

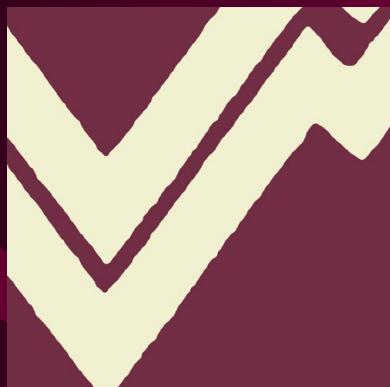


I DON'T MISS
THE PANDEMIC...
I MISS PANDEMIC
PRICING...

Economic and Revenue Review for the Vermont State Legislature

December 7, 2022

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Two Opposing Forces Are Now Colliding and Shaping the National and State Economies - and Affecting State Revenues

- Unprecedented Federal Stimulus Associated With the Pandemic (yes, still), the Infrastructure Investment and Jobs Act and Other Programs
 - Vs.
- Fed Monetary Action to Slow the Economy and Reduce Inflation Via Steep Interest Rate Increases

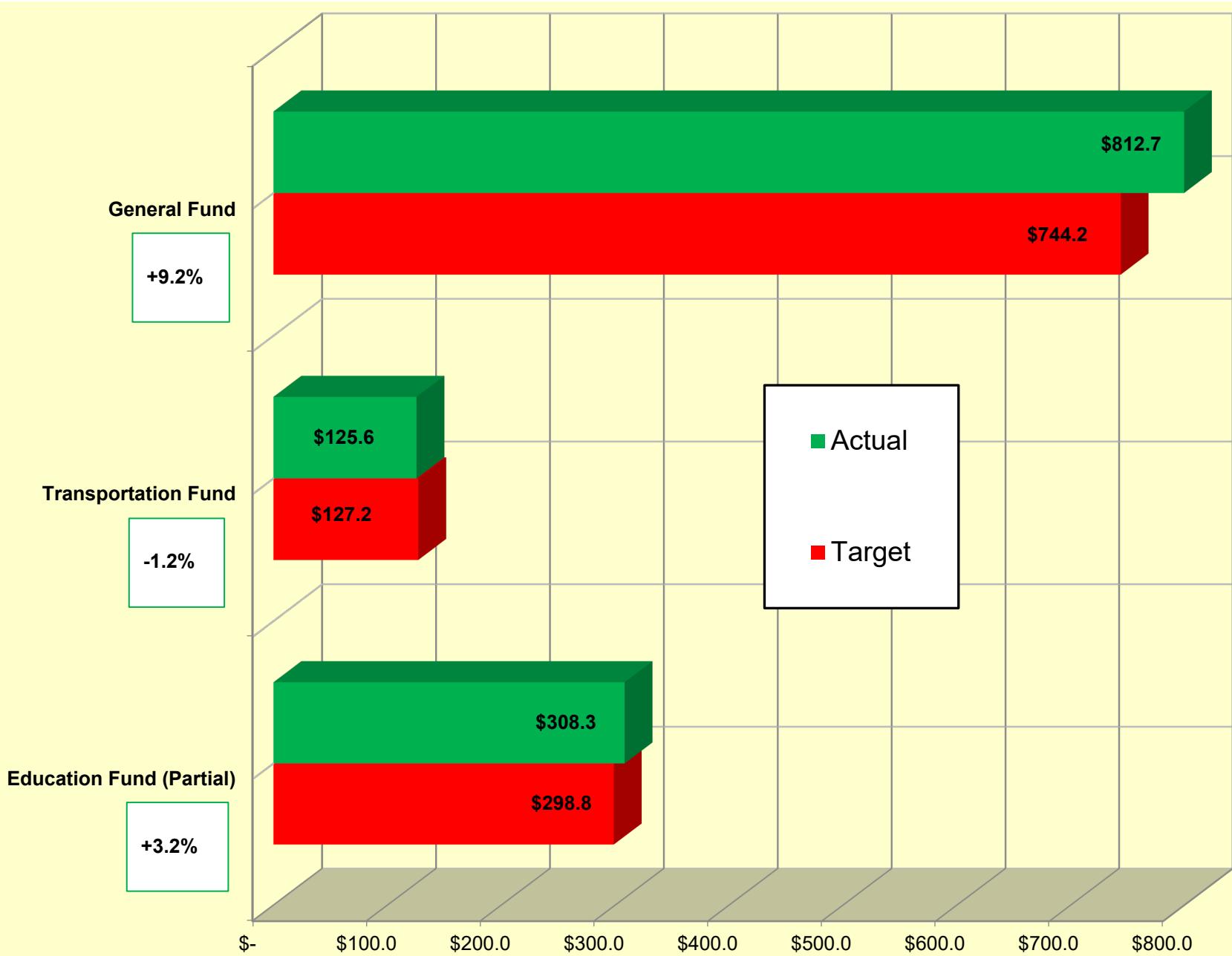
To Date, the Former is Prevailing, But This Could Change...

Year-To-Date FY23 Revenues Are Above Expectations, but the Economy is Slowing

- Total Revenues through November (General, Transportation and partial Education Funds) are about 6.5% above targets (about \$76M on a base of about \$1.2B), with revenues particularly strong in the first quarter of the fiscal year and slower in the second.
- The revenue strength in the first 5 months of the fiscal year was concentrated in Personal and Corporate Income taxes. With asset prices and corporate profits still at elevated levels, demand remaining resilient and prices rising, income tax liabilities have risen accordingly. The T-Fund's slightly negative variance was the result of weakness in Gasoline and Diesel fuel taxes, as prices were high enough to dent demand, but not high enough to kick in much offsetting growth in the Motor Fuel Assessment tax, which has a more complex price-based rate mechanism.
- Almost all other revenue sources were close to or slightly above year-to-date targets, including the large consumption taxes, with Meals and Rooms 1.8% above target, MVP&U up 2.3%, and Sales and Use, up 3.2%.
- With one foot still on the gas and the other now slamming on the brakes, federal fiscal and monetary policies are generating opposing forces that will both confuse and control the State economy and revenues in the coming years.
- While direct pandemic health effects have receded from prominence, their legacy of vast federal spending, shifting consumer preferences, supply chain disruptions and reduced labor force participation continue to resonate loudly.
- With viral mutations continuing and geo-political instability from war in Europe added to the mix, the outlook continues to be extremely volatile and unpredictable.
- Despite all the current risk, FY22 and FY23 revenues to date have benefitted from the vast Federal spending which has been coursing through the Vermont economy in the past 2 years.
- So, a good start to FY23 revenues, but the second half of the year will be more challenging and FY24 could be ugly...

FY23 Revenues by Fund Through November 2022

Actual Revenues (Green) vs. Targets (Red), Percent Variance by Fund in Box, Source: VT Joint Fiscal Office



Recent Fiscal Stimulus has Been Epic and Completely Without Precedent

- In order to offset the COVID pandemic, extraordinary deficit spending was proposed and enacted by both parties. Its effect was extraordinary in blunting what could have been a disastrous downturn, but in retrospect, was far in excess of what was needed.
- These federal fiscal and monetary policies pumped trillions into the economy, supporting individuals, companies and institutions. At the State level, Vermont received a disproportionate share of this funding, in excess of \$10 billion.
- Additional stimulus was added to this via the Infrastructure Investment and Jobs Act, which represented about \$250 billion in additional U.S. deficit spending. Legislation subsidizing semiconductor manufacturing and expanded veteran's health care spending will add to inflationary pressures. The Inflation Reduction Act may reduce inflation in the long run, but includes spending measures that will delay any immediate effects.
- In tandem with this spike in demand, supply constraints caused by the pandemic, including lower labor force participation rates, production bottlenecks in China as it adheres to its zero-COVID policy, and Russia's invasion and war in Ukraine, has resulted in the highest U.S. and global inflation experienced in 40 years.
- This has prompted the Fed to attempt to reduce overall demand via interest rate increases and other monetary measures. It has raised its key federal funds interest rates 6 times this year and will continue to do so until it believes the economy has sufficiently slowed to as to bring inflation closer to its 2-3% goal.
- Unfortunately, interest rate increases cannot affect supply chain issues and the lags in implementing policy and its impact on the economy may cause the Fed to overshoot. If it does, a recession is likely.

Federal Government Fiscal & Monetary Policies - Pandemic Response

	ALLOWED	COMMITTED/DISBURSED	DEFICIT IMPACT
FISCAL POLICY			
Legislative	\$5.92 trillion	\$4.84 trillion	\$5.19 trillion
Loan and Grant Programs	\$1.56 trillion	\$1.32 trillion	\$1.05 trillion
Income Support	\$906 billion	\$850 billion	\$872 billion
State & Local Funding	\$884 billion	\$723 billion	\$882 billion
Direct Payments	\$869 billion	\$815 billion	\$869 billion
Health Spending	\$662 billion	\$410 billion	\$652 billion
Tax Policy	\$580 billion	\$437 billion	\$430 billion
Other Spending	\$465 billion	\$276 billion	\$439 billion
Administrative	\$861 billion	\$714 billion	\$125 billion
Trump Administration	\$598 billion	\$477 billion	\$78.5 billion
Biden Administration	\$288 billion	\$261 billion	\$64.7 billion
MONETARY POLICY			
Federal Reserve	\$6.83 trillion	\$3.82 trillion	N/A
Asset Purchases	\$3.74 trillion	\$3.68 trillion	N/A
Liquidity Measures	\$2.14 trillion	\$328 million	N/A
Other Loan Purchase Programs	\$806 billion	\$90.4 billion	N/A
Lending Facilities	\$141 billion	\$41.8 billion	N/A
Interest Rate & Reserve Requirement Changes	cut federal funds rate to near-zero and reduced reserve requirements to zero		

Federal Government Fiscal Policies - Infrastructure/Other

	PROPOSED	APPROVED	DEFICIT IMPACT
FISCAL POLICY			
Legislative Total		\$1.7 trillion (\$1.035t new)	-\$51 to +\$101 billion
Bipartisan Infrastructure Investment & Jobs Act		\$1.2 trillion (\$550b new)	\$256 billion
Inflation Reduction Act (aka, Build Back Better)		\$485 billion	-\$155 to -\$305 billion

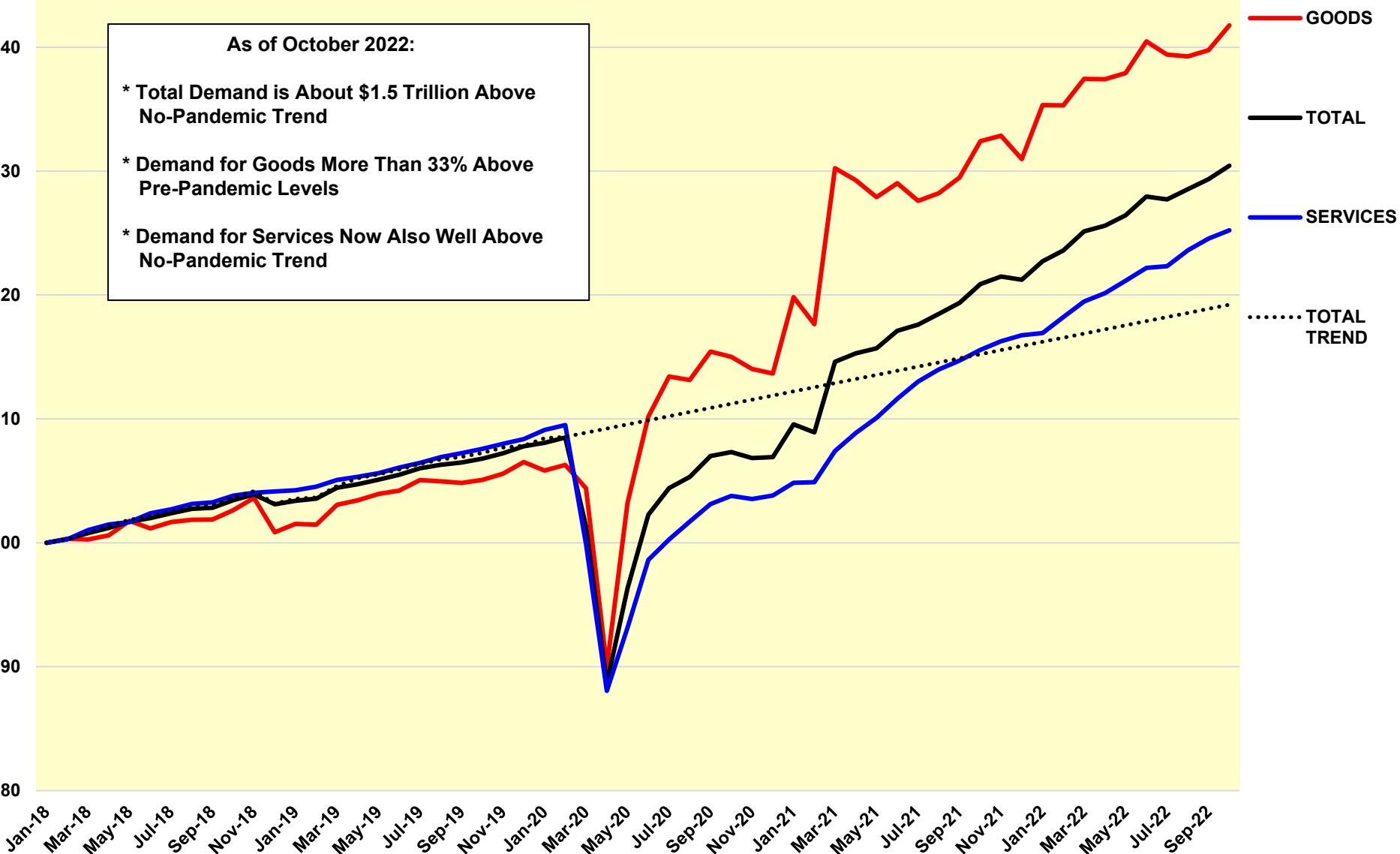
Sources: Committee for a Responsible Federal Budget, Moody's Analytics, The White House, Congressional Budget Office

