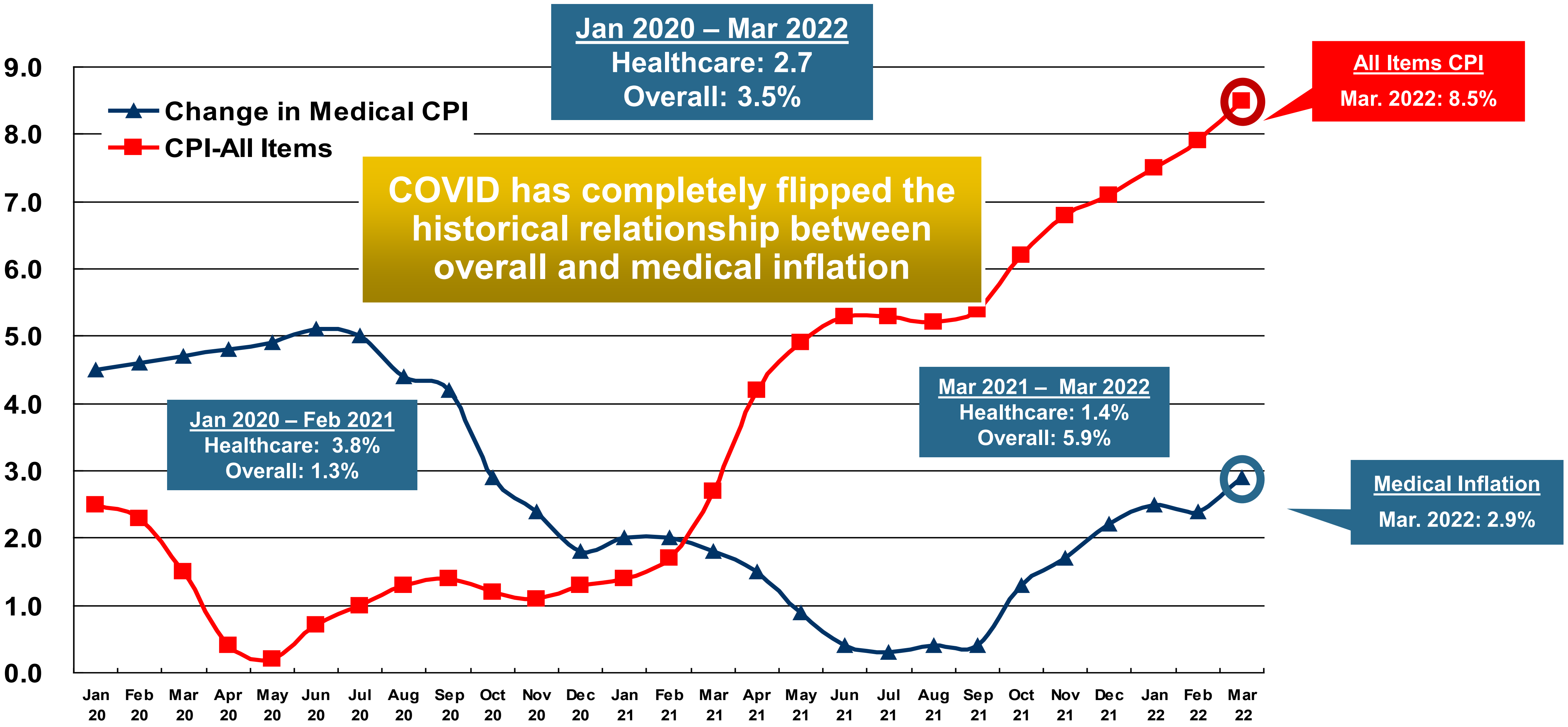
Medical Cost Inflation vs. Overall CPI, 1995–2023F



*2022 figure for Medical Cost Inflation is percentage change Mar. 2022 vs. Mar. 2021.

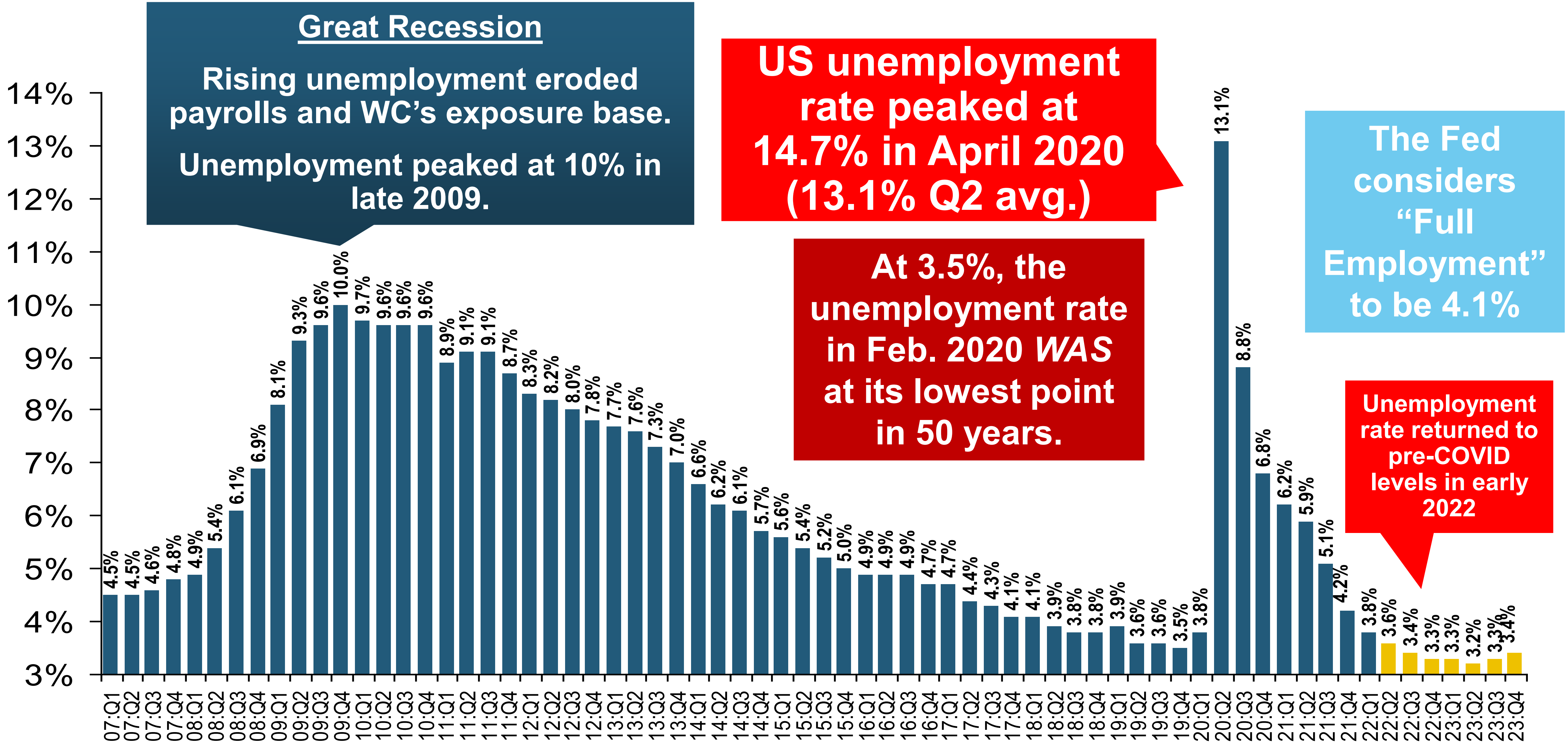
Sources: US Bureau of Labor Statistics; Wells Fargo Securities (2022F/23 for CPI-All Items); Risk and Uncertainty Management Center, University of South Carolina.

Medical Cost Inflation vs. Overall CPI During COVID, Jan. 2020 – Mar. 2022 *(Percent Change from Year Ago)*



Sources: US Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

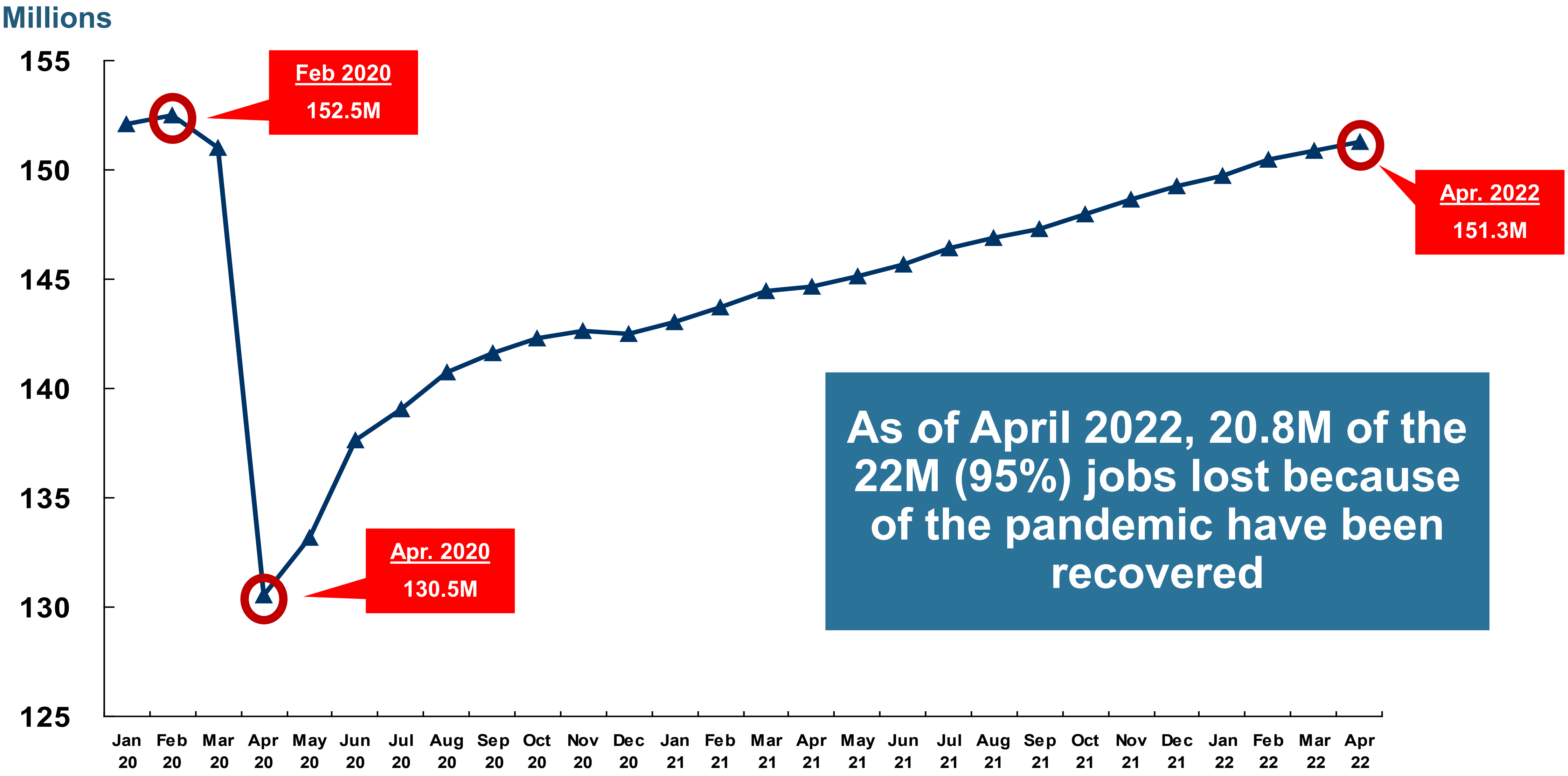
US Unemployment Rate Forecast: 2007:Q1–2023:Q4



= forecasts ; = actuals

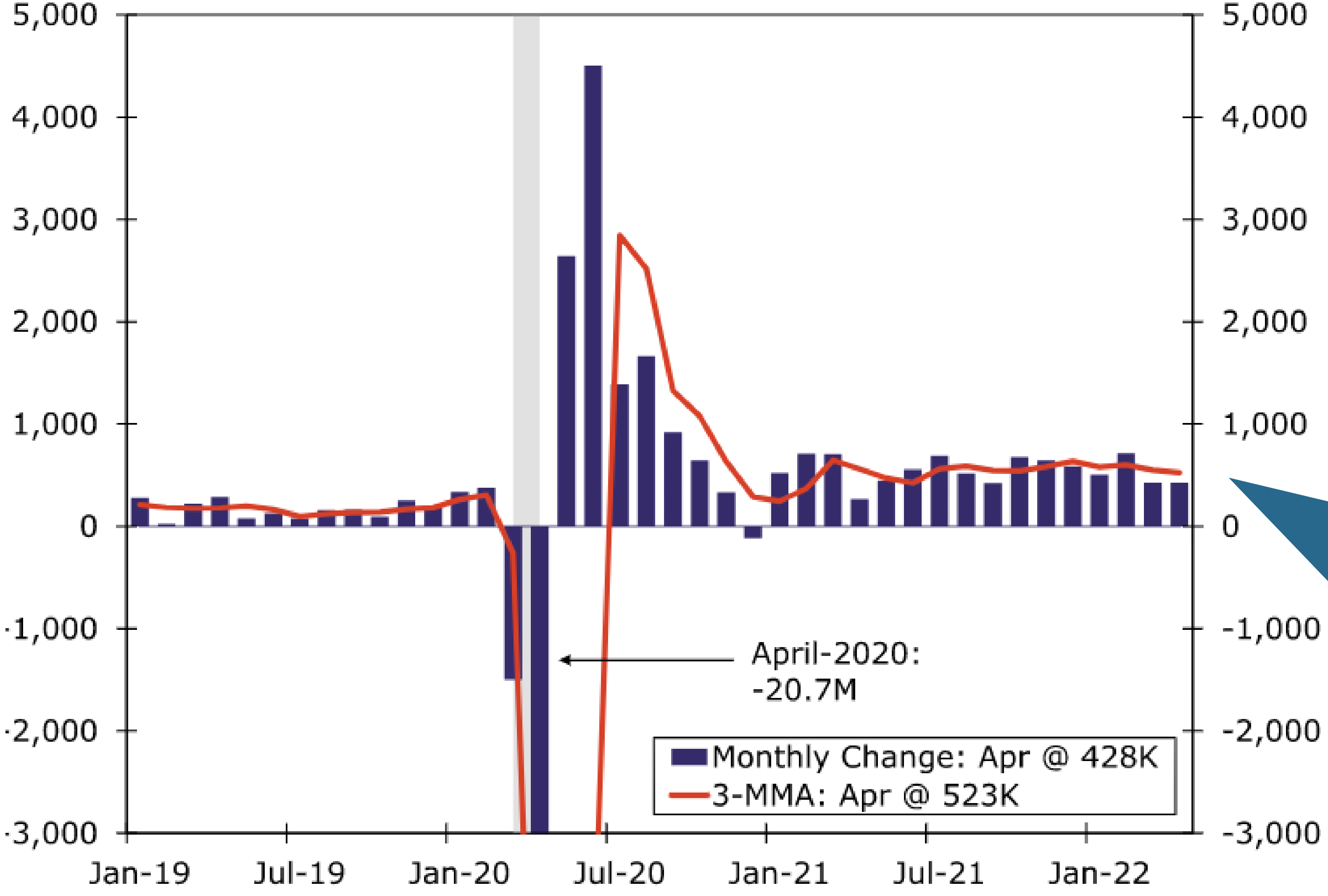
Sources: US Bureau of Labor Statistics; Wells Fargo Securities (4/22 edition); Risk and Uncertainty Management Center, University of South Carolina.

Nonfarm Employment: Jan. 2020 – Apr. 2022*



Sources: Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

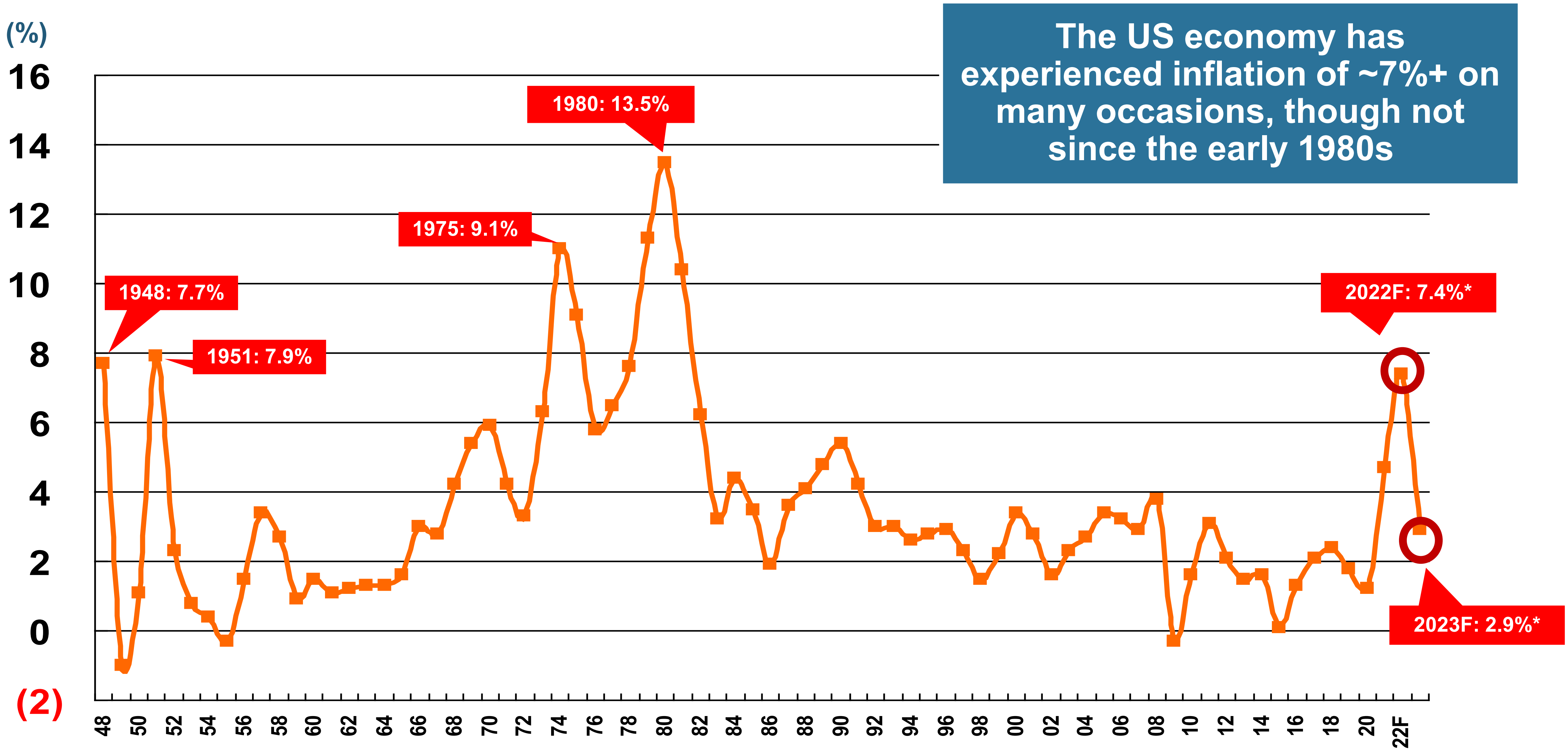
Nonfarm Employment Change, Jan. 2019 – Apr. 2022



- 428,000 jobs were created in April, with 1.22M created so far in 2022
- At its current pace, employment will return to its pre-pandemic level of 152.5M in September

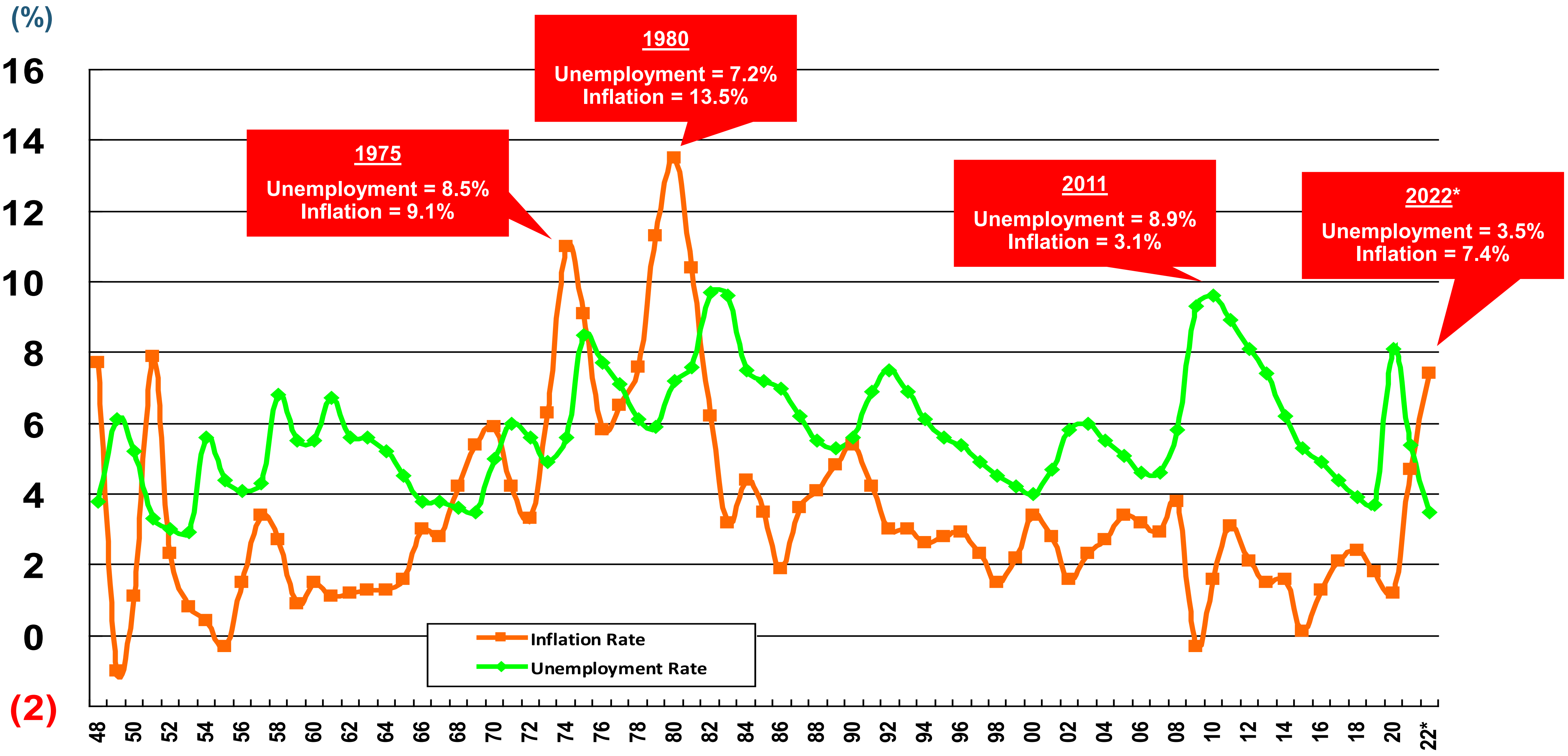
Sources: US Dept. of Labor; Wells Fargo Economics; Risk and Uncertainty Management Center, University of South Carolina.

