Economic Outlook and Trends Through October 2022

United States and Colorado

cber.co
Colorado-based Business and Economic Research
Prepared
November 22, 2022
Autumn Calm in the Suburbs - Before the Storm

Economic Outlook and Trends

Purpose and Summary

The purpose of this chartbook is to review the performance of the Colorado and U.S. economies through October 2022. Throughout the year, there has been a list of headwinds that is longer than usual: inflation, energy issues, Fed rate hikes, increased input costs, supply chain disruptions, labor shortages, wage increases, housing issues, policies and legislation that are controversial, and excessive spending related to the conflict in Eastern Europe.

As the year progressed, inflation became a bigger problem. The Federal Reserve raised interest rates in an attempt to curtail economic growth and reduce inflation.

The economy will slip into a shallow recession by the end of 2022 or early 2023. There will be weak economic activity and job growth during most of 2023.

The discussion focuses on the following topics.

- U.S. Real GDP
- Inflation
- U.S. and Colorado Employment
- Inflation and Consumption
- Industry Indices, Construction, Housing, and Extractive Industries
- Summary of Colorado Economic and Outlook.

Highlights – Economic Slowdown

The economy will slip into a shallow recession in late 2022 or early 2023. The concern is no longer about whether there will be a recession. Instead, it is about its intensity and duration.

The Loss of Momentum
The labor market was strong throughout the first ten months of 2022 and most industries returned to pre-COVID employment levels. Through the first half of the year, job growth was broad-based. That is no longer the case.

Personal consumption has tapered off. Consumers have reduced their level of personal savings. In addition, they have increased their credit card consumption.

Retail growth will increase by about 6.0% to 8.0% this year, down from last year. There will be a solid level of holiday spending.

Some industries are struggling to find qualified workers, despite a high level of job openings. A solution has been to increase wages.

Energy policy has played havoc with economic activity.

Inflation and Rate Hikes
The Federal Reserve has the unenviable task of containing inflation by raising interest rates. That is a supreme challenge, given the host of obstacles.

The rate hikes by the Fed have caused the housing, construction, and financial markets to slow – and in some U.S. regions, these industries entered a recession in the first half of the year.

Economic Outlook and Trends

U.S. Real Gross Domestic Product

The Conference Board U.S. Economic Forecast projects real GDP growth will slip to 1.8% in 2022, down from 5.9% in 2021. The change in real GDP will be 0.0% in 2023.

Real disposable income, personal consumption, and construction spending (residential and nonresidential) will be noticeably less in 2022 and 2023. There will be a decline in government spending in 2022 but an increase in 2023.

The annual unemployment rate will increase to 4.2% in 2023. The rate will peak at 4.5% during the year.

The recession will hit in Q4 2022. It will be broad-based and last into the second half of 2023. The labor market will remain tight in some sectors and occupations, particularly those that require specific training or person-to-person contact.

Inflation will decrease in 2023 but remain above the Fed's target rate into 2024.

U.S. Real GDP Growth

The Conference Board Forecast (November 9, 2022)

Real GDP and Economic Growth

The latest Conference Board forecast points to real GDP growth of 1.8% for 2022. Personal consumption has deteriorated as the year has progressed and will increase by 2.5% this year. Residential and nonresidential investments will experience declines caused by the Fed rate hikes. The U.S. will enter a recession by the end of 2022, with a change of 0.0% in real GDP in 2023.

Other Economic Factors

During the first ten months of 2022, the labor market reflected strong but decelerating job growth. This downward trend will continue into 2023; however, some industries and occupations will see labor shortages. The U.S. unemployment rate will be 3.6% in 2022 and 4.2% in 2023. In Q2 2022, PCE inflation peaked. It will be 5.0% in 2022 and 2.8% in 2023.

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	6.3%	7.0%	2.7%	7.0%	-1.6%	-0.6%	2.6%	-0.5%	5.9%	1.8%	0.0%
Real Disposable Income	52.4%	-28.8%	-4.6%	-4.9%	--10.6%	-1.5%	1.7%	0.3%	1.9%	-6.7%	-0.4%
Real Personal Consumption	10.8%	12.1%	3.0%	3.1%	1.3%	2.0%	1.4%	-0.5%	8.3%	2.5%	-0.1%
Residential Investment	11.6%	-4.8%	-5.8%	-1.1%	-3.1%	-17.8%	-26.4%	-30.0%	10.7%	-10.8%	-14.6%
Nonresidential Investment	8.9%	9.9%	0.6%	1.1%	7.9%	0.1%	3.7%	2.1%	6.4%	3.4%	-0.3%
Total Gov't. Spending	6.5%	-3.0%	-0.2%	-0.9%	-2.3%	-1.6%	2.4%	3.0%	0.6%	-0.8%	3.1%
Exports	0.4%	4.8%	-1.1%	23.5%	-4.6%	13.8%	14.4%	2.0%	6.1%	7.5%	2.0%
Unemployment Rate	6.2%	5.9%	5.1%	4.2%	3.8%	3.6%	3.6%	3.6%	5.4%	3.6%	4.2%
PCE Inflation (%Y/Y)	1.9%	4.0%	4.5%	5.7%	6.4%	6.6%	6.3%	5.6%	4.0%	6.2%	2.9%
Core PCE Inflation (%Y/Y)	1.7%	3.5%	3.9%	4.7%	5.3%	5.0%	4.9%	4.6%	3.5%	5.0%	2.8%

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 ten months of 2022, the U.S. and Colorado labor markets exceeded growth expectations. There are not enough workers to fill open jobs. Some companies have addressed the problem with automation.

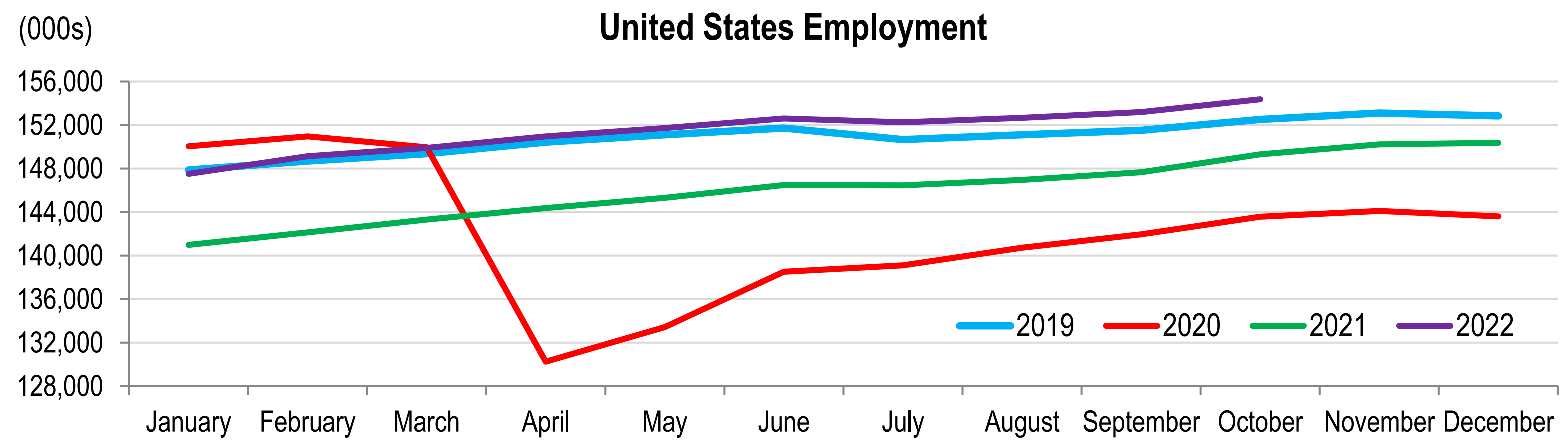
In addition, companies have raised wages to attract workers. Unfortunately, wage gains are less than the rate of inflation.

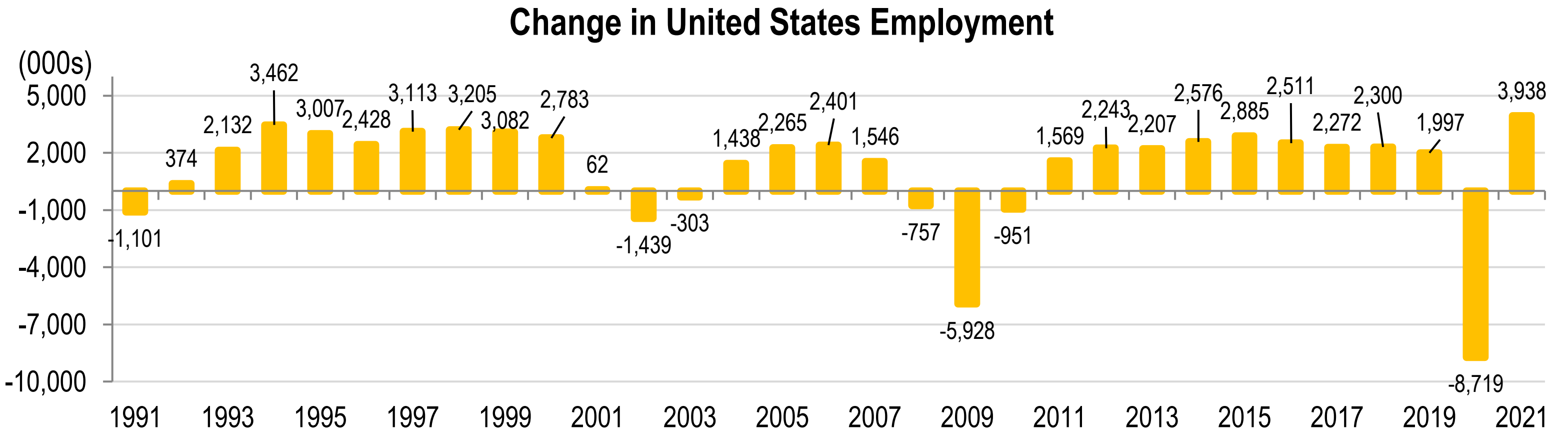
The broad-based growth will taper off in Q4. In some industries, companies have not laid off workers. Instead, they plan fewer job openings in the future. That is a reasonable temporary solution.

