Economic Outlook and Trends Through July 2022

United States and Colorado

cber.co
Colorado-based Business and Economic Research
Prepared
August 22, 2022
Storm clouds on the horizon

Economic Outlook and Trends

Purpose and Summary

The purpose of this chartbook is to review the performance of the Colorado and U.S. economies for the first seven months of 2022. The number and magnitude of the headwinds have increased as the year has progressed.

Through the first half of 2022, the strength of the economic activity and the labor market momentum exceeded the headwinds. That has changed in the second half of the year.

The economy will likely slip into a shallow recession by the end of 2022 or early 2023. In addition to the near-term slowdown, there will be weak economic activity and job growth in 2023.

Stay tuned!

The effect of the momentum and headwinds will be discussed in the following areas.

- U.S. Real GDP
- U.S. and Colorado Employment
- Momentum vs. Headwinds
- Headwinds
- Summary of Colorado Economic and Employment Outlook and Trends

Highlights – Momentum vs. Headwinds

This year, the economy has been in a struggle between momentum and headwinds. Recently, the headwinds gained the upper hand. The economy will likely slip into a shallow recession or period of weak economic activity and job growth in late 2022 or early 2023.

Momentum
There has been stronger than expected, broad-based growth in the labor market until recently. Here is what has changed.

The rate hikes by the Fed have caused the housing, construction, and financial markets to slow – and in some regions, they have entered a recession.

Companies are struggling to find workers because the industry and occupational unemployment rates are so low.

Consumers have reduced their level of personal savings, and they have increased their credit card consumption.

Some sectors of retail are showing weaknesses.

Headwinds
Inflation and rising interest rates are at the top of the long list of headwinds that have disrupted economic activity and the labor market in 2022. They have unfortunately become a political football.

The Federal Reserve has the unenviable task of containing inflation while dealing with other challenges such as supply chain disruptions, COVID-19 variants, labor shortages, low unemployment rates, policies related to the Eastern European conflict, overspending by Congress (poor fiscal policy), and political sideshows associated with the mid-term elections.

Economic Outlook and Trends

U.S. Real Gross Domestic Product

The Conference Board U.S. Economic Forecast projects real GDP growth will slip to 1.3% in 2022, down from 5.7% in 2021. Real disposable income, real consumer spending, and construction (residential and nonresidential) were also revised downward.

Inflation and rising interest rates will cause the economy to experience a slowdown or a shallow recession in late 2002 or early 2003.

Analysis of the recently passed healthcare and energy legislation indicates the legislation will have little impact on inflation. Inflation will decrease in 2023 but remain above the Fed's targeted rate for an extended period.

U.S. Real GDP Growth

The Conference Board Forecast (August 10, 2022)

Real GDP and Economic Growth

The latest Conference Board forecast points to real GDP growth of 1.3% for 2022. Personal consumption will deteriorate as the year progresses. Residential and nonresidential investment will decline as Fed Fund rates are raised to combat high inflation. The U.S. will enter a slowdown or shallow recession at the end of 2022 or in early 2023.

Other Economic Factors

The labor market reflected strong job growth in the first seven months of 2022. There will be weaker growth in the final months of 2022, continuing into 2003. The U.S. unemployment rate will increase slightly to 3.7% in 2023. PCE inflation will be 5.8% in 2022. Inflation will taper off at the end of 2022 and into 2023. Next year the PCE will be 3.0%.

Conference Board US Real GDP Growth Forecast

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2021	2022	2023
Real GDP (YoY)	6.3%	6.7%	2.3%	6.9%	-1.6%	-0.9%	0.0%	-0.6%	5.7%	1.3%	0.2%
Real Disposable Income	54.7%	-29.1%	-4.1%	-4.5%	-7.8%	-0.5%	-1.0%	-2.0%	2.2%	-5.8%	-0.8%
Real Personal Consumption	11.4%	12.0%	2.0%	2.5%	1.8%	1.0%	0.5%	-0.5%	7.9%	2.1%	0.0%
Residential Investment	13.3%	-11.7%	-7.7%	2.1%	0.5%	-14.0%	-10.0%	-5.0%	9.2%	-5.5%	-4.7%
Nonresidential Investment	12.9%	9.2%	1.6%	2.9%	10.0%	-0.1%	-0.6%	--1.1%	7.4%	3.6%	-0.6%
Total Gov't. Spending	4.2%	-2.0%	0.9%	-2.6%	-2.9%	-1.9%	1.0%	2.5%	0.5%	-1.3%	2.8%
Exports	-2.9%	7.6%	-5.3%	22.4%	-4.8%	18.0%	8.1%	2.0%	4.5%	6.8%	3.0%
Unemployment Rate	6.2%	5.9%	5.1%	4.2%	3.8%	3.6%	3.6%	3.6%	5.4%	3.6%	3.7%
PCE Inflation (%Y/Y)	1.8%	3.9%	4.3%	5.5%	6.3%	6.5%	6.3%	4.2%	3.9%	5.8%	3.0%
Core PCE Inflation (%Y/Y)	1.7%	3.4%	3.6%	4.6%	5.2%	4.8%	4.6%	4.4%	3.3%	4.8%	2.9%

Source: The Conference Board and cber.co.

Source: The Conference Board, https://www.conference-board.org/publications/Economic-Forecast-US, cber.co.

Economic Outlook and Trends

U.S. and Colorado Employment

Through the first seven months of 2022, the U.S. and Colorado labor markets have exceeded expectations. As the U.S. and Colorado unemployment rates have declined, there have been improvements in the employment-to-population ratios.

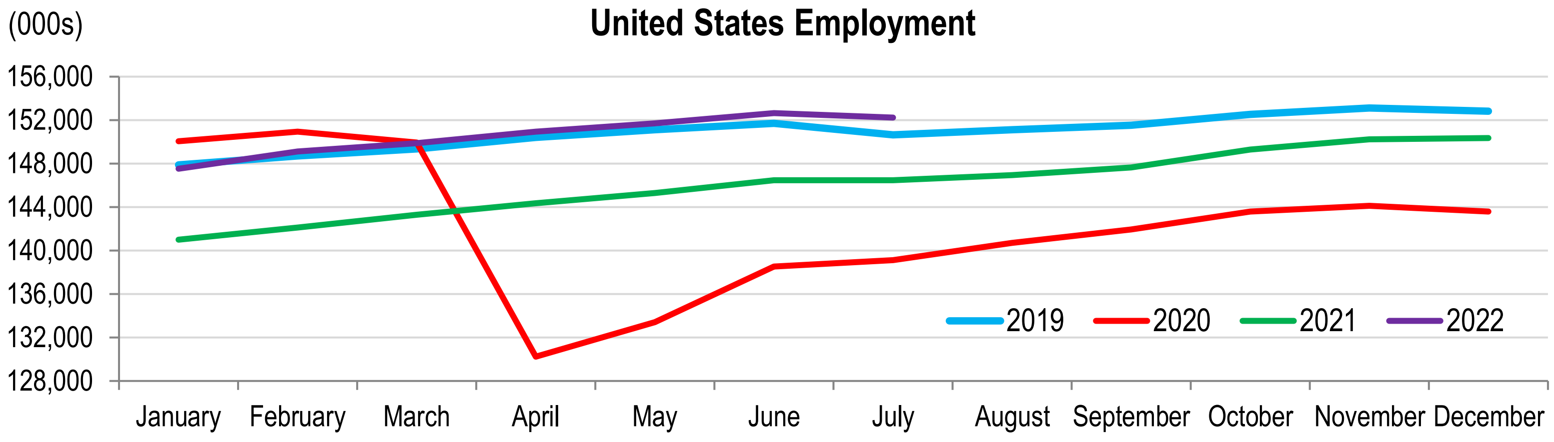
The number of job openings, separations, and quits is near record levels.

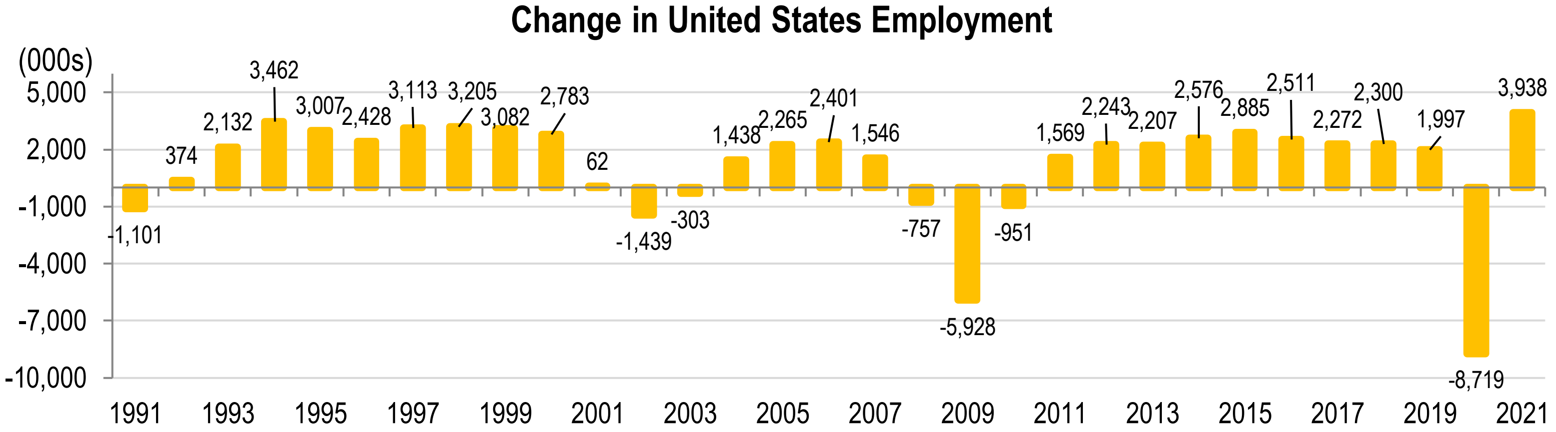
The labor shortages will continue as long as U.S. and Colorado unemployment rates remain low. There are not enough workers to fill available jobs.

Unlike past recessions, the Colorado labor market and economy are not among the top performing states in the overall economy. Even without the top ranking many good things are happening in the state economy.

Employment and Change in Employment

United States





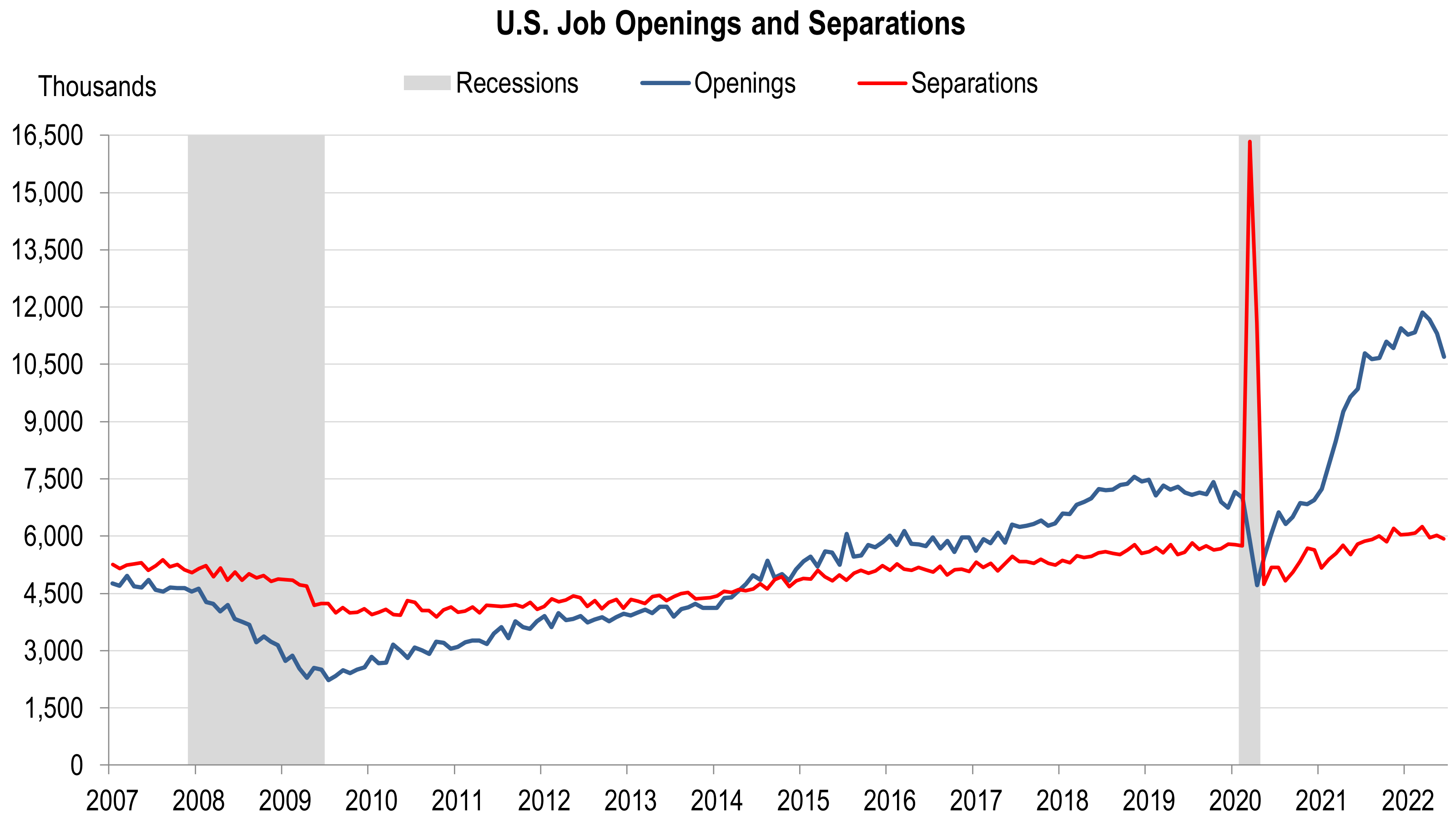
Source: Bureau of Labor Statistics, NSA cber.co.

Average annual U.S. employment (NSA) through the first seven months of 2022 (purple) is about 5.8 million more than the same period in 2021 (green). By comparison, average U.S. employment through seven months of 2022 is about 600,000 more than the same period in 2019 (blue).

This year there has been broad-based employment growth, a low unemployment rate, and a severe shortage of workers. Wage growth has been solid in many occupations and industries but less than the inflation rate.

Job growth will increase slower in the second half of 2022 and remain weak into 2023.

Job Openings and Separations
United States



Source: BLS, SA, cber.co.