Rate of Inflation (CPI-U), 1948–2023F*



,
*2022/23 forecast are from (Wells Fargo Securities, Apr. 2022 forecast).
Sources: US Bureau of Labor Statistics; Center for Risk and Uncertainty Management, University of South Carolina.

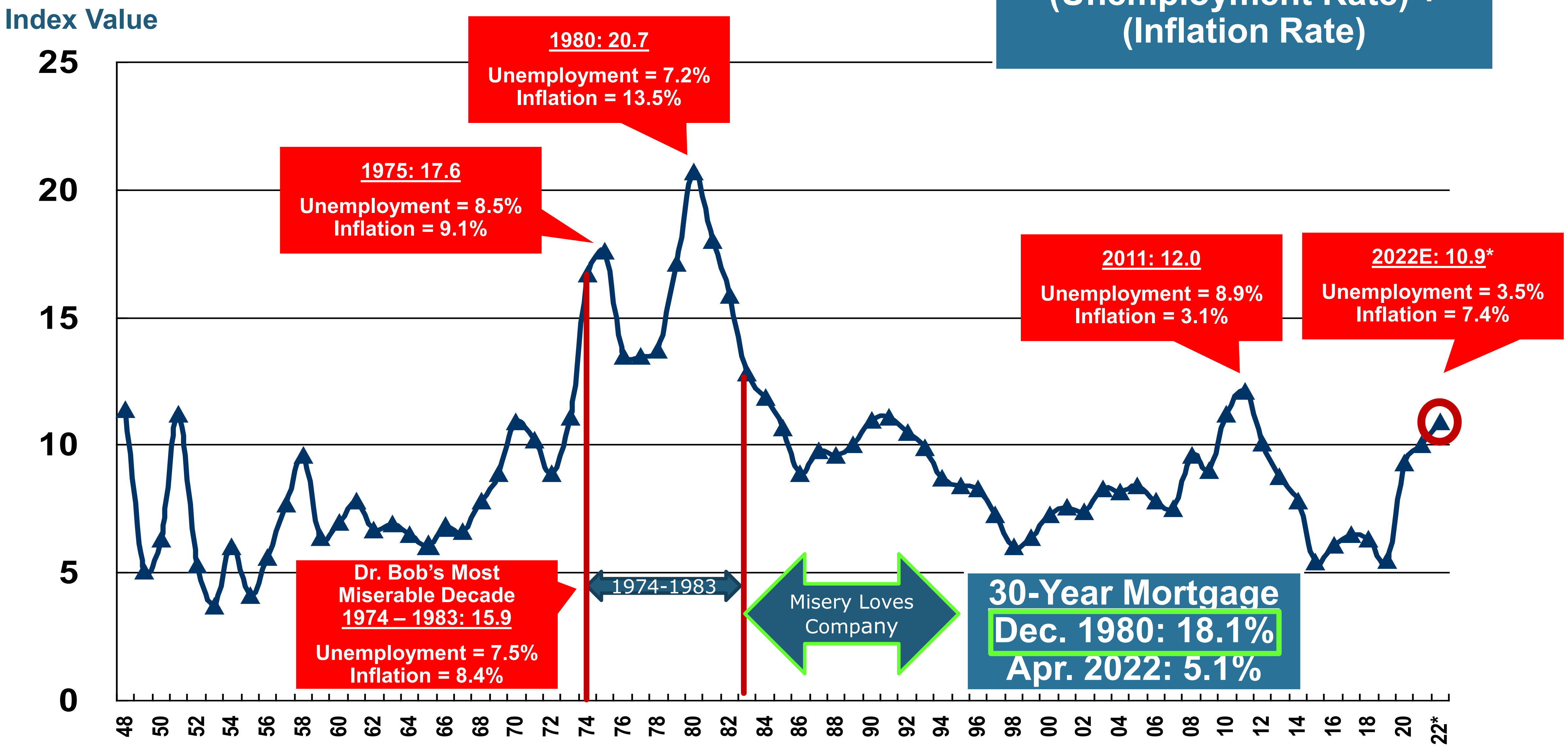
Inflation and Unemployment Rate, 1948–2022*



*2022 forecast based on Wells Fargo Securities forecasts (4/22).
Sources: U.S. Bureau of Labor Statistics; Center for Risk and Uncertainty Management, University of South Carolina.

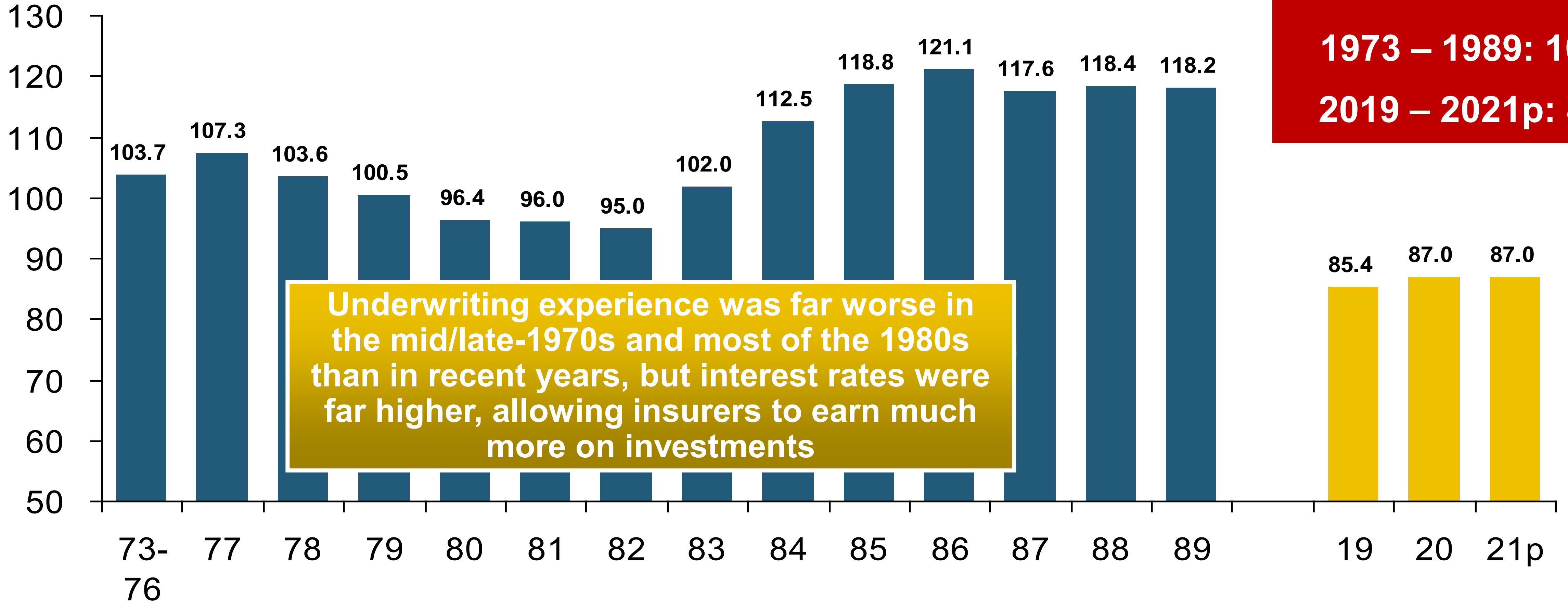
“Misery Index”: 1948–2022*

Misery Index = (Unemployment Rate) + (Inflation Rate)



*Estimated based on Wells Fargo Securities forecasts as of 4/22.
Sources: US Bureau of Labor Statistics; Center for Risk and Uncertainty Management, University of South Carolina.

Workers Comp Combined Ratios: 1970s/80s vs. Recent



Avg. Combined Ratio

1973 – 1979: 103.8

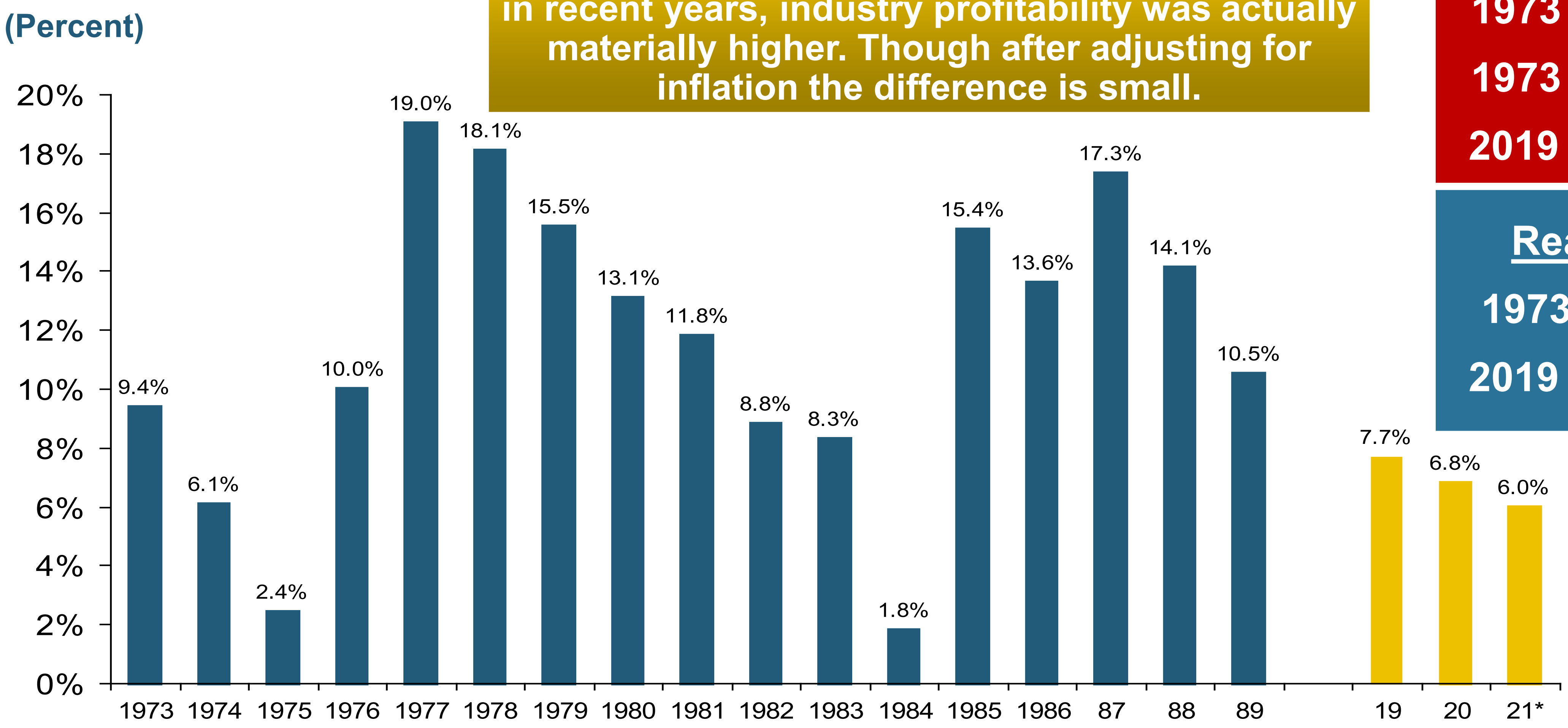
1973 – 1989: 107.4

2019 – 2021p: 86.5

Note: Data for 1973-1984 are calculated from incurred loss and expense data, excluding policyholder dividends, as sourced below, and are for stock companies only.
Sources: *Social Security Bulletin*, July 1988 (v. 51, n. 7) accessed at: https://www.ssa.gov/policy/docs/ssb/v51n7/v51n7p4.pdf; NAIC Annual Statement (1985-2020); NCCI (2021p); University of South Carolina, Risk and Uncertainty Management Center.

ROE: Property/Casualty Insurance, 1973 - 1989 vs. Recent

Although underwriting experience was far worse in the mid/late-1970s and most of the 1980s than in recent years, industry profitability was actually materially higher. Though after adjusting for inflation the difference is small.



Avg. ROE

1973 – 1979: 11.5%

1973 – 1989: 11.5%

2019 – 2021p: 6.8%

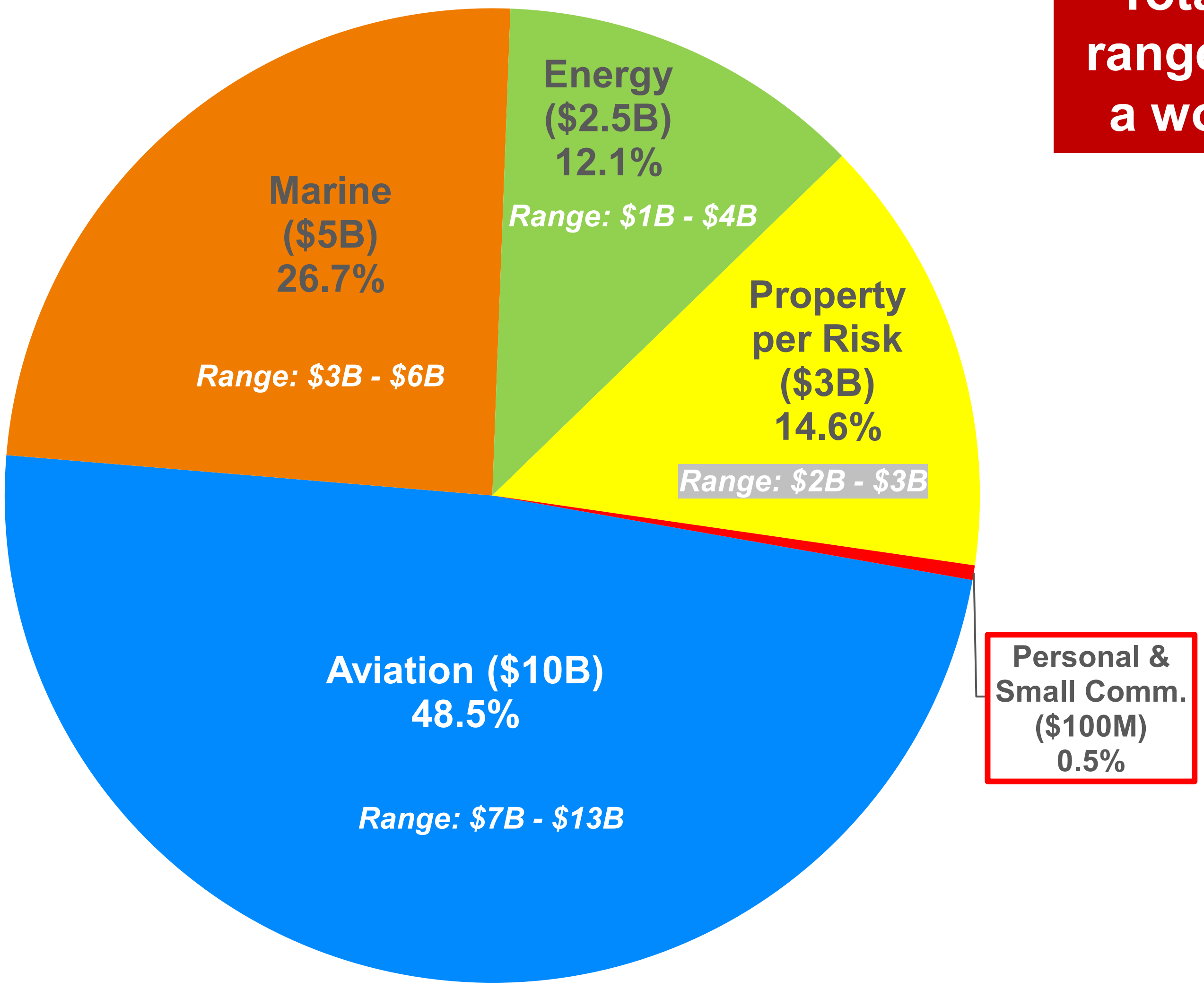
Real Avg. ROE

1973 – 1989: 4.8%

2019 – 2021p: 4.3%

*2021 P/C figure is estimate based on actual of 6.0% through Q3.
Sources: ISO, APCIA; USC RUM Center.

Ukraine/Russia War: Insured Loss Estimates*



Total insured loss estimates range from $13B to $23B+ with a working estimate of $20.6B

Implications for Workers Comp are currently limited and indirect, most likely through:

Defense Base Act

Jones Act

Longshore and Harbor Workers' Compensation Act

*PCS working estimates and ranges as of April 14, 2022.