The employment-to-population ratio has not improved recently as the unemployment rate has flattened or increased slightly.

Employment and Change in Employment

United States





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

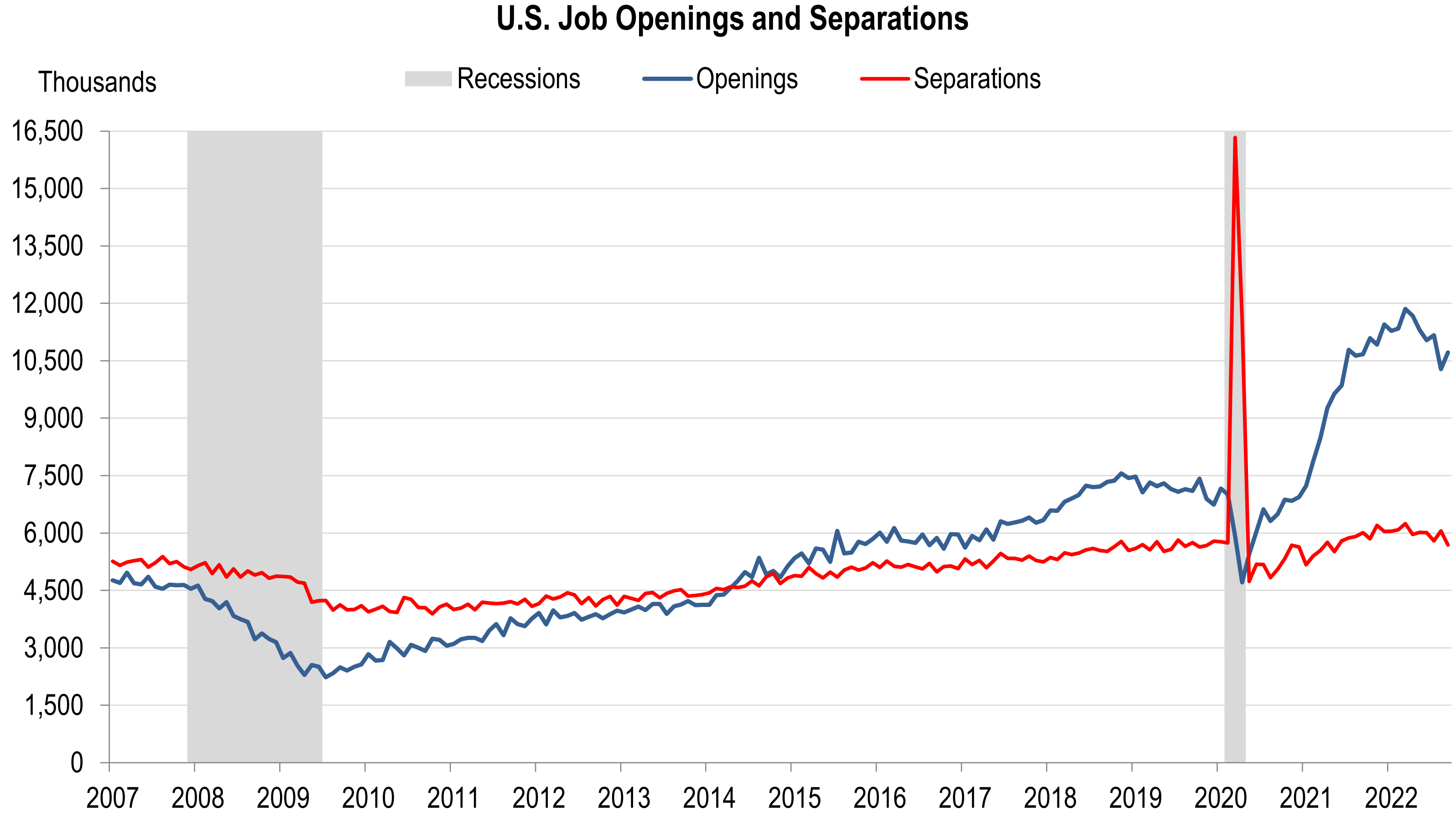
Average annual U.S. employment (NSA) through the first ten months of 2022 (purple) is about 6.1 million more than the same period in 2021 (green). The YOY employment has decreased since March 2022.

By comparison, the average U.S. employment through the first ten months of 2022 is about 943,000 more than the same period in 2019 (blue). In other words, 2019 employment is more than in 2021.

Despite the strong job growth in 2022, the U.S. has a low unemployment rate and a severe shortage of workers. Job growth will be much weaker in 2023. Wage growth has been solid in many occupations and industries but less than the inflation rate.

Job Openings and Separations

United States



Source: BLS, SA, cber.co.

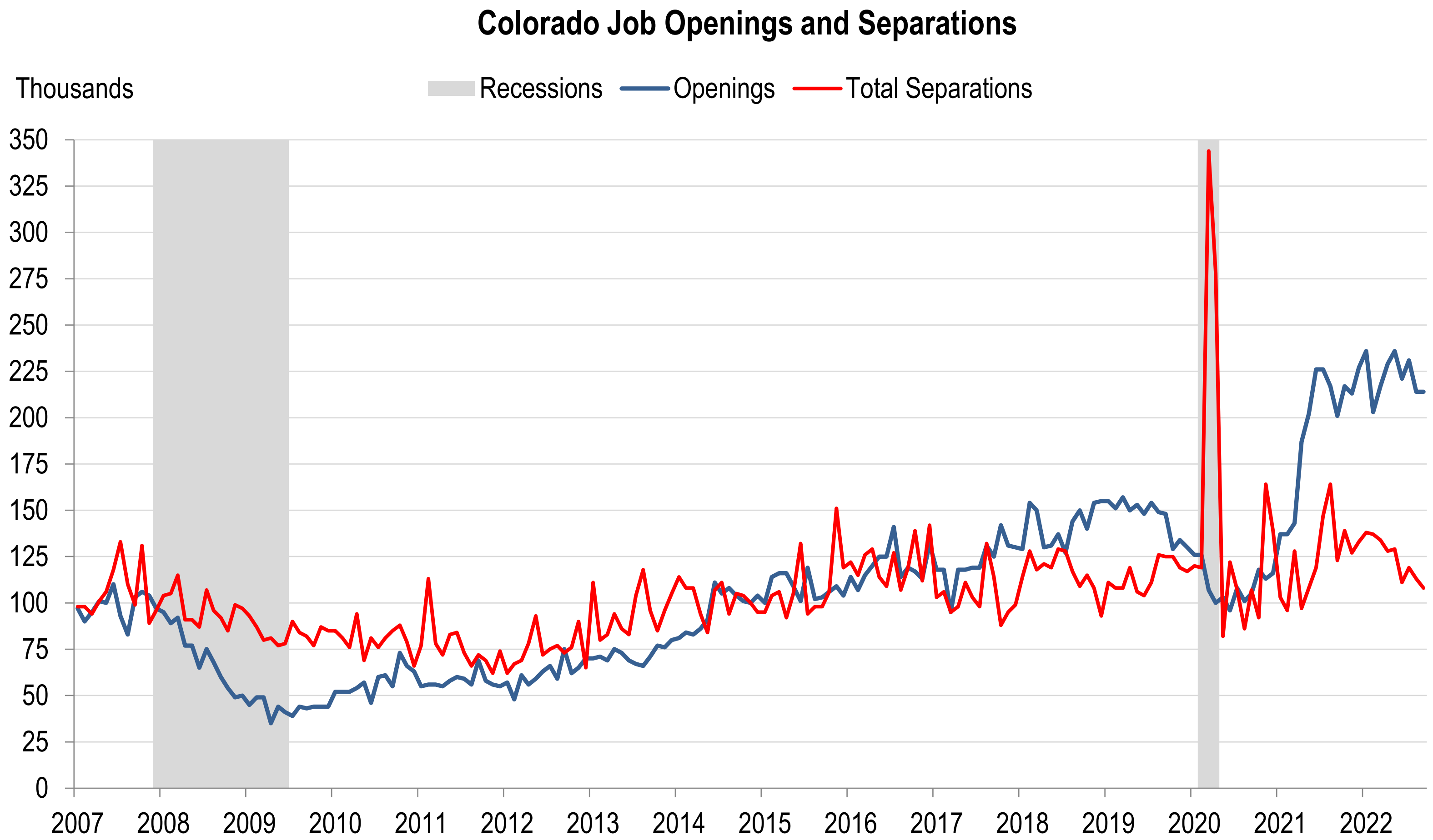
Openings

The number of U.S. job openings (blue) bottomed out in 2009. Openings steadily increased over the next decade and leveled out in 2019. COVID-19 lockdown policies caused the decline in 2020. By July 2021, job openings had rebounded to 10.7 million and peaked at 11.9 million in March 2022. In September, they were at 10.7 million.