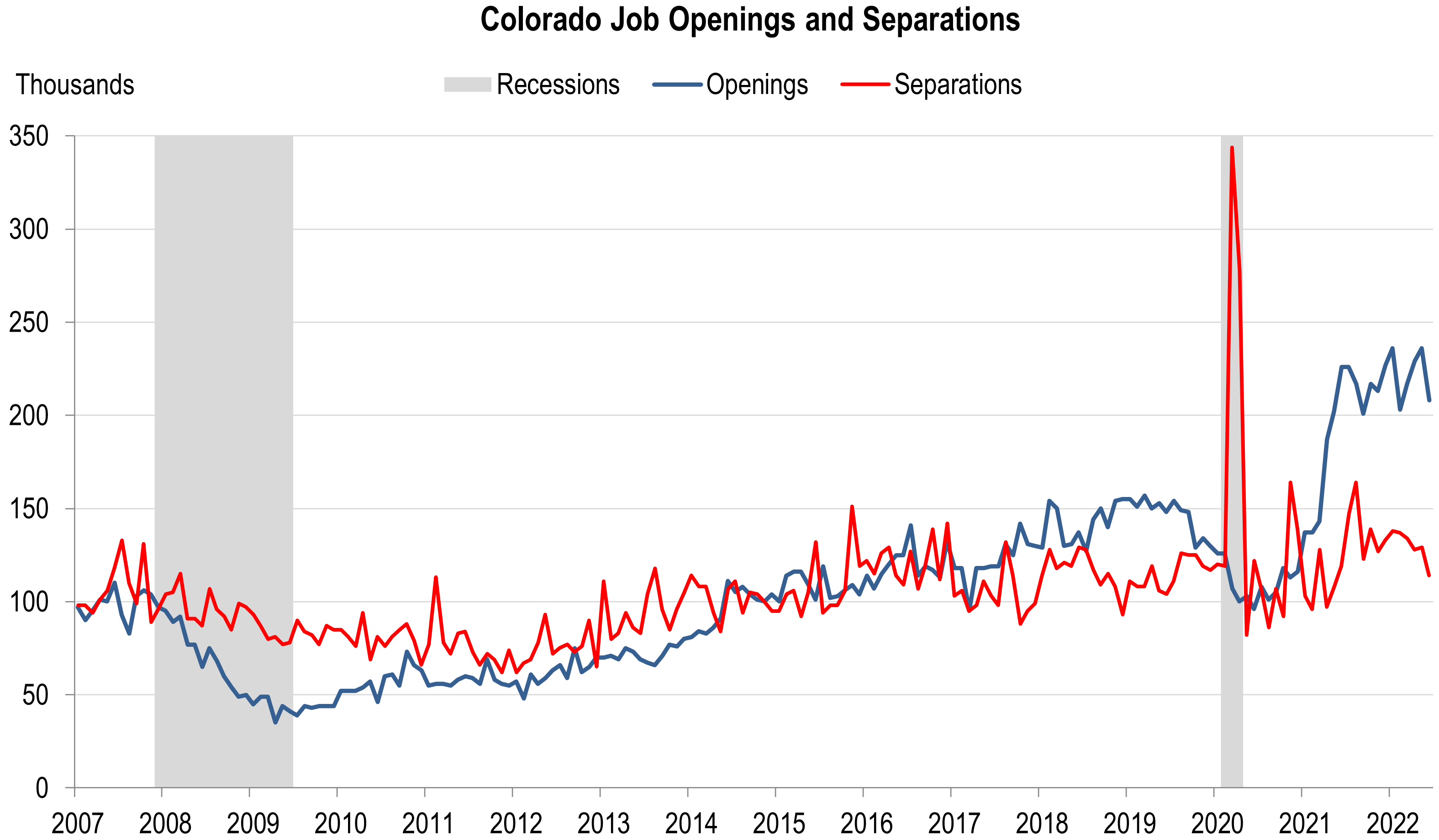
Openings

The number of U.S. job openings (blue) bottomed out in 2009. After the Great Financial Crisis, openings steadily increased over the next decade and leveled out in 2019. COVID-19 lockdown policies caused the decline in 2020. In July 2021, there were 10.7 million job openings. They have since been at or above that level. In June 2022, there were 10.7 million openings.

Separations

The June 2022 data reflected about 5.9 million separations (red). This level is slightly greater than pre-pandemic levels. Boomers retired, and other workers used the strong labor market to switch companies, increase their compensation, or improve their work environment. Since September 2021, at least 70% of the separations have been quits.

Job Openings and Separations
Colorado



Source: BLS, cber.co.

Openings

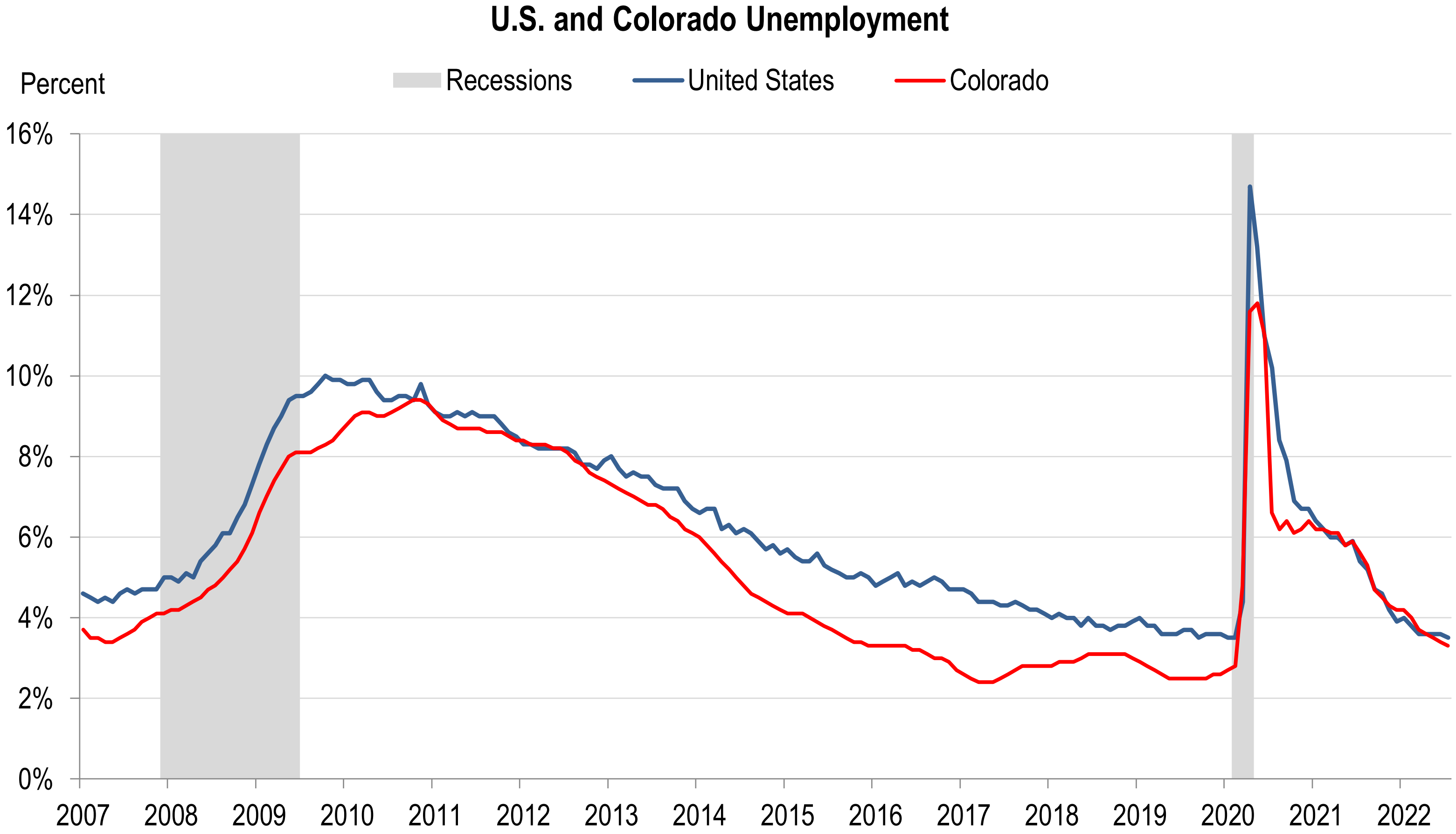
The number of Colorado job openings (blue) bottomed out in 2010 at about 35,000. After the Great Financial Crisis, openings steadily increased over the next decade. They peaked in the summer of 2019, then declined in March 2020 because of COVID-19 lockdown policies. They bottomed out in June 2020 at 96,000. In June 2022, there were 208,000 job openings.

Separations

The June 2022 data reflected about 114,000 separations (red). This level is similar to pre-pandemic levels. Since September 2021, at least 70% of the separations have been quits.

Unemployment Rate

United States and Colorado



Source: BLS, cber.co.

Unemployment Rate

The Colorado and U.S. unemployment rates were similar in 2021 and 2022. The July unemployment rate was 3.3% for Colorado and 3.5% for the U.S. There will continue to be a shortage of workers despite the low unemployment rate.

Annual Unemployment Rate

Year	United States	Colorado
2016	4.9%	3.1%
2017	4.4%	2.6%
2018	3.9%	3.0%
2019	3.7%	2.6%
2020	8.1%	6.9%
2021	5.4%	5.2%
2022	3.5%	3.5%

Unemployment Rates by States
July 2022

Unemployment Rate <2.8%

Rank	State	Rate
1	Minnesota	1.8%
2	Nebraska	2.0%
3	New Hampshire	2.0%
4	Utah	2.0%
5	Vermont	2.1%
6	North Dakota	2.3%
7	South Dakota	2.3%
8	Kansas	2.4%
9	Iowa	2.5%
10	Missouri	2.5%
11	Alabama	2.6%
12	Idaho	2.6%
13	Indiana	2.6%
14	Florida	2.7%
15	Montana	2.7%
16	Rhode Island	2.7%
17	Virginia	2.7%

Unemployment Rate Between 2.7% and 3.7%

Rank	State	Rate
18	Georgia	2.8%
19	Maine	2.8%
20	Oklahoma	3.0%
21	Wisconsin	3.0%
22	Wyoming	3.0%
23	South Carolina	3.2%
24	Arizona	3.3%
25	Arkansas	3.3%
26	Colorado	3.3%
27	Tennessee	3.3%
28	North Carolina	3.4%
29	Massachusetts	3.5%
30	Oregon	3.5%
31	Louisiana	3.6%
32	Mississippi	3.6%

In July 2022, the U.S. unemployment rate was 3.5%.

Thirty states had unemployment rates lower than 3.6% (green).

Colorado was tied with three other states as the 24th best state with a 3.3% unemployment rate. Colorado is ranked 34th in the number of unemployed.

The states with the largest labor forces are CA, TX, FL, NY, PA, IL, OH, GA, NC, and MI. About 53% of the U.S. labor force works in these ten states. The biggest states often have higher unemployment rates.

Unemployment Rate is 3.7% or Greater

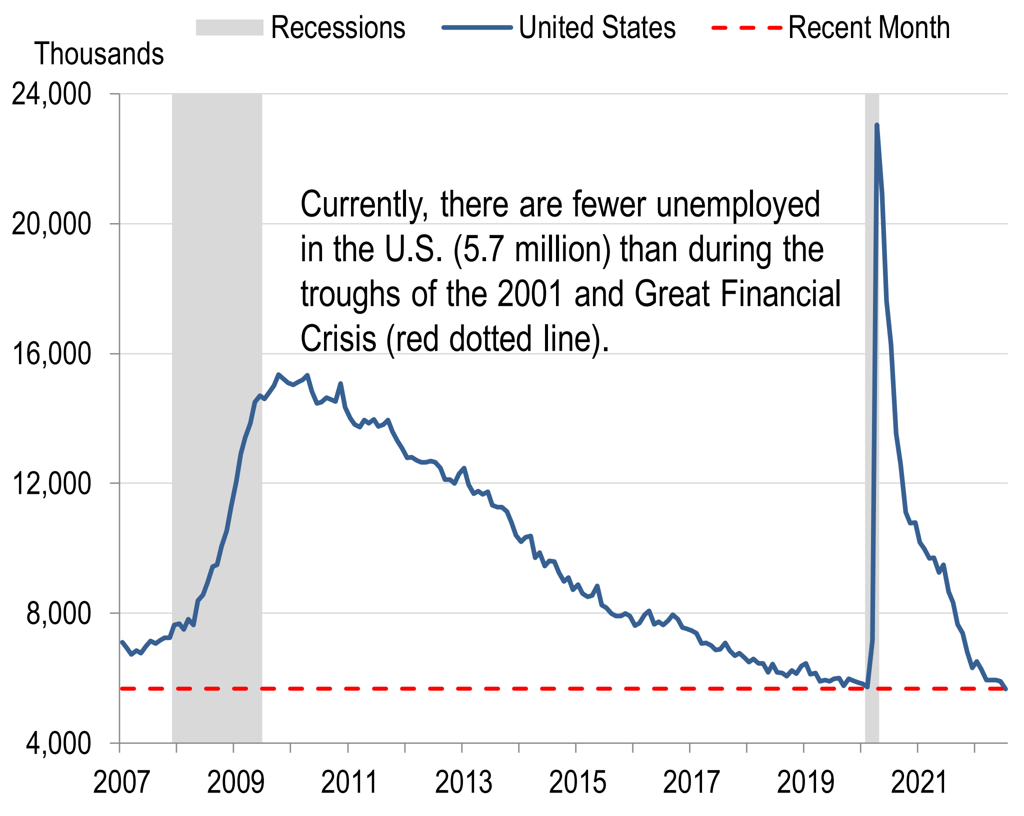
Rank	State	Rate
33	Connecticut	3.7%
34	Kentucky	3.7%
35	New Jersey	3.7%
36	Washington	3.7%
37	West Virginia	3.7%
38	California	3.9%
39	Maryland	3.9%
40	Ohio	3.9%
41	Texas	4.0%
42	Hawaii	4.1%
43	Michigan	4.2%
44	Pennsylvania	4.3%
45	Delaware	4.4%
46	Illinois	4.4%
47	Nevada	4.4%
48	New York	4.4%
49	Alaska	4.5%
50	New Mexico	4.5%
51	District of Columbia	5.2%

Source: Bureau of Labor Statistics, cber.co.