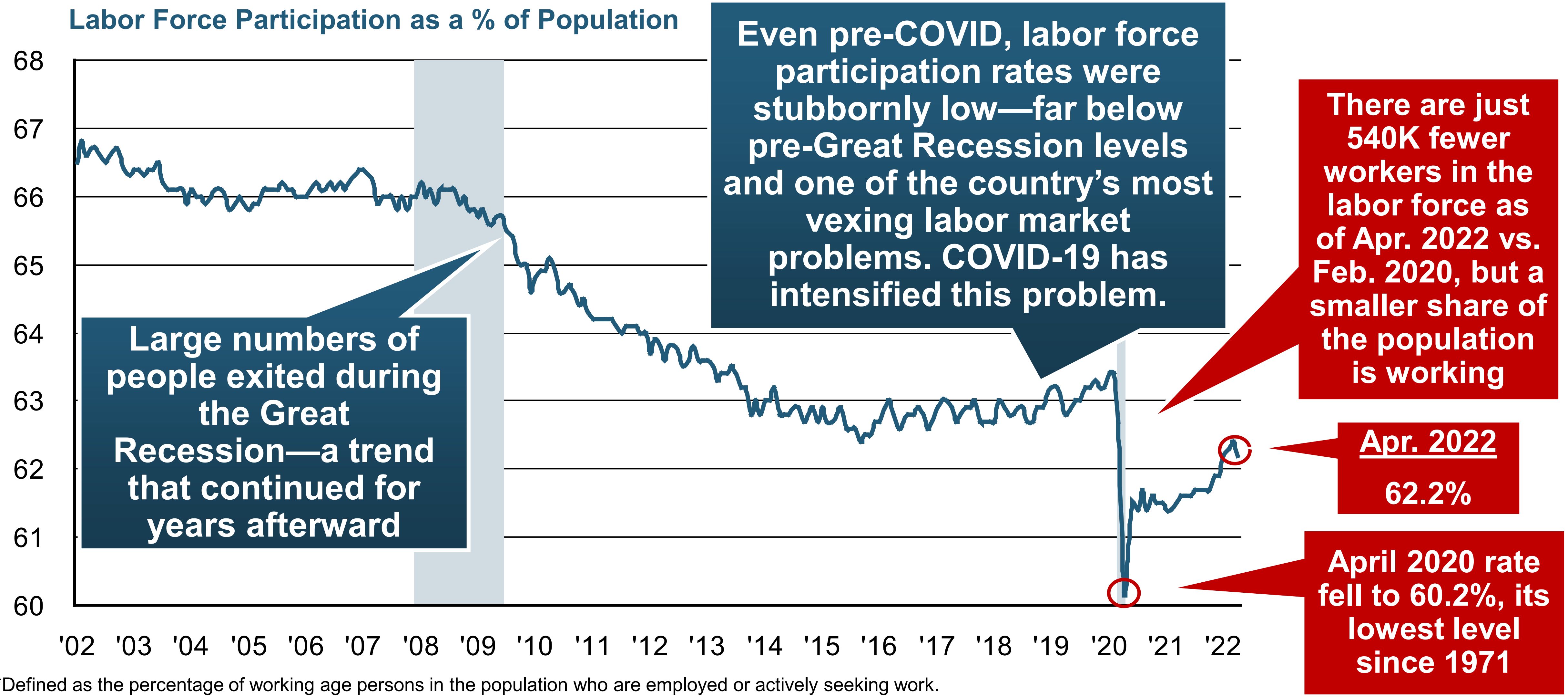
Sources: PCS from Artemis.bm: https://www.artemis.bm/news/pcs-says-ukraine-insured-losses-could-rise-above-20bn/; Risk and Uncertainty Management Center, University of South Carolina.

The Post-COVID Workforce is Sick, Tired and Grumpy

Labor Is Having Its "*Take This Job and Shove It*" Moment

… But Can It Last?

Labor Force Participation Rate, Jan. 2002–Apr. 2022*

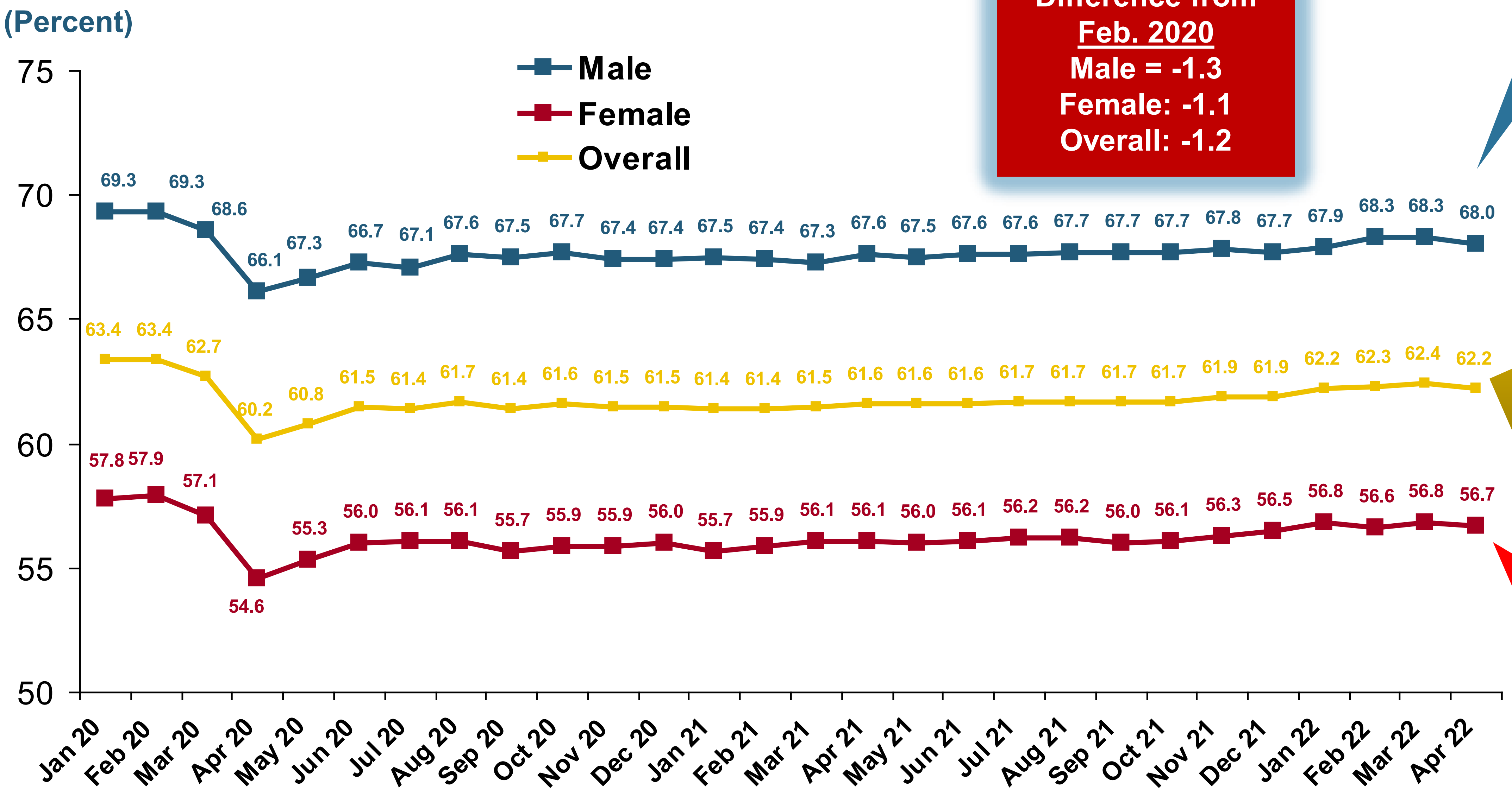


*Defined as the percentage of working age persons in the population who are employed or actively seeking work.

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics at http://www.bls.gov/data/; National Bureau of Economic Research (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

Labor Force Participation Rates by Sex, Jan. 2020–Apr. 2022



Difference from <u>Feb. 2020</u>
Male = -1.3
Female: -1.1
Overall: -1.2

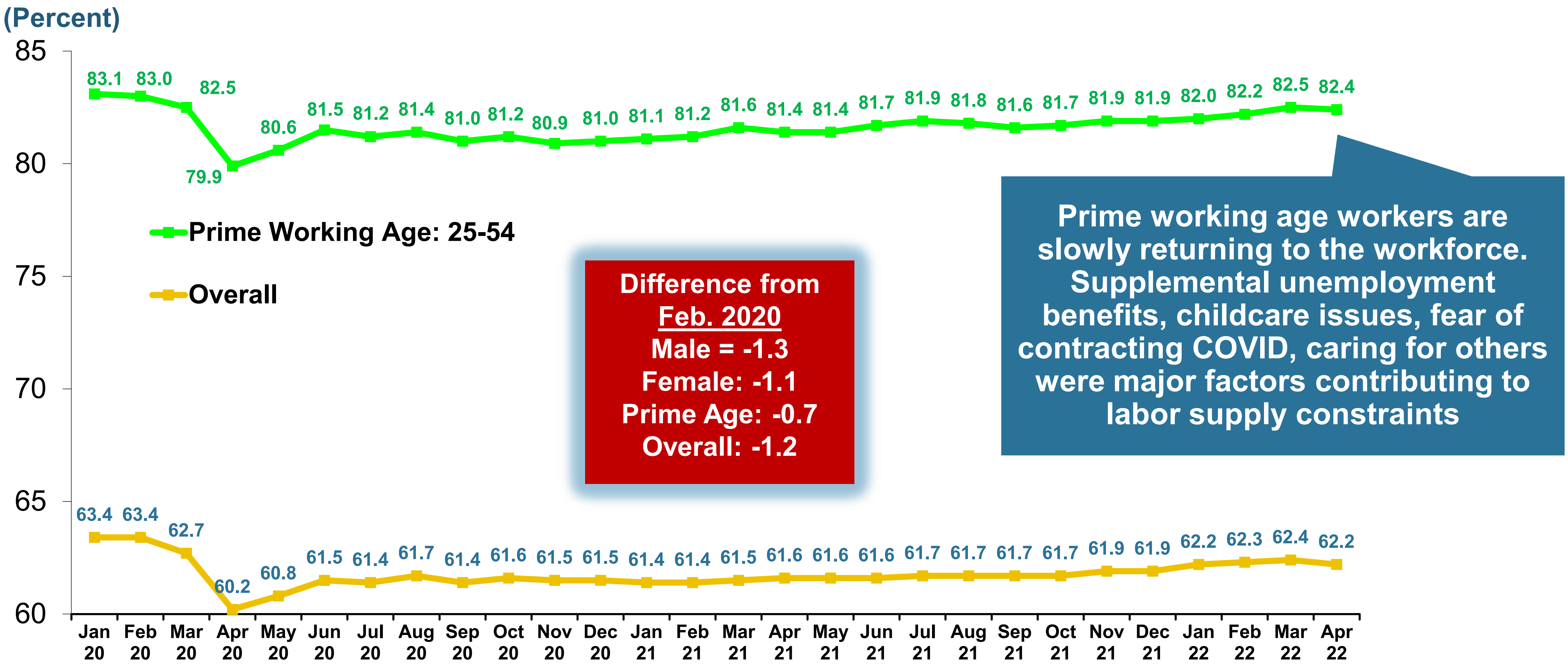
Male labor force participation has improved but remains below pre-COVID levels

Overall labor force participation has improved in recent months but remains below pre-COVID levels

Increasing female labor force participation has been a challenge for many reasons

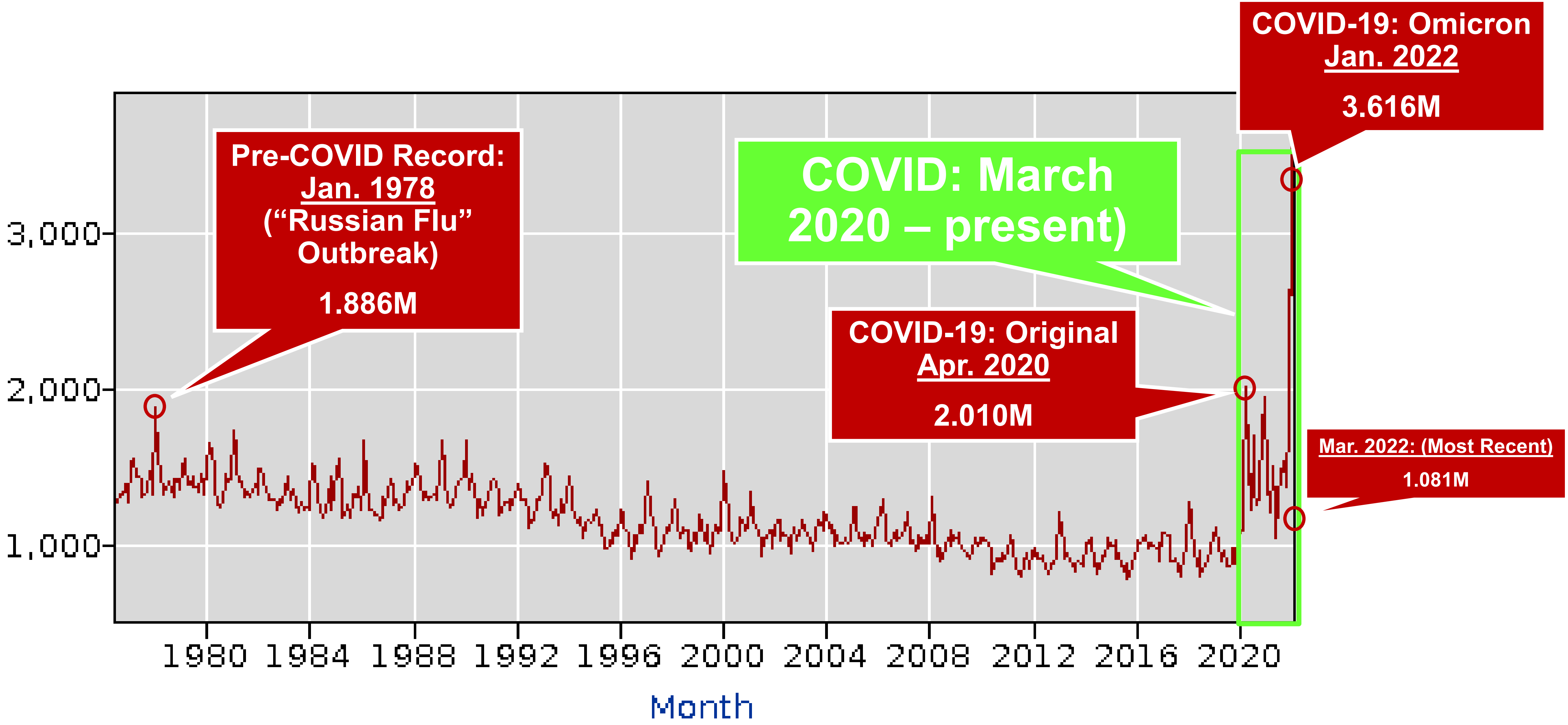
Sources: US Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

Labor Force Participation Rates for Prime Working Age Workers (Age 25–54), Jan. 2020–Apr. 2022



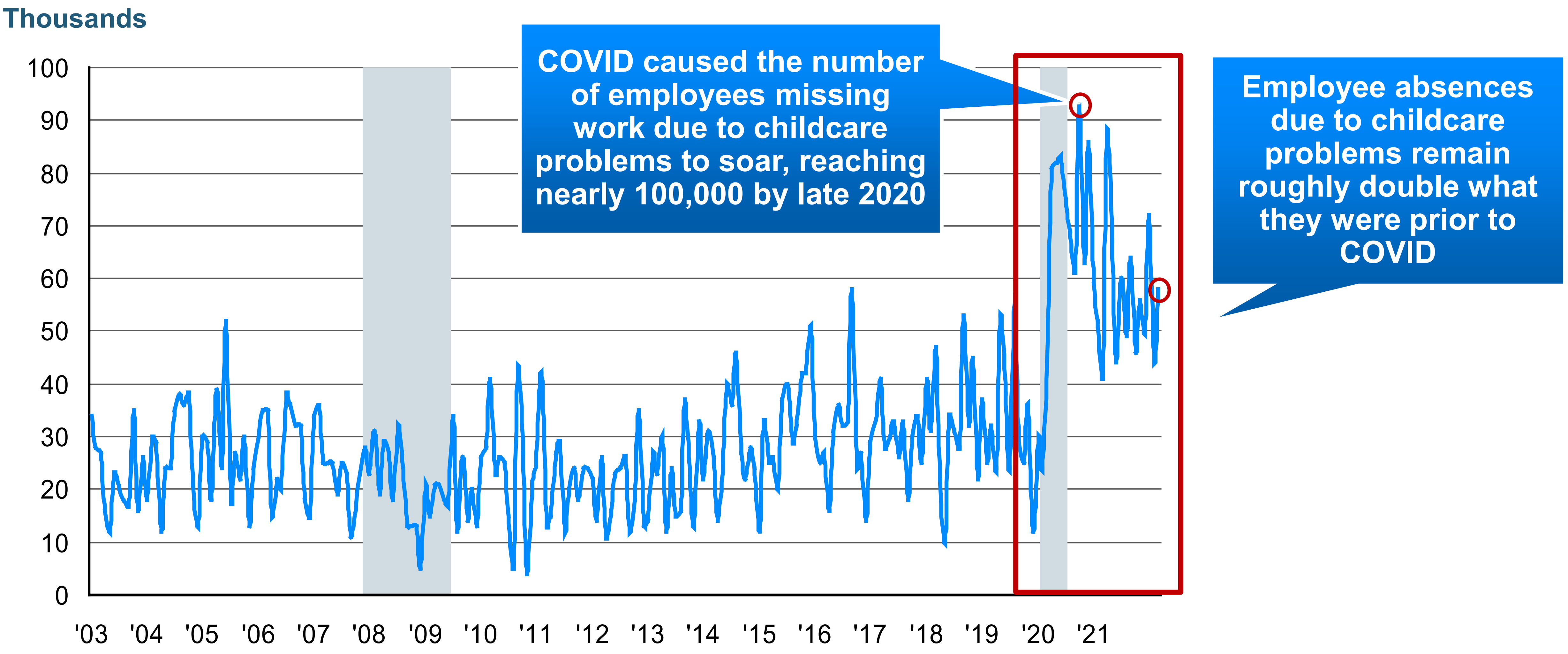
Sources: US Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

Number of Employees Missing Work Due to Own Illness, June 1976 – March 2022



Sources: US Bureau of Labor Statistics Current Population Survey accessed at: https://www.bls.gov/cps/absences.htm; USC Center for Risk and Uncertainty Management.

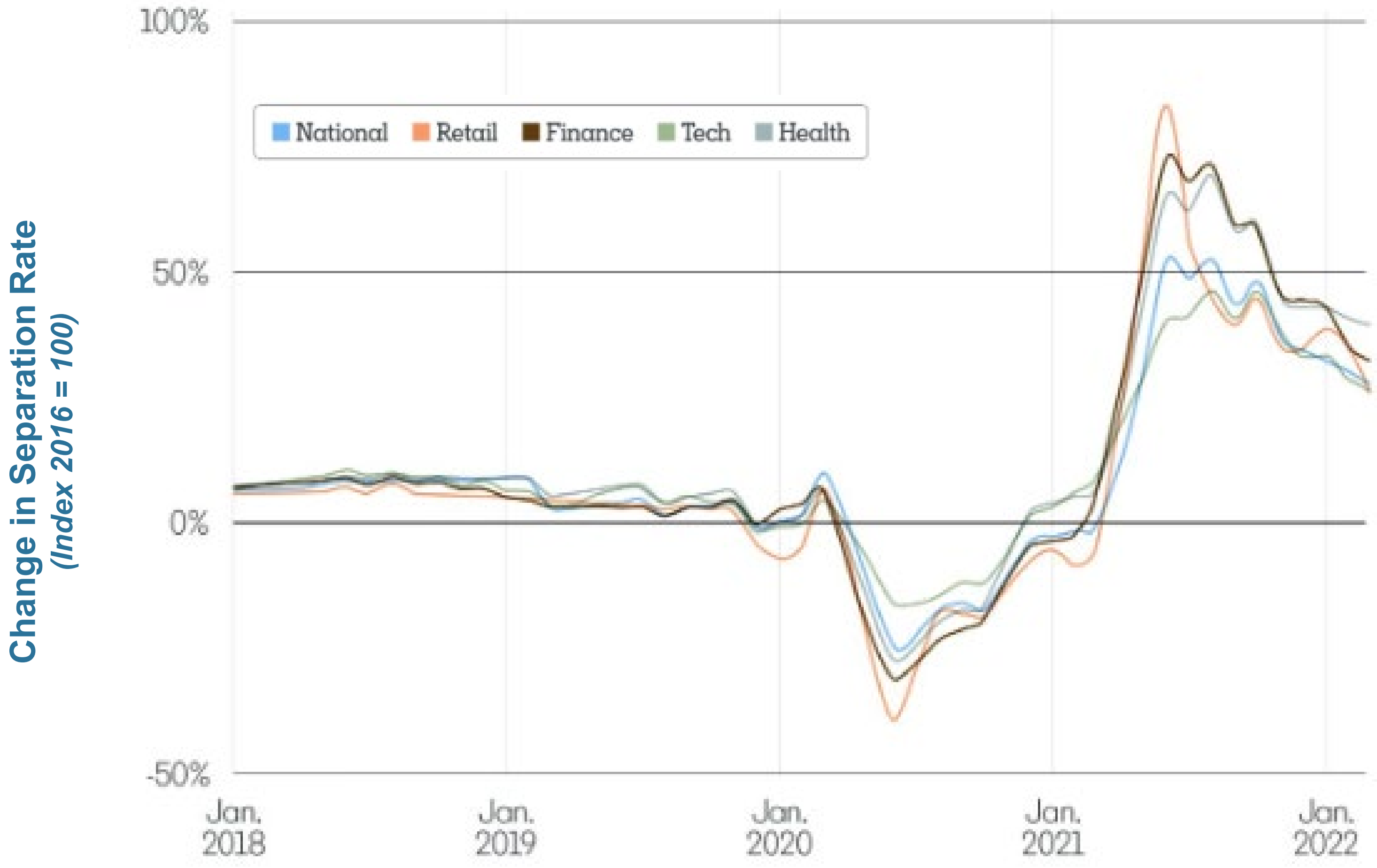
Number of Employees Missing Work Due to Childcare Problems, Jan. 2003 – March 2022



Notes: Recessions indicated by gray shaded columns. Data are not seasonally adjusted.