Separations

There were 5.7 million separations (red) in September 2022. The average level for 2018 and 2019 was 5.6 million. Boomers retired, and other workers used the strong labor market to switch companies, increase their compensation, or improve their work environment. In September 2022, about 71% of the separations were quits, the average for 2022.

Job Openings and Separations
Colorado



Source: BLS, SA, cber.co.

Openings

The number of Colorado job openings (blue) bottomed out in 2009 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 September 2022, there were 214,000 job openings. The number of job openings appears to have plateaued.

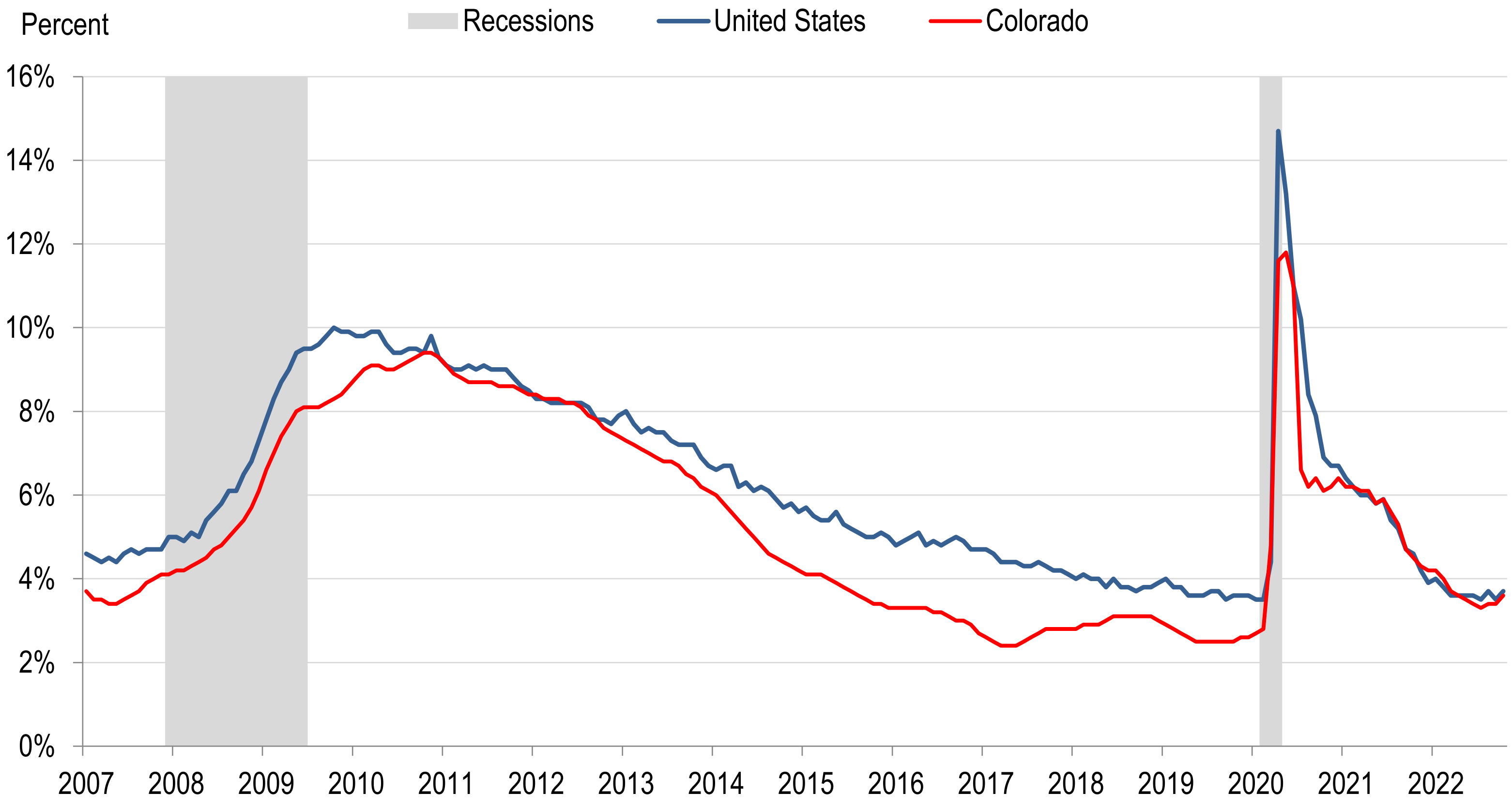
Separations

There were 108,000 separations (red) in September 2022. The average level for 2018 and 2019 was 115,800. In September, the quits were 66.7% of total separations.

Unemployment Rate

United States and Colorado

U.S. and Colorado Unemployment



Source: BLS, SA, cber.co.

Unemployment Rate

The Colorado and U.S. unemployment rates were similar in 2021 and 2022. The Colorado October unemployment rate was 3.6%, and 3.7% for the U.S. There will continue to be a shortage of workers in some occupations despite the low unemployment rate and the slowdown in employment.

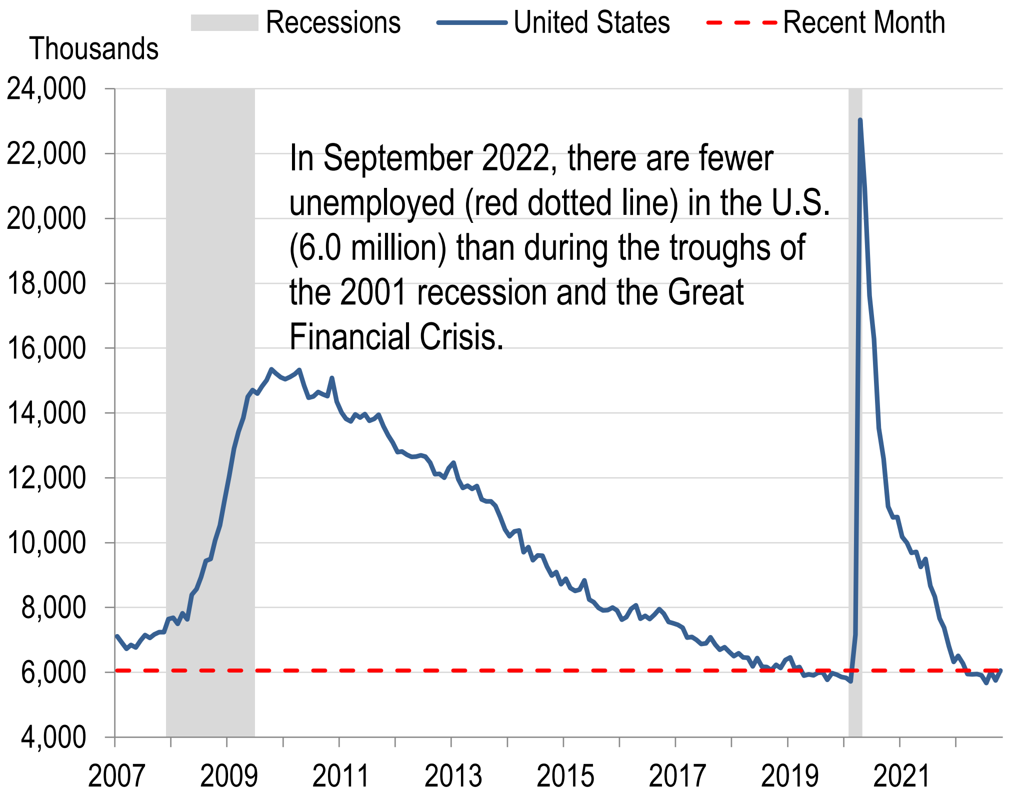
Annual Unemployment Rate

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	3.7%	3.6%

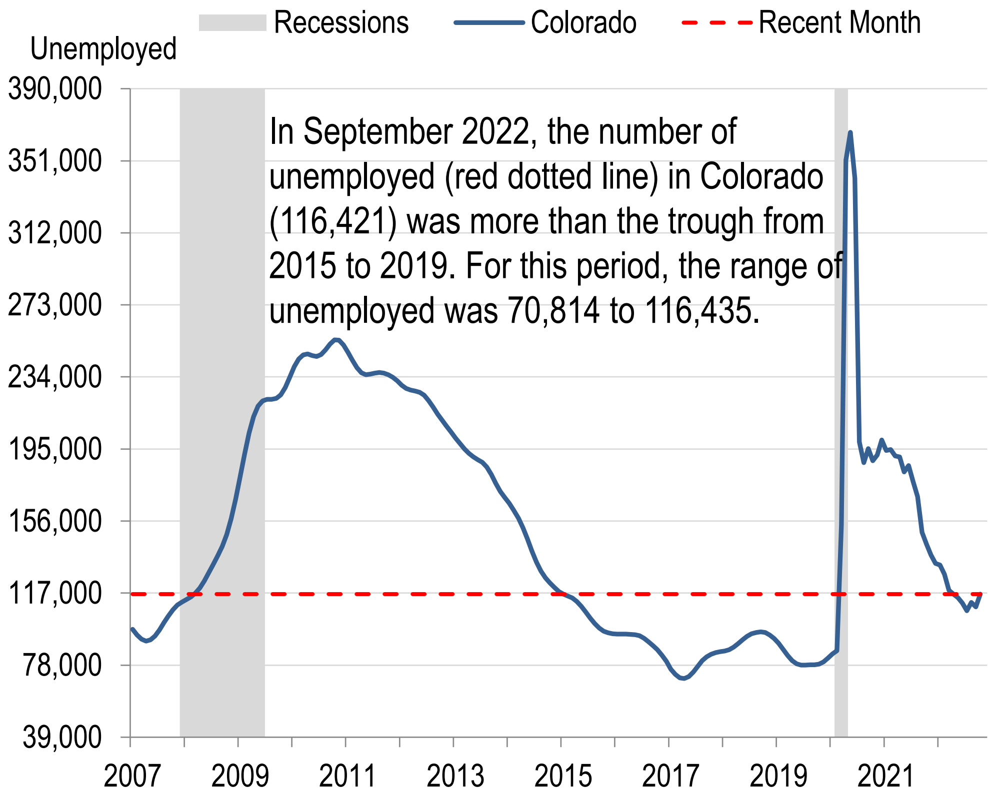
Number of Unemployed

United States and Colorado

U.S. Number of Unemployed (Thousands)