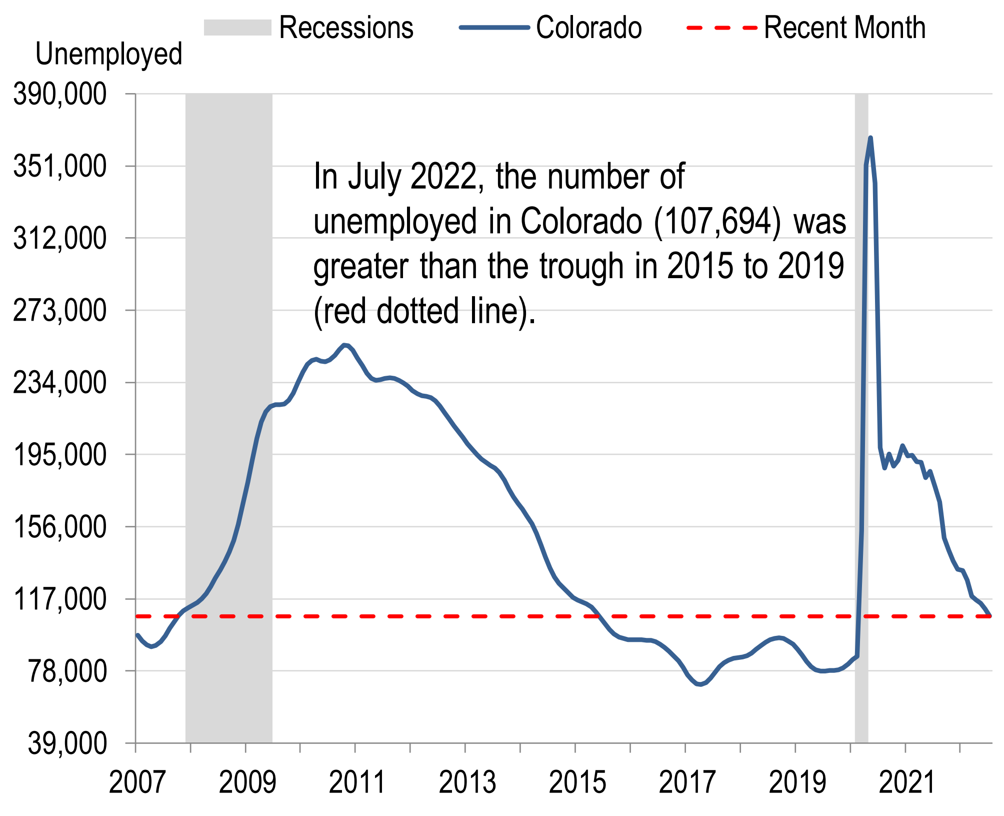
Number of Unemployed

United States and Colorado

U.S. Number of Unemployed (Thousands)



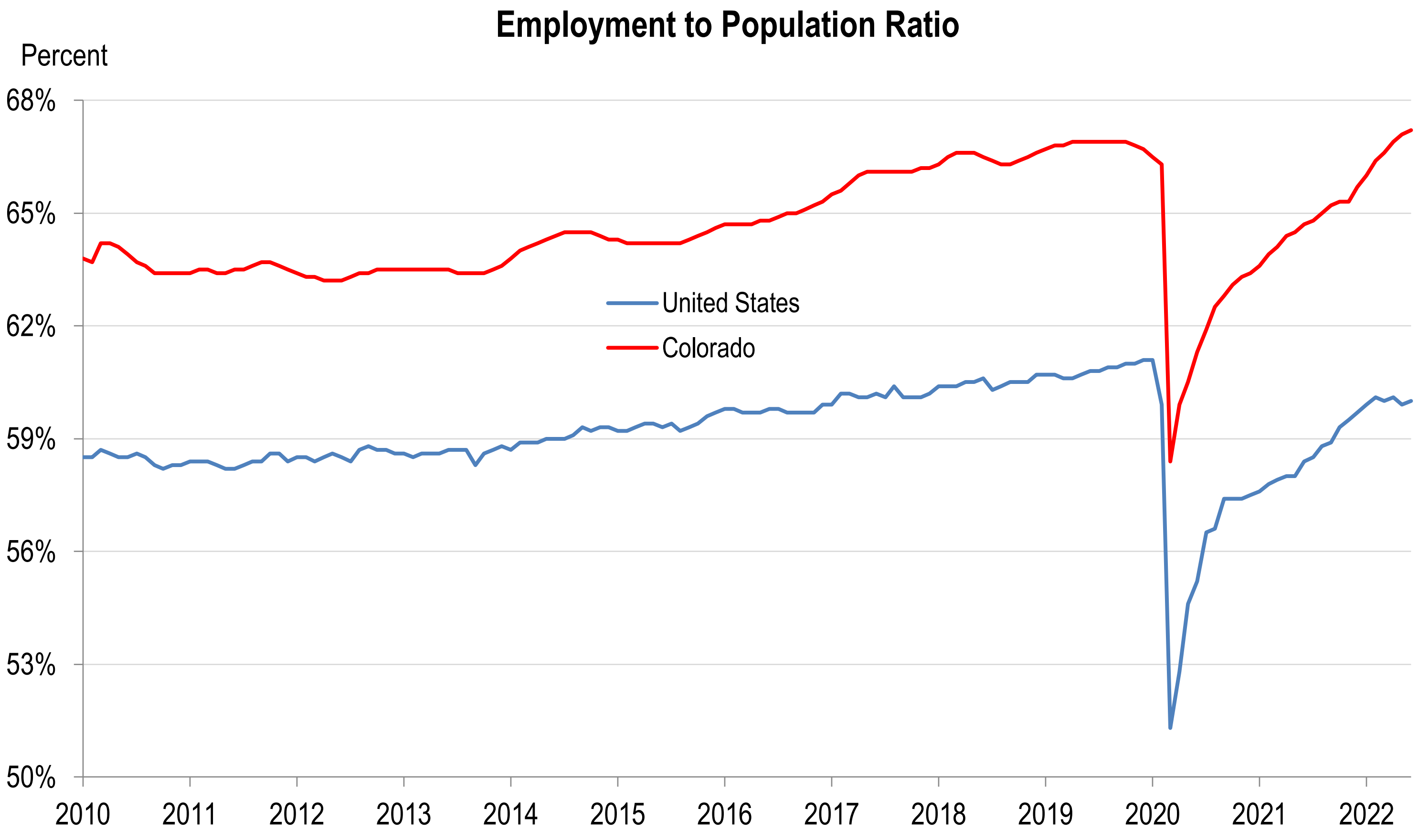
Colorado Number of Unemployed (Thousands)



Source: BLS, cber.co.

Employment-to-Population Ratio

United States to Colorado



Source: FRED, BLS, cber.co.

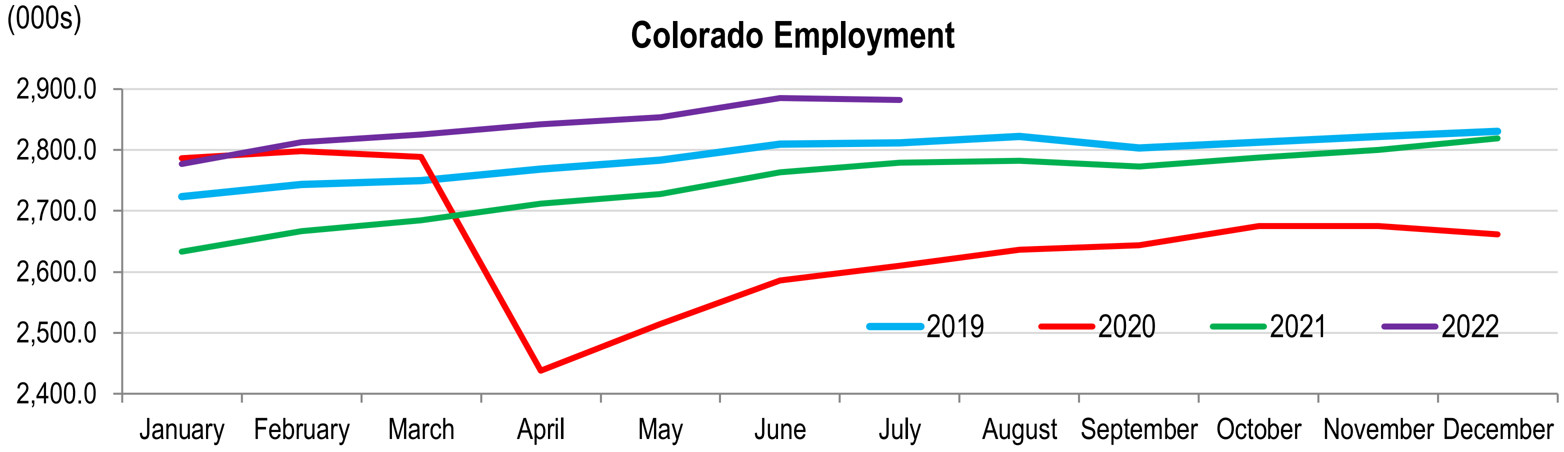
Between 2010 and 2019, the employment-to-population ratios for Colorado and the U.S. gradually increased.

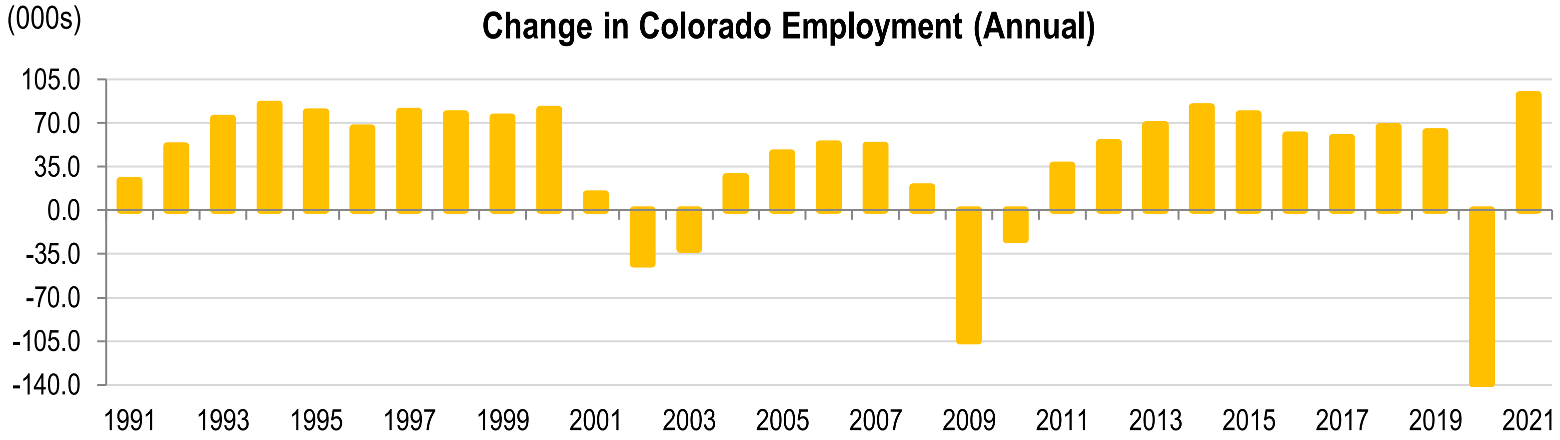
Between May and November 2019, the Colorado ratio peaked at 66.9%. In March 2020, it fell to 58.4% because of COVID-19 lockdown policies. It returned to 67.2% in July 2022.

In January and February of 2020, the U.S. ratio was 61.1%. In March 2020, it plummeted to 51.3% because of COVID-19 lockdown policies. It rebounded and was 60.0% in July 2022. The U.S. ratio is 1.1 percentage points below the pre-pandemic peak in 2020 (61.1%).

Employment and Change in Colorado Employment

Colorado





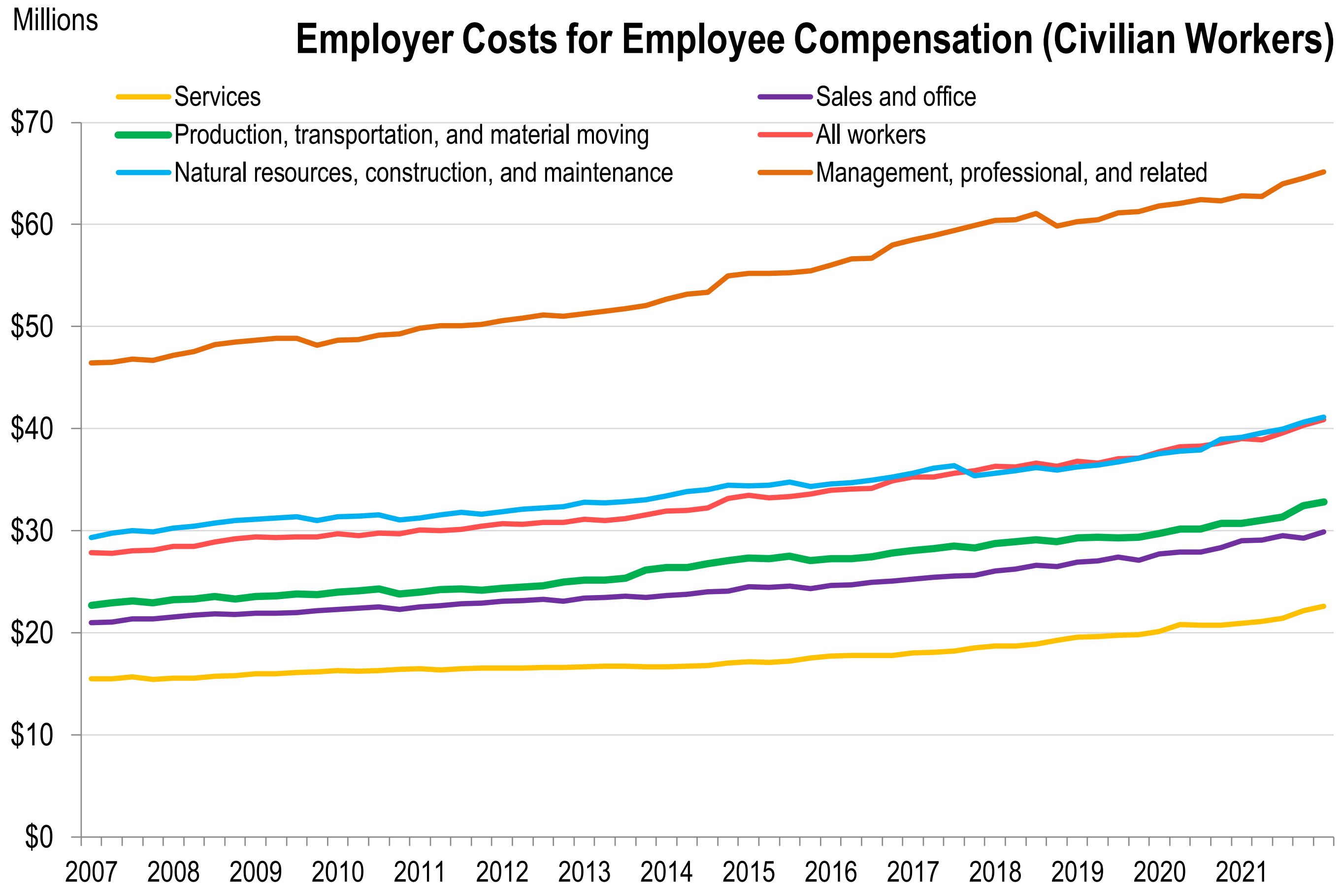
Source: Bureau of Labor Statistics, NSA, cber.co.

Average annual Colorado employment (NSA), based on the first seven months of 2022 (purple), is about 130,300 greater than the same period in 2021 (green). For the first seven months of the year, Colorado is ranked 19th in absolute growth and tied for 22nd with relative job growth. Because of the disruption caused by COVID-19 policies, it is more appropriate to compare 2022 to 2019. The annualized level of employment for 2022 (purple) is about 69,800 more than in 2019 (blue).

The following sectors are below their February 2020 (pre-pandemic) levels: Local Government (-9,500), Food and Accommodations (-6,200), State Government (-5,800), Extractive Industries (-6,000), Healthcare (-1,800), and Federal Government (-400).

Employer Costs for Employee Compensation

Quarterly Cost of Compensation (Cost per Hours Worked) by Occupation



Change in Compensation Q1 2022 vs. Q1 2021

Over the past year, compensation has increased across all occupations. Generally, the occupations with the lowest hourly rate have had the largest rate of increases. The rates in this table are lower than the rate of inflation.

Year over Year Change in Compensation

Color	Occupation	Wages	YOY Change	YOY%
Orange	Mgmt. and Prof.	$65.15	$2.35	3.7%
Blue	Nat. Res., Const., Maint.	$41.10	$1.97	5.0%
Red	**All Workers**	**$40.90**	**$1.89**	**4.8%**
Green	Prod., Transp., Mat. Moving	$32.84	$2.12	6.9%
Purple	Sales and Office	$29.85	$0.86	3.0%
Yellow	Services	$22.56	$1.62	7.7%

Source:Bureau of Labor Statistics, cber.co. Note: Not adjusted for inflation.