Sources: US Bureau of Labor Statistics Current Population Survey accessed at: https://www.bls.gov/cps/absences.htm; USC Center for Risk and Uncertainty Management.

Year-to-Year Changes in LinkedIn Separation Rate, Jan. 2018 – Mar. 2022*



Professionals in the Retail, Finance, Tech and Health fields have seen some of the highest separation rates since early 2021—but for very different reasons

Highs & Lows: National

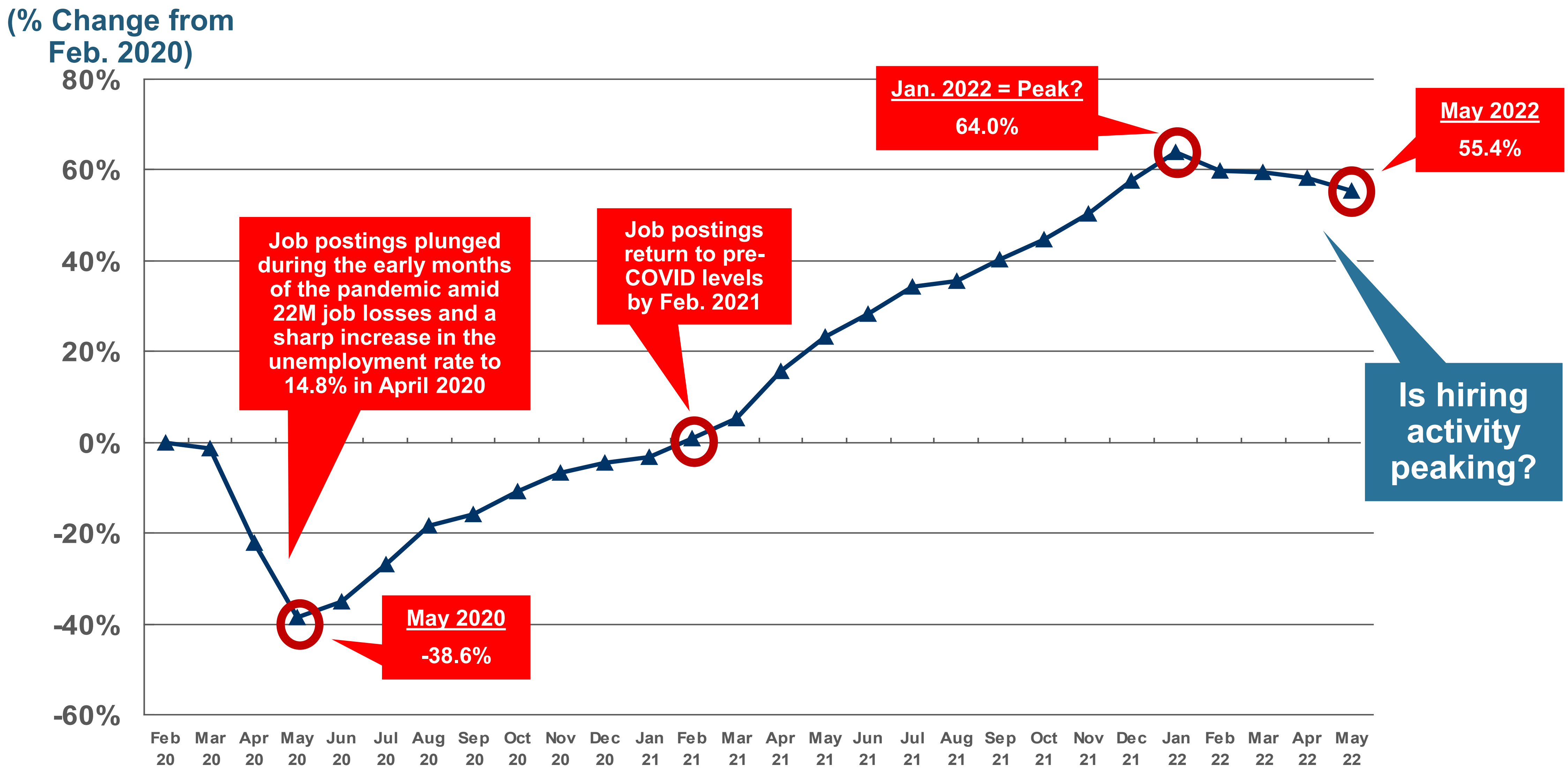
Peak: +46% (Aug. 2021)

Trough: -25% (Jun. 2020)

Current: +28% (Mar. 2022)

*Data through March 2022.
Source: LinkedIn Economic Graph accessed 4/18/22 at: https://www.linkedin.com/news/story/great-reshuffle-or-the-new-normal-4774729/.

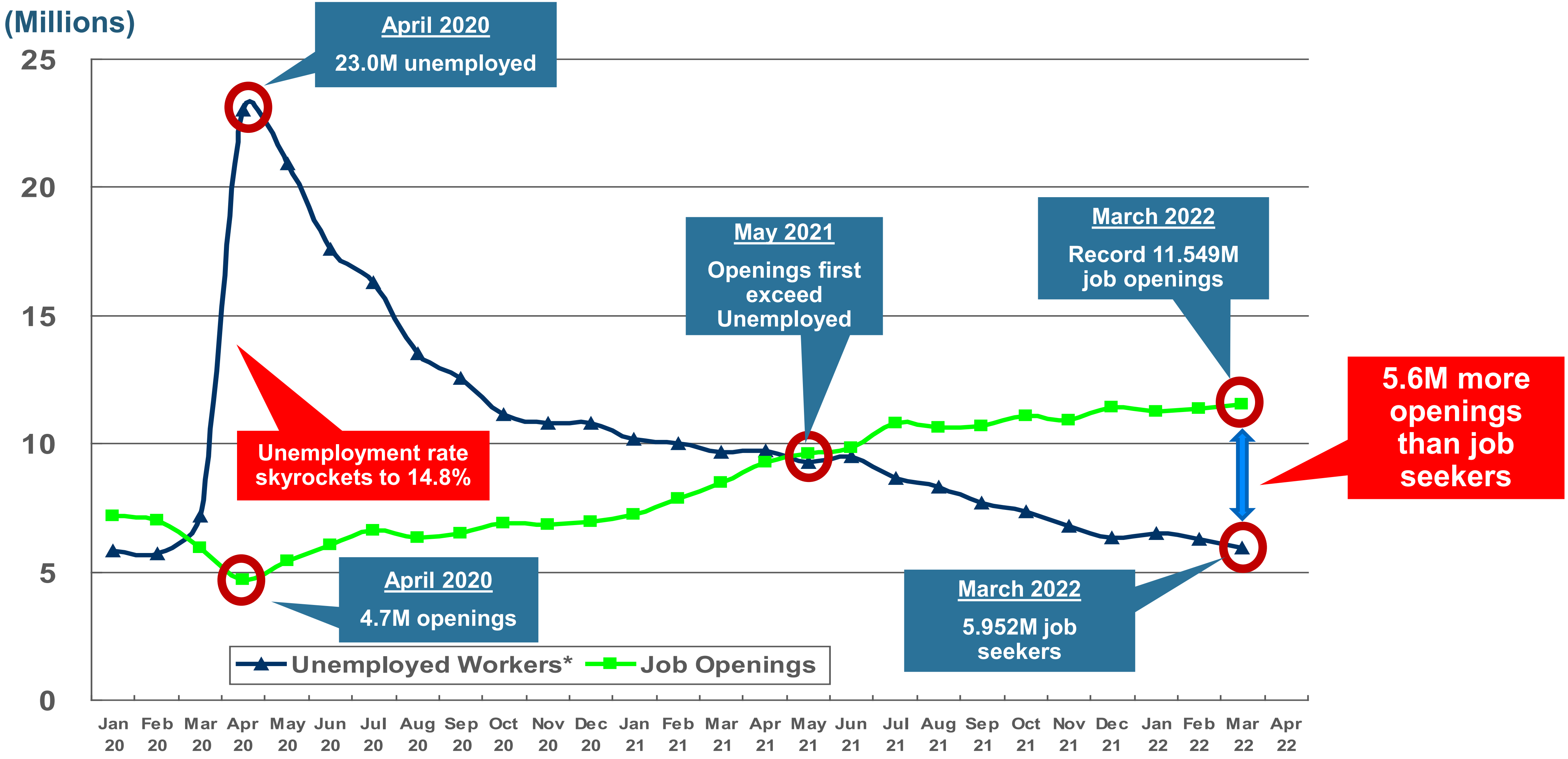
Percentage Change in Job Postings on Indeed: Feb. 2020 – May 2022*



*Data are as of the first of each month.

Sources: Indeed Hiring Lab: https://www.hiringlab.org/2022/04/28/april-2022-us-labor-market-update/; Risk and Uncertainty Management Center, University of South Carolina.

Job Openings vs. Number of Unemployed Workers: Jan. 2020 – Mar. 2022*

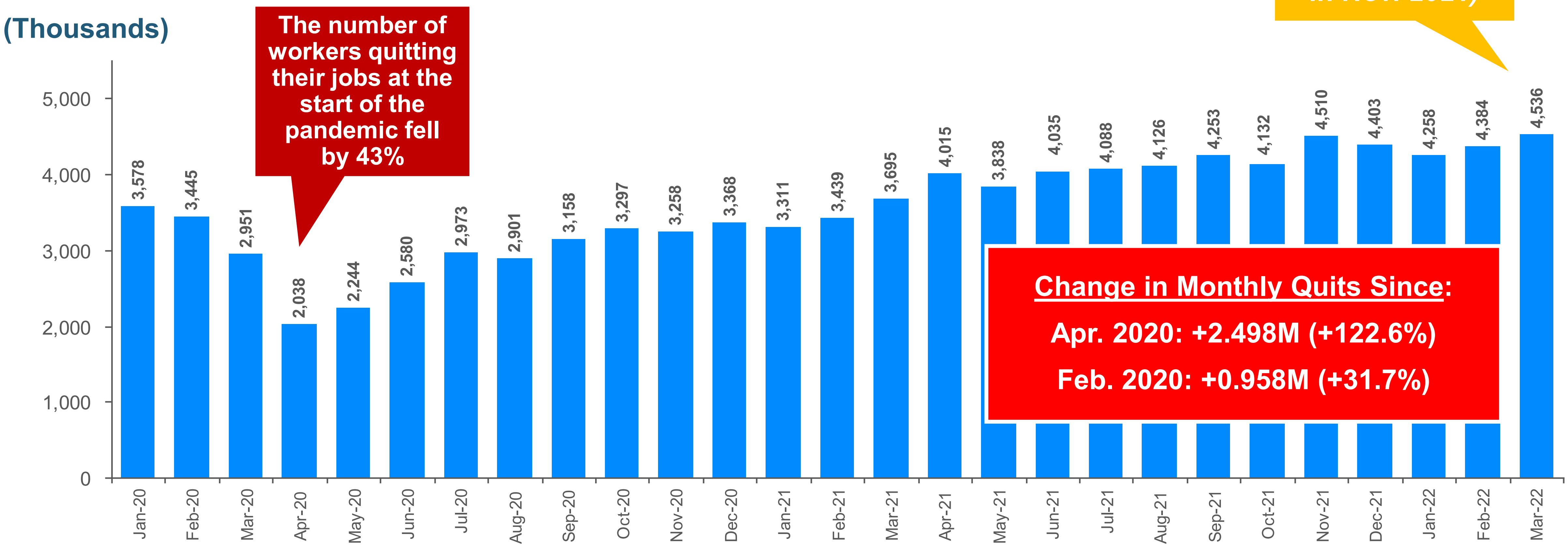


Sources: U.S Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

Number of Quits: Jan. 2020–Mar. 2022*

New Record
4.536M Quits
(March 2022)

(Breaking previous record 4.51M Quits in in Nov. 2021)

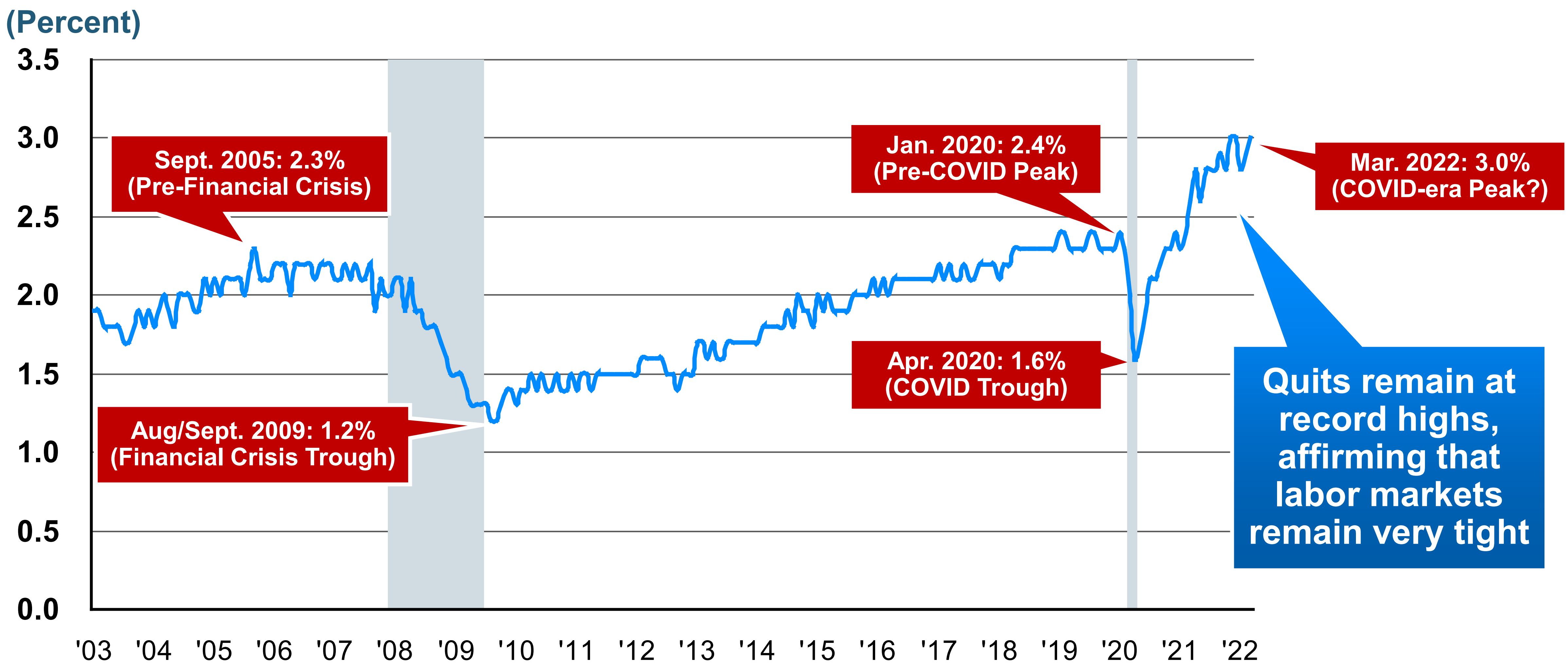


*Seasonally adjusted; Most recent available. Quits are defined as the number of quits during the entire month.

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics JOLTS survey: at http://www.bls.gov/jlt/; National Bureau of Economic Research (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

Quits Rate, Jan. 2003–Mar. 2022*



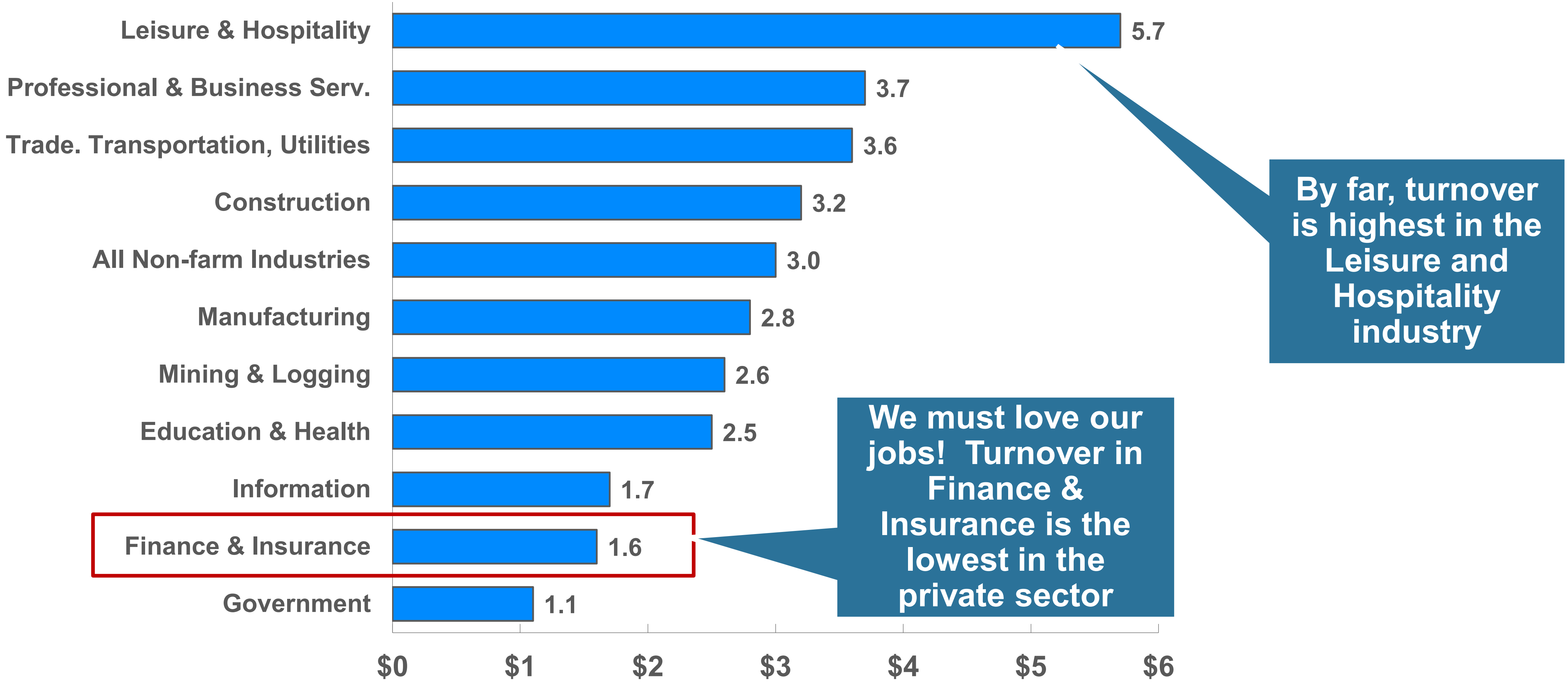
*Seasonally adjusted; Most recent available. Quits Rate is defined as the number of quits during the entire month as a percent of total employment.