Recipe for Inflation: Demand for Goods Exploses, While the Pandemic Kneecaps Supply

(Personal Consumption Expenditures and Components Indexed to January 2018=1.00, SAAR, Source: BEA)

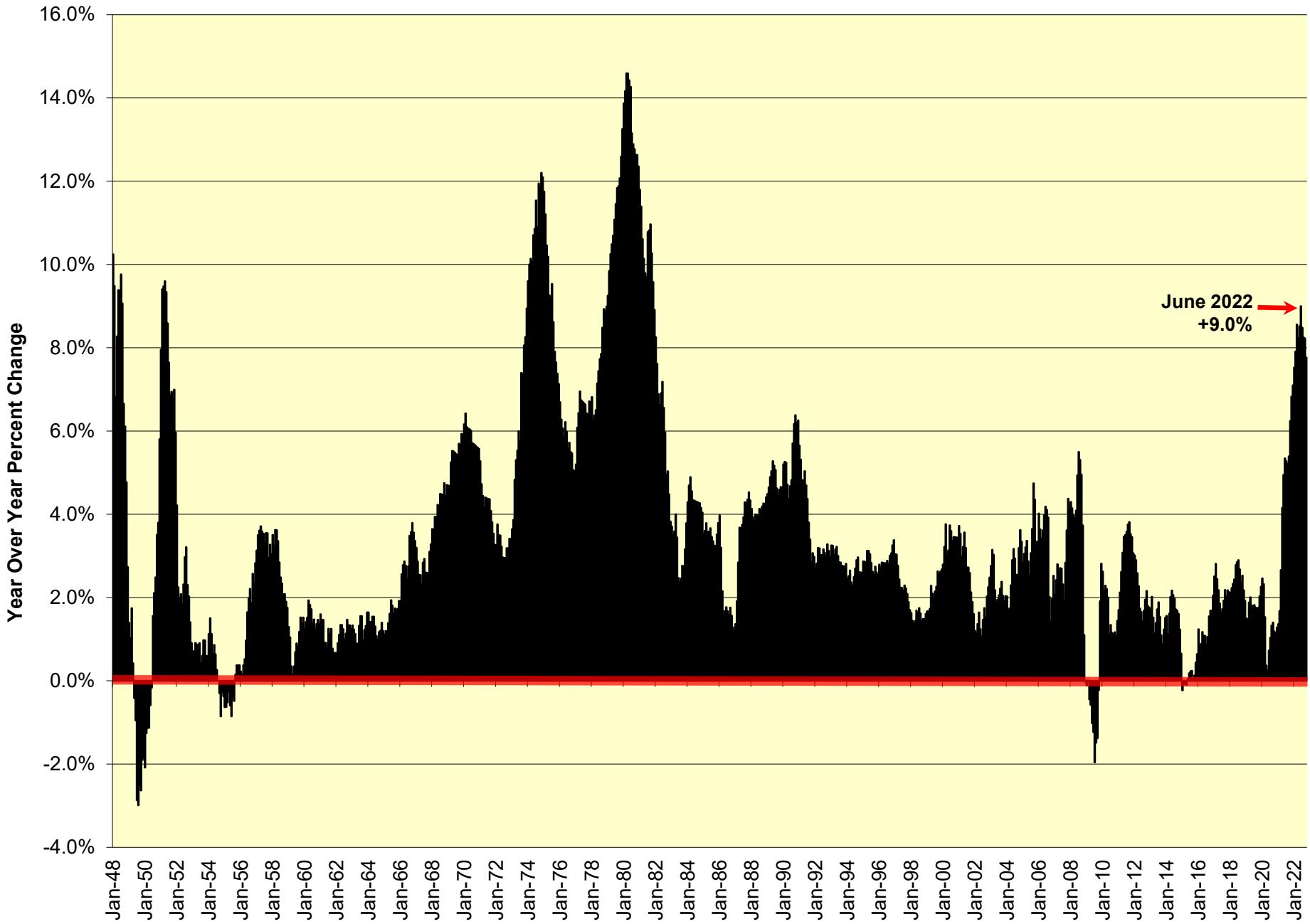
As of October 2022:

- * Total Demand is About \$1.5 Trillion Above No-Pandemic Trend
- * Demand for Goods More Than 33% Above Pre-Pandemic Levels
- * Demand for Services Now Also Well Above No-Pandemic Trend



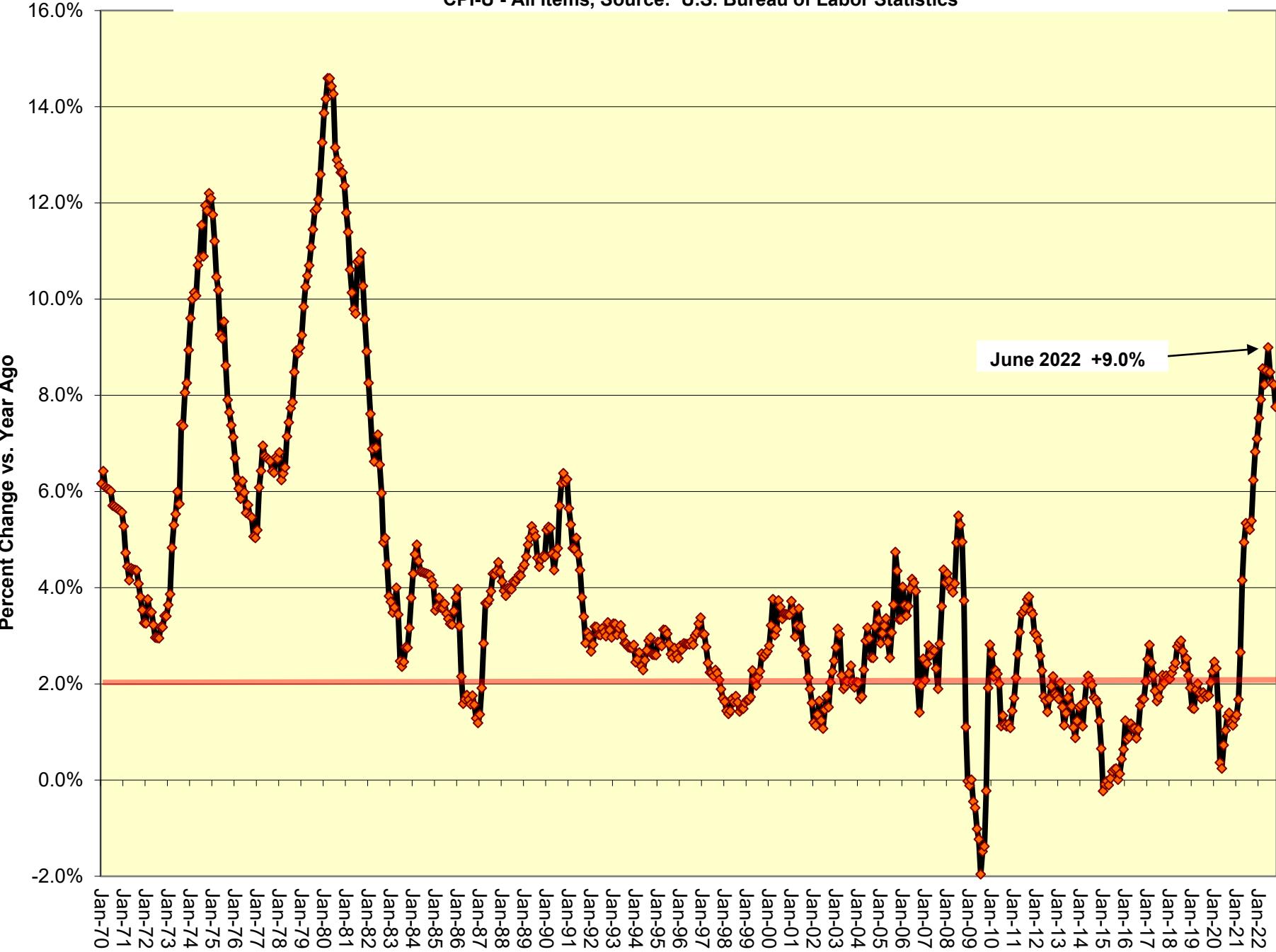
Inflation in Perspective

(Consumer Price Index - Urban, All Items, Percent Change vs. Year Ago)



Excess Demand Amidst Supply Constraints Reignites Inflation and Spooks the Fed

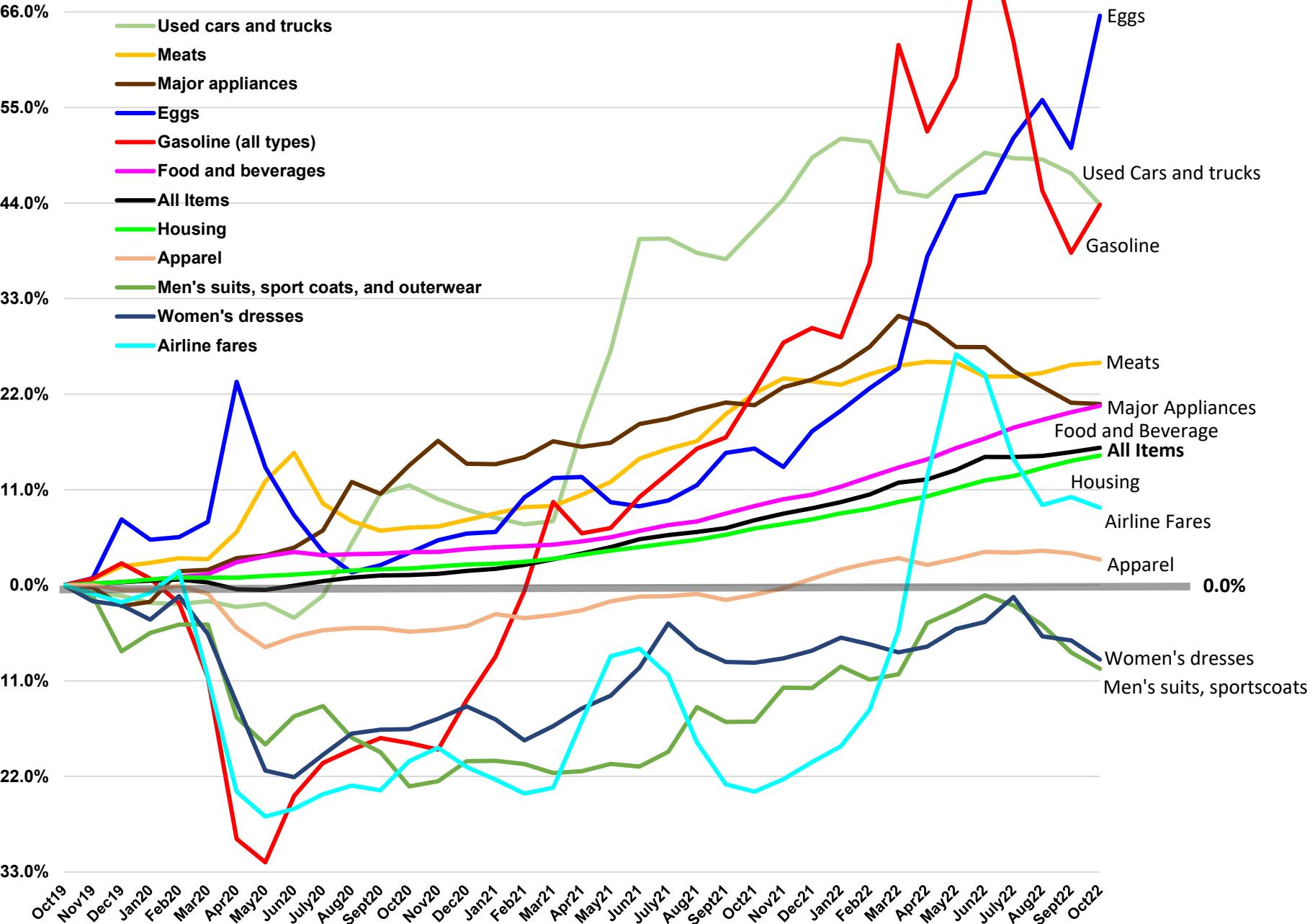
CPI-U - All Items, Source: U.S. Bureau of Labor Statistics