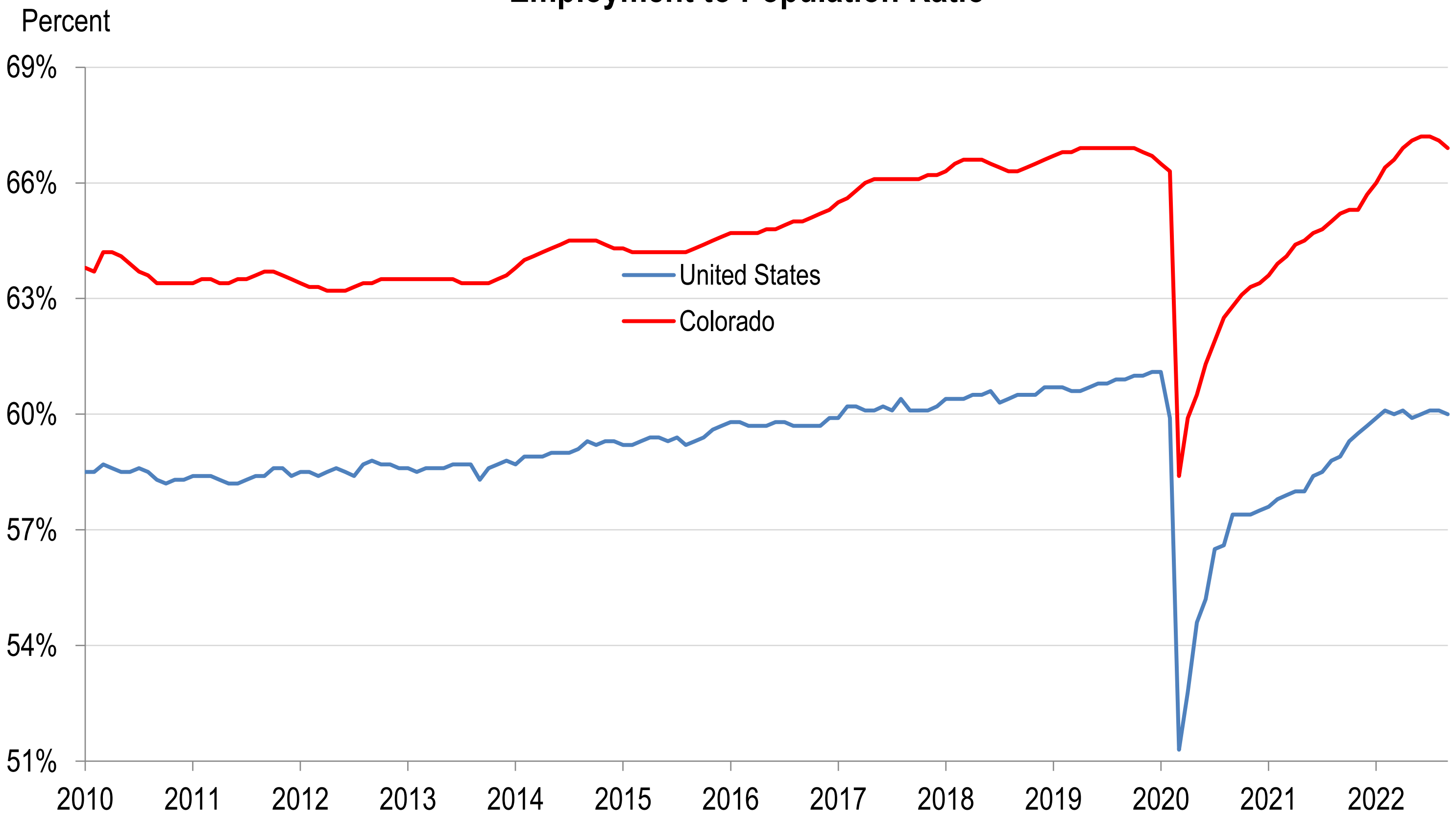
Colorado Number of Unemployed (Thousands)



Source: BLS, cber.co.

Employment-to-Population Ratio
United States to Colorado

Employment to Population Ratio



Source: FRED, BLS, cber.co.

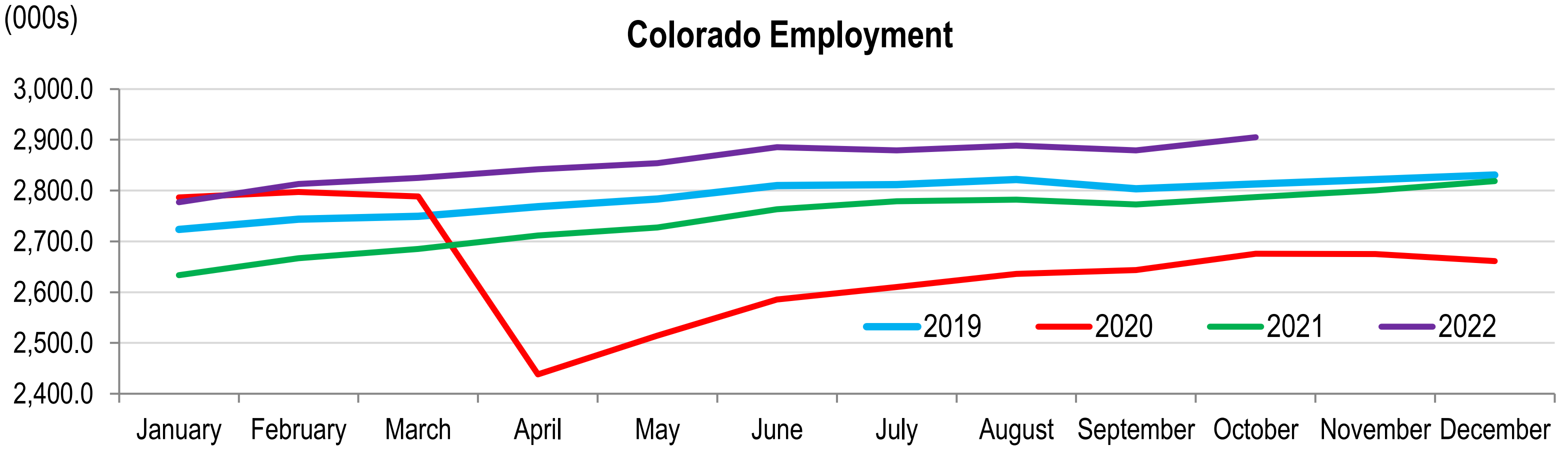
Between 2010 and 2019, the employment-to-population ratios for Colorado and the U.S. gradually increased.

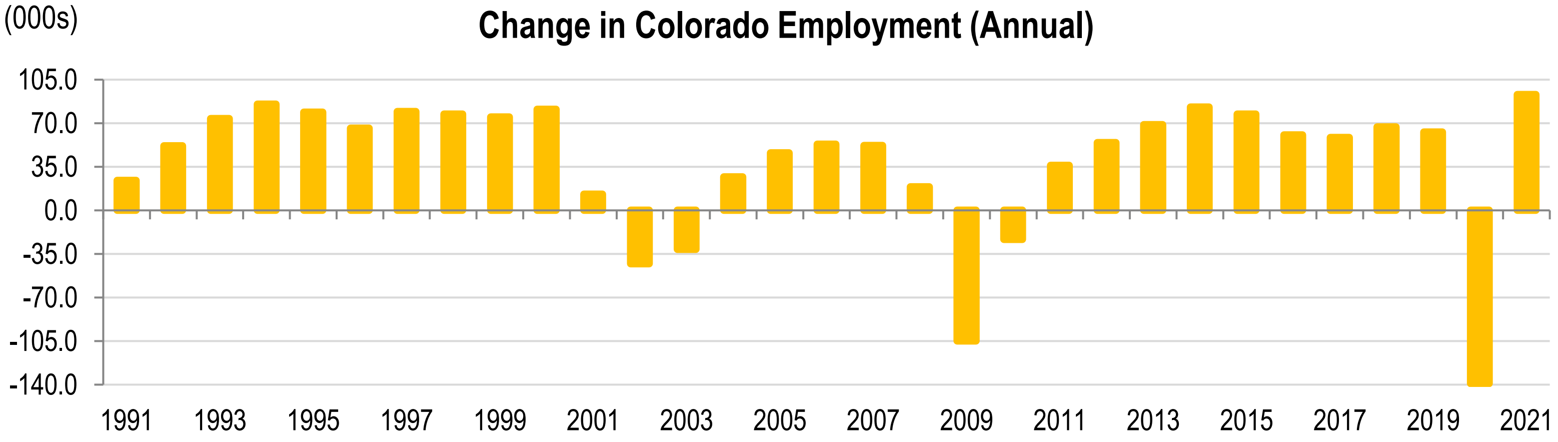
Between May and November 2019, the Colorado ratio peaked at 66.9%. In March 2020, it fell to 58.4% because of COVID-19 lockdown policies. It rebounded and was 66.9% in October 2022.