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics JOLTS survey: at http://www.bls.gov/jlt/; National Bureau of Economic Research (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

Quits Rate by Industry, March 2022*

(Quits as a Percent of Total Employment in Each Sector)

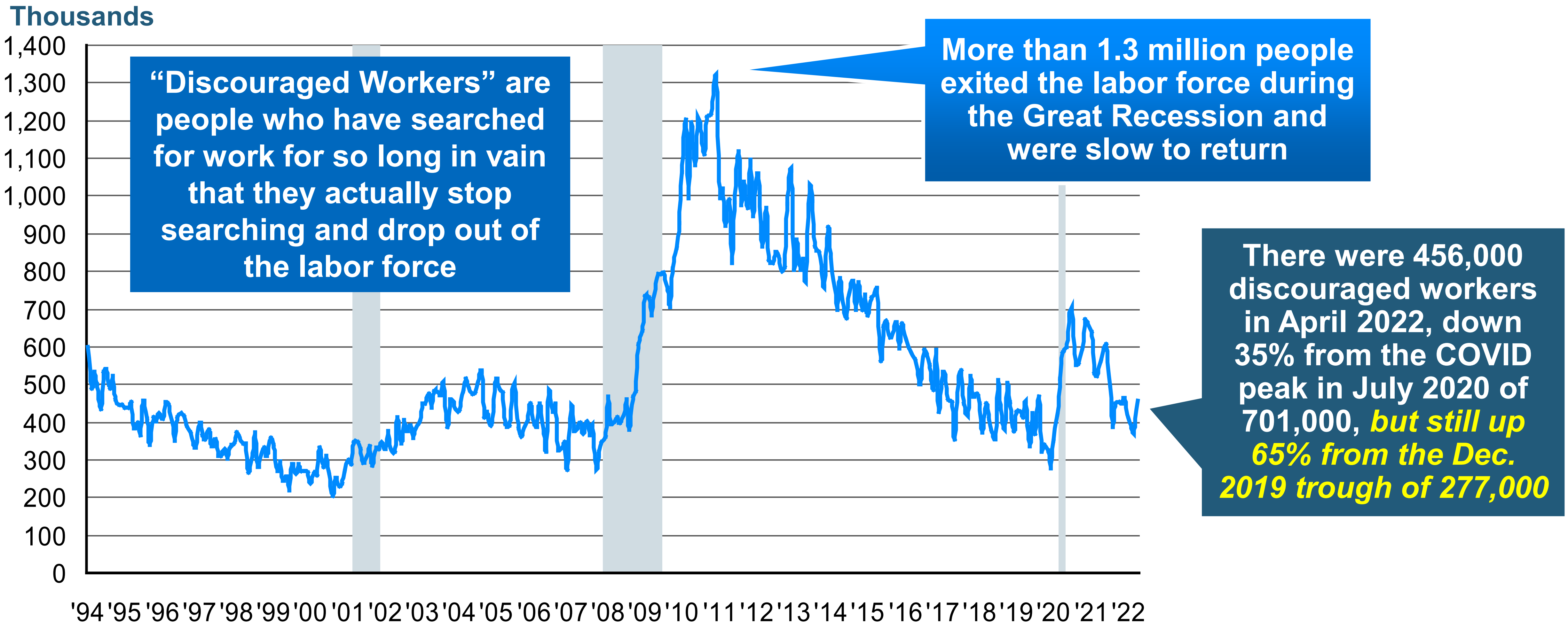


*Seasonally adjusted; Most recent available. Quits Rate is defined as the number of quits during the entire month as a percent of total employment.

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics JOLTS survey: at http://www.bls.gov/jlt/; National Bureau of Economic Research (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

Number of “Discouraged Workers”: Jan. 1994–Apr. 2022



Post-COVID, workers may be categorized as discouraged for reasons apart from lack of job opportunities, including fear of contracting COVID, childcare, etc.

Notes: Recessions indicated by gray shaded columns. Data are not seasonally adjusted.

Sources: Bureau of Labor Statistics https://www.bls.gov/charts/employment-situation/persons-not-in-the-labor-force-selected-indicators.htm; NBER (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

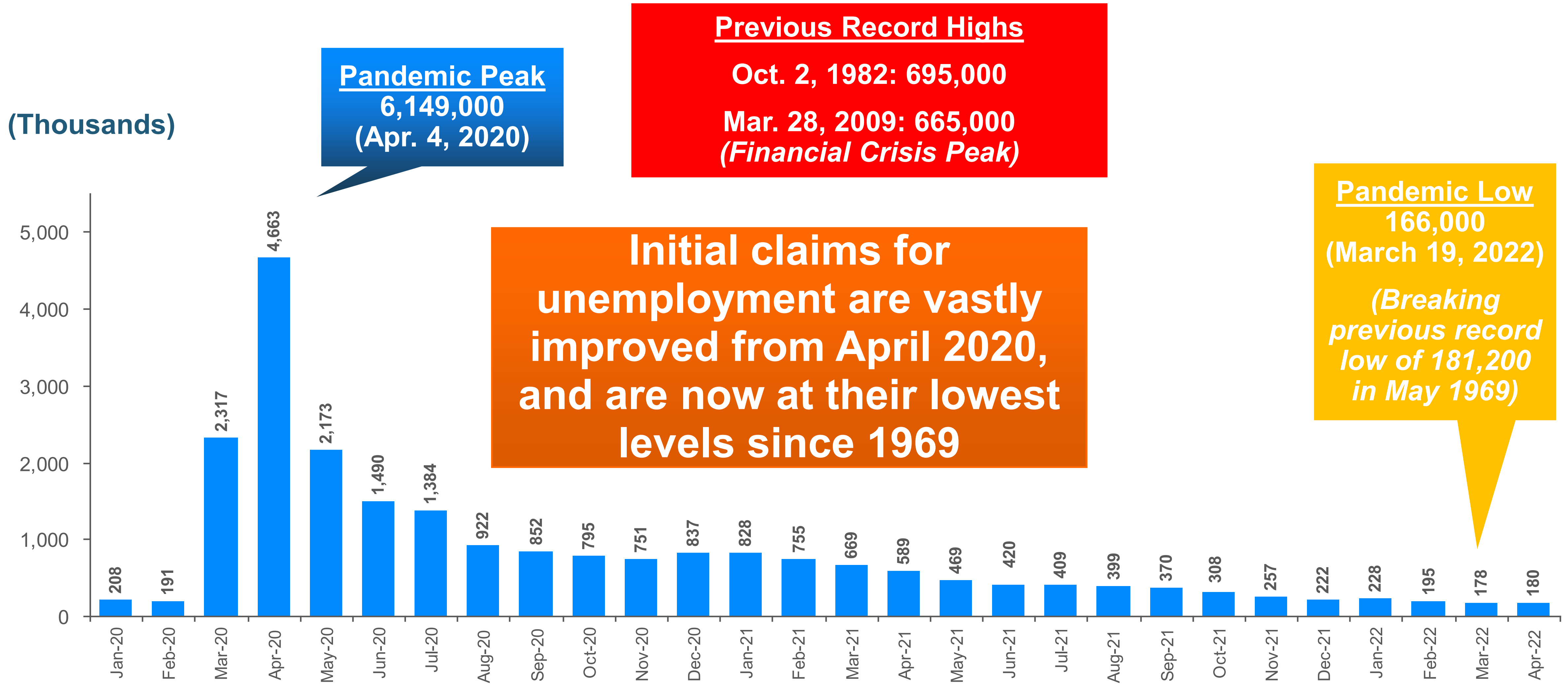
Number of Unemployed Persons per Job Opening, Feb. 2003–Mar. 2022*

*Seasonally adjusted. Most recent available.

Note: Recessions indicated by gray shaded columns.

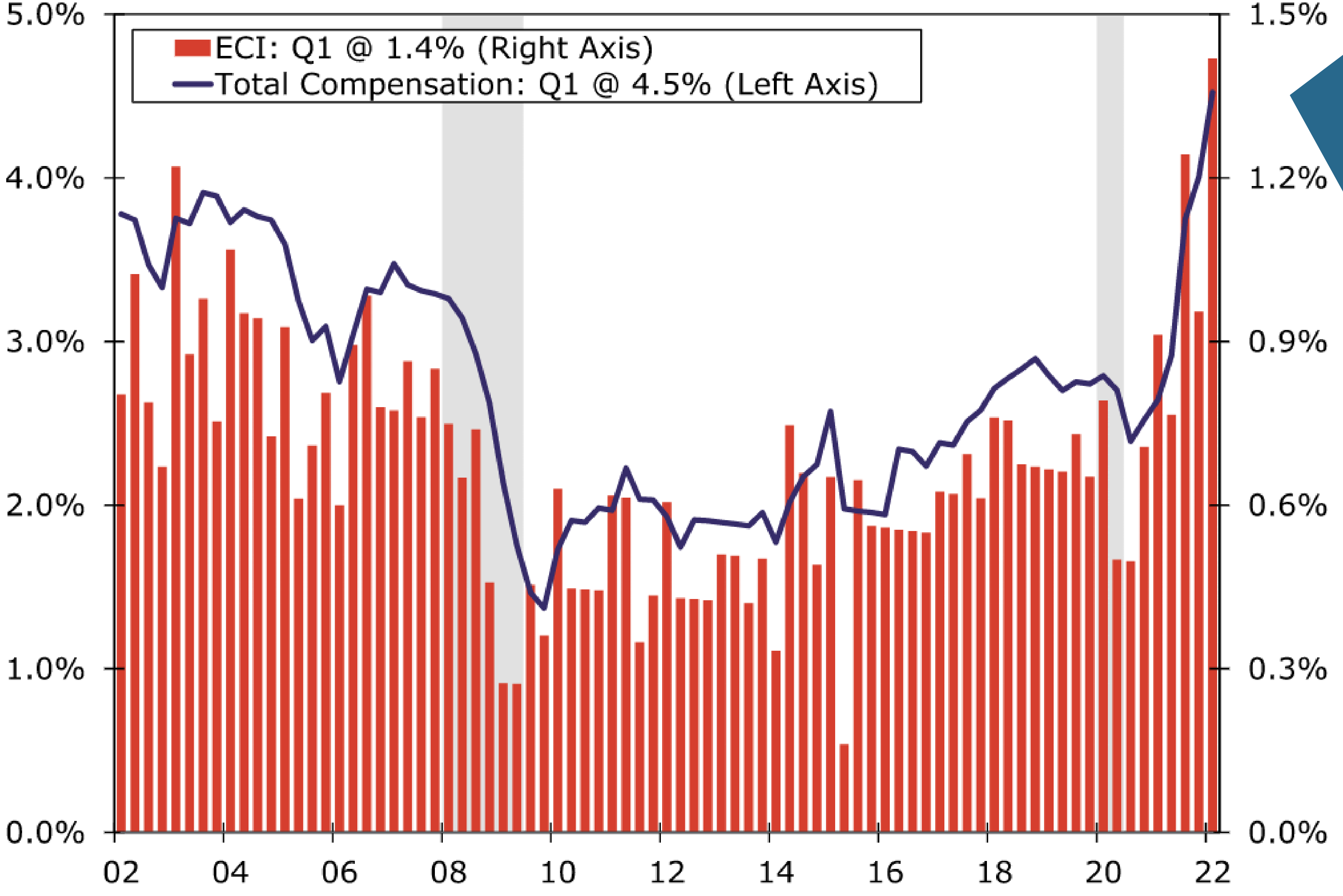
Sources: US Bureau of Labor Statistics JOLTS survey: at http://www.bls.gov/jlt/; National Bureau of Economic Research (recession dates); Center for Risk and Uncertainty Management, University of South Carolina.

Initial Claims for Unemployment, Weekly Average January 2020–April 2022



Sources: US Bureau of Labor Statistics; Risk and Uncertainty Management Center, University of South Carolina.

Employment Cost Index—All Workers
2002:Q1–2022:Q1



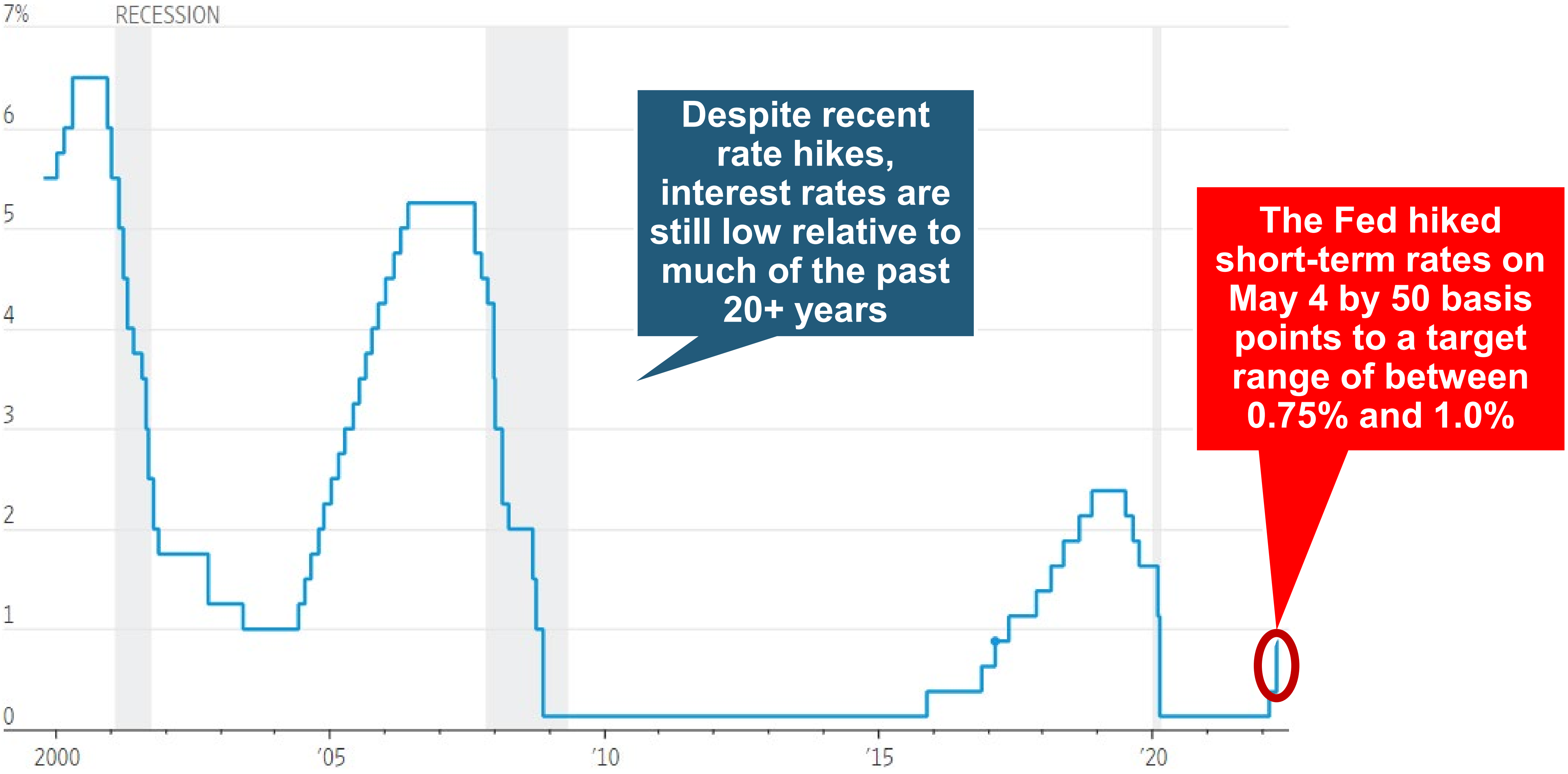
- The ECI was up 1.4% in Q1 2022 (fastest increase in the series' 21-year history)
- Data don't yet suggest a "wage-price spiral"
- But given the gain occurred amid increasing availability of workers, it's clear wage inflation will be difficult to subdue
- Wages = 69% of employee compensation, Benefits = 31%
- In Q1, benefits rose faster than wages→Some evidence that employers are seeking to increase benefits with immediate appeal (e.g., PTO) rather than retirement or insurance benefits

Sources: US Dept. of Labor; Wells Fargo Economics; Risk and Uncertainty Management Center, University of South Carolina.

Show Me the Money!

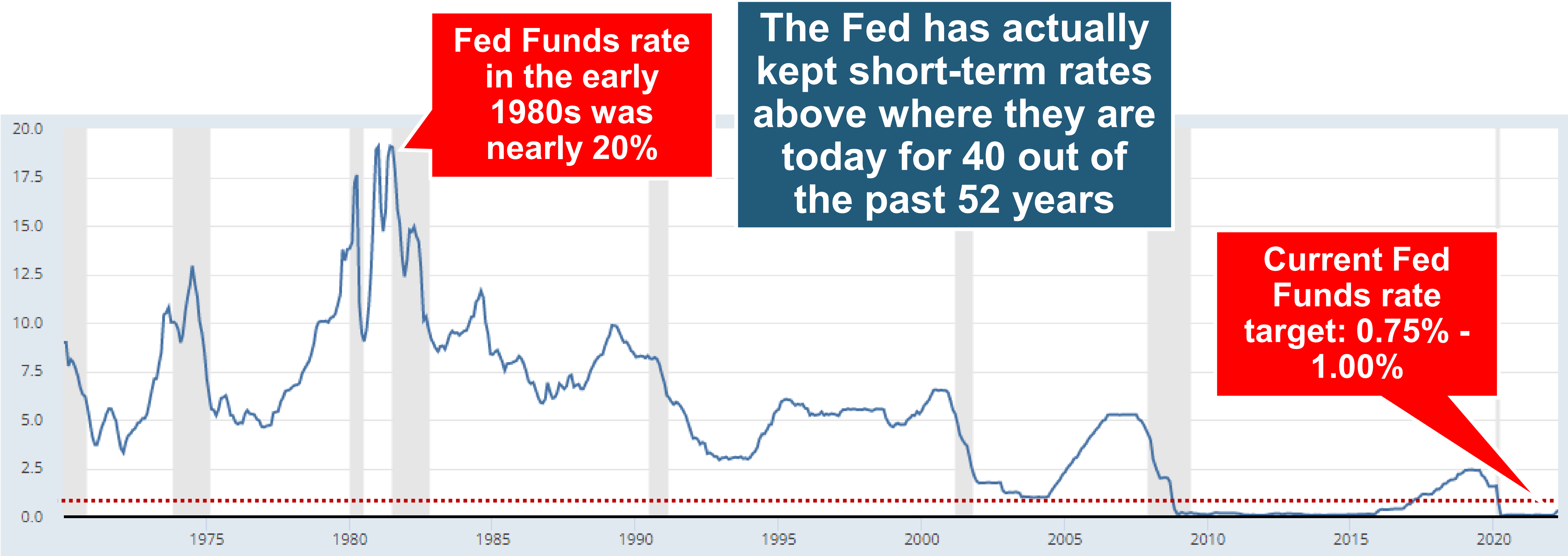
COVID's Financial Market Rollercoaster

Federal Funds Target Rate: Up, Up and Away!



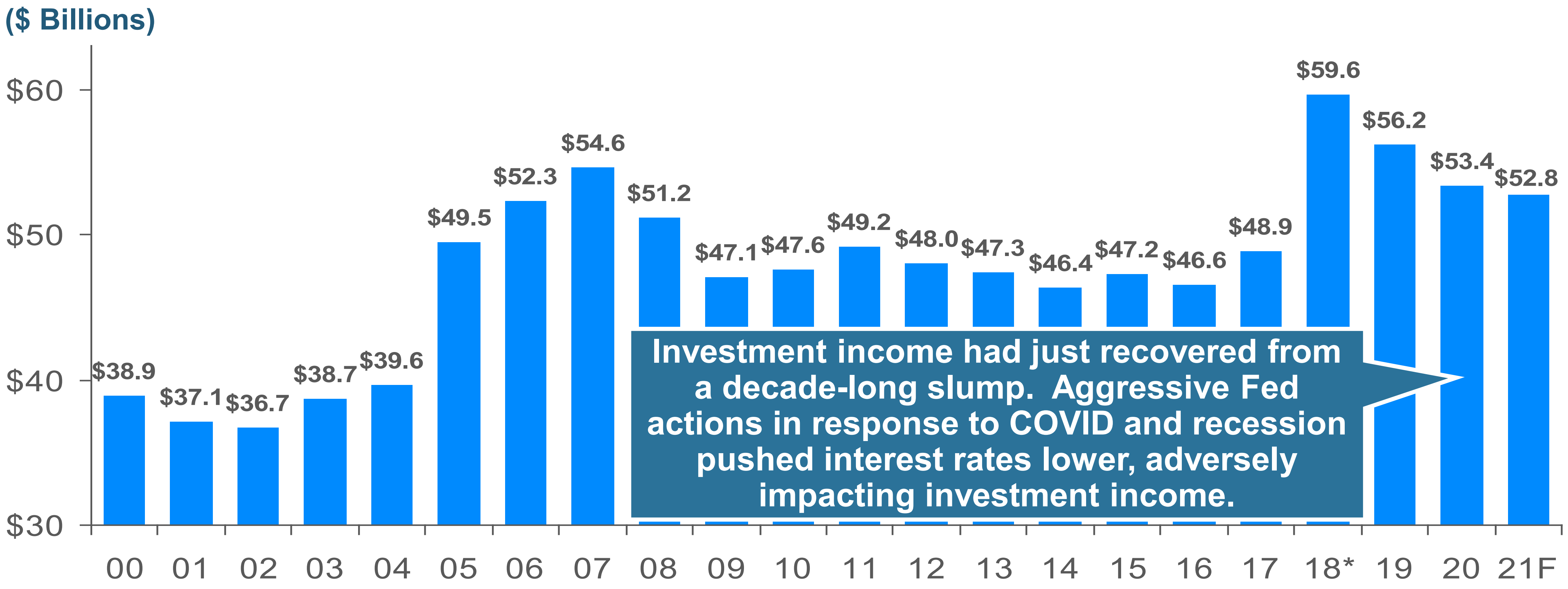
Source: Federal Reserve from the Wall Street Journal, May 5, 2022.