77.0%

Like Everything Else, Pandemic Skews Inflationary Impacts by Sector

Percent Change in Price, October 2022 vs. October 2019 by Selected CPI Component, Source: BLS



THINGS THAT HAVE DECLINED IN PRICE SINCE 2019

(October 2022 vs October 2019 CPI Price Changes)

%CH

-2.3%	Toys
-2.5%	Ship fare
-2.7%	Information technology, hardware and services
-3.3%	Boys' apparel
-3.3%	Other video equipment
-3.9%	Men's shirts and sweaters
-4.4%	Women's outerwear
-5.2%	Audio equipment
-8.5%	Women's dresses
-8.7%	Admission to sporting events
-9.1%	Video and audio products
-9.6%	Men's suits, sport coats, and outerwear
-11.5%	Education and communication commodities
-14.2%	Information technology commodities
-17.6%	Televisions
-39.1%	Telephone hardware, calculators, and other consumer information items

THINGS THAT HAVE RISEN IN PRICE BY MORE THAN 30% SINCE 2019

(October 2022 vs October 2019 CPI Price Changes)

%CH

- 92.5% Fuel oil
- 75.0% Fuel oil and other fuels
- 71.1% Other motor fuels
- 65.6% Eggs
- 58.9% Margarine
- 56.6% Utility (piped) gas service
- 46.3% Car and truck rental
- 45.8% Energy commodities
- 44.3% Motor fuel
- 44.2% Gasoline, unleaded regular
- 43.8% Used cars and trucks
- 43.8% Gasoline (all types)
- 42.4% Propane, kerosene, and firewood
- 42.4% Gasoline, unleaded premium
- 42.1% Gasoline, unleaded midgrade
- 38.5% Energy
- 38.4% Butter and margarine
- 35.0% Fats and oils
- 34.2% Other fats and oils including peanut butter
- 33.8% Flour and prepared flour mixes
- 32.3% Other uncooked poultry including turkey
- 32.3% Household energy
- 31.8% Poultry
- 31.6% Chicken
- 31.3% Salad dressing
- 30.3% New and used motor vehicles
- 30.1% Energy services

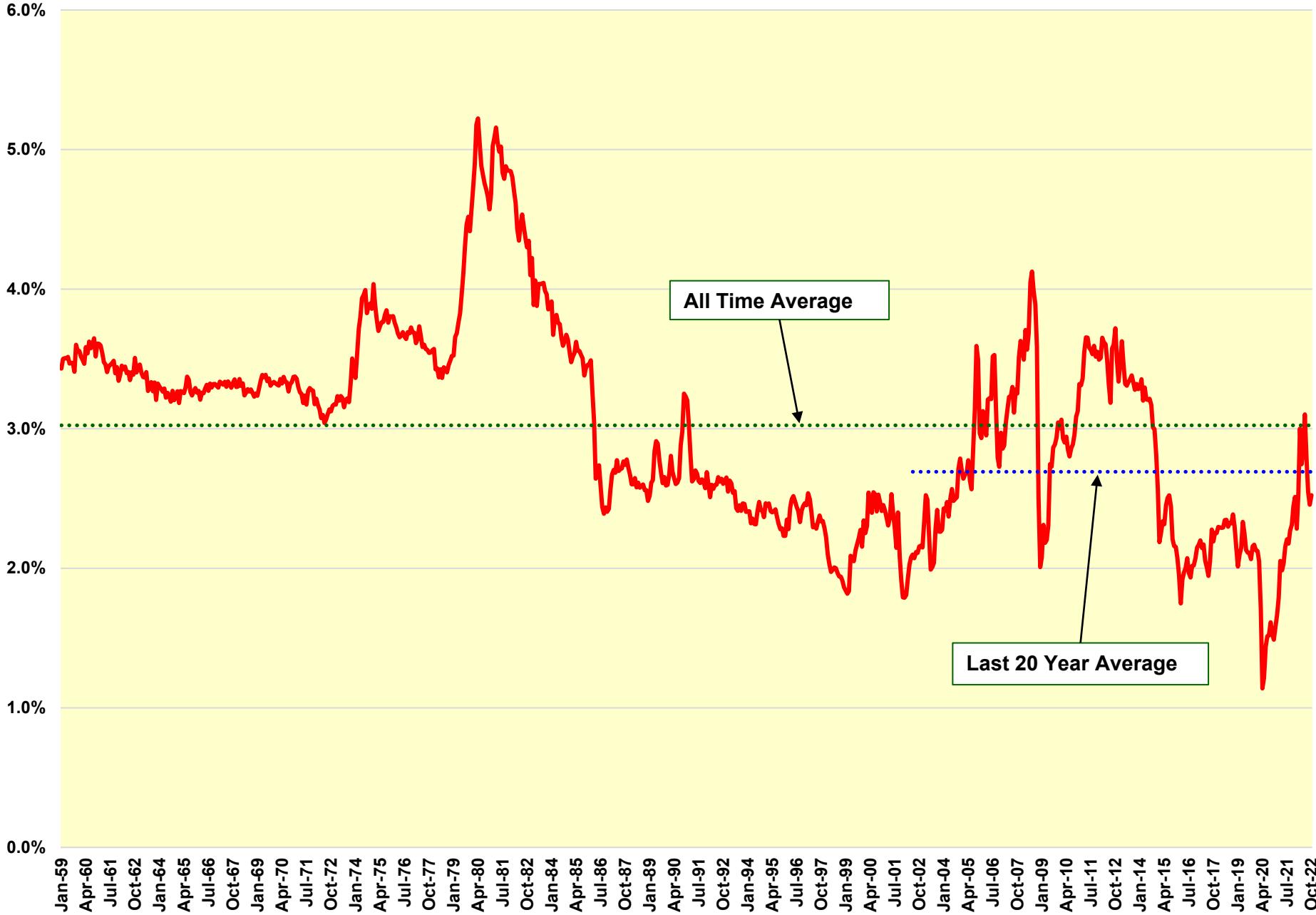
THINGS THAT HAVE RISEN IN PRICE BETWEEN 20%-30% SINCE 2019
(October 2022 vs October 2019 CPI Price Changes)

%CH

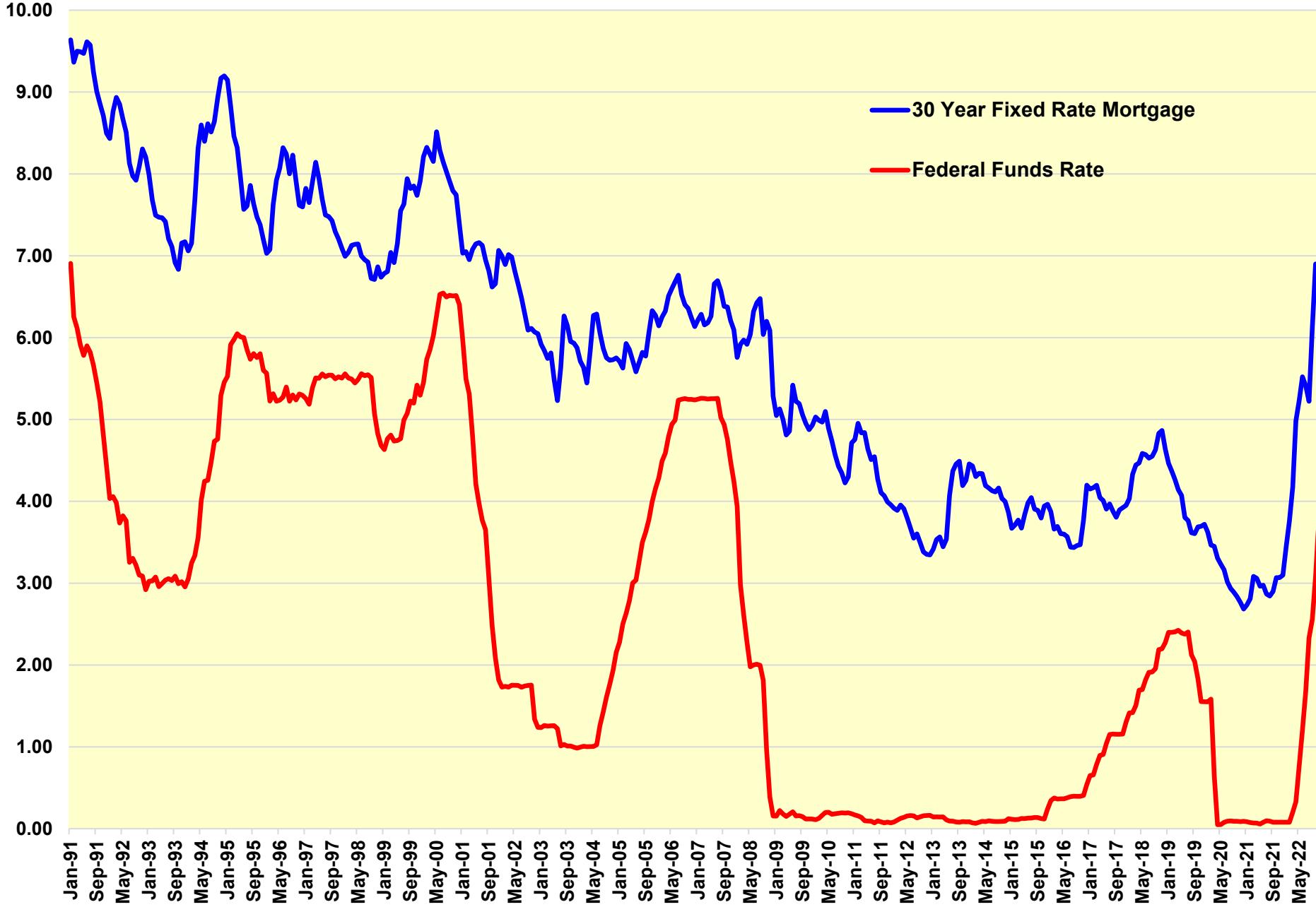
29.5% Transportation commodities less motor fuel
29.5% Lunchmeats
29.4% Private transportation
29.3% Lettuce
29.3% Canned vegetables
29.2% Other pork including roasts, steaks, and ribs
29.1% Crackers, bread, and cracker products
28.8% Carbonated drinks
28.5% Butter
28.5% Canned fruits and vegetables
28.3% Leased cars and trucks
28.2% Meats, poultry, fish, and eggs
28.1% Sugar and artificial sweeteners
28.0% Pork chops
27.8% Fresh whole chicken
27.7% Soups
27.4% Transportation
27.3% Fuels and utilities
27.2% Canned fruits
27.2% Other dairy and related products
27.2% Bacon, breakfast sausage, and related products
27.1% Bacon and related products
27.1% Other meats
26.6% Frozen and refrigerated bakery products, pies, tarts, turnovers
26.5% Breakfast sausage and related products
26.5% Other furniture
26.4% Fresh whole milk
26.1% Pork
25.9% Laundry equipment
25.9% Meats, poultry, and fish
25.8% Frozen and freeze dried prepared foods
25.6% Meats
25.2% Other bakery products
24.7% Roasted coffee
24.7% Milk
24.7% Beef and veal
24.6% Processed fruits and vegetables
24.6% Motor vehicle repair
24.4% Fresh milk other than whole
24.4% Juices and nonalcoholic drinks
24.3% Other miscellaneous foods
24.2% Other food at home
24.0% Cereals and cereal products
23.8% Fresh fish and seafood
23.7% Frankfurters
23.7% Nondurables less food, beverages, and apparel
23.5% Cereals and bakery products
23.5% Domestically produced farm food
23.4% Bakery products
23.3% Other foods
23.2% Uncooked beef steaks
23.1% Food at home
23.0% Nonalcoholic beverages and beverage materials
23.0% Window coverings
22.9% Coffee
22.8% Fresh biscuits, rolls, muffins
22.8% Frozen fruits and vegetables
22.8% Bread
22.7% Snacks
22.7% Durables
22.7% Motor vehicle parts and equipment
22.7% Electricity
22.5% Uncooked ground beef
22.4% Nondurables less food and apparel
22.3% Cakes, cupcakes, and cookies
22.3% Other sweets
22.2% Delivery services
22.2% Tires
22.1% Dairy and related products
22.1% Frozen vegetables
22.0% Breakfast cereal
22.0% Cigarettes
21.9% Sauces and gravies
21.8% Furniture and bedding
21.7% Rice, pasta, cornmeal
21.6% New cars
21.5% Nonfrozen noncarbonated juices and drinks
21.4% Food
21.0% New trucks
20.9% Sugar and sweets
20.9% Tobacco and smoking products
20.9% Major appliances
20.8% New vehicles
20.7% Stationery, stationery supplies, gift wrap
20.7% Food and beverages
20.5% Frozen fish and seafood
20.4% Commodities
20.3% Commodities less food and beverages
20.3% Cookies
20.3% Fish and seafood
20.0% Motor vehicle maintenance and repair