In January and February 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 60.1% in August and September 2022. The October U.S. ratio is 1.0 percentage points below the pre-pandemic peak in 2020 (61.1%).

Employment and Change in Colorado Employment

Colorado





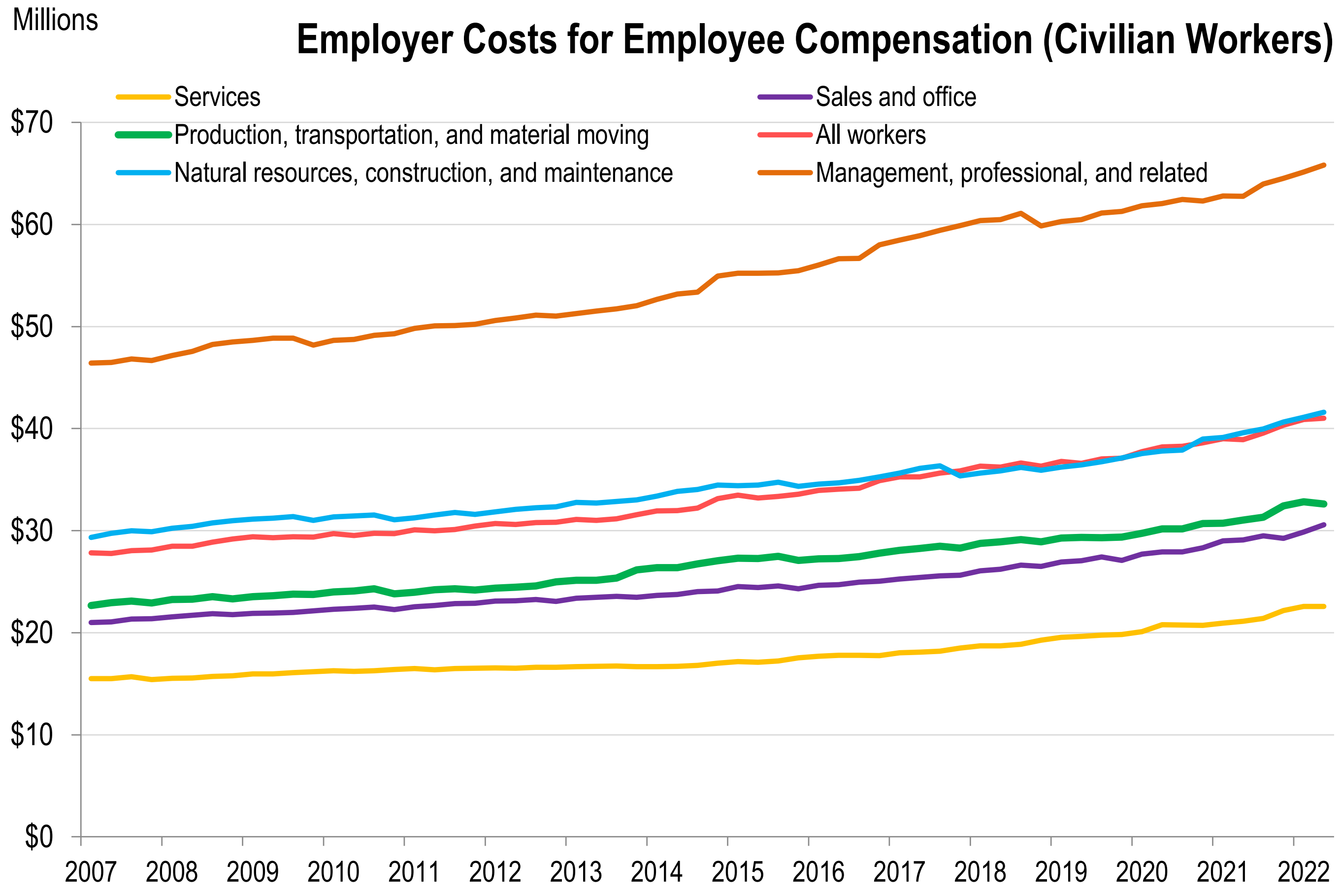
Source: Bureau of Labor Statistics, NSA, cber.co.

Job growth has been more than expected through ten months. The average annual Colorado employment (NSA), based on the first ten months of 2022 (purple), is about 123,900 more than the same period in 2021 (green). The annualized level of employment for the first ten months of 2022 (purple) is about 72,000 more than in 2019 (blue).

The CES data series (establishment survey) for October does not align with activity on the street. Areas that are seeing slowdowns are food services, retail, ski areas (little snow), housing, financing, and layoffs in major high-tech companies that may trickle down to Colorado. Activity on the street aligns more closely with the household survey.

Employer Costs for Employee Compensation

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



Change in Compensation Q2 2022 vs. Q2 2021

Over the past year, compensation has increased across all occupations. Except for the service occupations, the rate of increase was comparable across all occupation categories.

Year over Year Change in Compensation

Color	Occupation	Wages	YOY Change	YOY%
Orange	Mgmt. and Prof.	$65.83	$3.06	4.9%
Blue	Nat. Res., Const., Maint.	$41.61	$2.02	5.1%
Red	**All Workers**	**$41.03**	**$2.12**	**5.4%**
Green	Prod., Transp., Mat. Moving	$32.60	$1.57	5.1%
Purple	Sales and Office	$30.58	$1.50	5.2%
Yellow	Services	$22.59	$1.47	7.0%

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

Economic Outlook and Trends

Inflation and Consumption

Inflation is at the top of a long list of headwinds. After peaking during the summer, the CPI and PCE have started the long descent back to the Fed's target rate.

Consumers will adapt their purchasing patterns to account for higher prices and increase credit card consumption. They have already reduced funds from their personal savings.

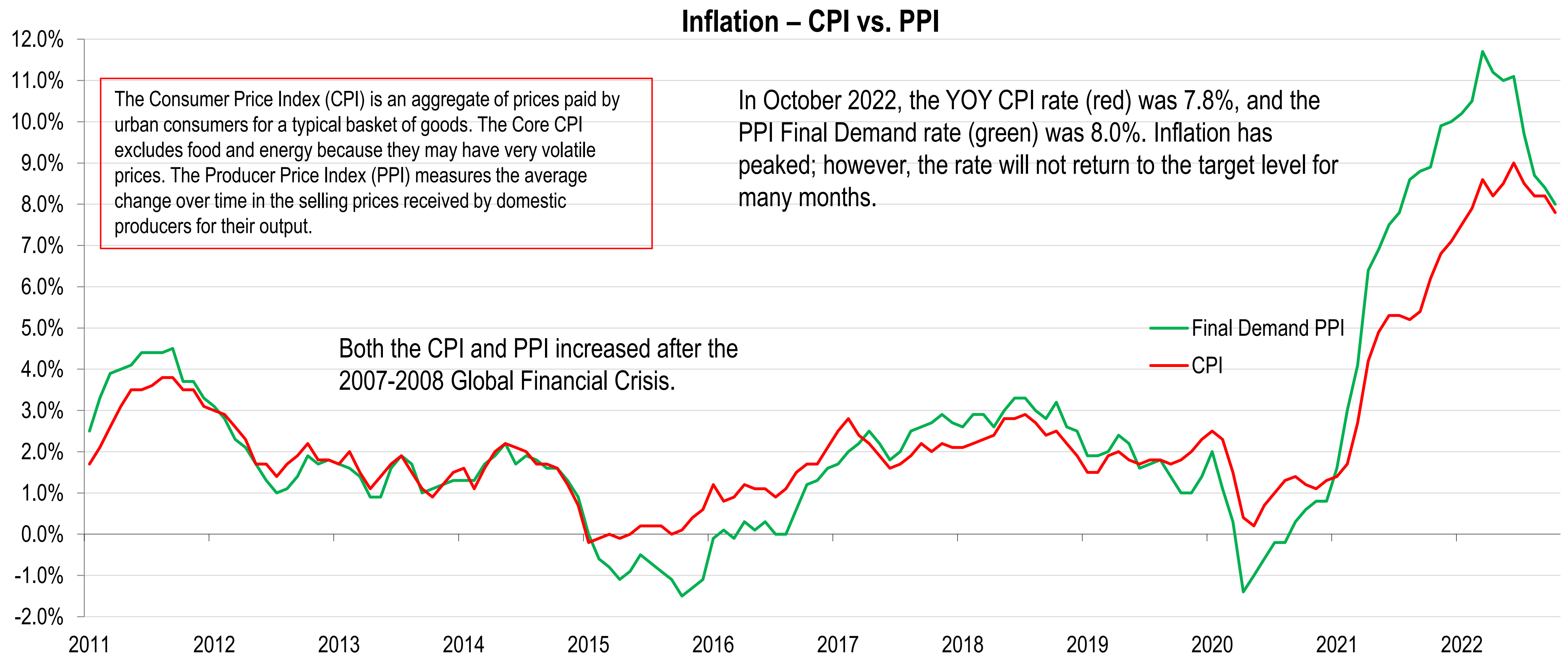
Colorado will find that inflation is highest for the most critical items: food, energy, housing, medical, recreation, and transportation. Heating costs during winter months will be problematic.