Federal Funds Target Rate: The End of Cheap Money?



Source: Federal Reserve from the Wall Street Journal, May 5, 2022.

Property/Casualty Insurance Industry Investment Income: 2000–2021F

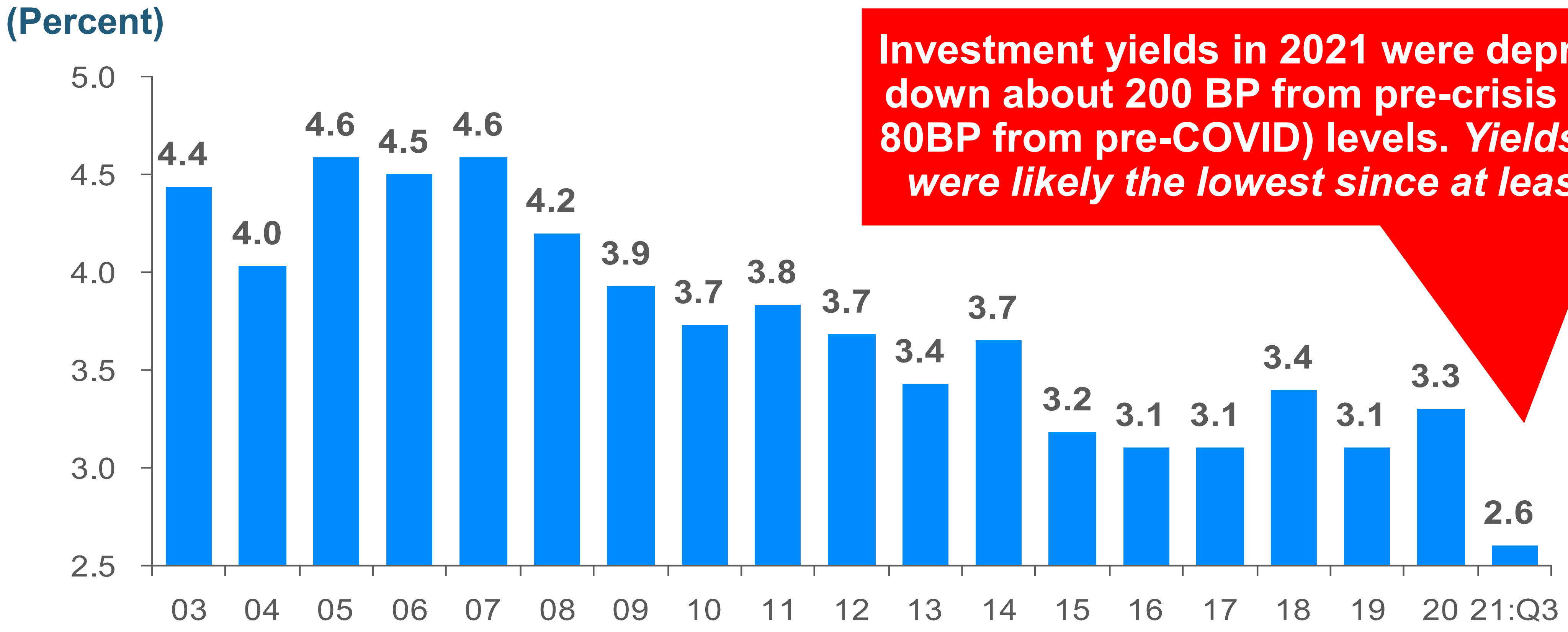


Due to persistently low interest rates, investment income remained below pre-crisis levels for a decade. Lower interest rates during COVID drove investment income down once again. Fed rate hikes in 2022/23 could reverse this trend.

*2021 figure is annualized YTD 9M actual figure of $39.564B. 2018-19 figures are distorted by provisions of the TCJA of 2017. Increase reflects such items as dividends from foreign subsidiaries.

[1] Investment gains consist primarily of interest and stock dividends. Sources: ISO; University of South Carolina, Center for Risk and Uncertainty Management.

Net Investment Yield on Property/Casualty Insurance Invested Assets, 2007–2021:Q3



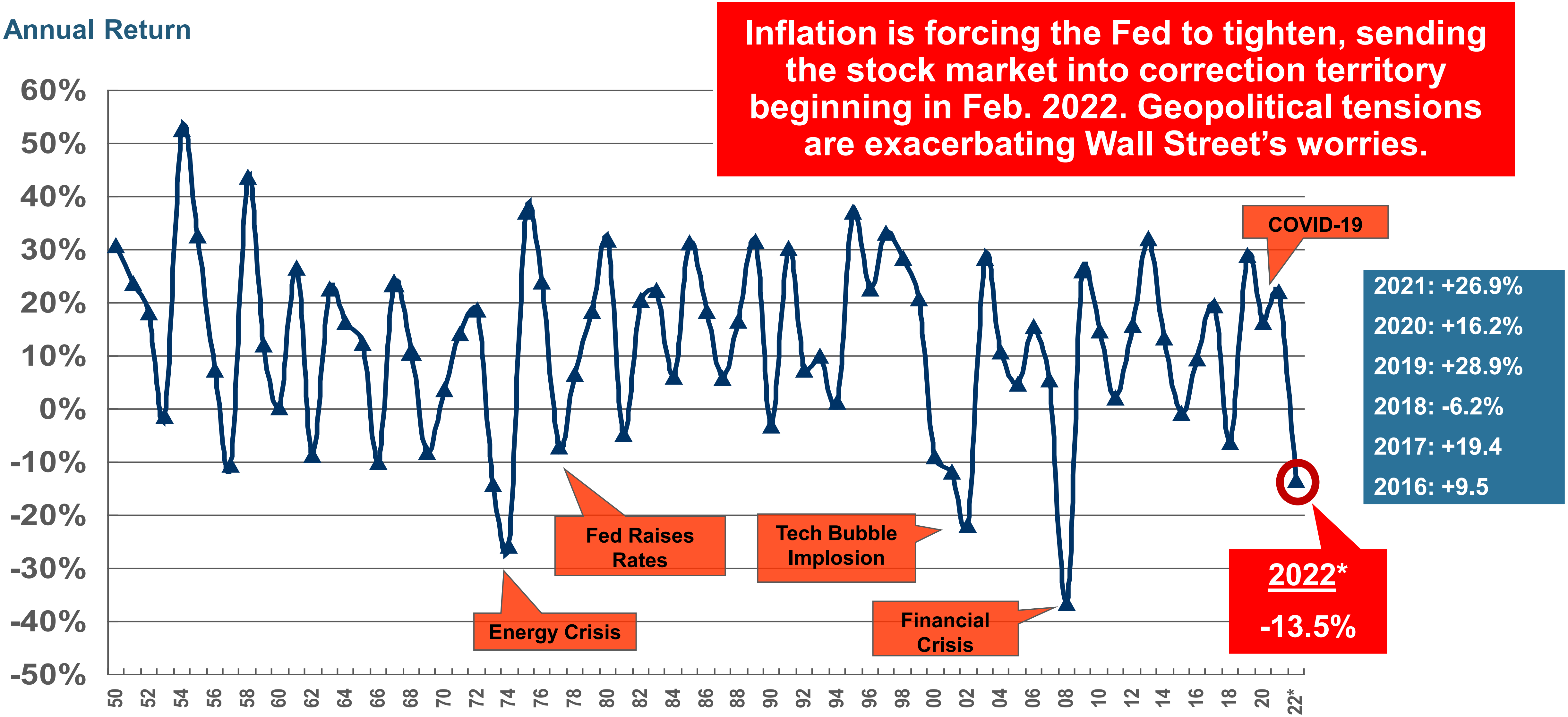
Investment yields in 2021 were depressed—down about 200 BP from pre-crisis (and 50-80BP from pre-COVID) levels. *Yields in 2021 were likely the lowest since at least 1960.*

The yield on invested assets remains depressed relative to pre-financial crisis and pre-COVID yields. Fed rate hikes in 2022 should begin to slowly lift yields.

Average: 1960-2019 = 4.9%
Low: 2.8% (1961)
High: 8.2% (1984/85)

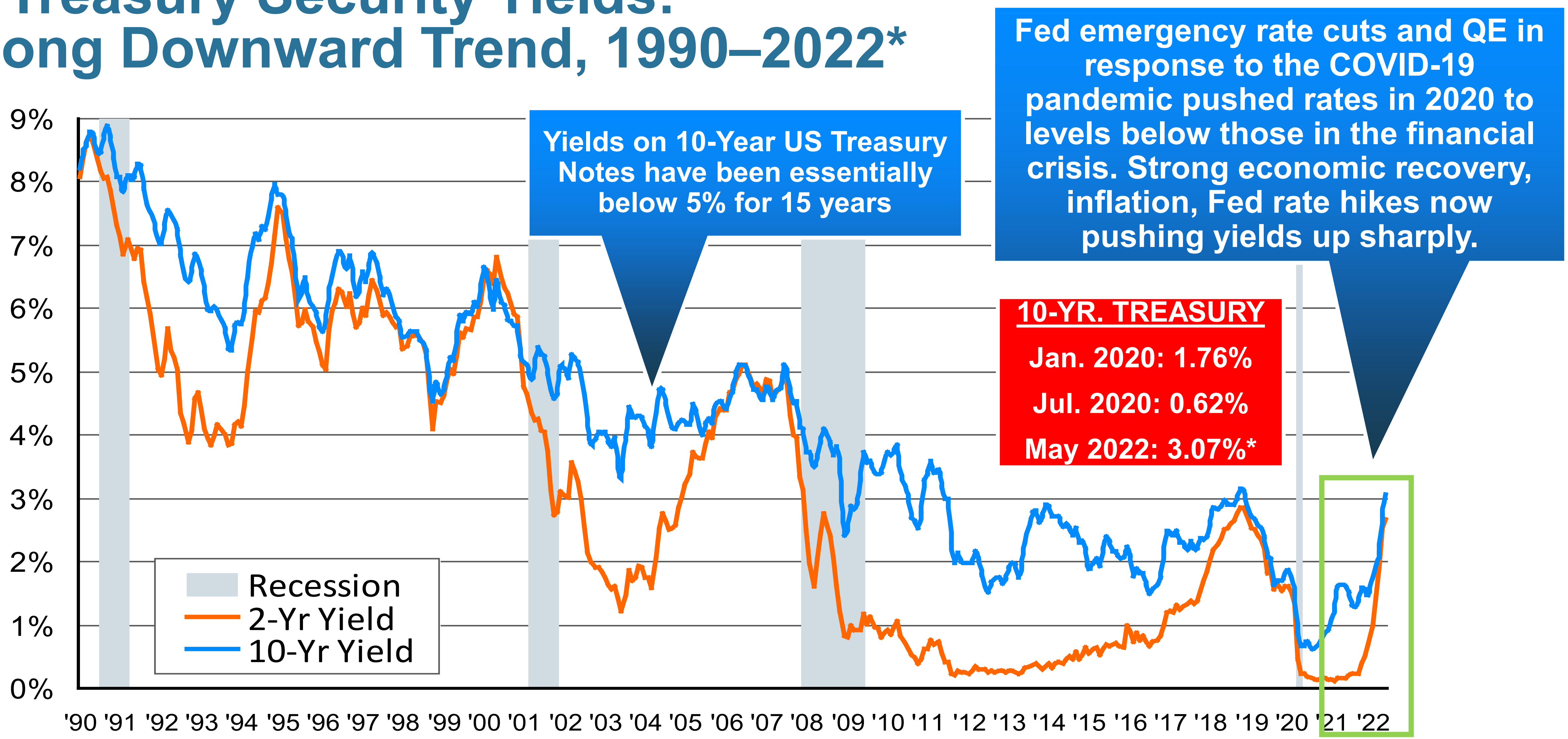
Sources: NAIC data, sourced from S&P Global Market Intelligence; 2017-19 figures are from ISO. 2020-21 data from the APCIA. Risk and Uncertainty Management Center, Univ. of South Carolina.

S&P 500 Index Returns, 1950–2022*



*Through May 6, 2022.
Sources: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html; Center for Risk and Uncertainty Management, University of South Carolina.

US Treasury Security Yields: A Long Downward Trend, 1990–2022*

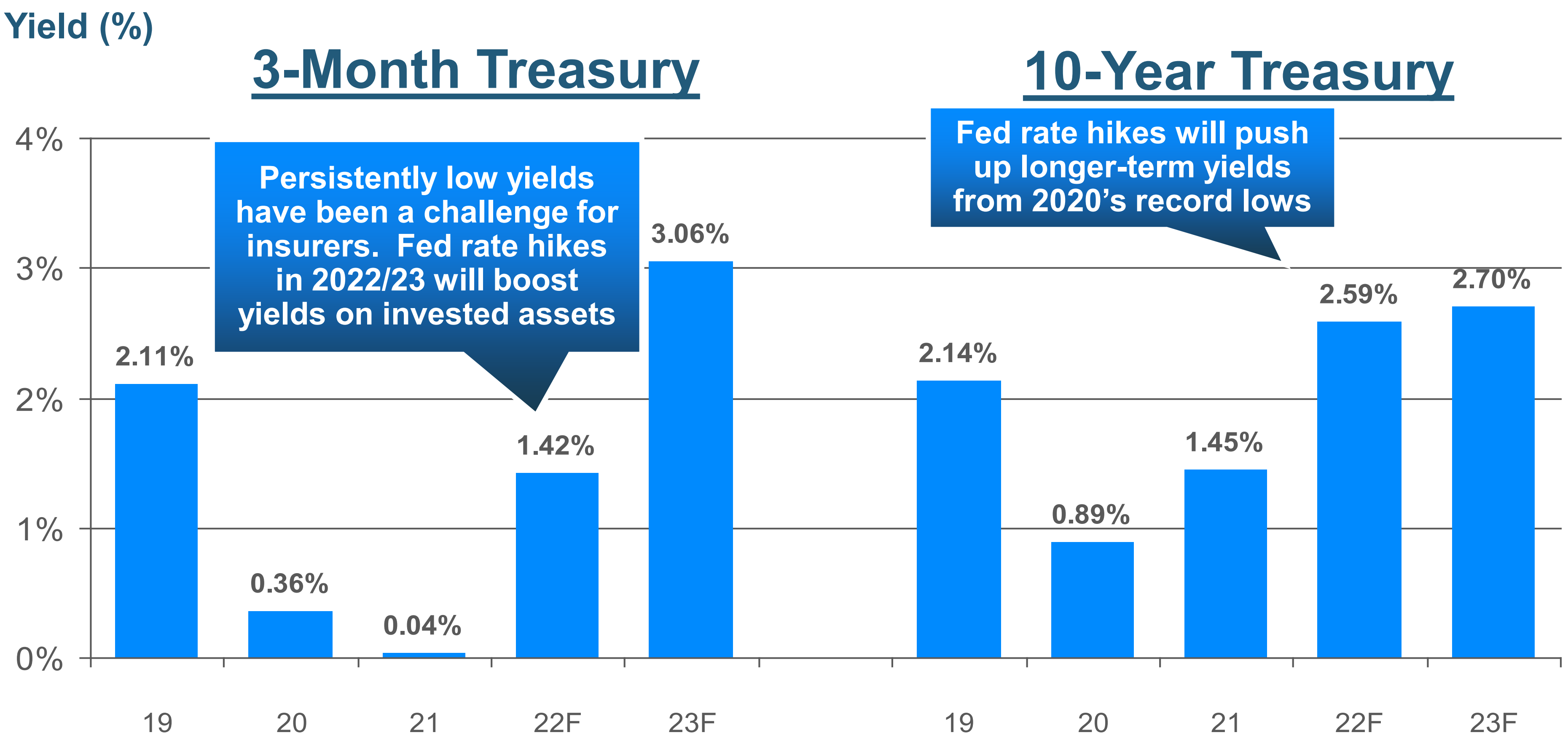


Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, Fed rate hikes should, over time, provide a modest boost to P/C insurer portfolio yields.

*Monthly, constant maturity, nominal rates, through May 2022 (as of May 6).

Sources: Federal Reserve Bank at http://www.federalreserve.gov/releases/h15/data.htm. National Bureau of Economic Research (recession dates); Risk and Uncertainty Management Center, University of South Carolina.

Interest Rate Forecasts: 2019 – 2023F



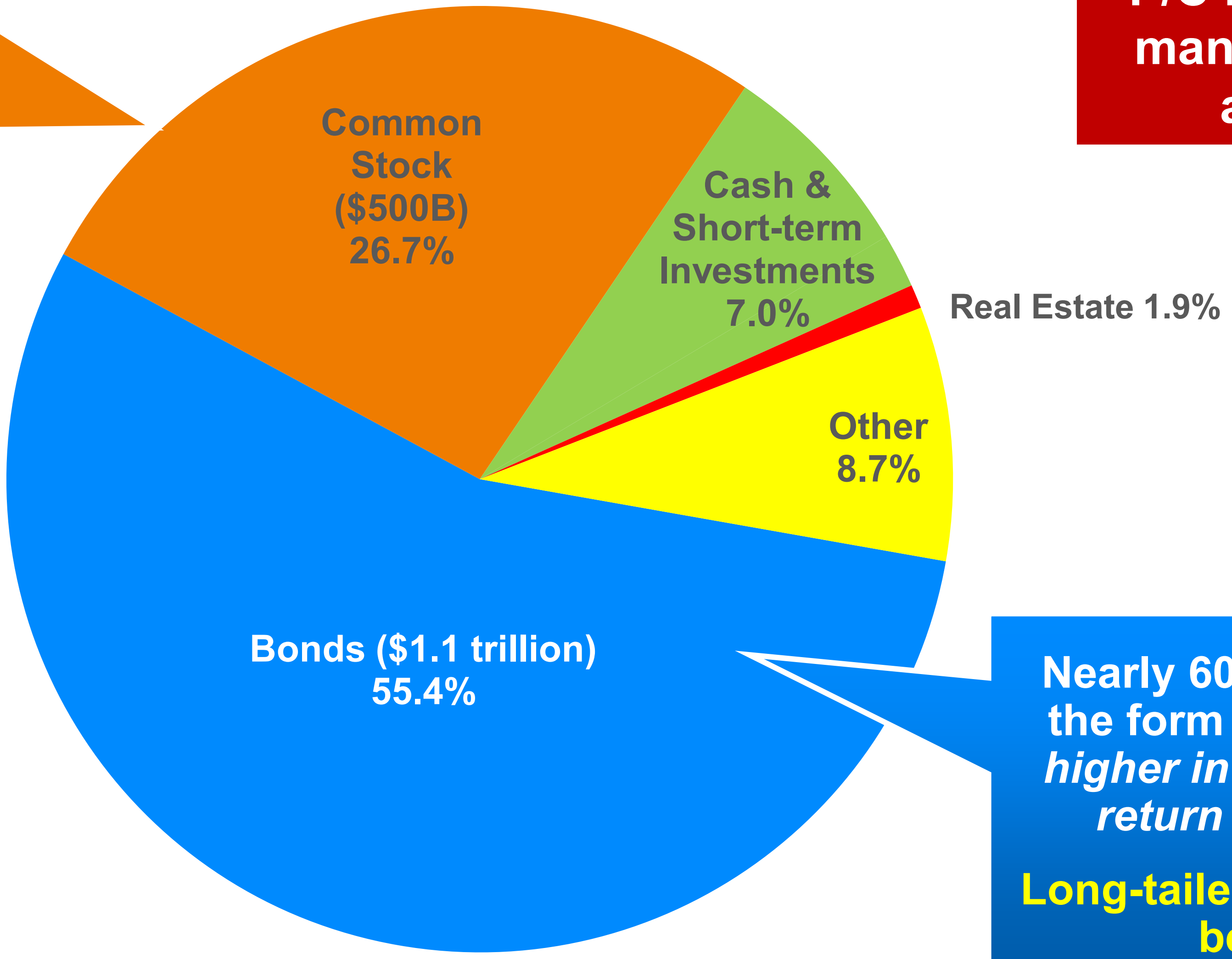
Rising interest rates will provide a modest tailwind for insurers as the Fed raises interest rates. This will be especially beneficial to longer-tailed lines such as Workers Comp.