Gasoline Prices Have Soared, But Expenditures as a Share of Total Consumption Are Now Below Average

(Gasoline Share of Total U.S. Personal Consumption Expenditures, Source: U.S. BEA)

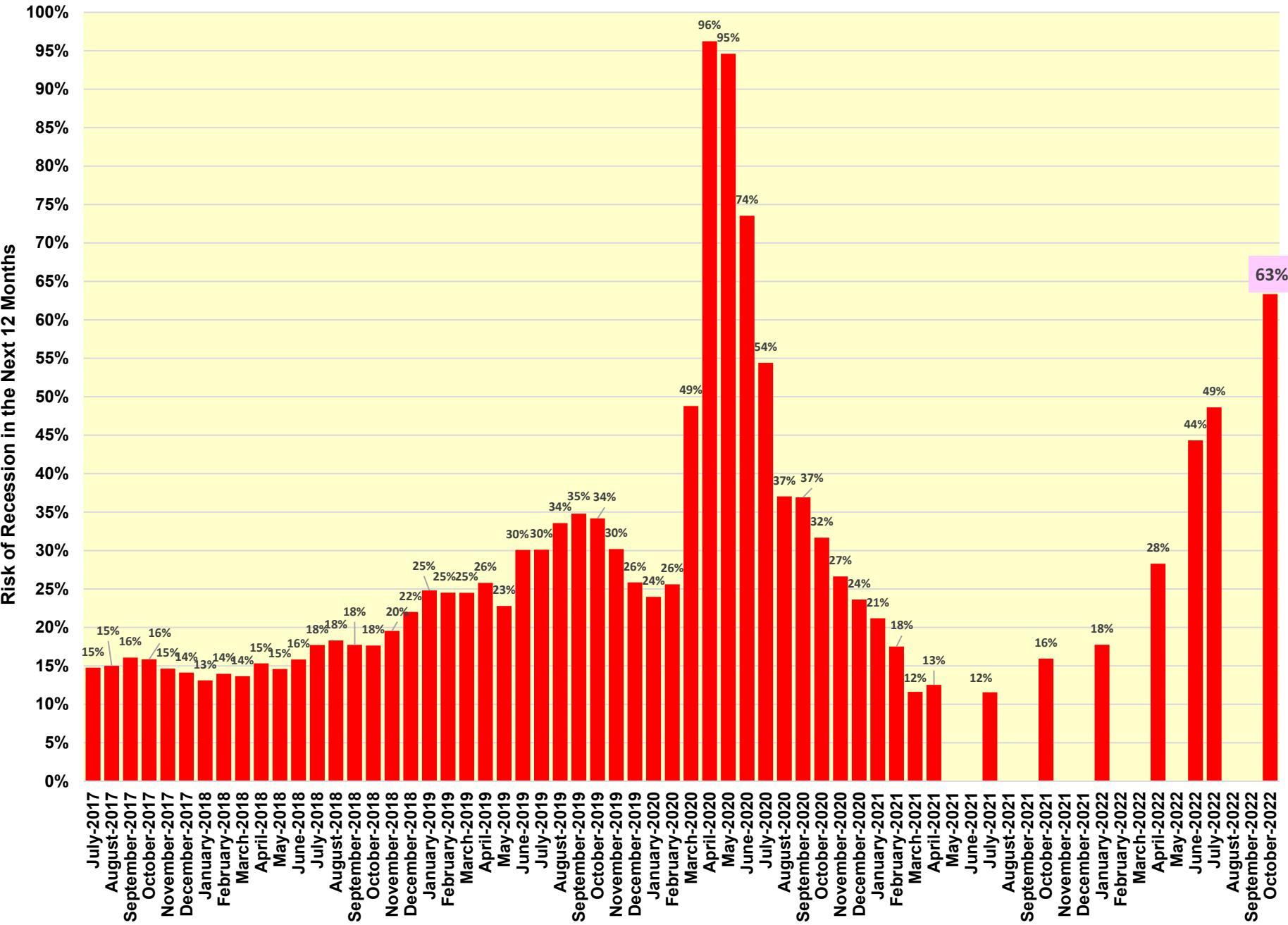


Fed Interest Rate Increases Hammer Credit-Sensitive Sectors to Slow Economy and Tame Inflation



Most Economists Now Expect a Recession in 2023

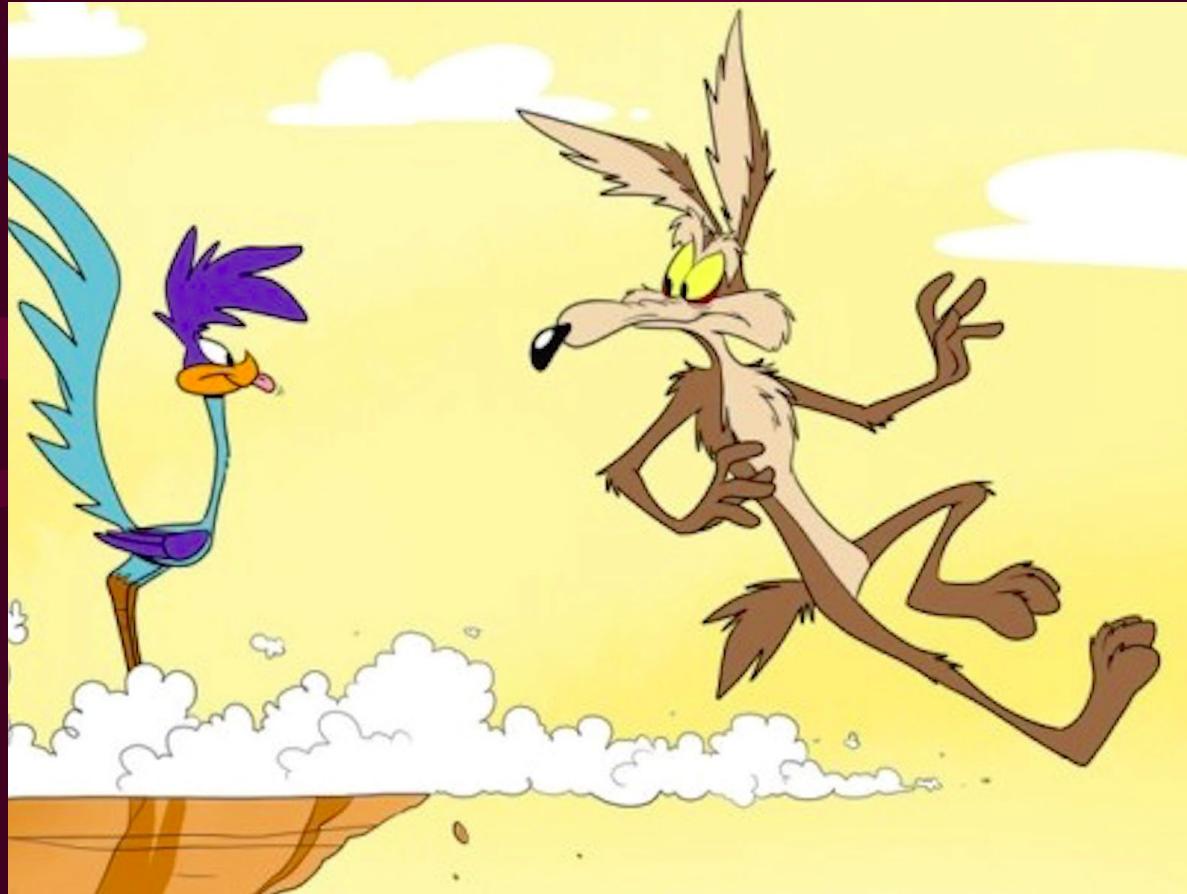
(Risk of Recession In the Next 12 Months - Source: Wall Street Journal Survey of 75 Economists)



To Date, Retained Personal and
Corporate Savings Have Blunted the
Impacts of Fed Tightening...

But How Long Can This Last?

"At a certain point consumers run out of their savings, and then you have a Wile E. Coyote kind of moment where consumption falls off. Once you get in to a negative situation, there's an avalanche aspect."



Tweet from Former Treasury Secretary and Harvard President, Lawrence Summers

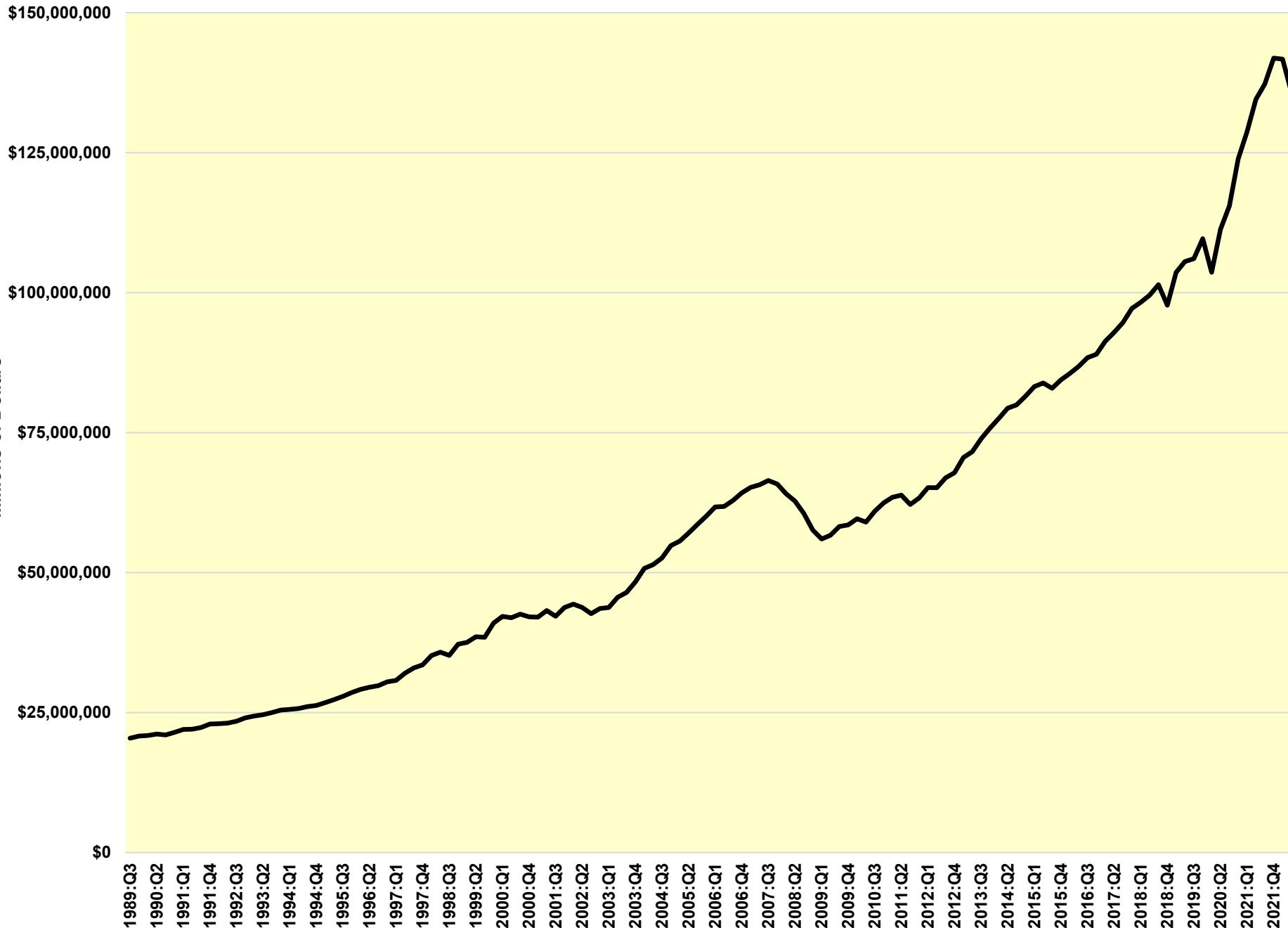
Savings Nosedive to Support Continued Consumer Spending

(Percent of Disposable Personal Income Saved, Source: U.S. Bureau of Economic Analysis)