Change in Employment

Colorado Sectors with 2022 Growth that is Less than the State Rate (2.0%)

Change in Employment Sectors with Growth Less Than the State Rate			
Sector	July 2022 (000s)	7/22 vs 12/21 (000s)	% Change
Information	79.1	1.4	1.80%
Food and Accommodation (F&A)	282.5	4.7	1.69%
Education (Private)	45.4	0.6	1.34%
Manufacturing	153.1	1.9	1.26%
Healthcare	307.3	3.7	1.22%
Wholesale Trade	113.1	1.2	1.07%
Local Government	266.5	2.6	0.99%
State Government	126.5	0.4	0.32%
Retail Trade	273.5	-0.3	-0.11%
Financial Activities	179.1	-0.9	-0.50%
Federal Government	52.9	-1.0	-1.86%
Total	1,879.0	14.3	0.77%

Total employment for the state increased by 2.0% during this period.

These eleven sectors/sub-sectors had a growth rate less than the state average, 2.0%, when comparing July 2022 to December 2021 employment. These sectors increased by an average of 0.77%.

The combined employment of these sectors accounted for 66% of Colorado employment and 24% of total job growth during this period.

Sectors add jobs at different rates for different reasons. For example, the government is not a growth industry, financial services are volatile, there are always shortages for healthcare positions, and the retail sector is evolving.

Source: BLS, SA, cber.co.

Change in Employment

Colorado Sectors with 2022 Growth That is Greater Than the State Rate (2.0%)

Summary

Change in Employment Sectors with a Growth Rate Greater Than the State Rate			
Sector	July 2022 (000s)	7/22 vs 12/21 (000s)	% Change
Arts, Entertainment, Recreation (AER)	62.7	9.2	17.20%
Transportation, Warehousing, and Utilities	111.4	5.3	5.00%
Professional, Scientific, and Technical Services	274.6	11.7	4.45%
Management of Corporations and Enterprises	46.4	1.8	4.04%
Extractive Industries	20.5	0.7	3.54%
Construction	185	6.1	3.41%
Other Services (Personal)	120.1	3.4	2.91%
Administrative Services	163.2	3.6	2.26%
Total	983.9	41.8	4.44%

Summary Change in Employment (000s)			
	July 2022	7/22 vs 12/21	% Change
Greater than State Rate	983.9	41.8	4.44%
Less than State Rate	1,879.0	14.3	0.77%
Total	2,862.9	56.1	2.00%

Source: BLS, SA, cber.co.

Total employment for the state increased by 2.0% during this period.

These eight sectors/sub-sectors had a growth rate more than the state average, 2.0%, when comparing July 2022 to December 2021 employment. These sectors increased by an average of 4.44%.

The combined employment of these sectors accounted for 34% of Colorado employment and 76% of total job growth during the first seven months.

Sectors such as AER, administrative services, and extractive industries recently added jobs lost during the pandemic. On the other hand, PST and MCE are consistently strong performers.

Economic Outlook and Trends

Momentum and Headwinds

Strong demand for travel, housing, and consumer goods and services has driven the labor market. The ISM indices show optimism for the future and concerns about the headwinds challenging manufacturers and service providers.

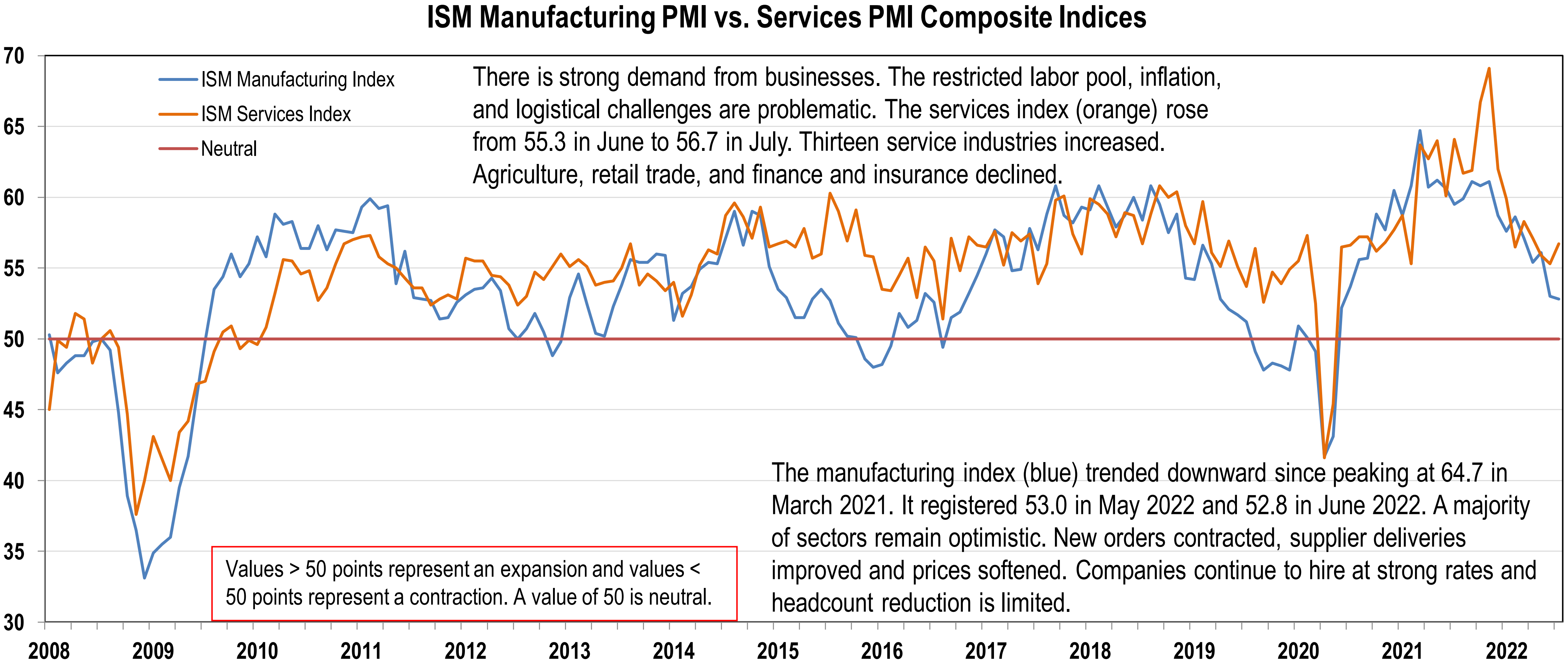
Retail sales in the U.S. and Colorado will grow at a slower rate during the last five months of the year. Nationally, construction and housing have slowed.

In Colorado, housing demand remains high. In some places, prices have stabilized or decreased slightly. Interest rates have increased but are low compared to other inflationary periods. The housing market is changing daily.

Colorado tourism has had an excellent year, including increased passenger traffic at DIA. Despite restrictions, Colorado oil production has stabilized.

ISM PMI Composite Indices

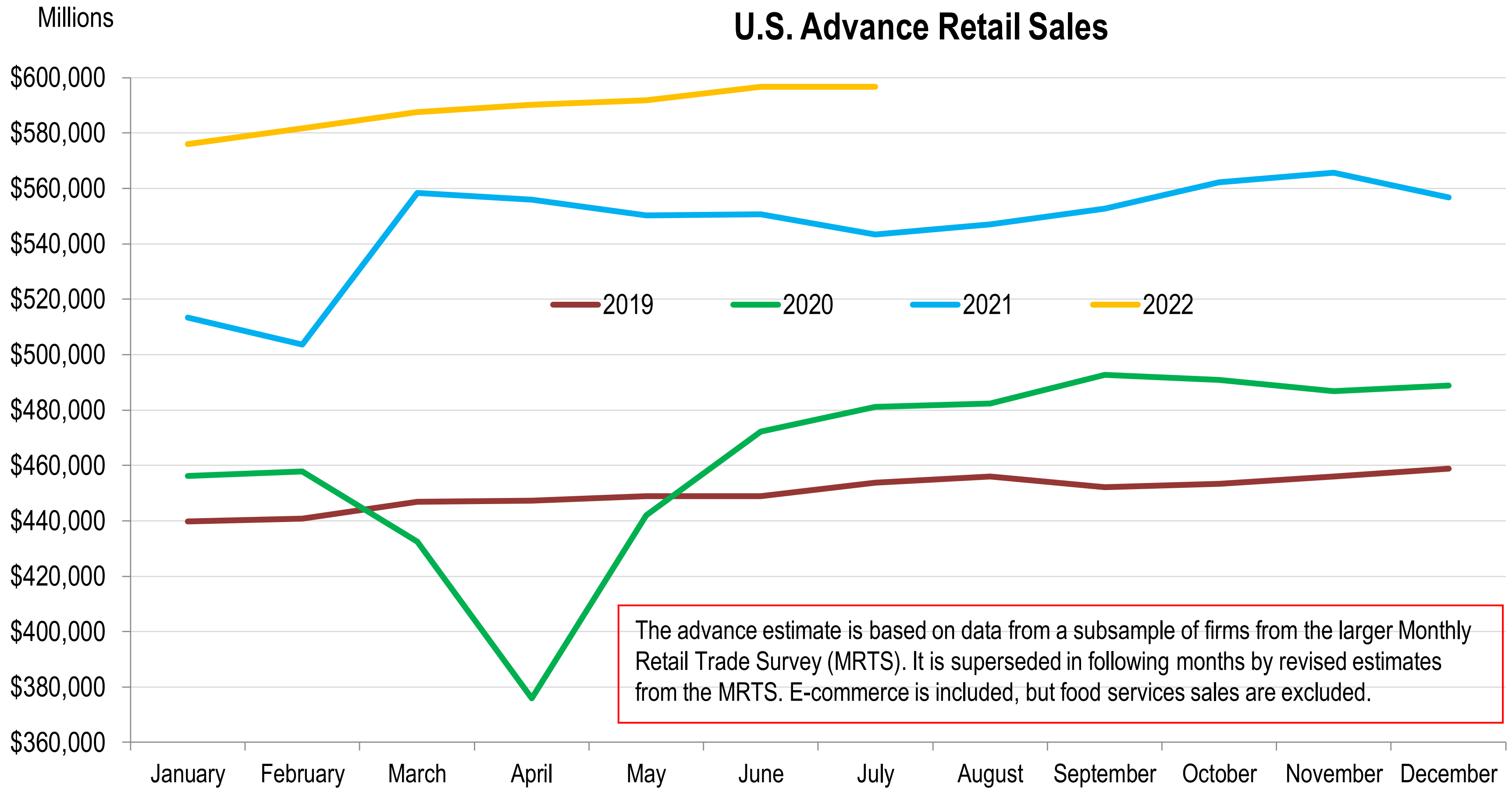
Manufacturing vs. Services



Source: Institute of Supply Management, cber.co

U.S. Advance Retail Sales

Monthly



Advance retail sales increased at a rapid pace during the pandemic (green-2020 and blue-2021). Sales through the first seven months of 2022 (yellow) are 9.1% greater than the same period in 2021. Growth is not expected to continue at this rate for the remainder of the year. The NRF projected 2002 forecast shows an increase of 6.0% to 8.0% over the 2021 value.

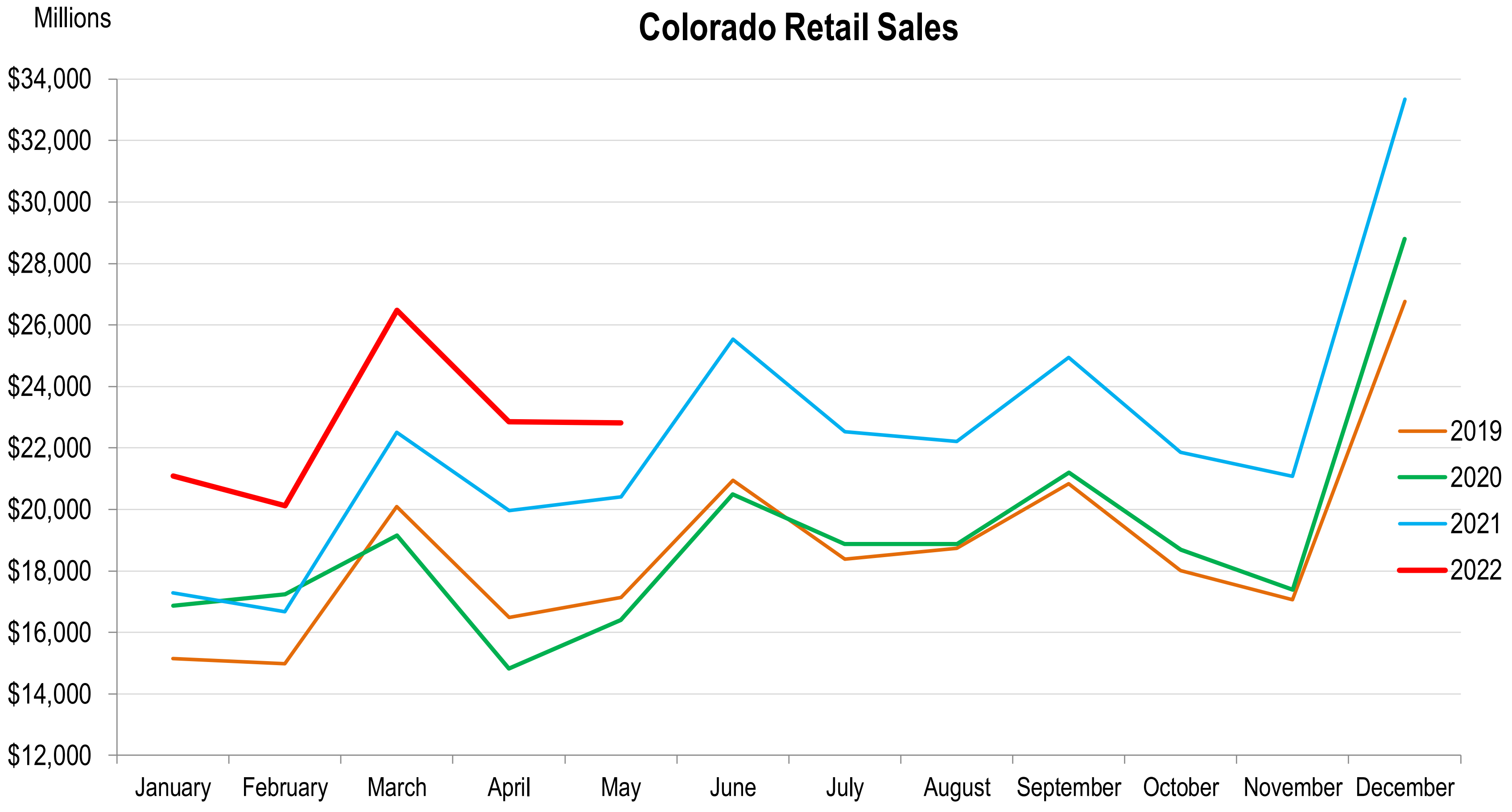
Annual Retail Sales (Trillions)		
2017	$5.05	4.4%
2018	$5.26	4.2%
2019	$5.40	2.7%
2020	$5.56	2.9%
2021	$6.56	18.0%

Source: Census, cber.co

Source: U.S. Census Bureau, cber.co. Note: Not adjusted for inflation.