Holiday retail sales will be 6.0% to 8.0% greater than in 2021.

Overall, passenger traffic at DIA has rebounded with fewer business travelers.

The S&P 500 is -20.0% compared to the 2021 year-end value, reducing personal wealth.

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 vs. U.S.

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 essential critical goods and services for Coloradans are listed below. Most have abnormally high inflation rates. Almost half of the rates listed below are greater for Colorado than the U.S.

The most current NSA data for Denver is through September, 7.7%. The U.S. rate is 8.2% through September. When the value for the second half of 2022 is available, most goods and services will have lower inflation rates.

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.

Heating Bills in Colorado this Winter

The CPI data provides a historical perspective of inflation. The following articles/information suggest Coloradans may face steep increases in heating costs this winter.

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Heating Costs Are Rising This Winter. Here's How to Keep Your Bill Affordable

TOP STORY

Xcel customers likely to see higher energy rates as winter arrives

By SCOTT WEISER scott.weiser@gazette.com Nov 15, 2022 Updated Nov 15, 2022

Average Residential Xcel Energy Bills

December 2021 compared to December 2022

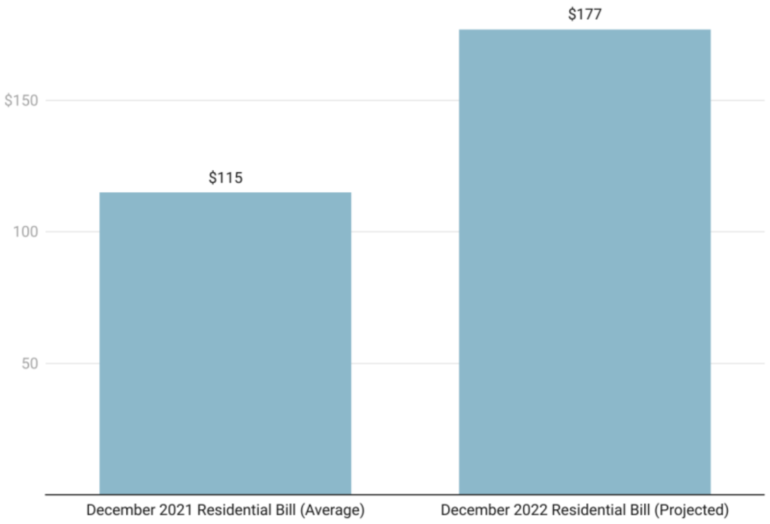


Chart: City of Boulder • Source: Colorado Office of the Utility Consumer Advocate • Created with Datawrapper

BUSINESS

December natural gas bills will jump 54% as Xcel passes a stack of price hikes on to Colorado customers

The rate increase "is more than concerning, it is frightening," state consumer advocate says

Mark Jaffe 3:32 AM MDT on Sep 23, 2022

THE DENVER POST

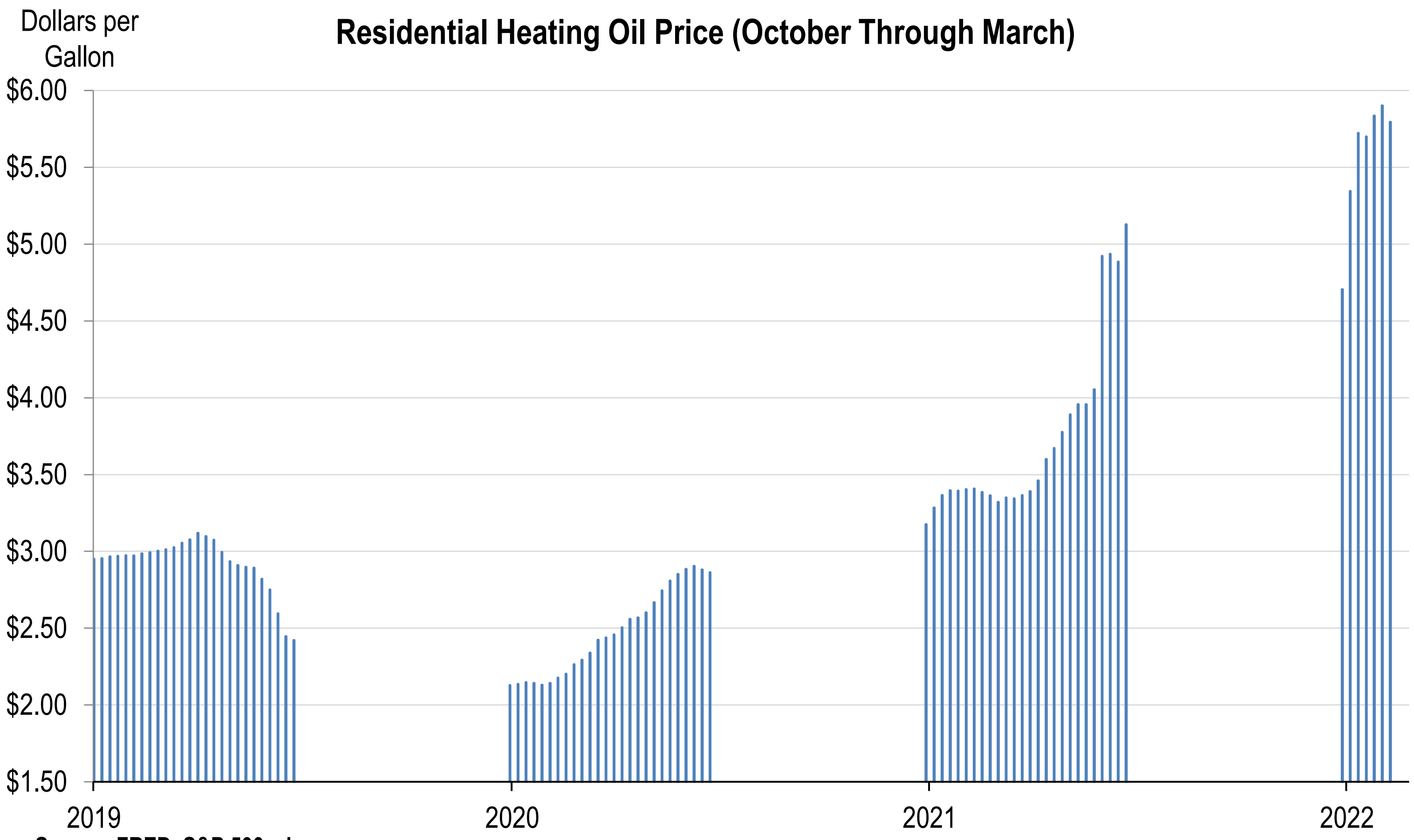
Energy | Your utility bill is going up in October thanks...

Your utility bill is going up in October thanks to higher natural gas prices

State regulators OK requests by Xcel Energy, Atmos Energy to pass through fuel costs

Source: City of Boulder, Denver Gazette, Denver Post, Colorado Sun, cber.co.

U.S. Weekly No. 2 Heating Oil Residential Price



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

The season for heating oil runs from October through March.

This chart begins with the season (October 2019 through March 2020). The average price per gallon by period follows

- Oct. 2019 to March 2020 $2.91

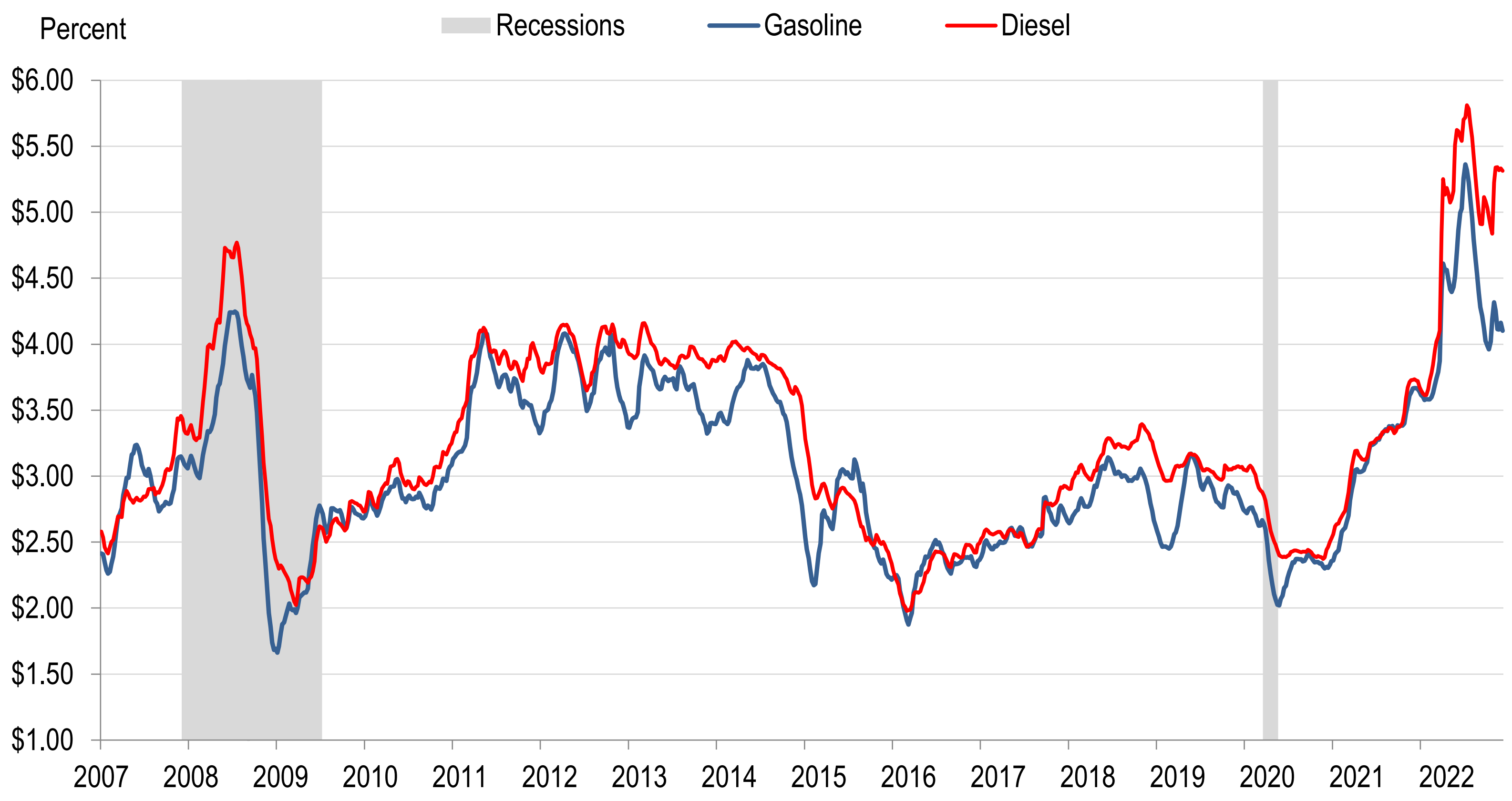
- Oct. 2020 through Jan. 2021 $2.30
- Feb. 2021 and March 2021 $2.80
- Oct. 2020 to March 2021 $2.47