Total Household Net Worth

(\$Millions, Source: Federal Reserve Board, Distribution of Household Wealth in the U.S since 1989)



Change in Household Net Worth: Pre-Pandemic to 2022Q2

By Wealth Percentile Group

Wealth Percentile Group		Top1	Next9	Next40	Bottom50	Total
	(\$ Nominal)					
Average HH Net Worth	2020:Q1	\$ 23,929,223	\$ 3,512,769	\$ 616,321	\$ 29,999	816,969
Average HH Net Worth	2022:Q2	\$ 32,687,647	\$ 4,313,015	\$ 759,798	\$ 68,362	1,053,148
Average HH Net Worth	%CH	36.6%	22.8%	23.3%	127.9%	28.9%
Average HH Net Worth	\$CH	\$ 8,758,423	\$ 800,246	\$ 143,477	\$ 38,363	\$ 236,179
	(% Percent)					
Percent Share of Net Worth	2020:Q1	29.3%	38.7%	30.2%	1.8%	100.0%
Percent Share of Net Worth	2022:Q2	31.0%	36.9%	28.9%	3.2%	100.0%
	(\$ Millions)					
Total Net Worth	2020:Q1	\$ 30,354,866	\$ 40,104,374	\$ 31,272,774	\$ 1,902,718	\$ 103,634,732
Total Net Worth	2022:Q2	\$ 42,134,344	\$ 50,035,271	\$ 39,175,173	\$ 4,405,938	\$ 135,750,726
Total Net Worth	%CH	38.8%	24.8%	25.3%	131.6%	31.0%
Total Net Worth	\$CH	\$ 11,779,478	\$ 9,930,897	\$ 7,902,399	\$ 2,503,220	\$ 32,115,994

Source: Federal Reserve Board, Distribution of Household Wealth in the U.S since 1989 and U.S. Census Bureau

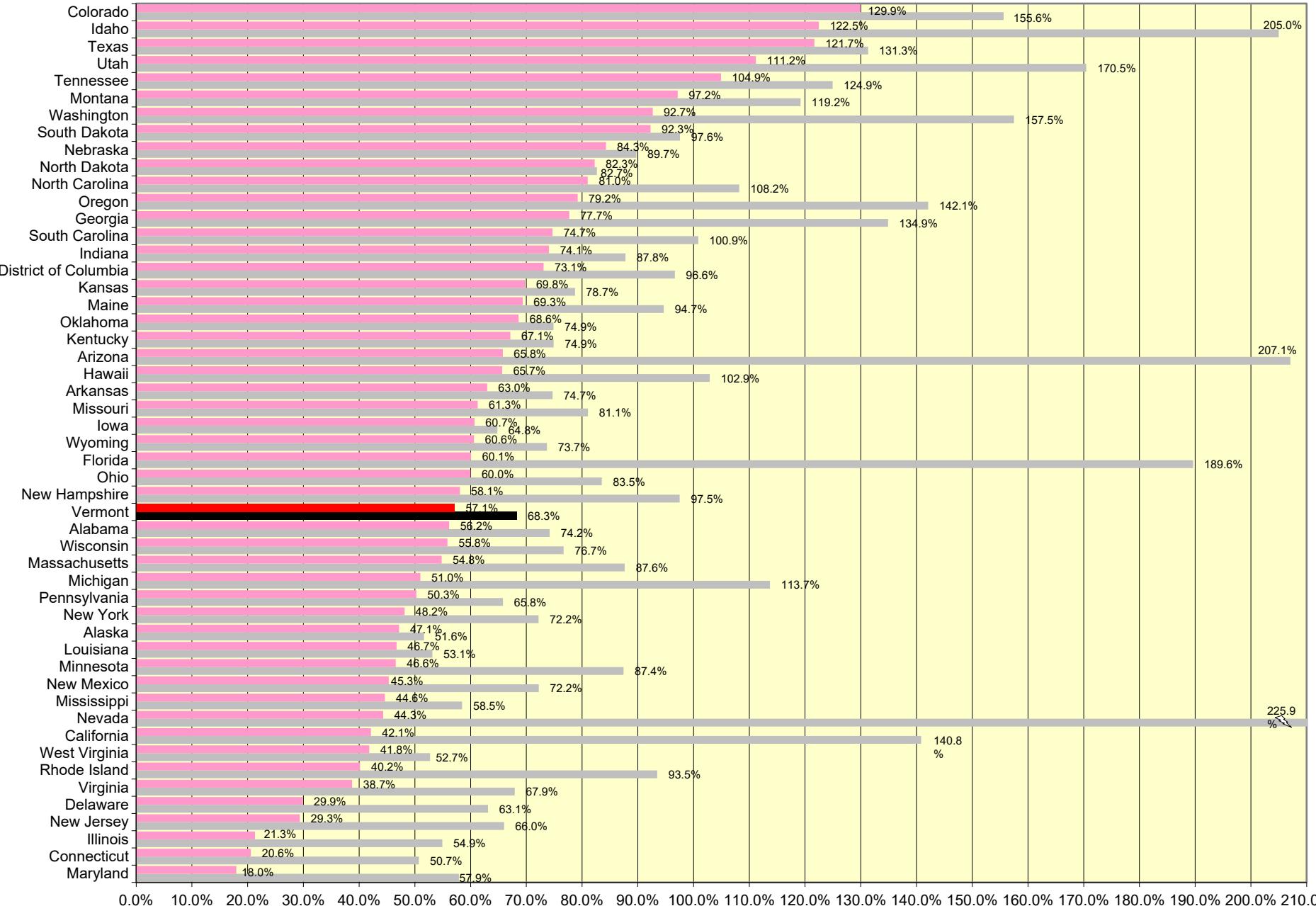
Interest Rate Hikes Disproportionally Affect Sectors Dependent Upon Lending - Like Real Estate

- While the initial effect of broad asset price appreciation, plentiful money and growing remote work has been to drive housing prices to record levels, the dependency of housing on lending will make it especially vulnerable to interest rate hikes in the coming year
- After some of the fastest growth on record over the past 2 years, and 14 straight quarters in which home prices grew month to month in at least 50 states, in the third quarter of 2022 there were price declines in 7 states, including some of the hottest markets (CA, CO, DC, MN, OR, UT and WA)
- Vermont has experienced its highest year-over-year growth ever in the past two quarters, and growth since the last cyclical peak is now higher than all NE states except NH (virtually tied) and ME
- Construction employment has yet to suffer from growing single family housing cancellations, as there is an enormous backlog of work on already started projects and substantial continuing demand in multi-family housing and other nonresidential building.
-

Real Estate Update: Housing Values Relative to Last Peak (pink) and Trough (grey)

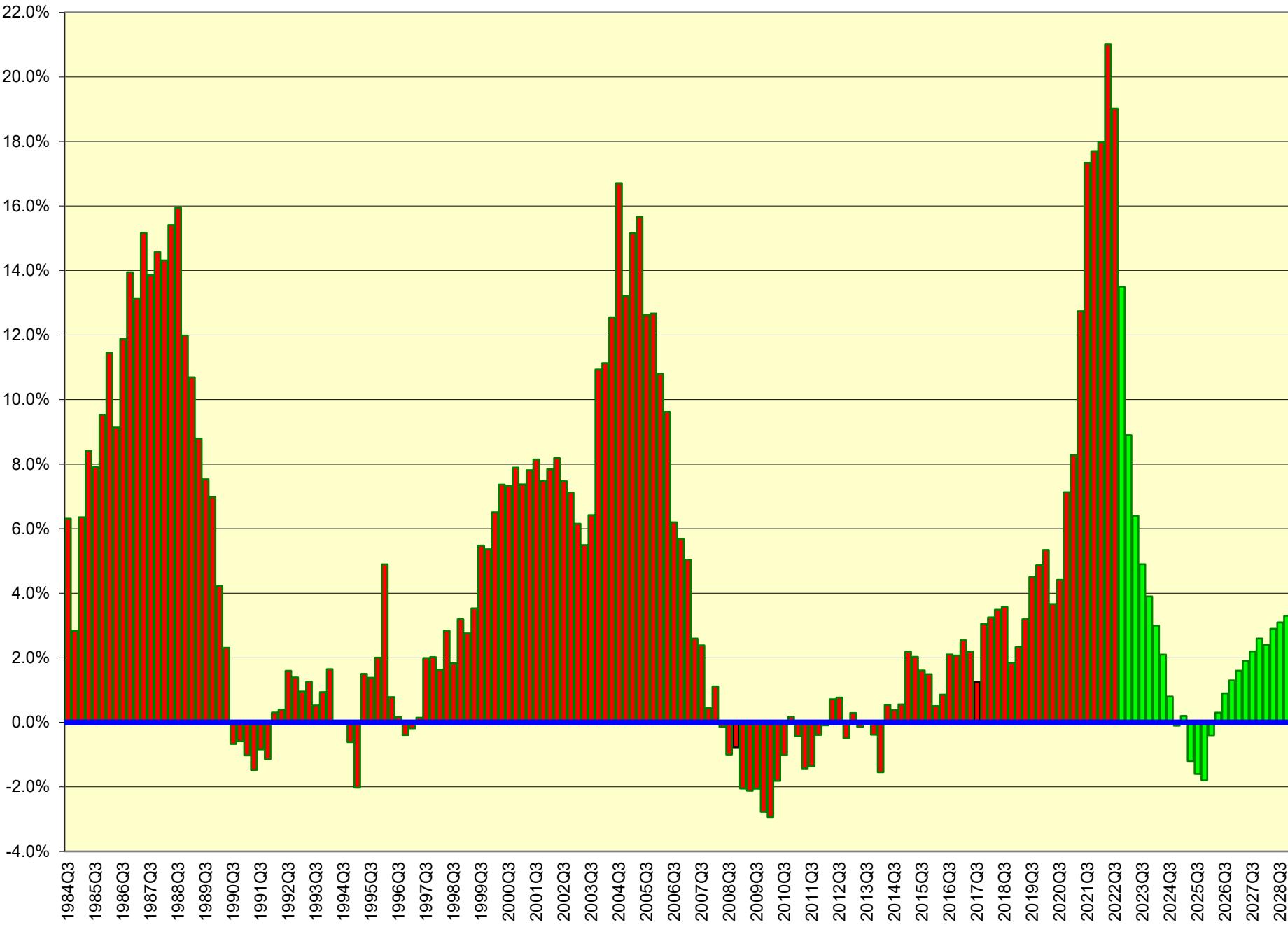
Percent Change, 2022Q3 vs. Peak Price by State Between 2005Q3 and 2009Q3 (Pink) and 2022Q3 vs. Trough Price Between 2009Q3 and 2014Q1 (Grey)

Source: FHFA House Price Index



Vermont is Now Experiencing Its Third Major Real Estate Cycle in the Past 40 Years

(FHFA Vermont Housing Price Index Percent Change Vs. Year Ago, Historical Data - Red, JFO Forecast Data - Green)



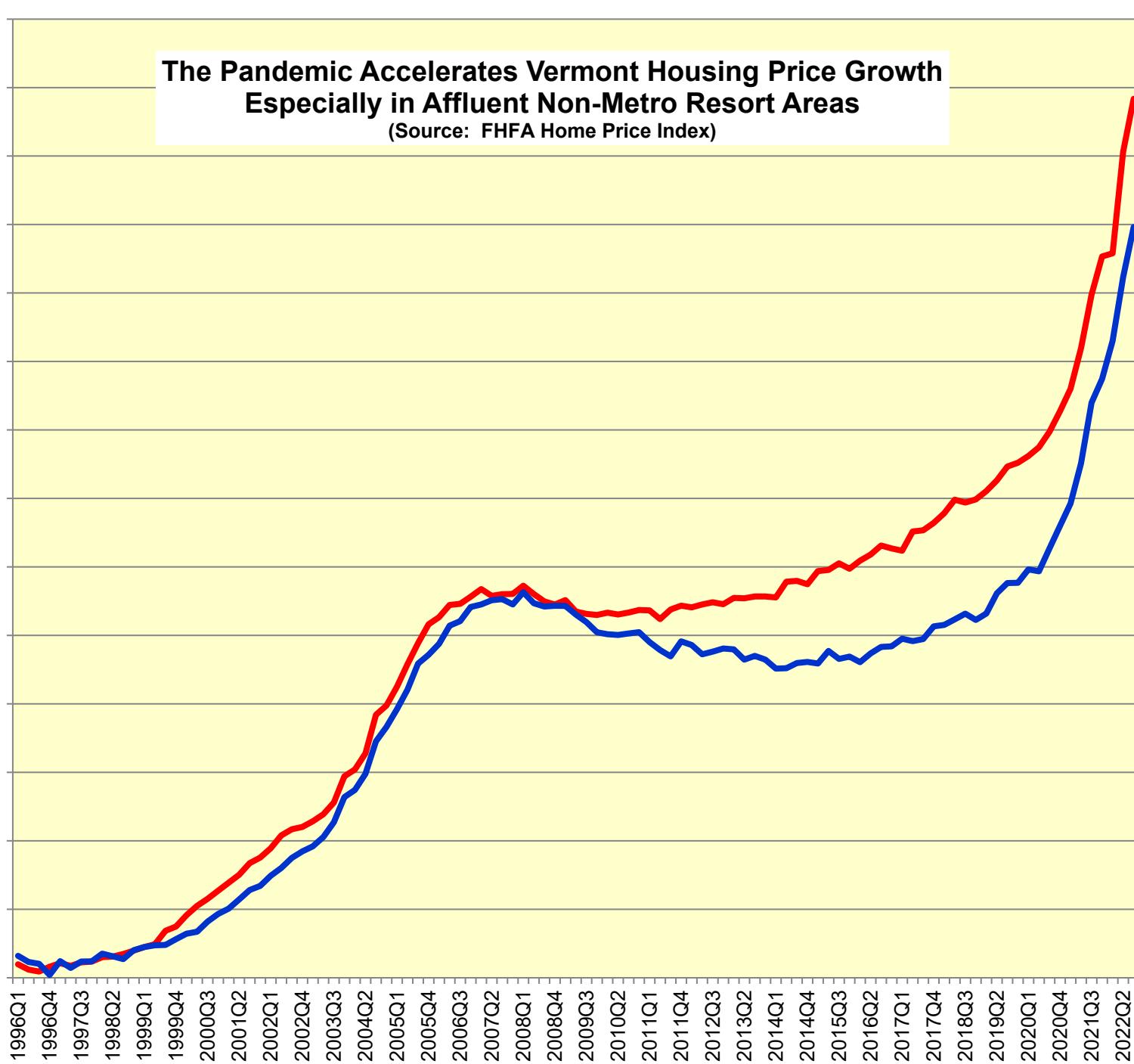
**The Pandemic Accelerates Vermont Housing Price Growth
Especially in Affluent Non-Metro Resort Areas**