Colorado Retail Sales

Monthly



Colorado Retail Sales

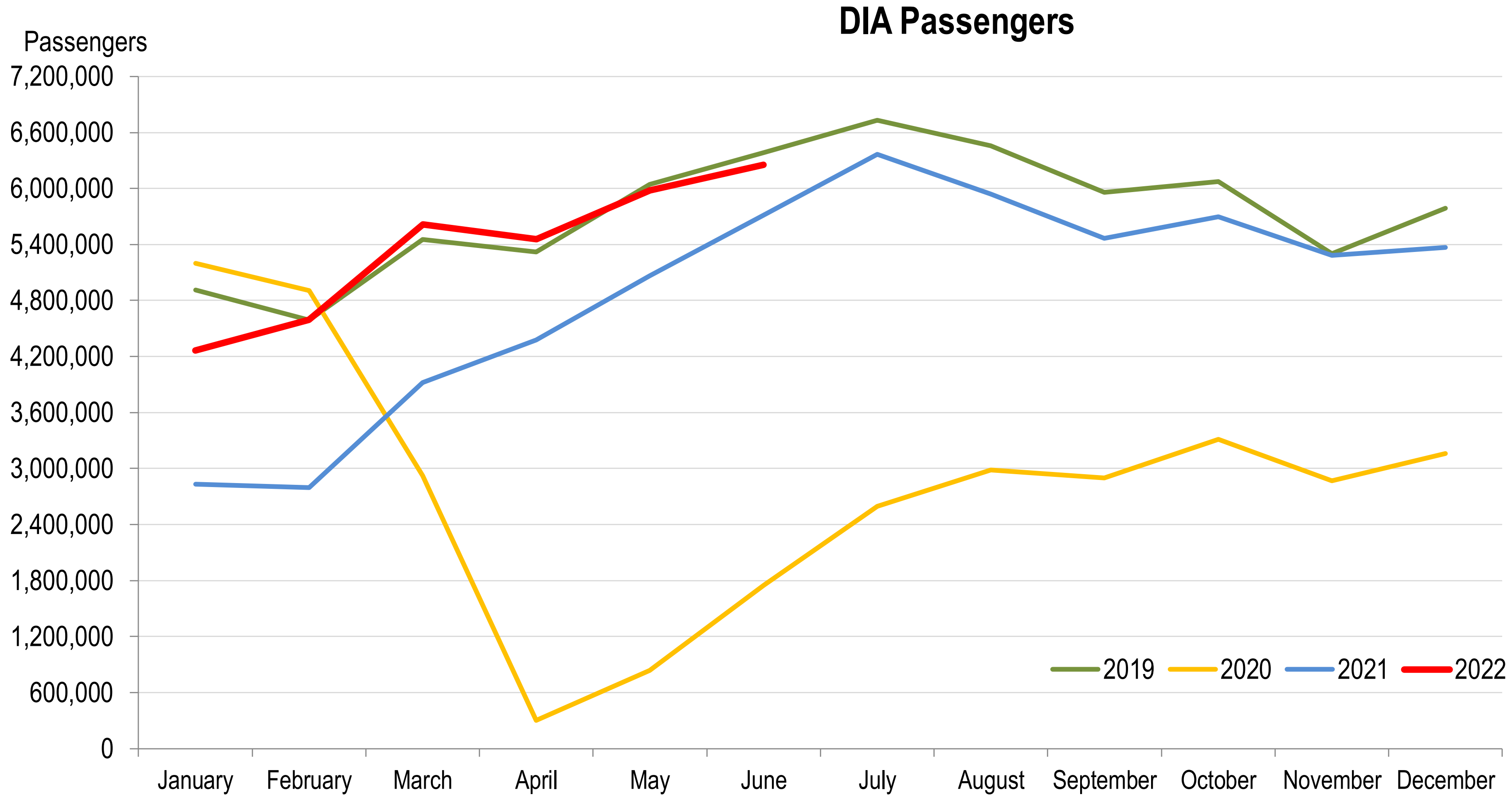
Retail sales for the first five months of 2022 (red) were 17.0% greater than the same period in 2021 (turquoise). Sales are not expected to increase at this rate for the remainder of the year.

Annual Retail Sales (Billions)		
2017	$194.6	5.4%
2018	$206.2	5.9%
2019	$224.6	9.0%
2020	$228.8	3.9%
2021	$268.3	17.3%
2022f	$295.2	10.0%

Source: Colorado Department of Revenue, https://cdor.colorado.gov/retail-sales-reports, cber.co. Note: Not adjusted for inflation.

Denver International Airport Passengers

Monthly



The number of DIA passengers during the first six months of 2022 (red) is slightly below the YTD total for 2019 (green) but significantly above the YTD total for 2021 (blue).

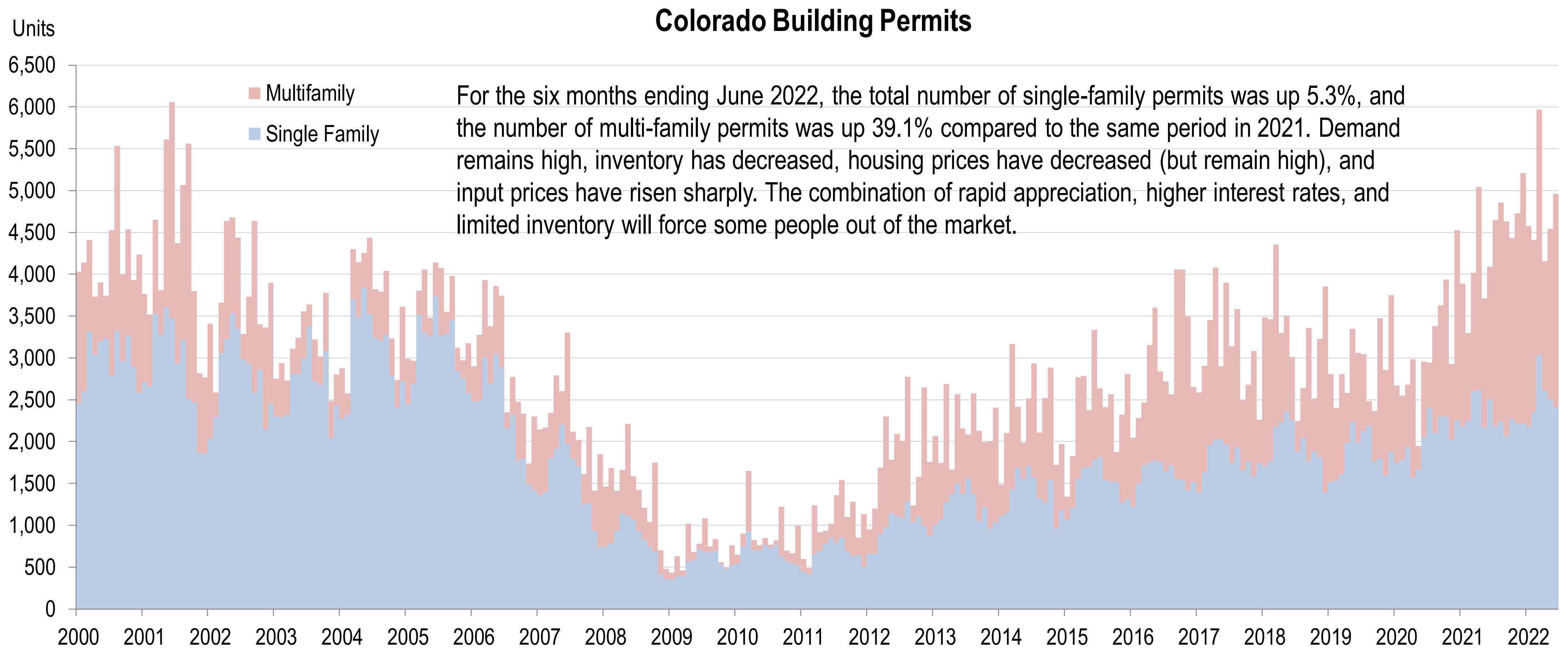
There were 32.2 million DIA passengers during the first six months of 2022.

Year	Passengers	% Change
2022	64,000,000	8.8%
2021	58,828,552	74.4%
2020	33,741,129	-51.3%
2019	69,015,703	7.0%
2018	64,494,613	5.1%
2017	61,379,396	5.3%
2016	58,266,515	7.9%

Source: flydenver.com, cber.co.

Colorado Residential Building Permits

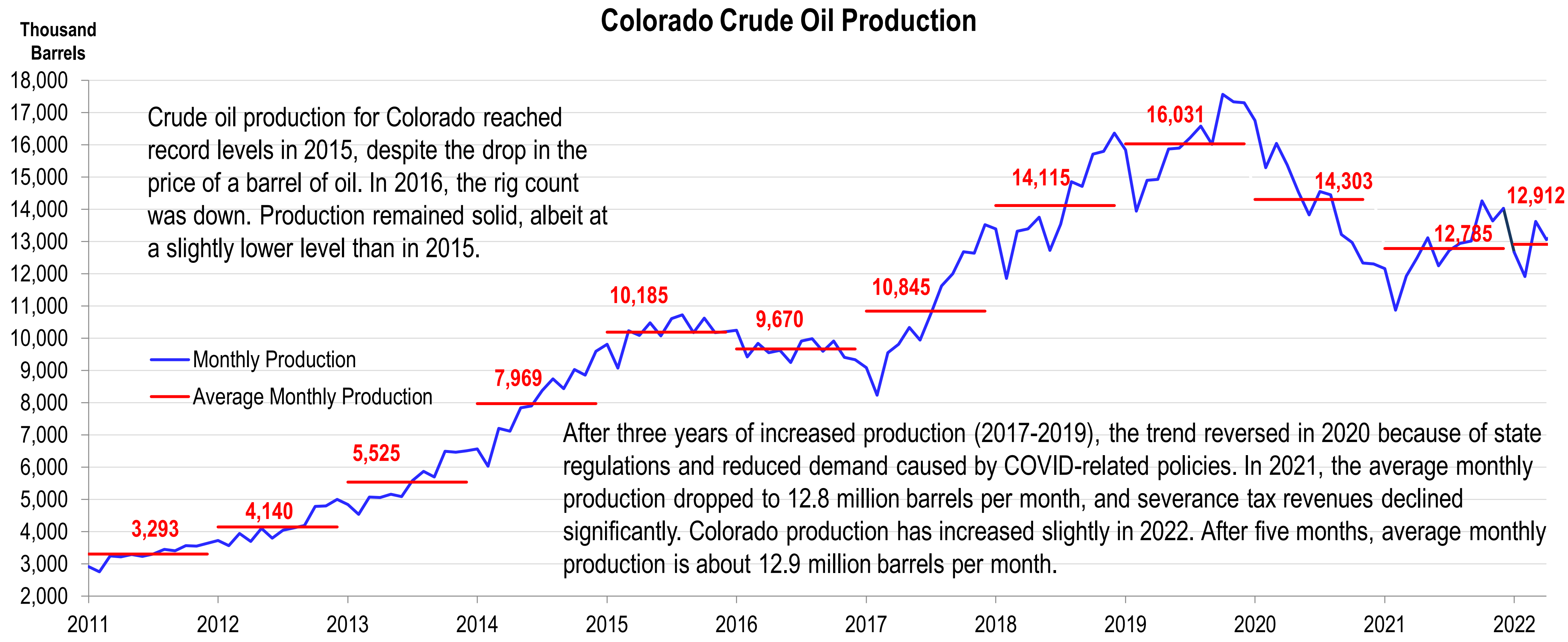
Units



Source: TAMU Real Estate Center, U.S. Census Bureau, cber.co.

Colorado Field Production of Crude Oil

2011 to 2022 (Thousand Barrels)



Source: EIA, cber.co.

Economic Outlook and Trends

Headwinds

Inflation is at the top of the list of many headwinds. Consumers and businesses will pay higher prices for rising energy costs, higher wages, increased input costs, housing appreciation, supply chain disruptions, and policy decisions related to the conflict in Eastern Europe.

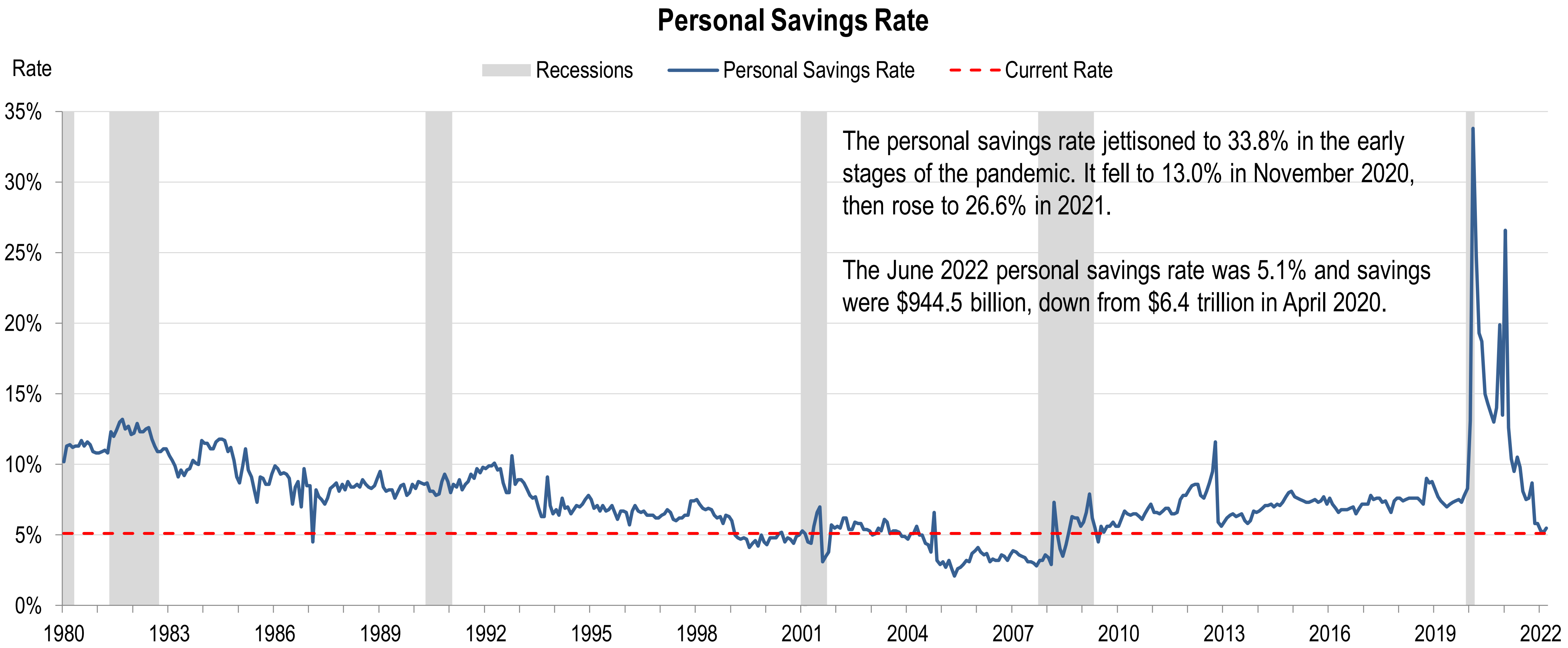
Job growth is no longer broad-based because of the increase in headwinds. The labor shortages in many industries will continue. There is a small pool of potential workers. Ultimately, this will cause labor costs to increase.

Consumption will be affected by reduced personal savings and the increased amount of credit card consumption.

Finally, the increase in headwinds will cause an economic slowdown or shallow recession.