Sources: Wells Fargo Securities (4/22); Risk and Uncertainty Management Center, University of South Carolina.

P/C Insurance Industry Investment Portfolio*

With stocks accounting for about 25% of invested assets, the current correction represents a buying opportunity for P/C insurers

P/C insurers in the US managed $2 trillion in assets in 2020



Nearly 60% of P/C assets are in the form of bonds. *This means higher interest will push up the return on invested assets.*

Long-tailed lines such as WC will benefit the most

*As of 12/31/20.
Sources: NAIC data from I.I.I.; Risk and Uncertainty Management Center, University of South Carolina.

Reasons Why Higher Interest Rates Might Benefit Insurers

- P/C yield on invested assets was at a 60-year low in 2021
- If interest rates continue to rise and remain elevated for the next few years, P/C insurers will see investment income increase materially
- Increased investment returns will partially offset claim severity pressures
- Rising interest rates are occurring during a relatively hard market (though not in WC), increasing cash flow available for investment

Risks: “Super Bubble” Bursting

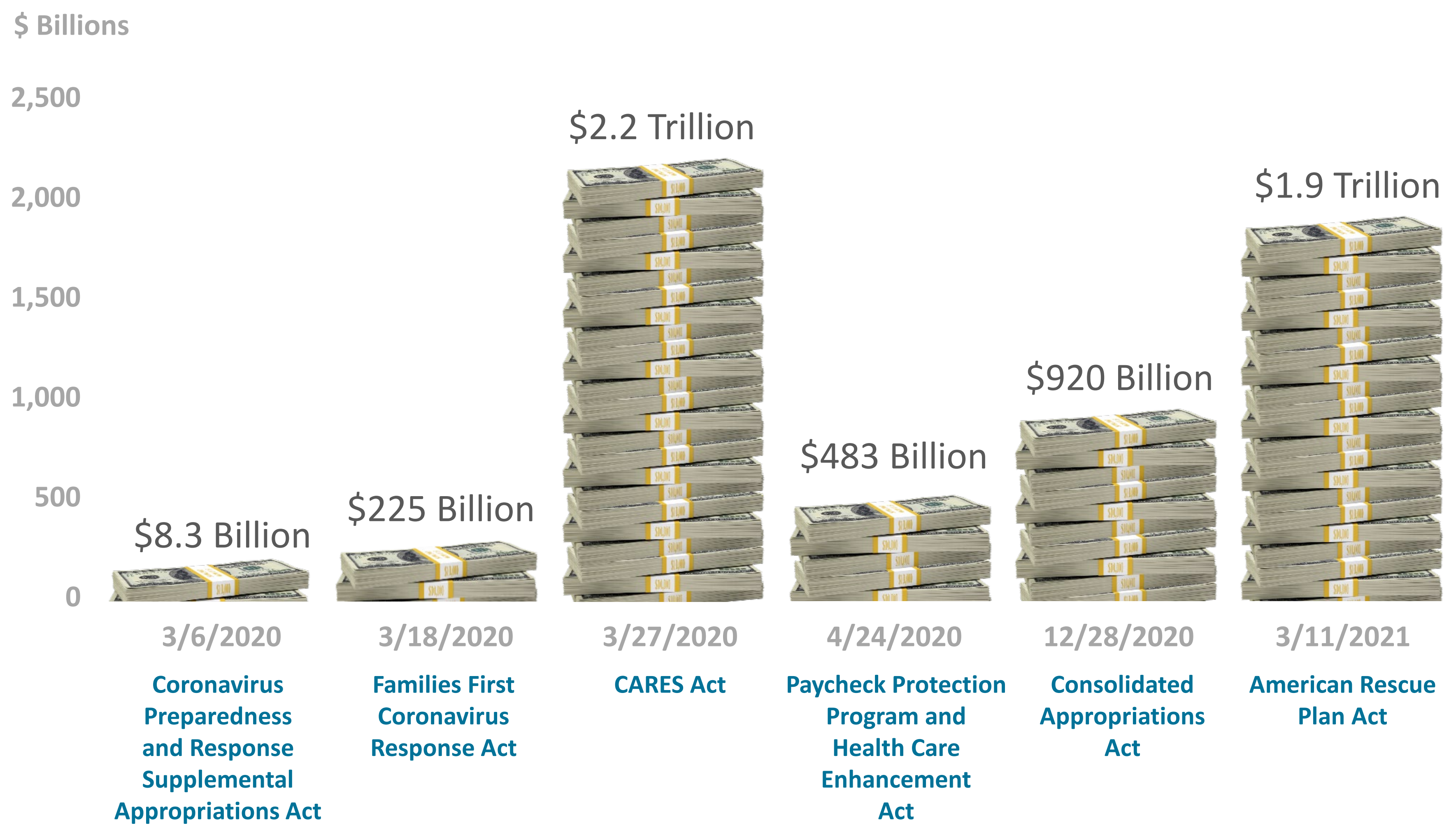
- Ultra-low interest rates have been the norm since the start of the financial crisis in 2007/08
- Low rates led to a global search for yield, causing likely bubbles in many asset classes (i.e., Super Bubble):
  - Stocks
  - Commodities
  - Crypto
  - Bond Prices
  - Real Estate
  - Tech
- The bursting of super bubbles generally results in recession
  - Tech Bubble of 2000
  - Real Estate Bubble of 2006
  - Wall Street Crash of 1929
- This does not mean that recession is imminent

We Are Living in a Material World

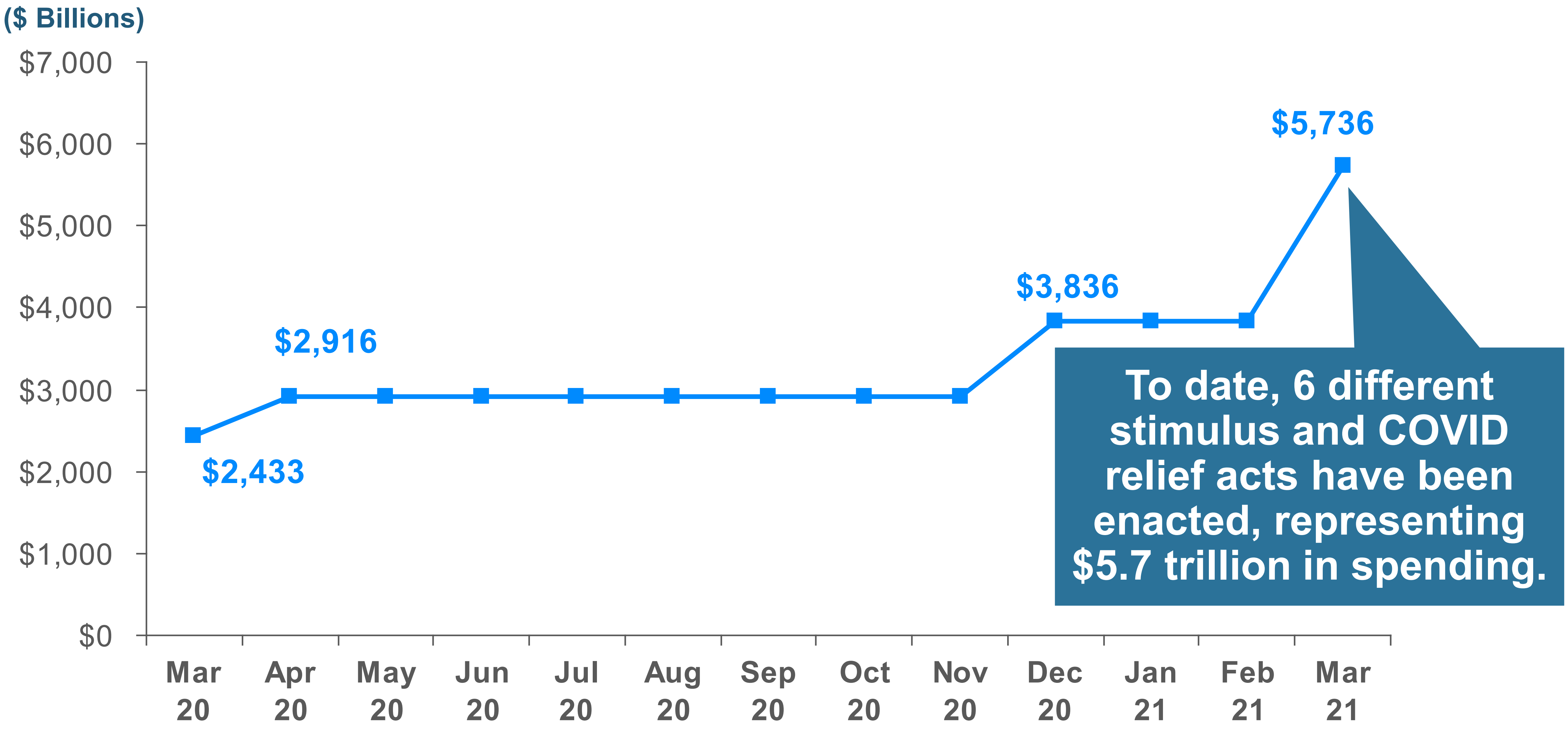
Consumers Binged During the Pandemic

Keeping Up with the Joneses (and Inflation) Will Help Drive People Back into the Labor Force

Federal COVID Stimulus Plans, March 2020–Present

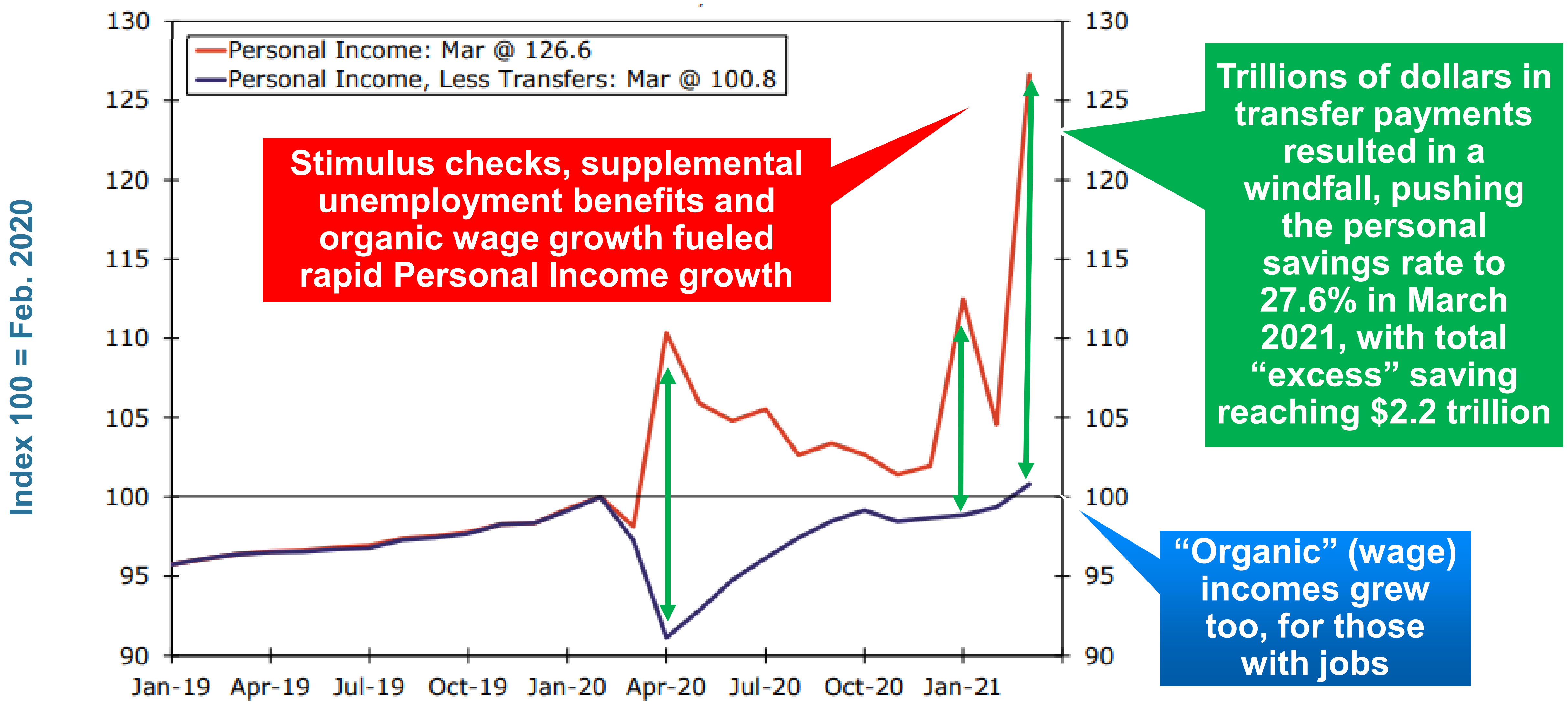


Cumulative Cost of Enacted Federal COVID Stimulus Programs



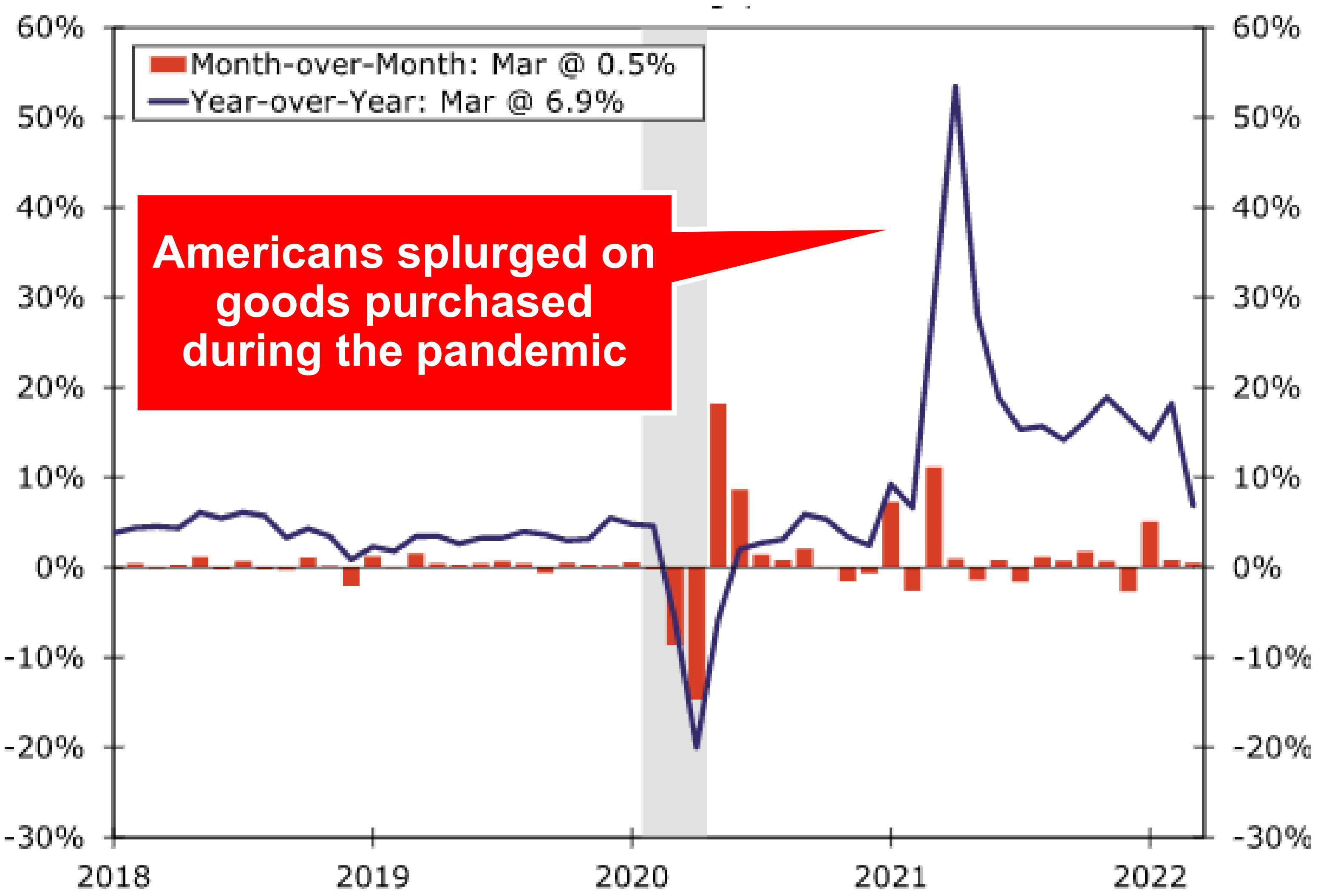
Sources: US Congressional Budget Office; Risk and Uncertainty Management Center, University of South Carolina.

Stimulus Payments Sent Personal Income Soaring … *BUT*



Sources: US Department of Commerce and Wells Fargo Securities (April 30, 2021).

Retail Sales: Americans Went on an Unprecedented Spending Spree … Which Was Ultimately Unsustainable

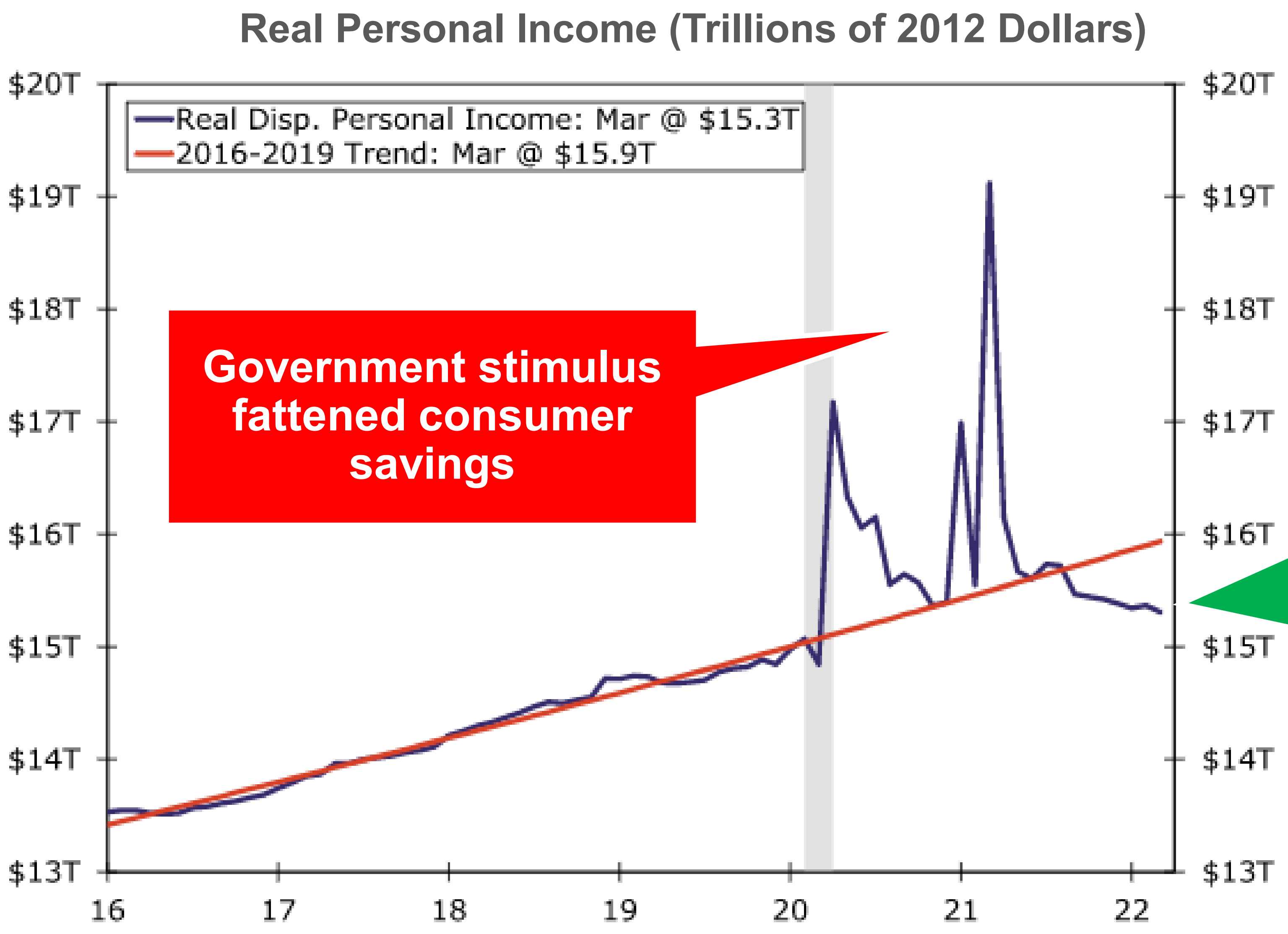


In addition, Americans spent heavily on real estate, driving home values to record highs

As the economy recovered, excess demand and on-going supply chain issues stoked the fire of inflation

Sources: US Department of Commerce and Wells Fargo Securities.