(Source: FHFA Home Price Index)

Burlington
MSA
+66.3% since
prior peak

Non-MSA
+50.2% since
prior peak

FHFA Home Price Index, 1995Q1 = 100

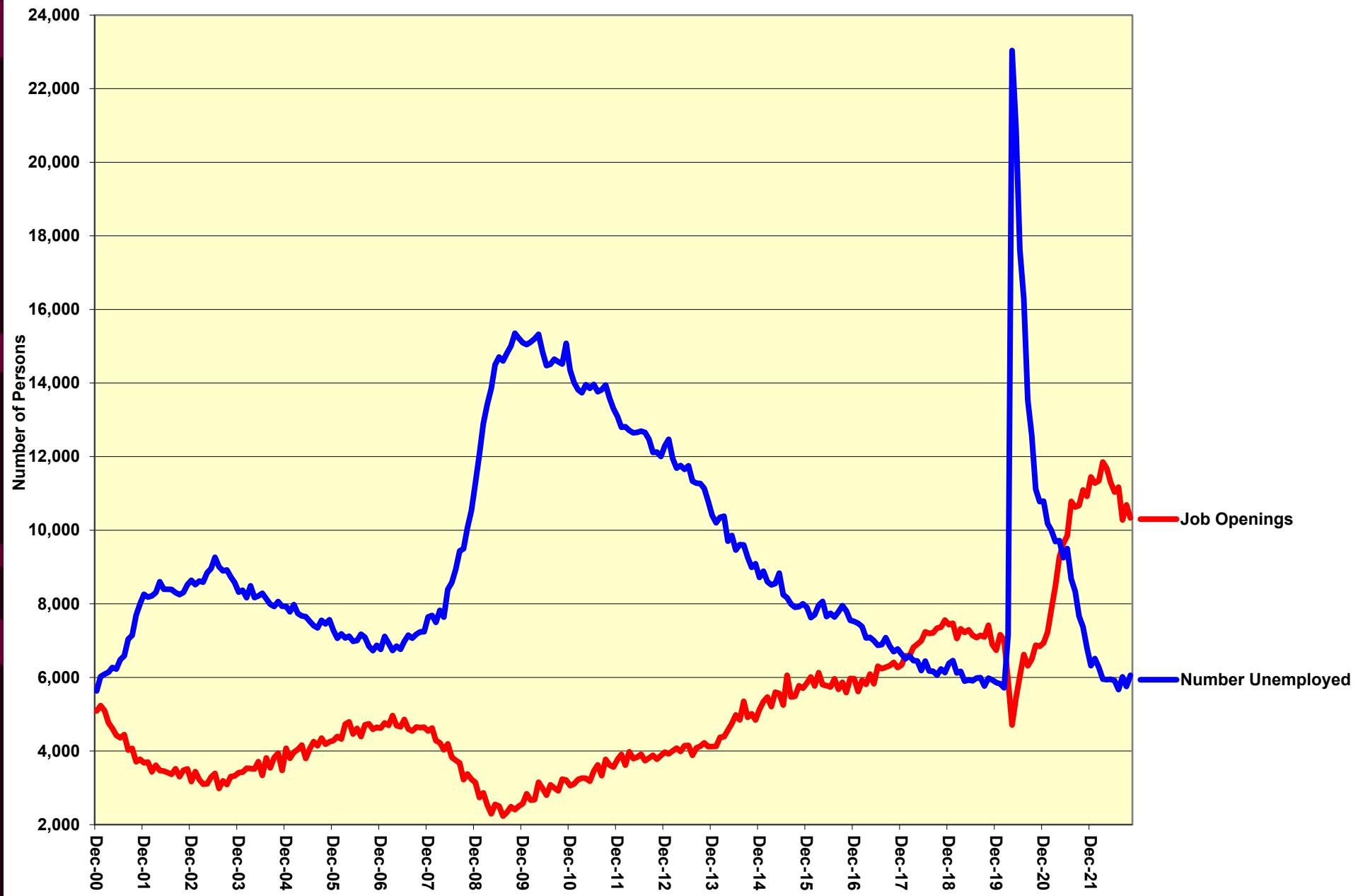


Labor Markets Remain Tight, Provoking Anxiety About Wage-Price Spirals

- Job growth has slowed, but is still solid and slightly above what the Fed is seeking
- Labor force participation has ticked up, but there are still more job openings than unemployed persons
- Wage growth continues to be above 5% - below headline inflation, but being baked into longer-term contracts
- Unionized wage settlements are much higher and often multi-year, with strikes threatened and imminent in key sectors
- There is something of a disconnect between employment data from the Household Survey vs. Payroll Employment, with the former being much weaker. It is unclear which is more reflective of reality, but generally, the Payroll data are more reliable and have larger sample sizes

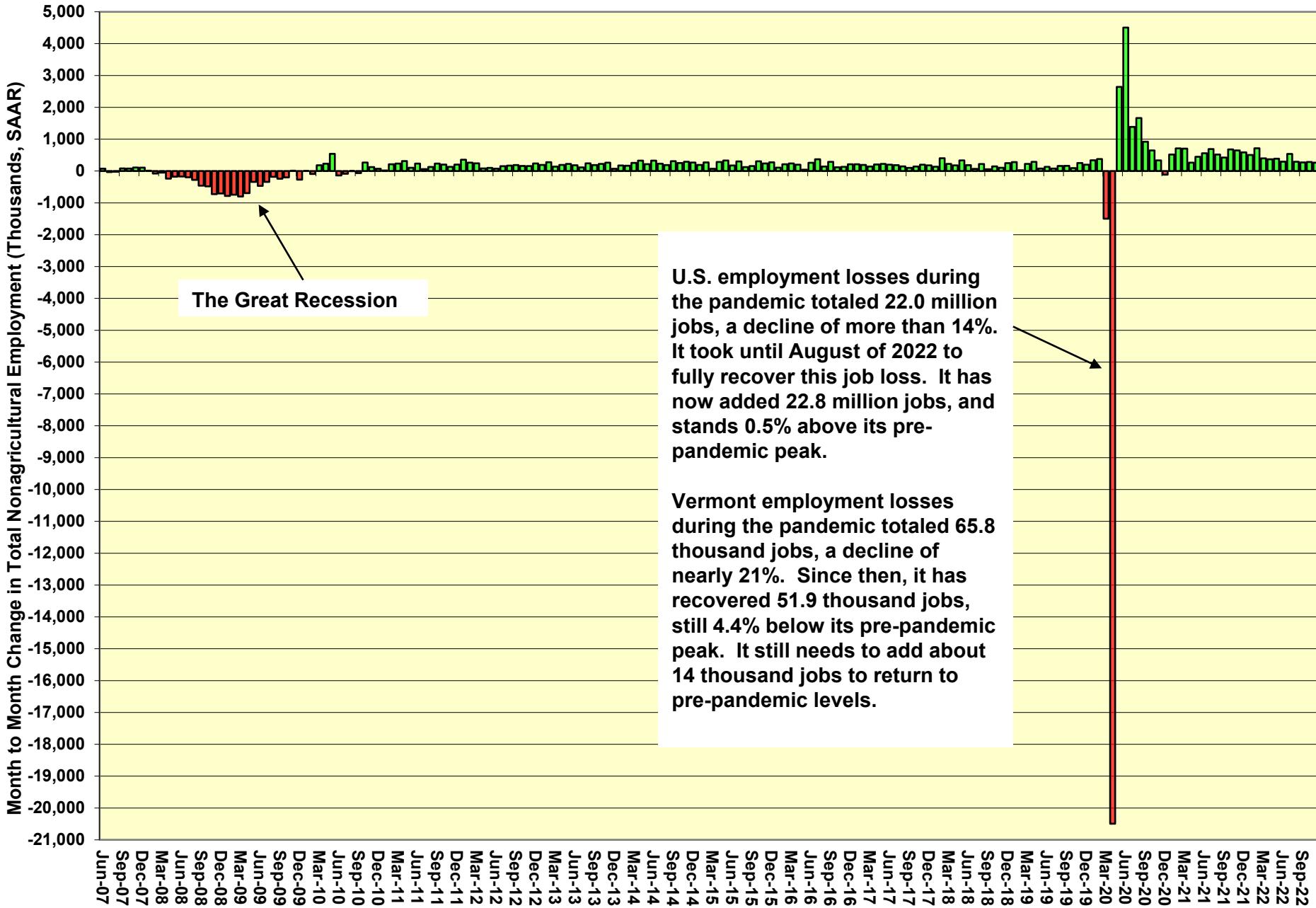
Labor Markets Remain Tight, As Job Openings Still Exceed the Number Unemployed

(Seasonally adjusted data, Source: Bureau of Labor Statistics, U.S. Department of Labor)



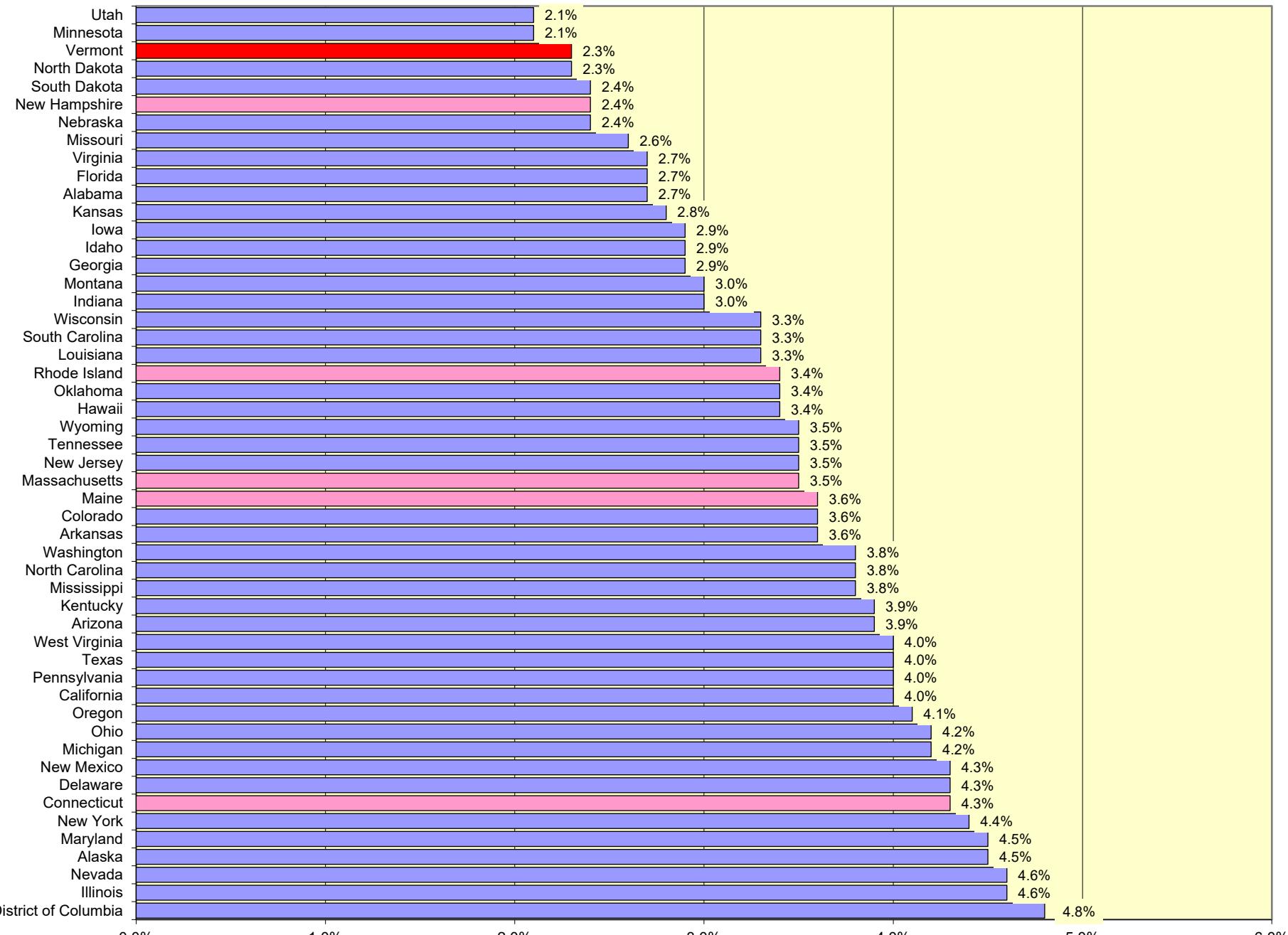
U.S. Employment Finally Exceeds Pre-Pandemic Levels