U.S. Personal Savings Rage

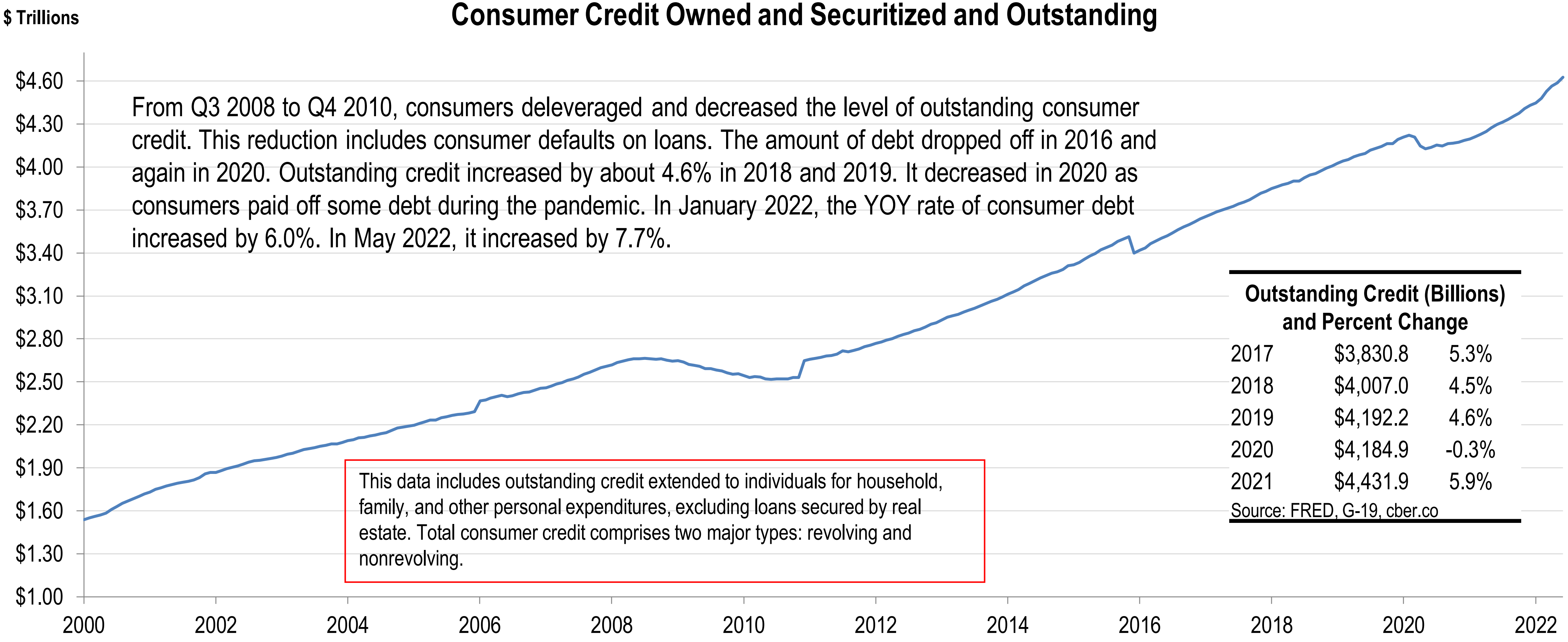
Percentage of Disposable Personal Income



Source: BEA, FRED, cber.co.

U.S. Consumer Credit Outstanding

Consumer Credit Owned and Securitized and Outstanding



From Q3 2008 to Q4 2010, consumers deleveraged and decreased the level of outstanding consumer credit. This reduction includes consumer defaults on loans. The amount of debt dropped off in 2016 and again in 2020. Outstanding credit increased by about 4.6% in 2018 and 2019. It decreased in 2020 as consumers paid off some debt during the pandemic. In January 2022, the YOY rate of consumer debt increased by 6.0%. In May 2022, it increased by 7.7%.

This data includes outstanding credit extended to individuals for household, family, and other personal expenditures, excluding loans secured by real estate. Total consumer credit comprises two major types: revolving and nonrevolving.

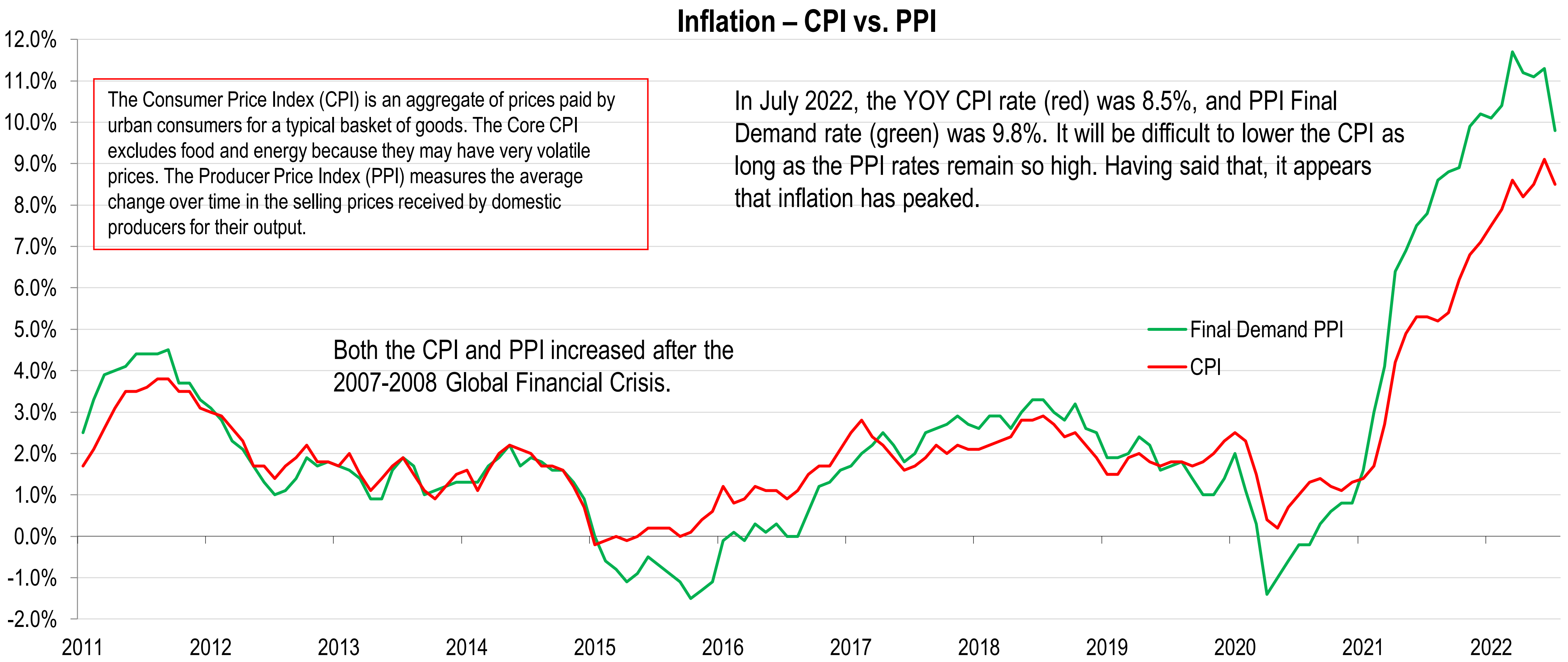
Outstanding Credit (Billions) and Percent Change

2017	$3,830.8	5.3%
2018	$4,007.0	4.5%
2019	$4,192.2	4.6%
2020	$4,184.9	-0.3%
2021	$4,431.9	5.9%

Source: FRED, G-19, cber.co

Source: FRED, Federal Reserve, G.19, SA.

U.S. Inflation
CPI vs. Producer Price Index (Final Demand)



Source: Bureau of Labor Statistics, PPI Commodity Data, Final Demand SA; CPI All Items City Average SA, cber.co.

Inflation
Denver-Aurora-Lakewood

Last fall, some of the country's top economists said inflation would be transitory. The word "transitory" became the rallying cry for those who disagree with inflation-related policies. The CPI for the first half of 2022 was 8.3% for the U.S. and 8.6% for Colorado. Mid-year CPI rates for select categories are listed below.

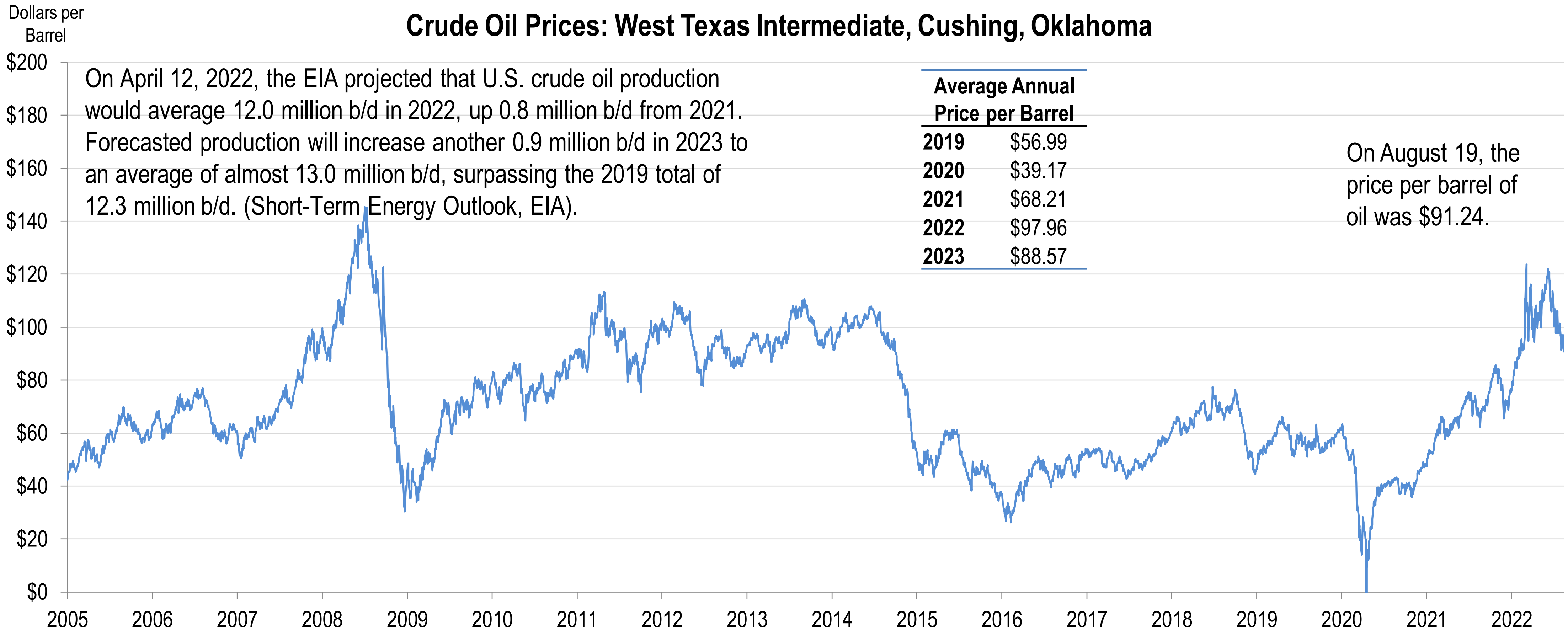
It appears that inflation has peaked. The July monthly CPI rate was 8.5% for the U.S. and 8.2% for Colorado.

Consumer Purchasing Index for Denver-Aurora-Lakewood and the U.S. – First Half of 2022						
	Denver	U.S.			Denver	U.S.
Alcoholic Beverages	4.2%	3.6%		Housing	6.9%	6.5%
Apparel	4.2%	5.7%		Meats, Poultry, Fish, Eggs	14.5%	13.2%
Dairy	6.4%	8.3%		Medical	10.1%	3.2%
Food and Beverage	8.8%	8.6%		Motor Fuel	38.4%	47.2%
Food at Home	9.0%	10.2%		Non-Alcoholic Beverage	7.5%	8.9%
Food Away From Home	9.5%	7.1%		Recreation	6.1%	4.6%
Fruits and Vegetables	5.1%	7.6%		School Fees/Childcare	-0.3%	2.4%
Household Energy	12.4%	16.8%		Transportation	19.3%	20.6%
Household Furnishings	6.3%	9.5%		Used Vehicles	28.6%	25.8%

Source: BLS, cber.co.

Crude Oil Prices

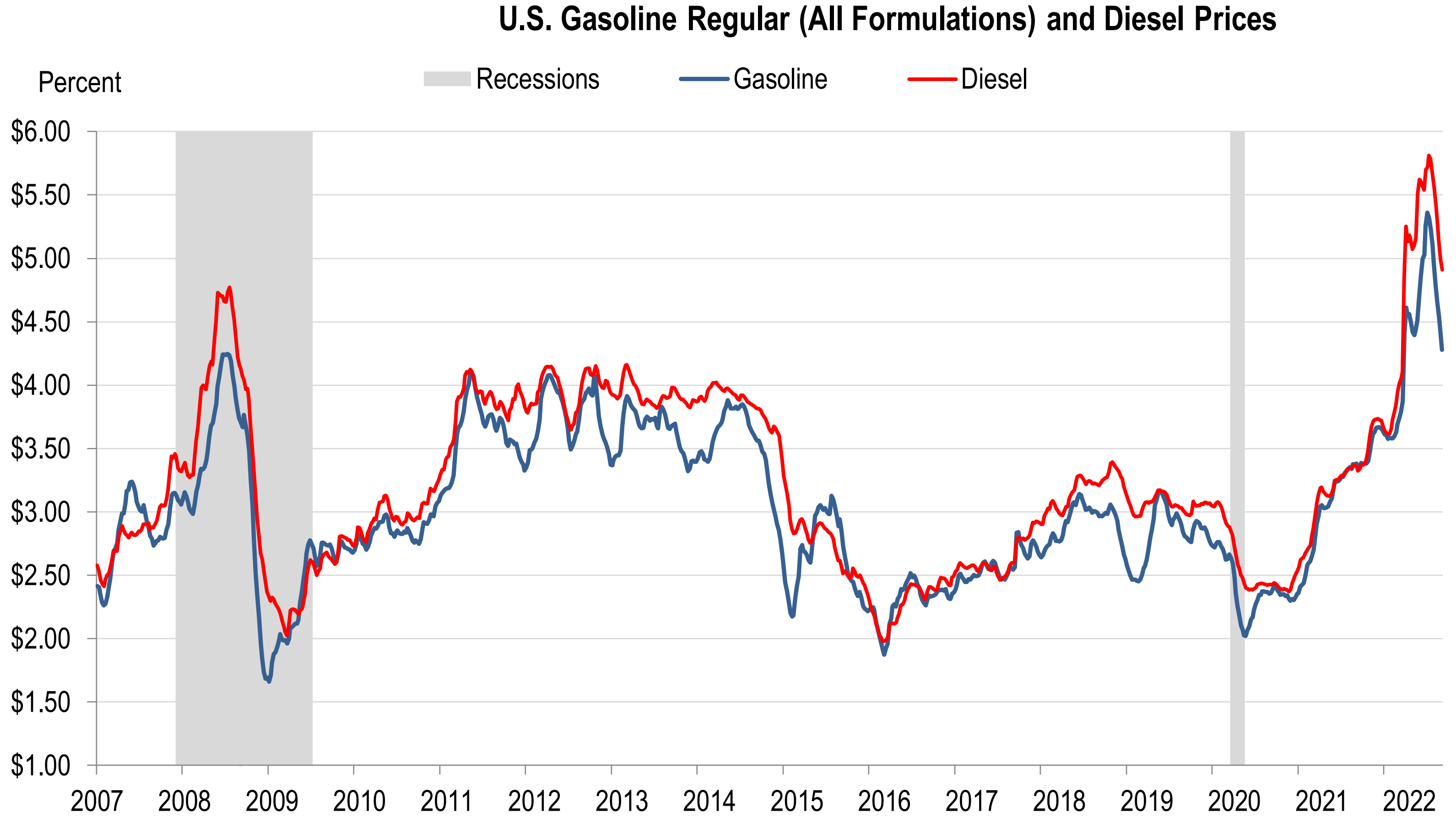
West Texas Intermediate



Average Annual Price per Barrel	
2019	$56.99
2020	$39.17
2021	$68.21
2022	$97.96
2023	$88.57

Source: EIA, cber.co, https://www.eia.gov/outlooks/steo/#:~:text=U.S.%20crude%20oil%20production%20in,b%2Fd%20set%20in%202019.