- Oct. 2021 through Feb. 21, 2022 $3.49, The Eastern European Conflict began on Feb. 24, 2022
- Feb. 28, 2022 through March 2022 $4.78
- Oct. 2021 to March 2022 $3.73

- Oct. 2022 through Nov 14, 2022 $5.57

The price rose by 51% in 2021 and 49% for the data available for 2022.

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



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, a year before the Eastern European conflict escalated (2/24/2022). On November 17, 2022, a gallon of gasoline was $4.10, down from a peak of $5.51. A gallon of diesel was $5.31 compared to its peak of $5.78.

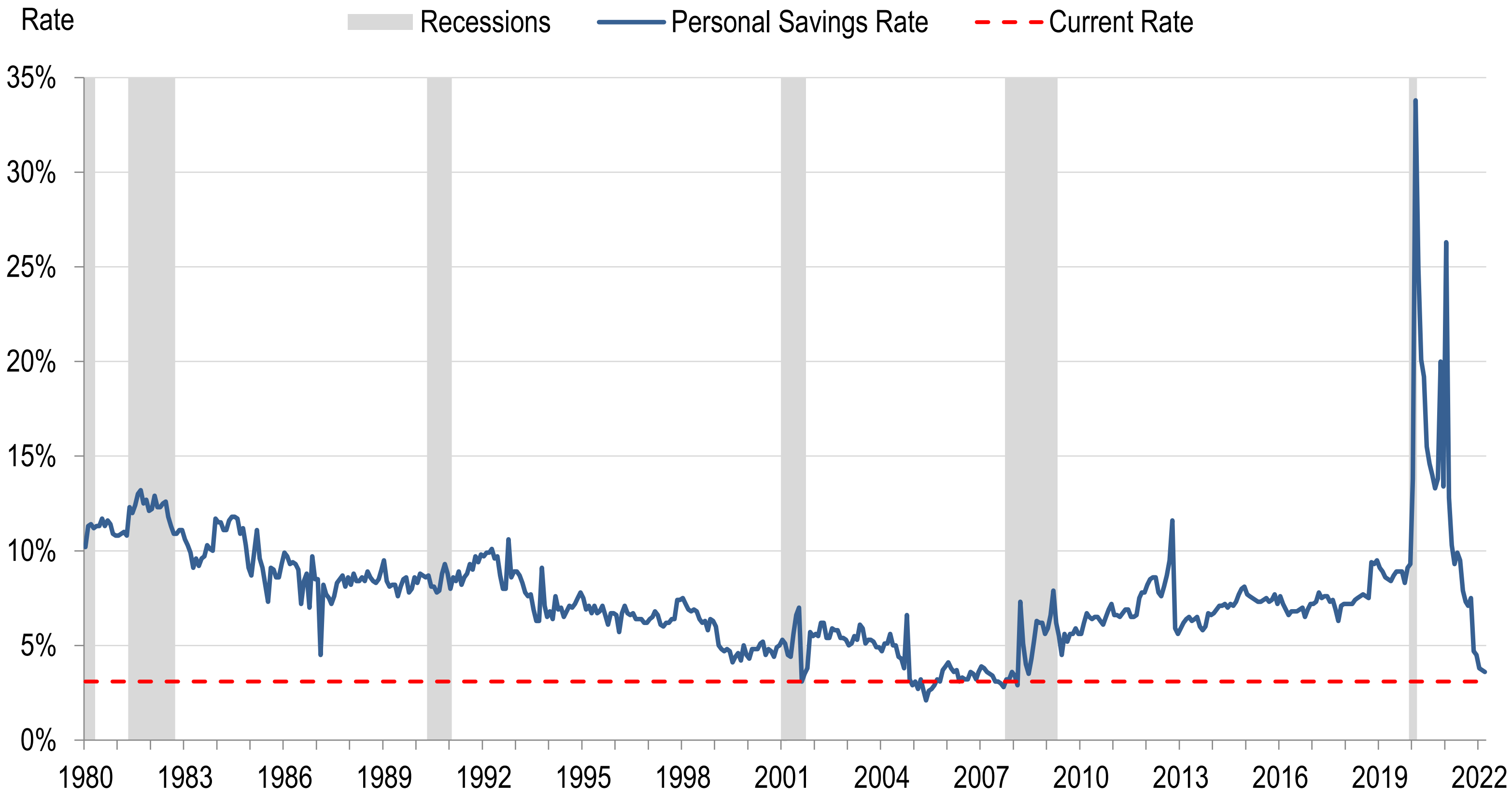
Average Annual

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

Source: FRED, EIA, https://www.eia.gov/dnav/pet/pet_pri_gnd_a_epd2d_pte_dpgal_w.htm, https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMM_EPM0_PTE_NUS_DPG&f=W, cber.co.

U.S. Personal Savings Rate

Percentage of Disposable Personal Income



Source: BEA, FRED, cber.co.

The personal savings rate jettisoned to 33.8% in the early stages of the pandemic. It fell to 13.0% in November 2020, then rose to 26.6% in 2021.

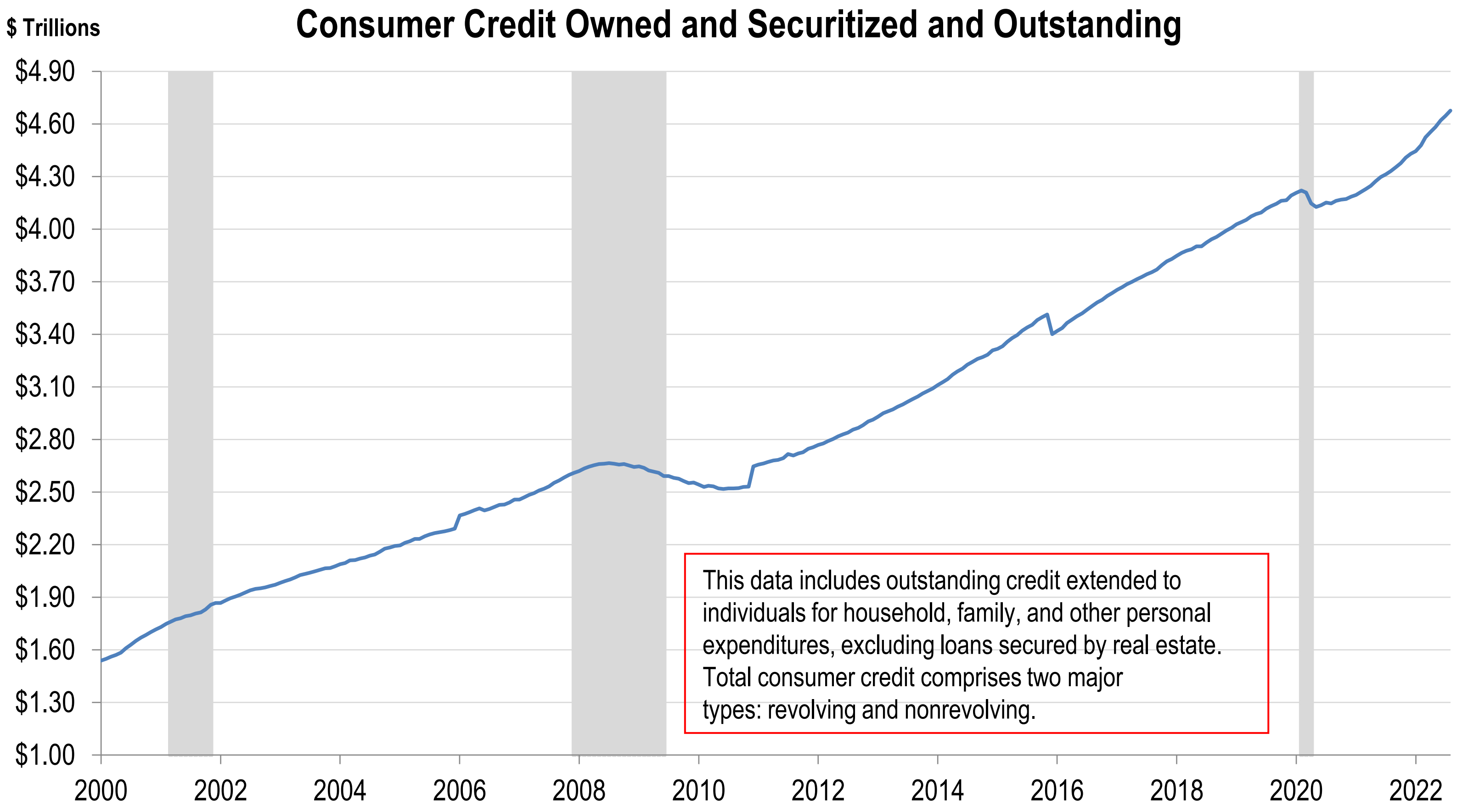
The September 2022 personal savings rate was 3.1%, and savings were $581.6 billion, down from $6.4 trillion in April 2020.