The Government Gravy Train Has Come to an End … And the Economic Hangover Has Begun



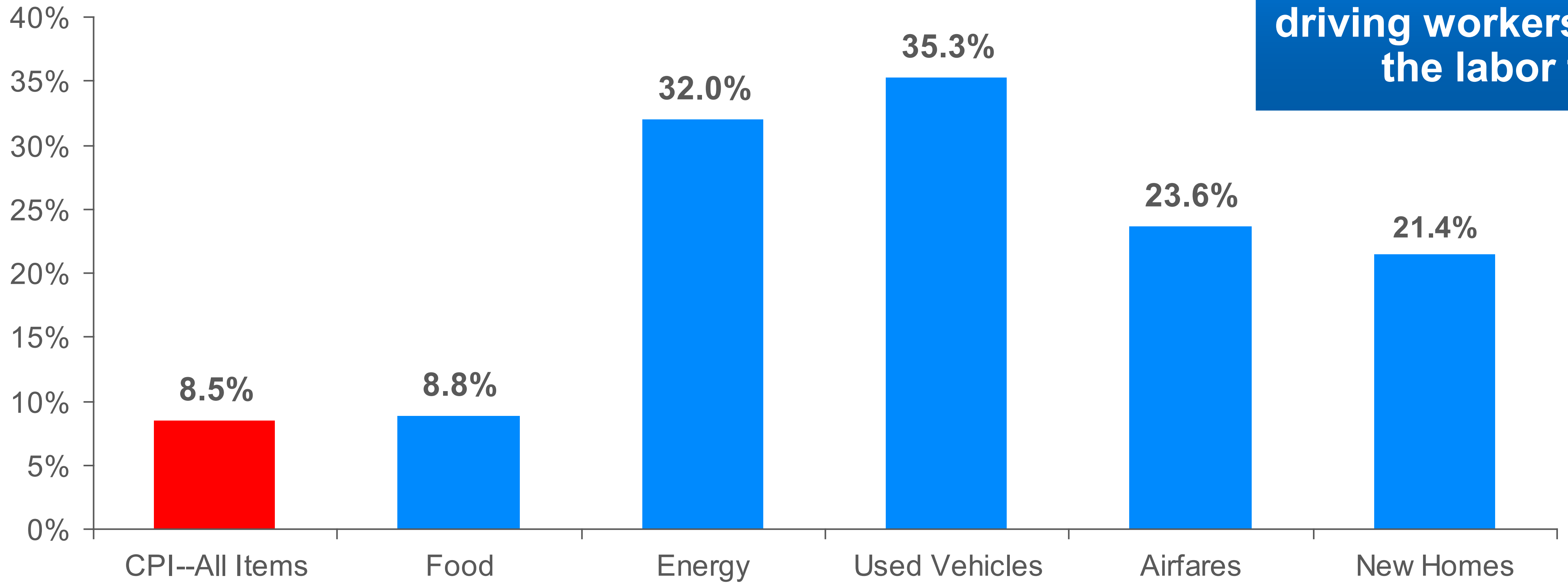
The pandemic punchbowl has been removed. Consumers are struggling to adjust to the loss of that income AND the unanticipated challenge of inflation, which is reducing real income

Asset Prices → Wealth Effect

Sources: US Department of Commerce and Wells Fargo Securities (April 29, 2022).

Inflation, Select Items: March 2022 vs. March 2021

Inflation is eroding worker and family incomes and will likely become a major force driving workers back into the labor force



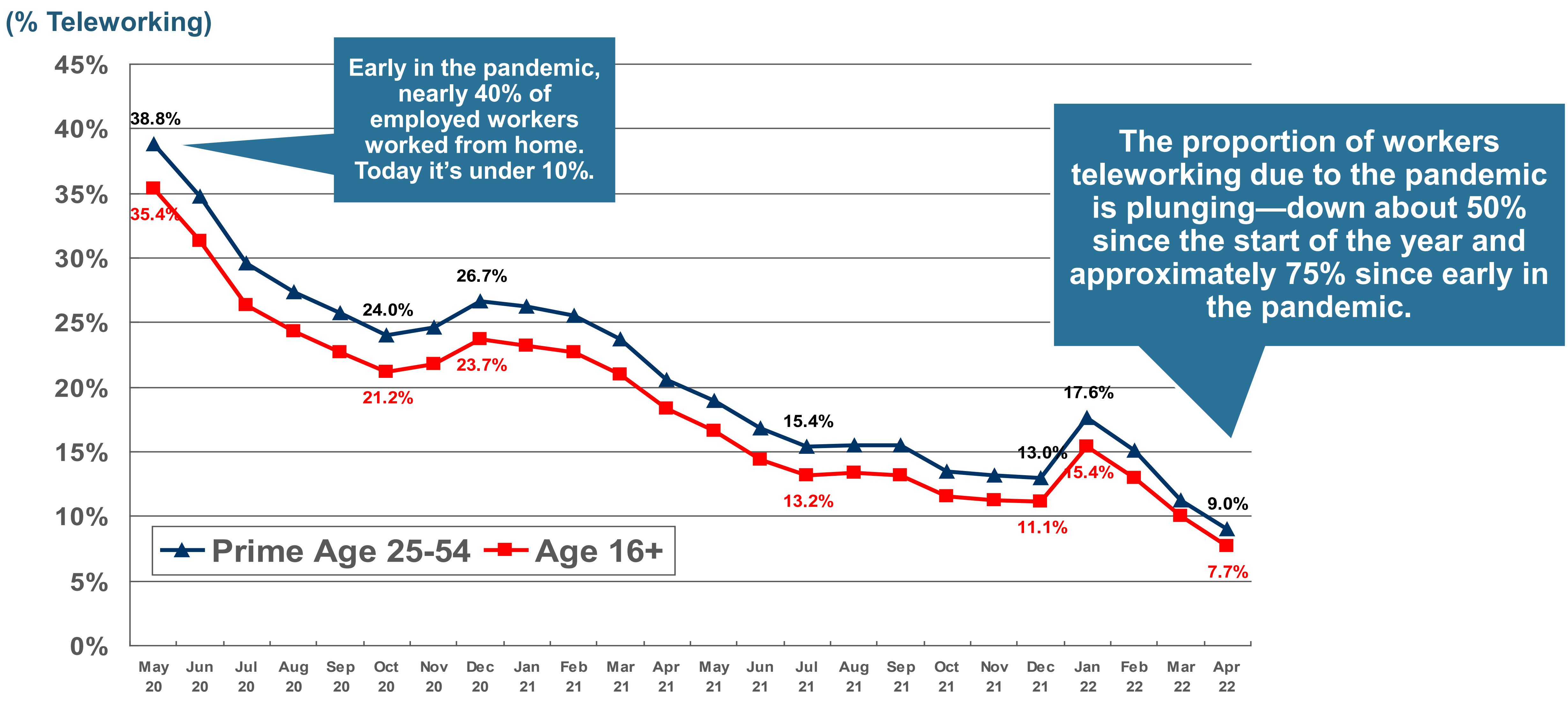
Sources: US Bureau of Labor Statistics and U.S. Census Bureau (home prices data); USC Center for Risk and Uncertainty Management.

The Post-COVID Worker

The Future of Work Is Anything But Certain

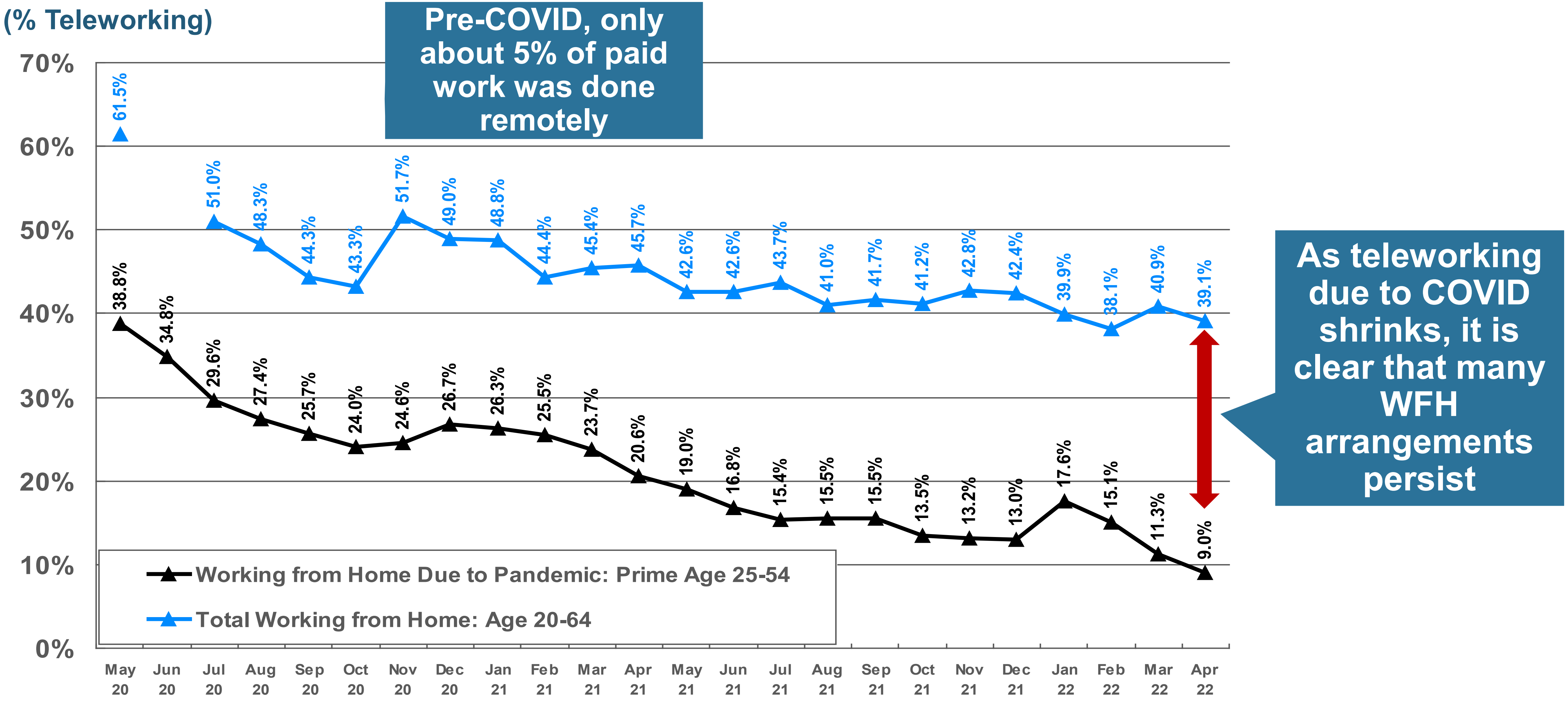
What Workers Want Will Eventually Collide With Economic Reality

Percentage of Employed Persons Teleworking Due to Pandemic: May 2020 – Apr. 2022



Sources: Bureau of Labor Statistics: https://www.bls.gov/cps/effects-of-the-coronavirus-covid-19-pandemic.htm; Risk and Uncertainty Management Center, University of South Carolina.

Working from Home Due to Pandemic vs. All Remote Workers*



*All Remote Workers measures proportion of full paid workdays worked remotely. Includes workers whose earnings during the prior calendar year were at least $10,000.
Sources: Bureau of Labor Statistics: https://www.bls.gov/cps/effects-of-the-coronavirus-covid-19-pandemic.htm (Prime age workers); Total WFH data from the Working from Home Research Project, accessed at: https://wfhresearch.com/; Risk and Uncertainty Management Center, University of South Carolina.

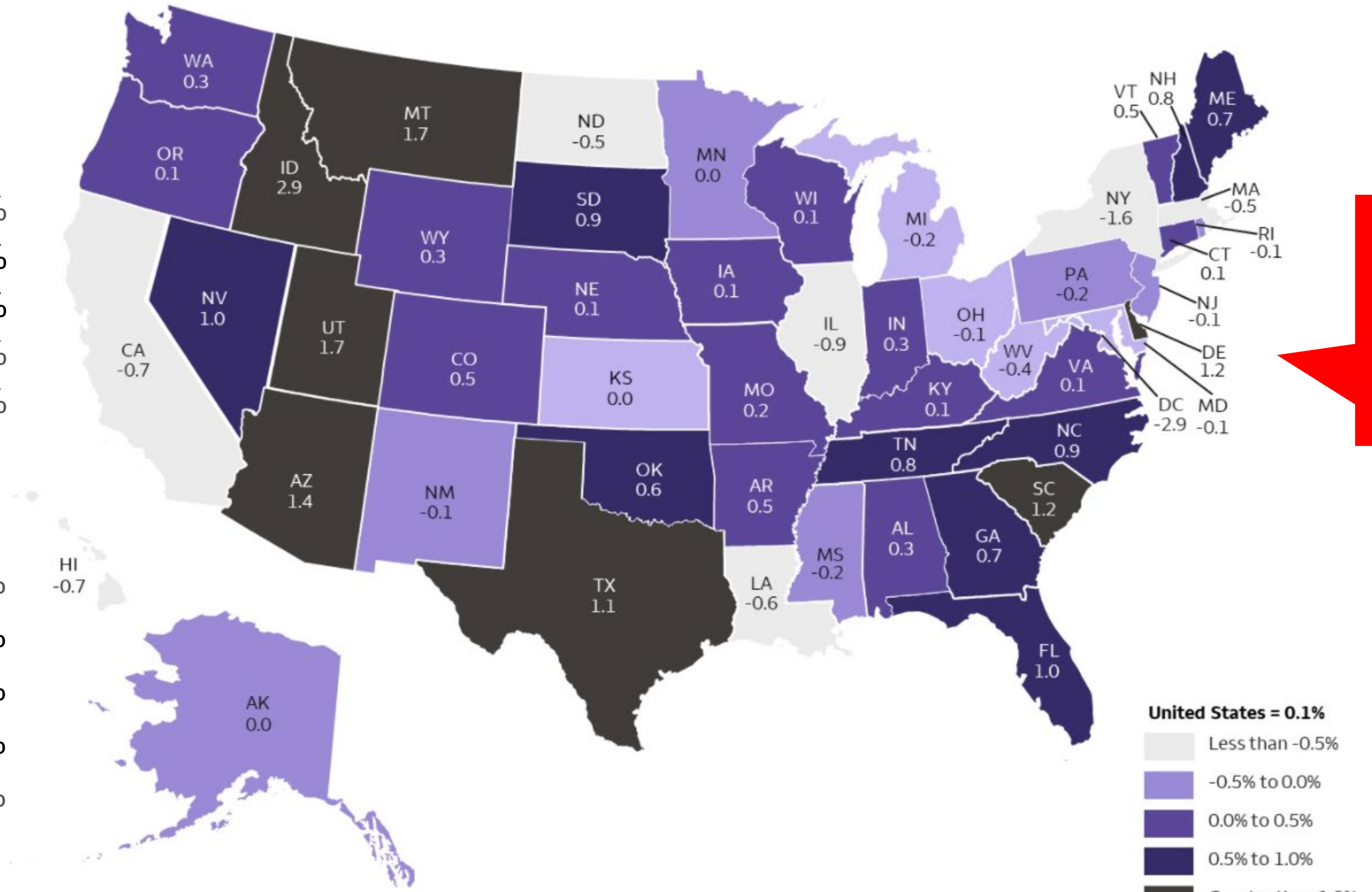
Population Change by State, July 2020–July 2021 **(US: 0.1%)**

Top 5

ID	2.9%
MT	1.7%
UT	1.7%
AZ	1.4%
SC	1.2%

Bottom 5

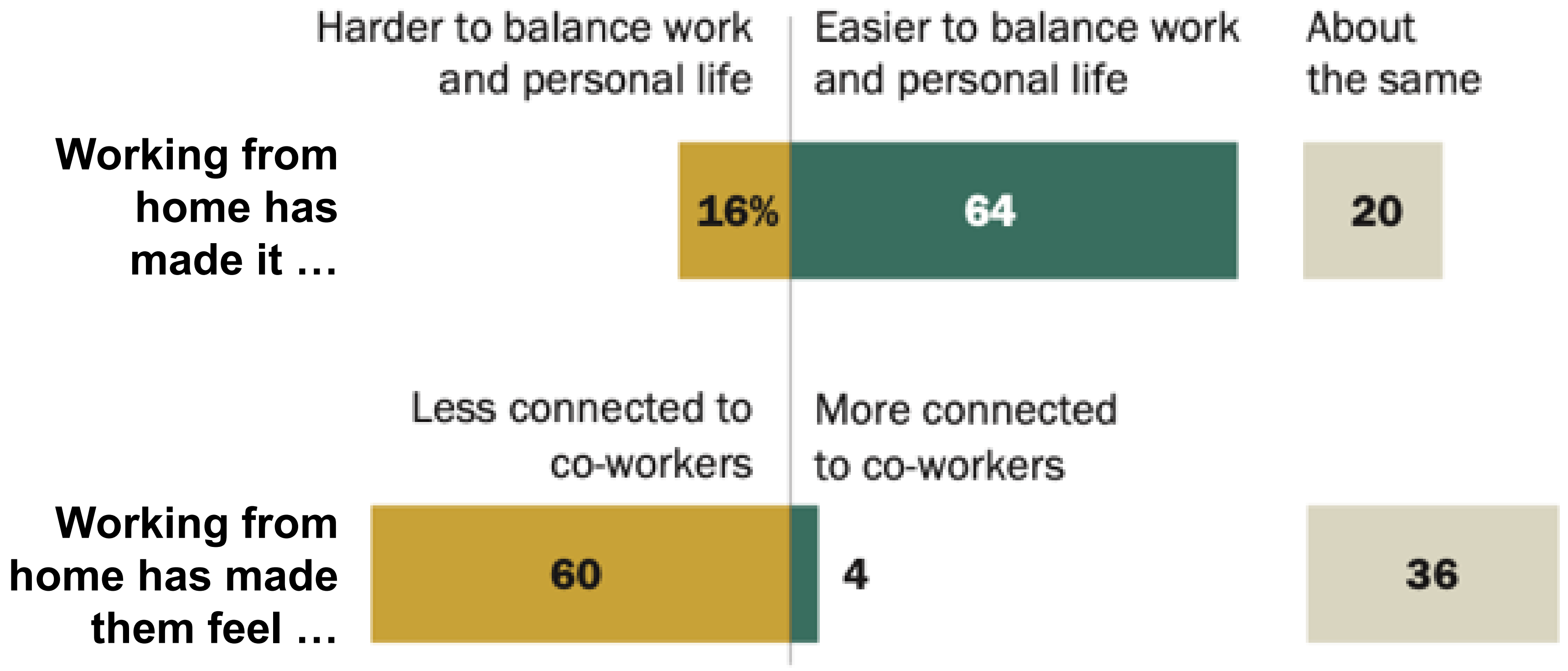
NY	-1.6%
IL	-0.9%
CA	-0.7%
HI	-0.7%
LA	-0.6%



Population growth is a driver of growth in insurance demand and insurable exposure. Demographic trends in the Northeast are generally weak.

Sources: US Census Bureau, Dec. 2021 estimates, www.census.gov/popest; Wells Fargo Securities; Risk an Uncertainty Management Center, University of South Carolina.

Remote Work: Expect Workers and their Employers to Clash on this Issue for Years to Come



- Most Americans who can telecommute prefer a hybrid work arrangement
- Employers and workers are trying to define the boundaries of their new relationship
- The ultimate impacts on workers comp are unclear

Source: Pew Research Center, accessed at: https://www.pewresearch.org/social-trends/psdt_2-16-22_covidandwork_0_1/

SUMMARY

- The US Economy Is Stronger than Most Believe
- Well Positioned to Enter a Cycle of Tightening by the Fed
- Risk of Recession Is Elevated, but Recession Is Still Avoidable
- Workers: Strong Labor Market, But Upset Over Inflation
- Wall Street Worries→Opportunities for Insurers
- The Post-COVID Workforce Remains a Work in Progress

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Thank you for your time and your attention!

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