Weekly Gasoline (Regular All Formulations) and Diesel Prices
United States



Source: FRED, EIA, cber.co.

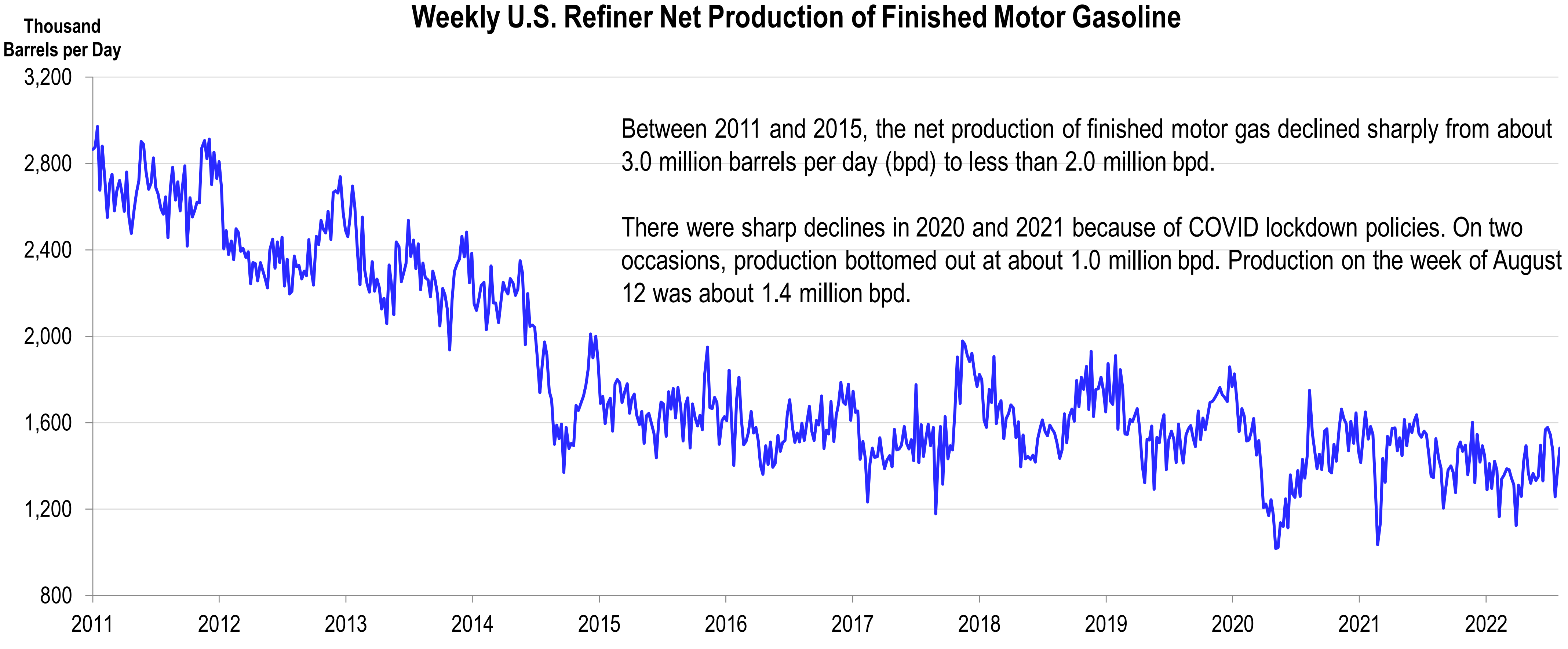
Gas and Diesel Prices

On February 21, 2021, the price for a gallon of gasoline was $2.82, and a gallon of diesel was $2.93.This was about a year before the Eastern European conflict escalated (2/24/2022). On July 25, 2022, a gallon of gasoline peaked at $5.32, and a gallon of diesel was $5.81. Prices has dropped slightly.

Average Annual

Year	Diesel	Gasoline
2015	$2.71	$2.43
2016	$2.30	$2.14
2017	$2.65	$2.42
2018	$3.18	$2.72
2019	$3.06	$2.60
2020	$2.55	$2.17
2021	$3.29	$3.01

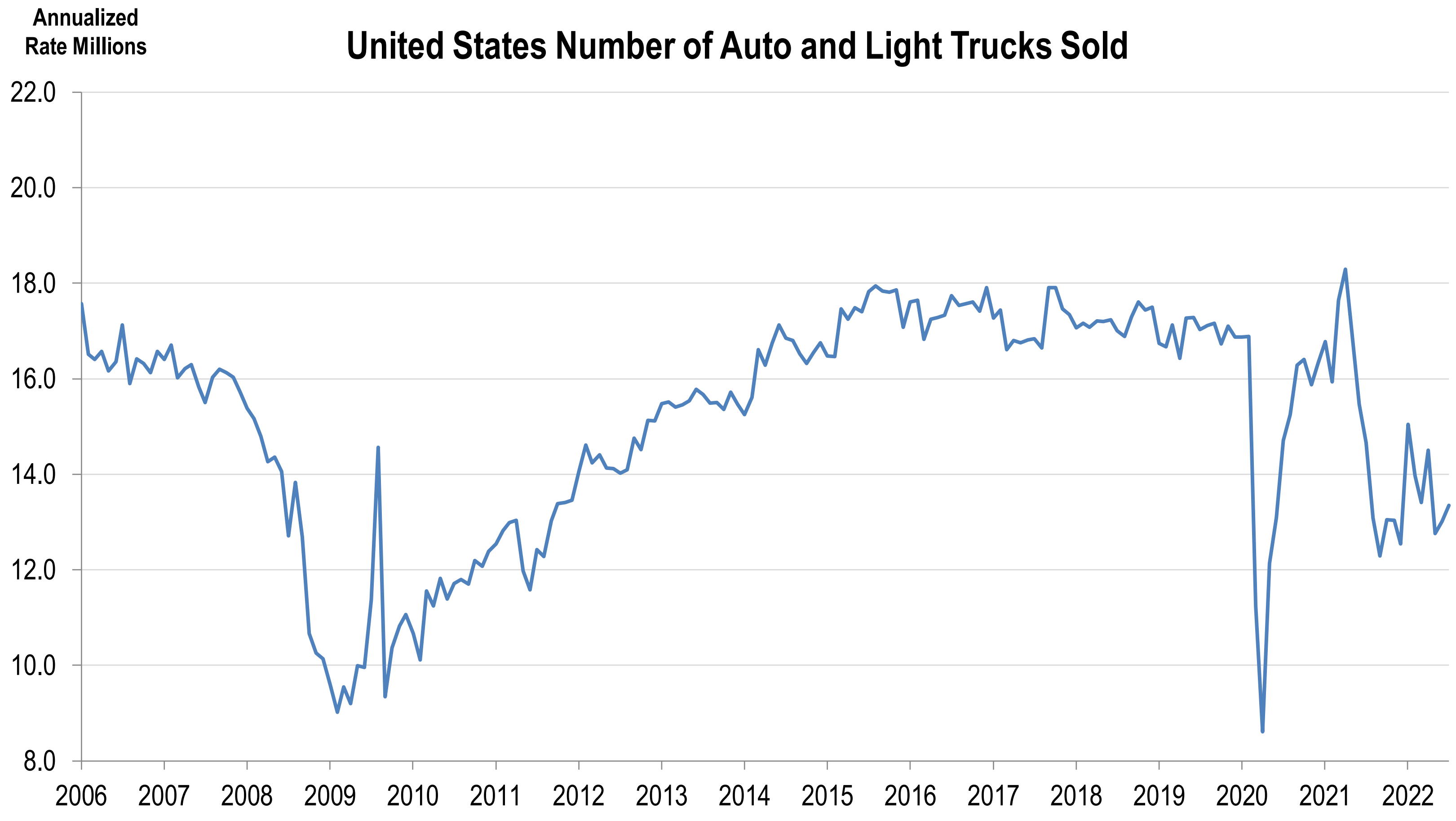
Weekly U.S. Refiner Net Production of Finished Motor Gasoline
(Thousand Barrels per Day)



Source: EIA, cber.co.

U.S. Auto and Light Truck (ALT) Sales

Monthly (Seasonally Adjusted Annualized Rate in Millions)



Source: FRED, BEA, Seasonally Adjusted Annualized Rates (SAAR), cber.co.

In April 2020, SAAR sales plummeted to 8.6 million units (The February 2009 total was 9.0 million). There was a sharp rebound, and sales peaked at 18.3 million in April 2021.

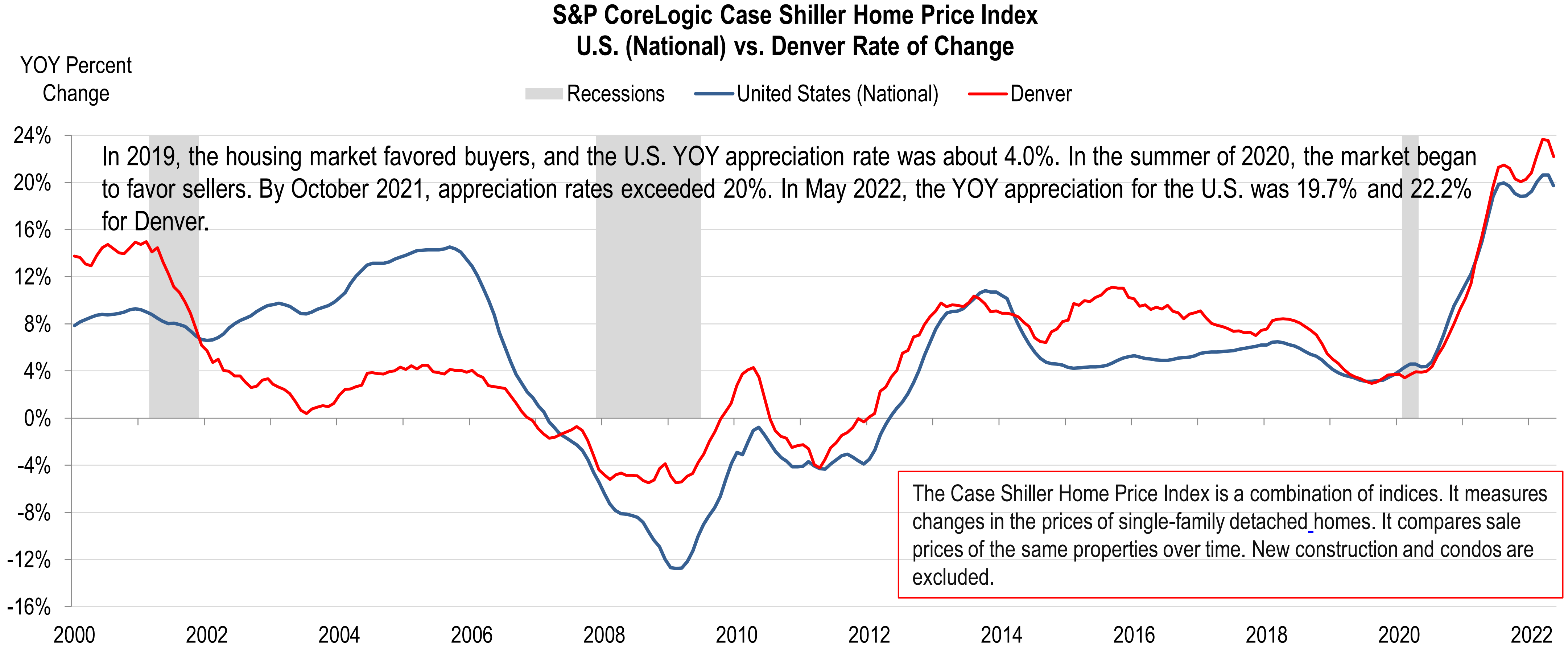
ALT Unit Sales

Year	Units Sold (Millions)
2015	17.4
2016	17.5
2017	17.2
2018	17.2
2019	17.0
2020	14.5
2021	15.0
2022 (f)	16.5

In 2021, the industry did not meet the demand for new cars because of supply chain disruptions. Sales in July 2022 were below expectations at 13.3 million annualized.

Case Shiller Home Price Index

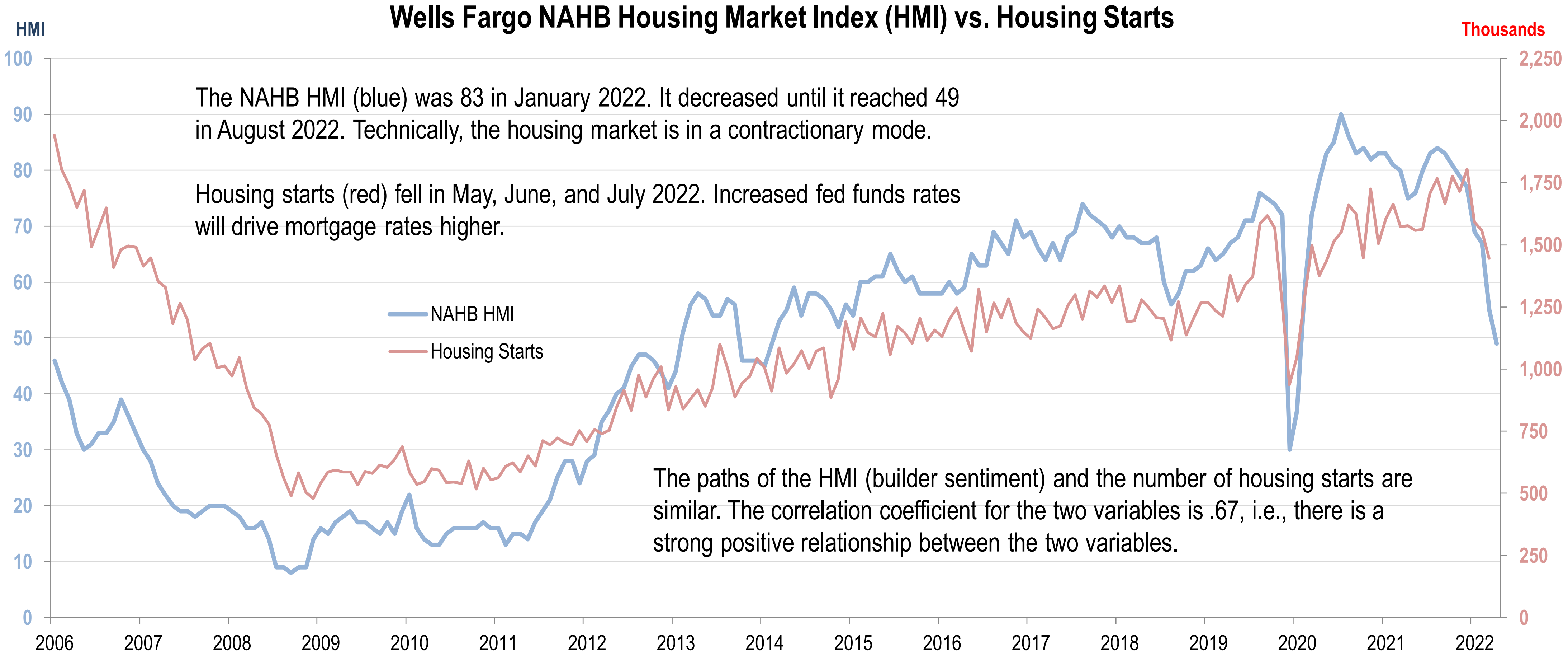
YOY National vs. Denver Rate of Change



Source: S&P Case Shiller, cber.co.