Monthly Change in Total U.S. Payroll Employment, Seasonally-Adjusted, Source: U.S. Bureau of Labor Statistics



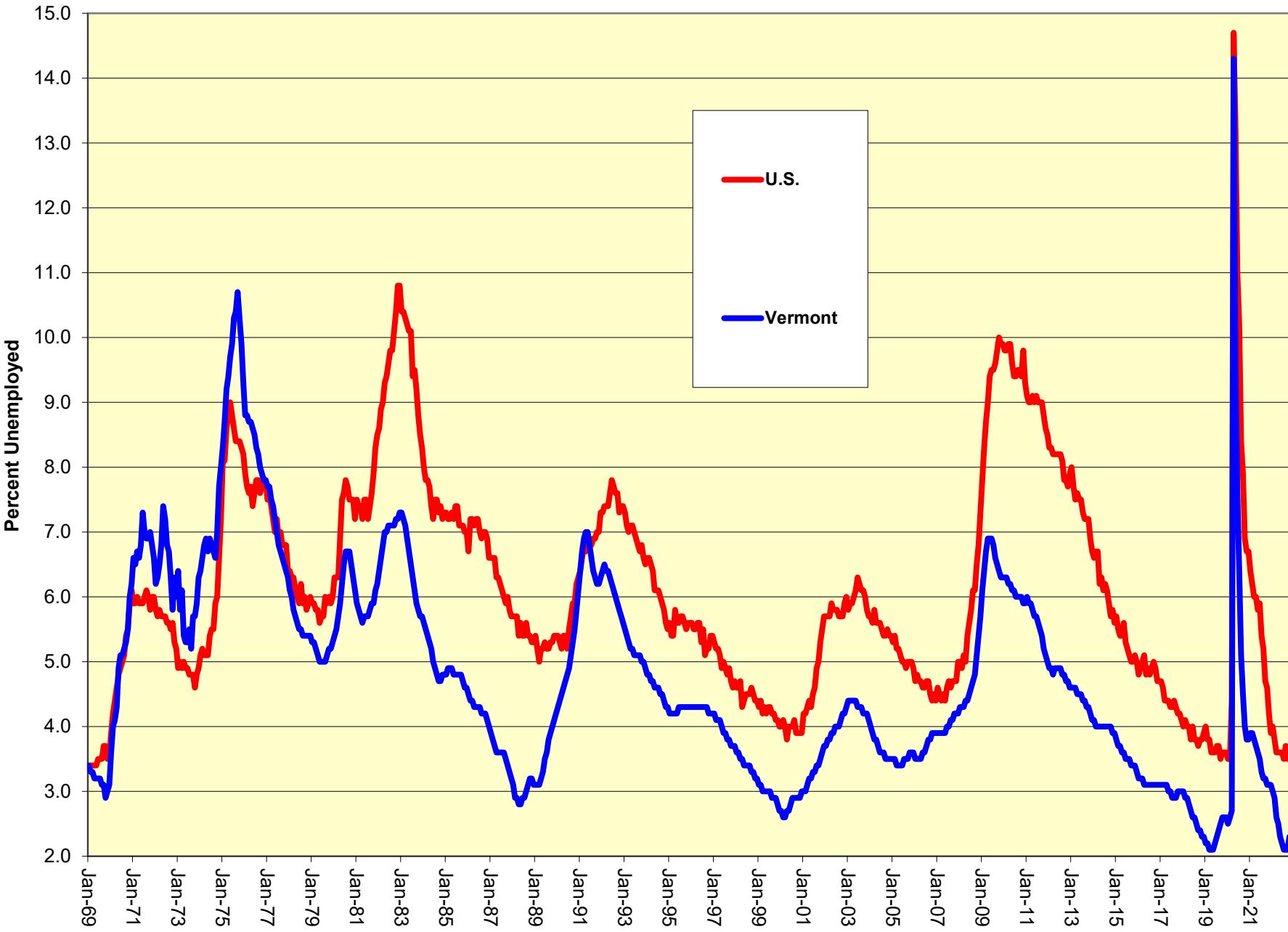
Unemployment Rate by State - October 2022

Seasonally Adjusted Data, Source: U.S. Bureau of Labor Statistics



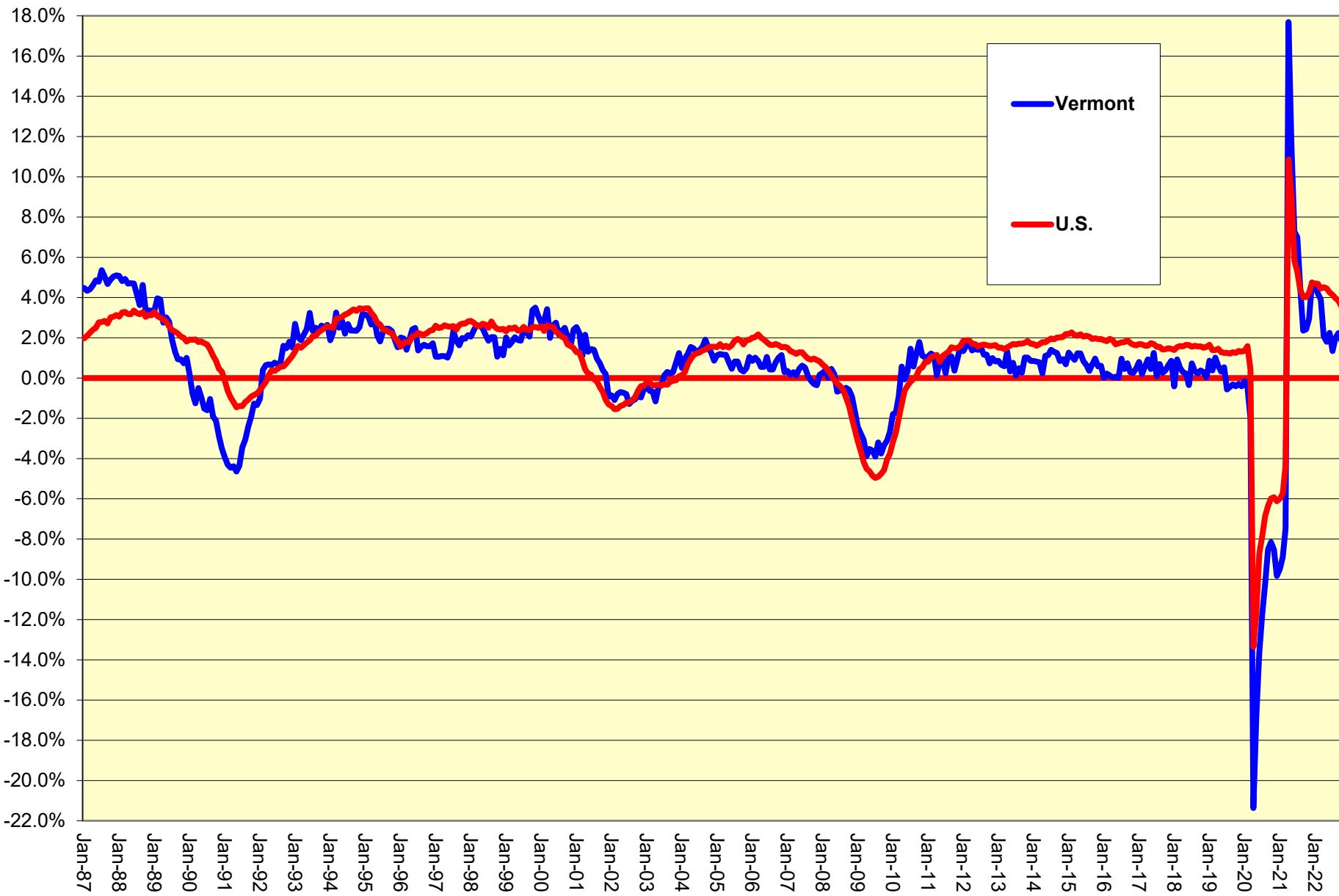
Unemployment Rates Match Pre-Pandemic Levels

(Seasonally adjusted data, Source: Bureau of Labor Statistics, U.S. Department of Labor)



Employment Growth in Vermont Continues to Lag U.S.

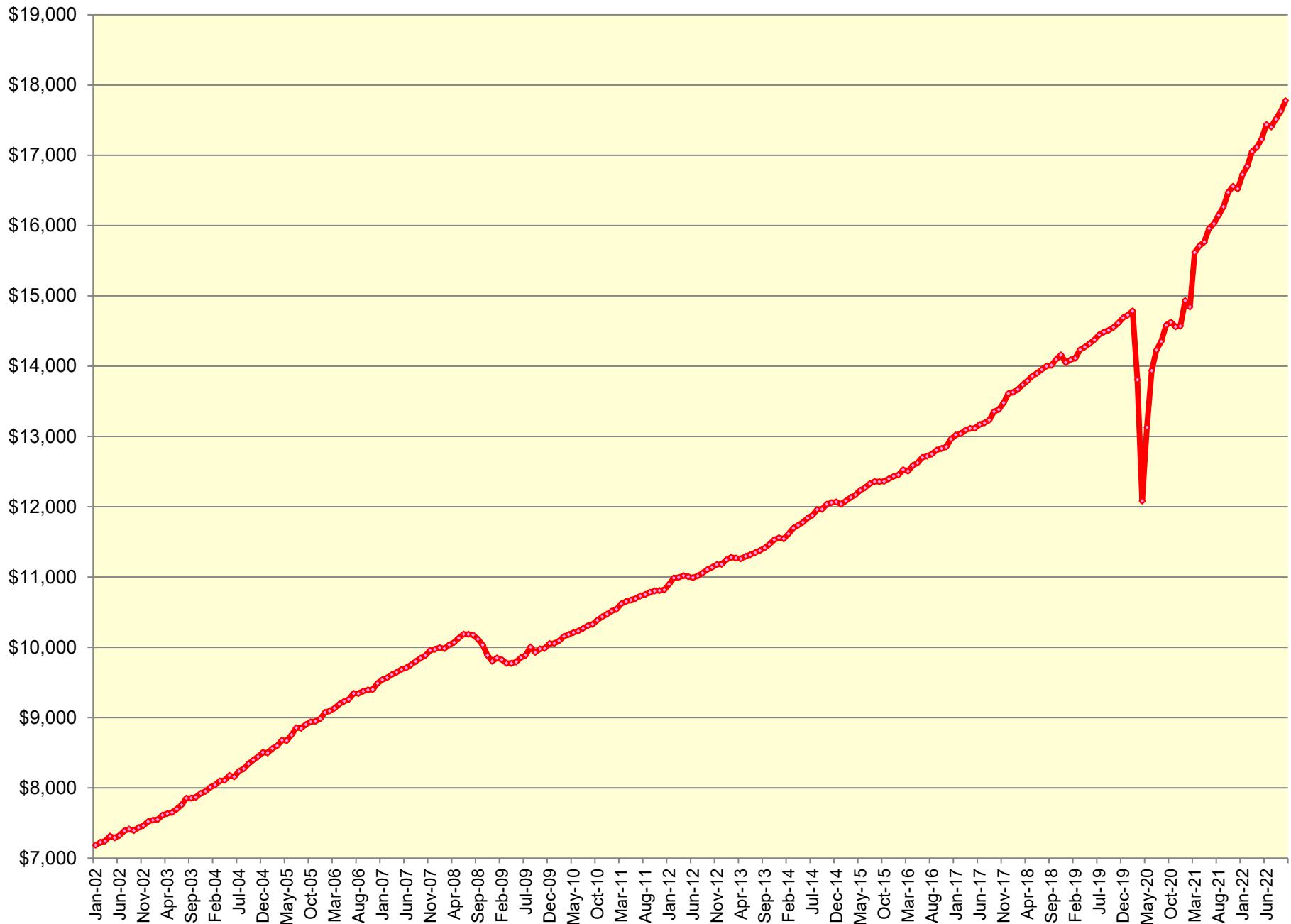
Total Nonagricultural Employment, Percent Change vs. Year Ago, Seasonally Adjusted Data

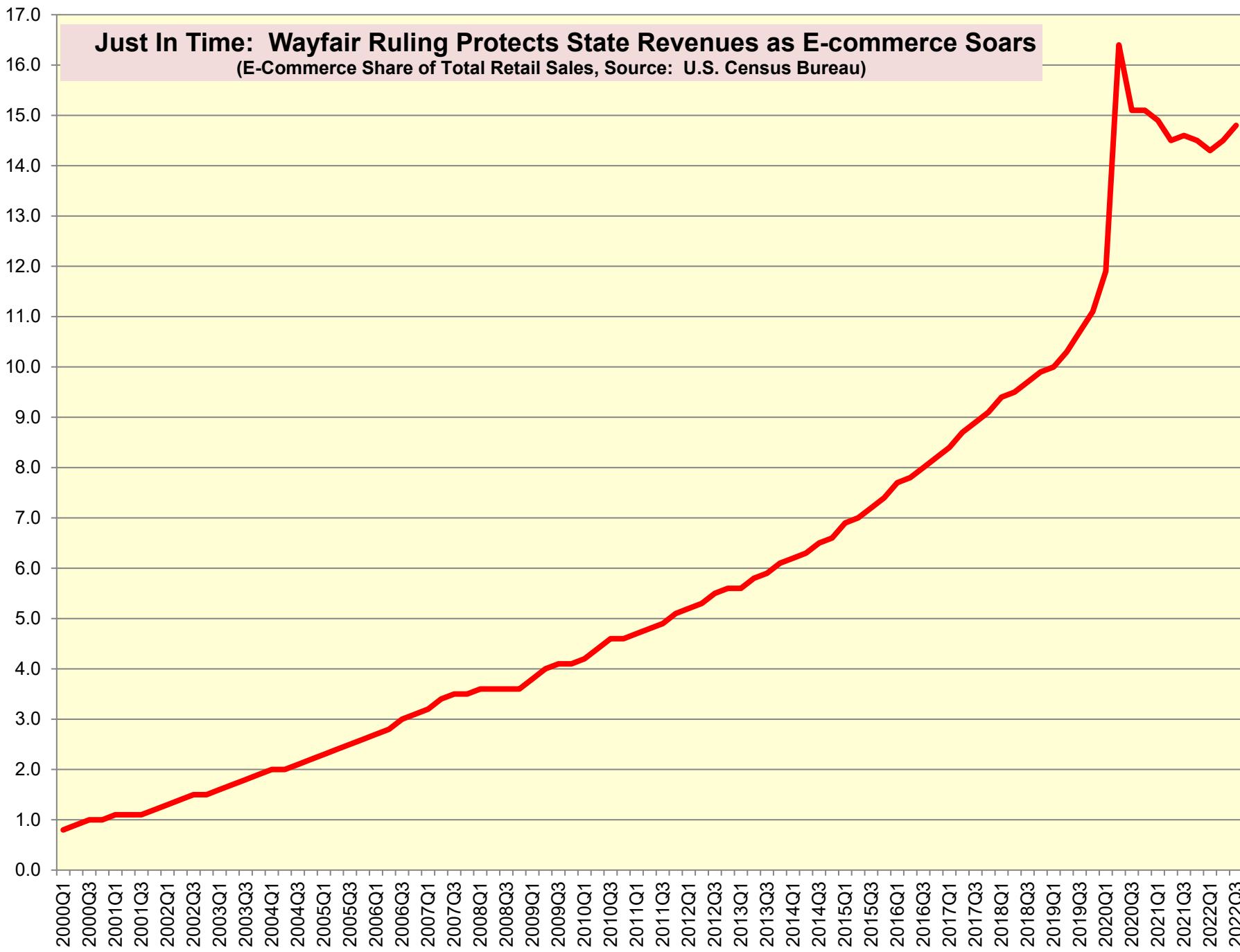


Source: Bureau of Labor Statistics, U.S. Department of Labor

Consumer Demand Remains Unabated

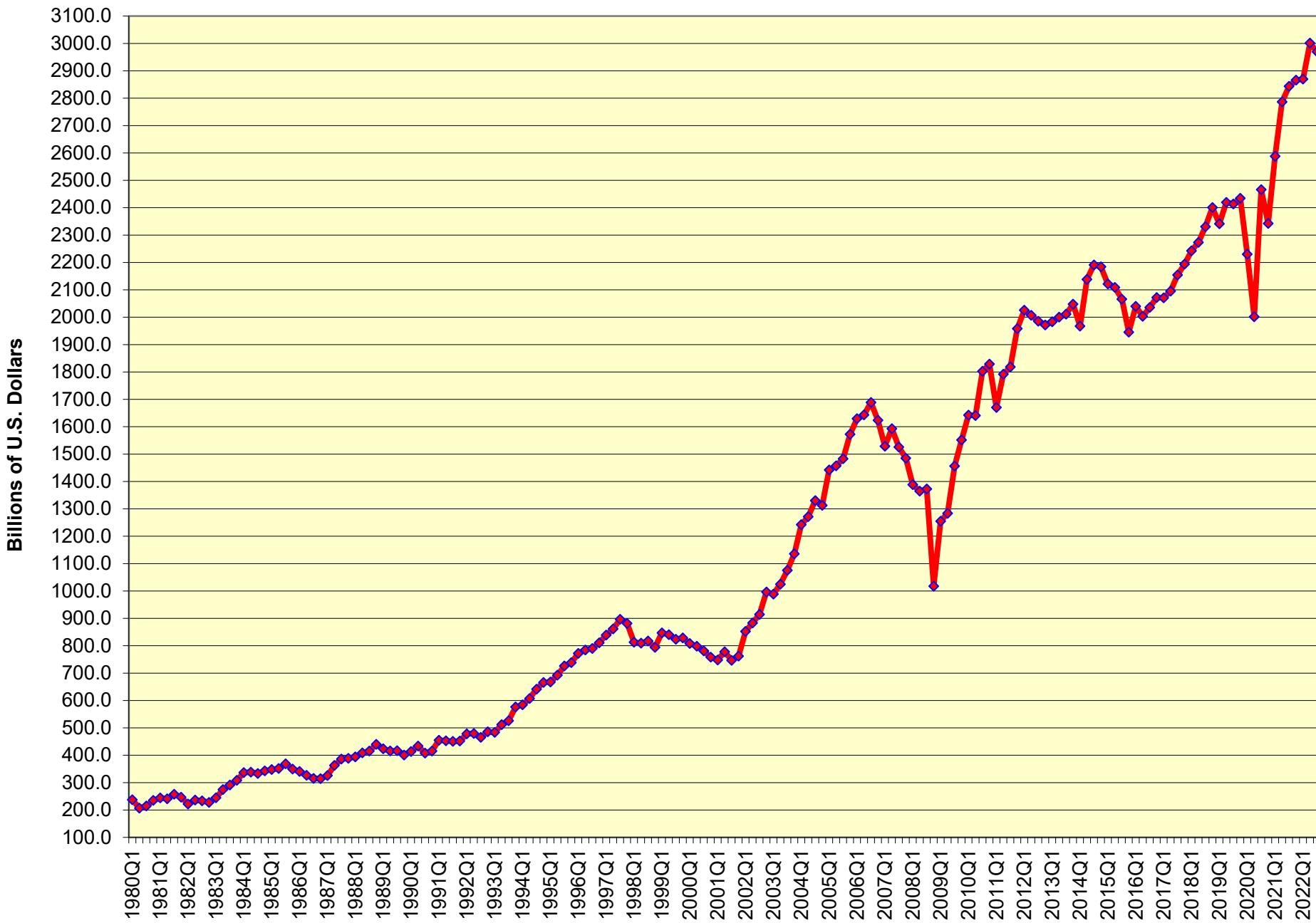
(Total U.S. Personal Consumption Expenditures Source: U.S. BEA, Billions of Nominal Dollars, SAAR)



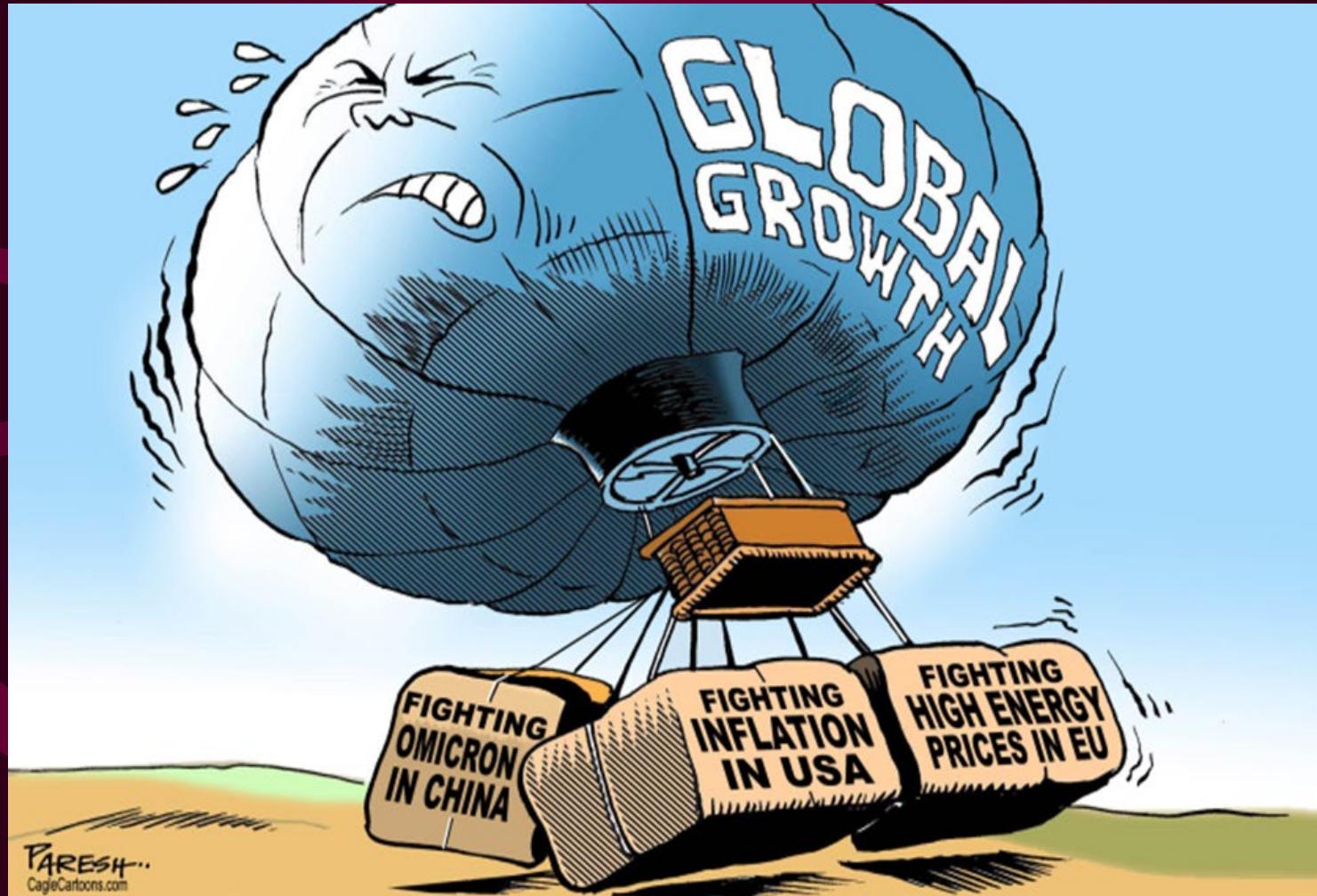


Corporate Profits Tick Down in 2022Q3 from Record High

(U.S. corporate profits with inventory valuation and capital consumption adjustment; Source: US BEA)



And I've Hardly Mentioned the Pandemic...



...Or Crypto



For Further Information, Contact The Vermont Joint Fiscal Office or:

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