Wells Fargo NAHB HMI vs. Housing Starts

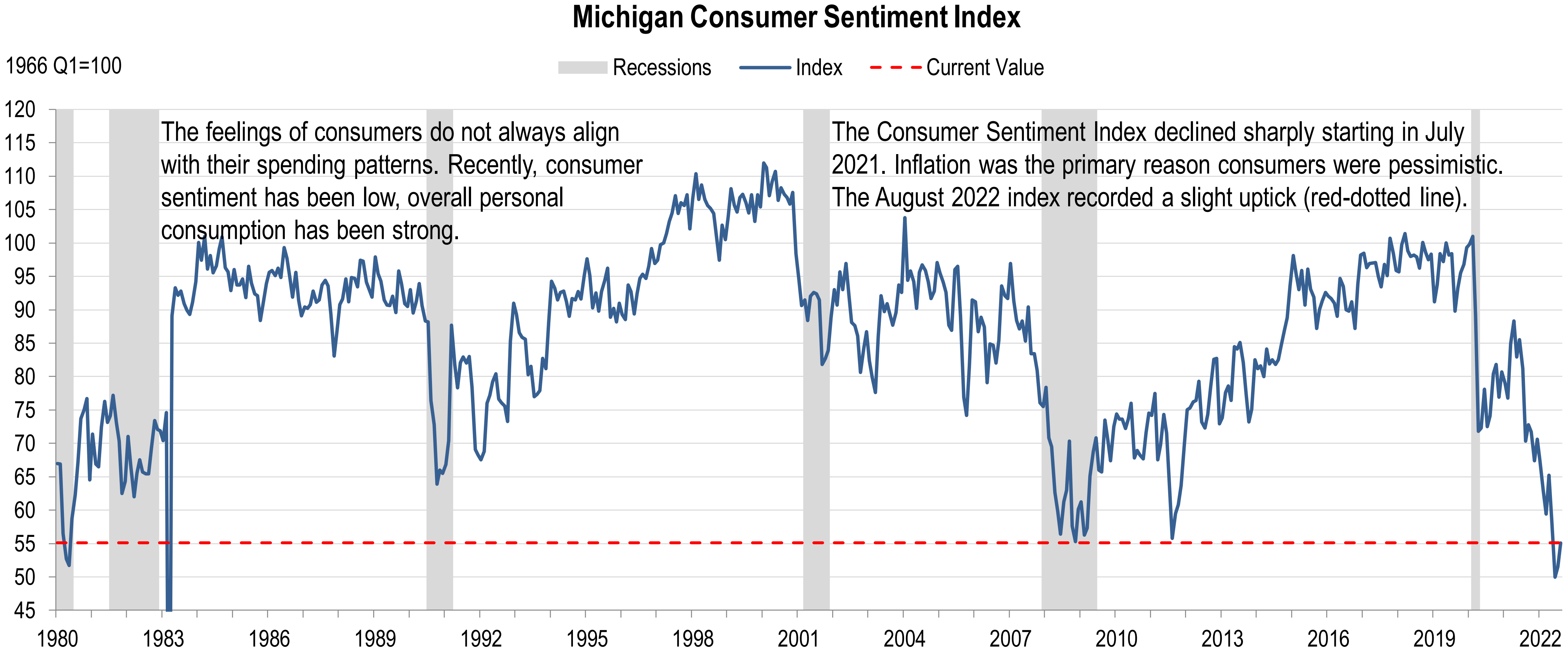
United States



Source: NAHB, cber.co.

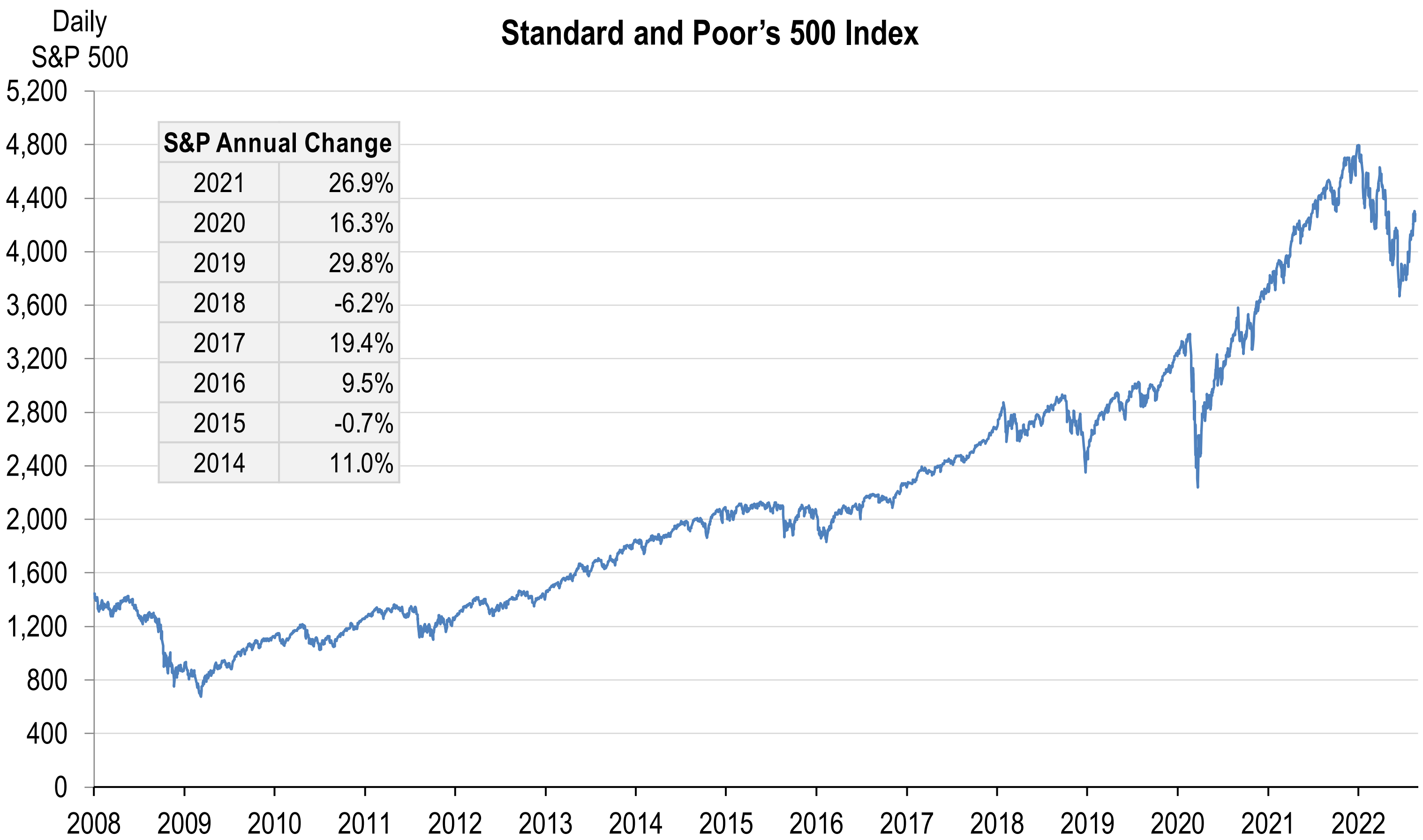
Consumer Sentiment Index

University of Michigan



Source: University of Michigan, cber.co.

Standard and Poor's 500 Index



S&P Annual Change	
2021	26.9%
2020	16.3%
2019	29.8%
2018	-6.2%
2017	19.4%
2016	9.5%
2015	-0.7%
2014	11.0%

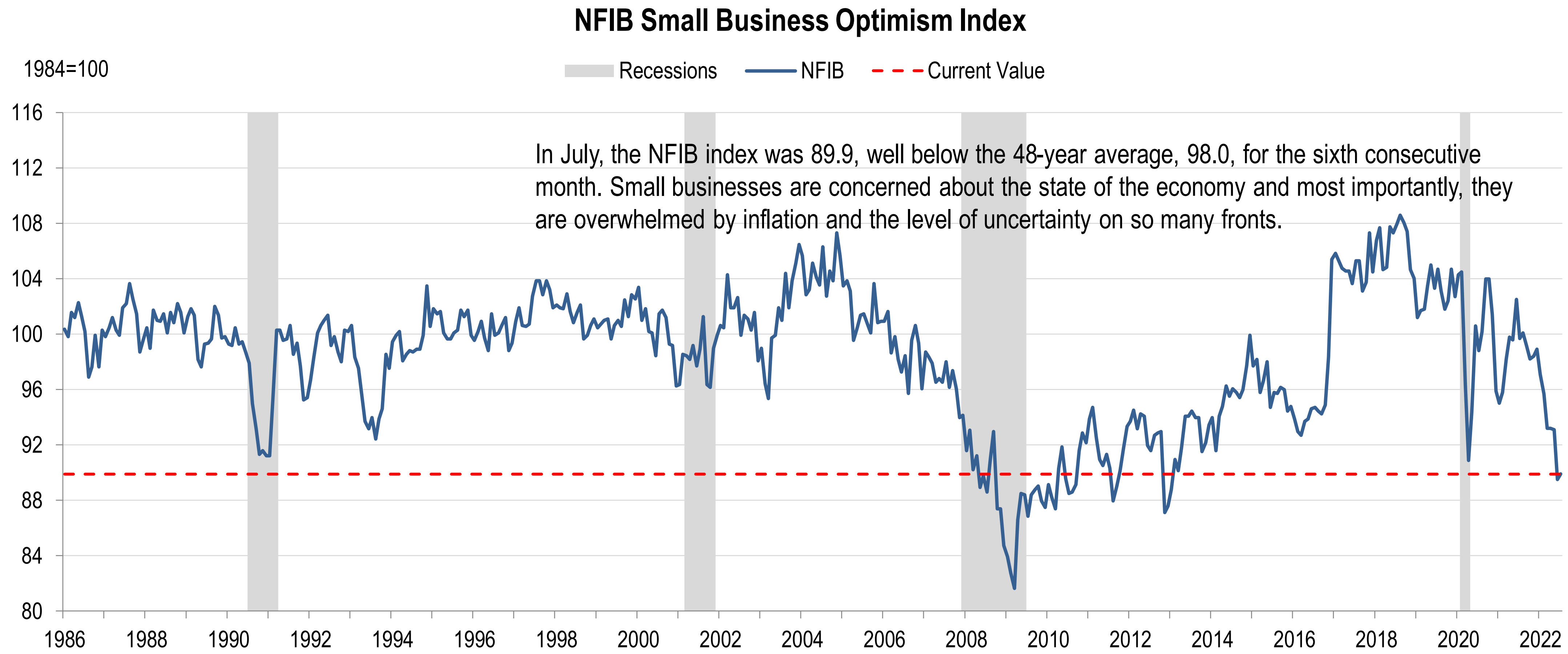
Source: FRED, S&P 500, cber.co.

COVID 19 Policies Bear Market - 2020
After reaching 3,386 on February 19, 2020, the S&P 500 slipped to 2,237 on March 23, 2020, a loss of 34% or 1,148 points. On August 18, 2020, the S&P returned to 3,386. The bear market of 2020 was short-lived (149 days).

Year-End 2021
The S&P index increased at a steady rate for most of 2021. On December 31, it was 4,766 or 26.9% greater than the December 2020 closing value.

YTD Change - 2022 Bear Market
On July 16, 2022, the S&P 500 closed at 3,667, a change of -23.1%, or 1,099 points off the December 31, 2021 value. The August 19 value was 4,228.

NFIB Small Business Optimism Index
United States



Source: NFIB, cber.co.

Economic Outlook and Trends

Summary of Colorado
Employment and Economic Outlook and Trends

This year, Colorado will add about 98,000 jobs. The Government, Healthcare, Extractive Industries, and Leisure and Hospitality sectors have added jobs, but they have not returned to pre-pandemic levels. Tourism activities have fared well, and the number of passengers at DIA has been a strong point in the economy.

The low housing inventory bodes well for residential construction, although demand has softened because of increased interest rates and price appreciation. Retail sales will diminish as consumer spending is affected by inflation and higher interest rates.

As usual, the PST sector will be a leader in job growth. During the second half of 2022, there will be a slowdown in the economy. Weak growth will continue in 2023. Headwinds include inflation, higher interest rates, labor shortages, supply chain disruptions, and ineffective public policy.

Colorado Economic Forecast 2022

The Colorado real GDP growth rate for 2022 was revised downward to reflect slower growth in Q4.

The state labor market will remain strong through eight months, followed by a slowdown that continues into 2023.

Retail sales will remain strong in 2022. They will increase at a slower rate than in 2021. A portion of the 2022 growth reflects inflated prices.

Colorado businesses will face headwinds from increased inflation, supply chain disruptions, labor shortages, interest rate hikes, and ineffective public policy.

Colorado Economic Forecast

	2019	2020	2021	2022
Real GDP Value (billions)	$356.77	$346.01	$365.90	$375.41
% Change Real GDP	4.2%	-3.0%	5.8%	2.6%
CES Employment (thousands)	2,790.1	2,651.1	2,744.0	2,842.0
Annual Change (thousands)	62.8	-139.0	92.9	98.0
% Change	2.3%	-5.0%	3.5%	3.6%
Unemployment Rate	2.7%	7.3%	5.5%	3.4%
Retail Sales (billions)	$224.6	$228.8	$267.7	$292.9
% Change	9.0%	1.9%	17.0%	9.4%
Consumer Price Index	1.9%	2.0%	3.5%	7.6%
DIA Passengers (millions)	69.0	33.0	59.0	66.0
Single Family Permits	24,756	26,489	27,000	29,000
Multi-family Permits	13,877	13,738	24,000	26,000
Oil Production (thousands) barrels	189,707	172,000	142,000	146,000

The number of DIA passengers has increased rapidly in 2022. The year-end total will be less than for 2019.

The demand (based on the number of building permits) will continue to exceed the supply because of in-migration and the Marshall Fire. The total number of building permits will be slightly more than in 2021. Higher input costs, rising prices, and interest rates will negatively impact construction, and home sales, and financial services.

The production of crude oil declined in 2021 because of state regulations. Oil production will increase slightly in 2022.

cber.co
Economic Outlook and Trends Through July 2022
Colorado and the United States

For additional information contact cber.co at cber@cber.co , gary@garyhorvath.com, or garyhorvath@hotmail.com.

ACKNOWLEDGEMENTS
A special thank you to Ana and Allyson Horvath for their review and comments on this publication.

ABOUT THE AUTHOR

Gary Horvath has produced annual employment forecasts of the state economy for over 30 years. They have been supplemented by monthly economic updates and indices that track economic performance over the short term. In addition, he has directed three statewide analyses that included reviews of all 64 county economies.

Horvath was the principal investigator for a state and federally funded project to prepare a nanotechnology roadmap for Colorado. As well, he was a co-founder of the Colorado Photonics Industry Association, a trade group for Colorado's Photonics cluster. Horvath has been an active board member of the group since its inception.

Horvath has also served on the Board of Directors for the Economic Development Council of Colorado, Northwest Denver Business Partnership, Adams County Economic Development, and Broomfield Economic Development Corporation. Horvath has also been the chair of the photonics/electronics committee in the Governor's Office of Economic Development and International Trade early stage and proof of concept grant program, and he served on the 2021 Colorado Legislative Redistricting Commission.