Year End Personal Savings (Billions) and Rate

2017	$948.5	6.3%
2018	$1,511.9	9.4%
2019	$1,381.3	8.3%
2020	$2,402.8	13.8%
2021	$1,372.3	7.5%

Source: BEA, cber.co

U.S. Consumer Credit Outstanding



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

From Q3 2008 to Q4 2010, consumers deleveraged and decreased the level of outstanding consumer credit, including consumer defaults on loans. The amount of credit authorized increased in 2018 and 2019 and declined in 2020 as consumers reduced expenditures and paid off debt during the pandemic. In January 2022, the YOY rate of consumer debt increased by 6.0%. In September 2022, it increased by 7.9%.

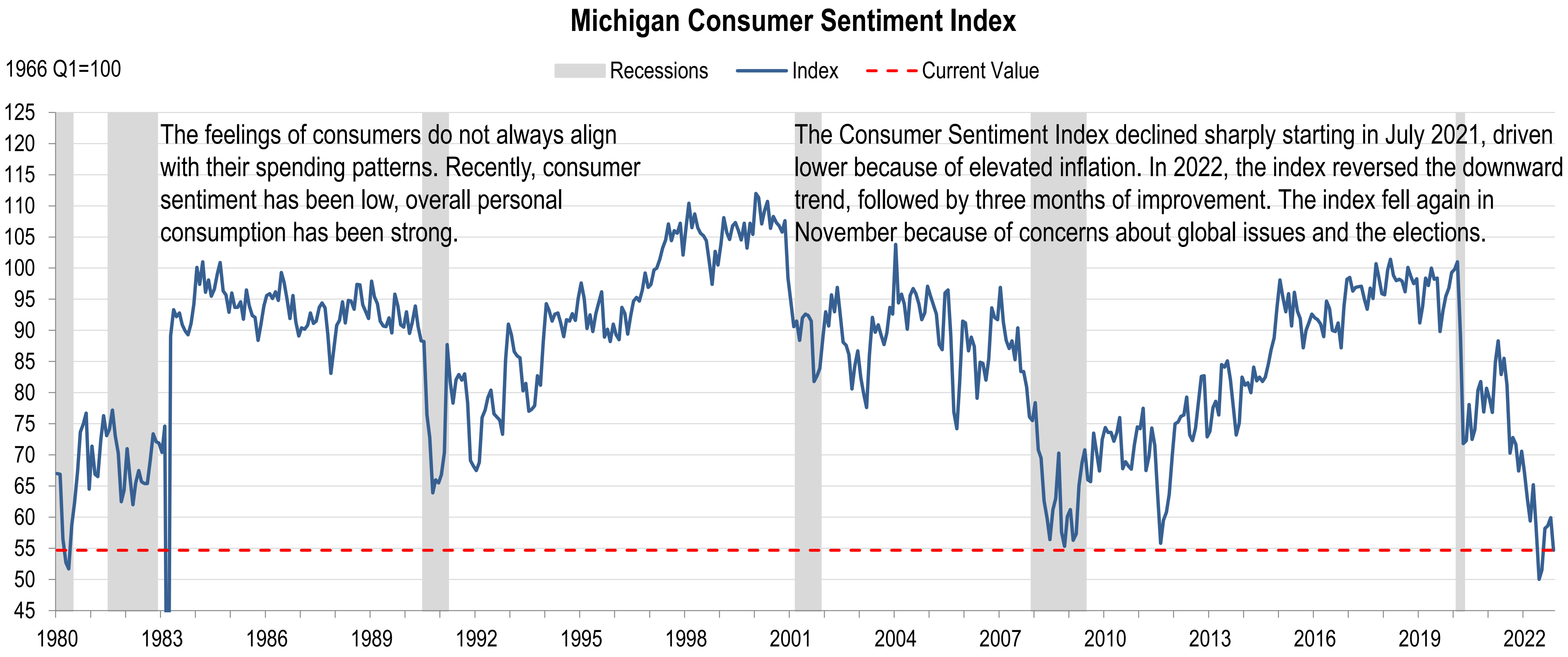
Outstanding Credit (Billions) and Percent Change

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

Consumer Sentiment Index

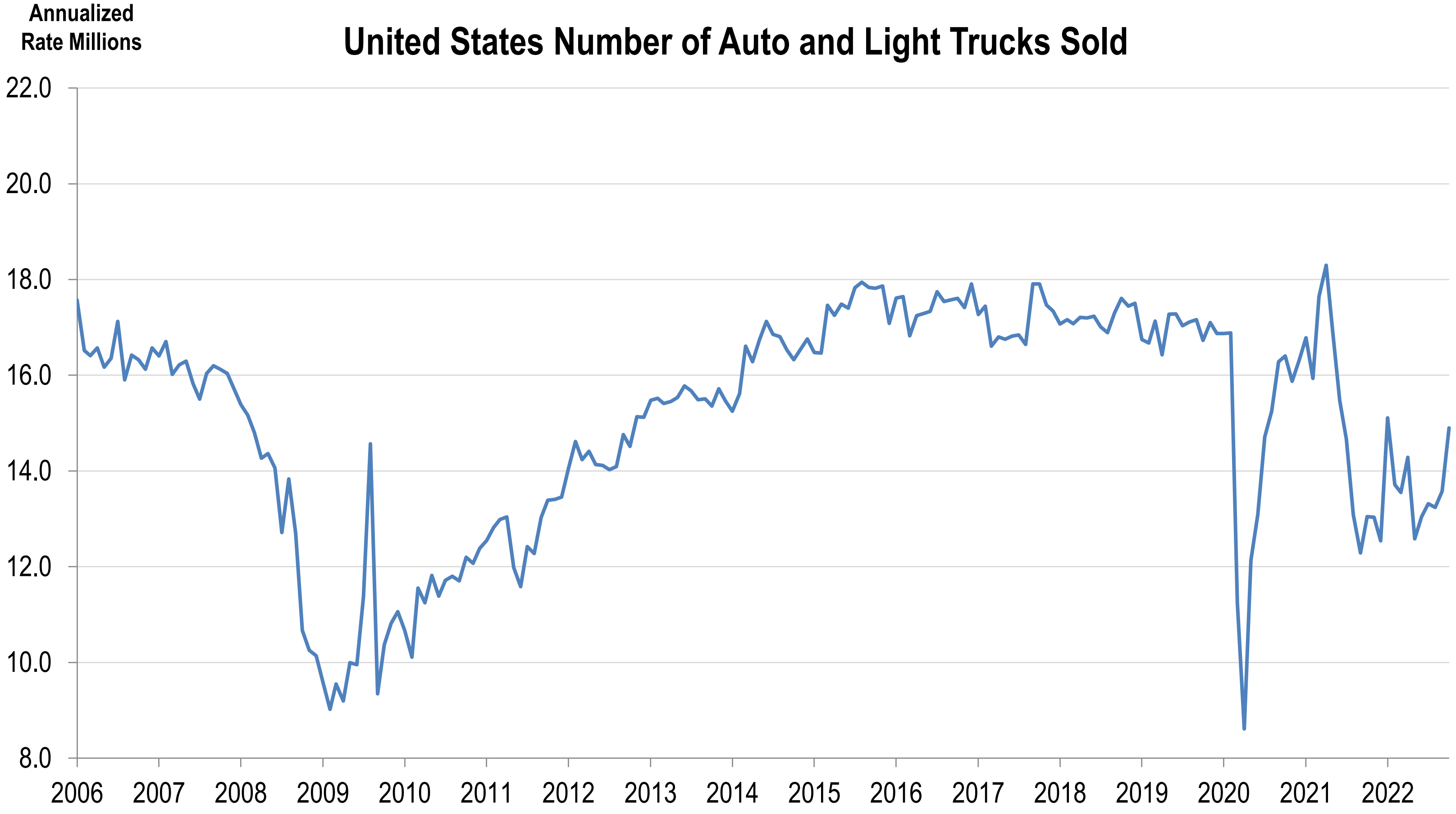
University of Michigan



Source: University of Michigan, 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.

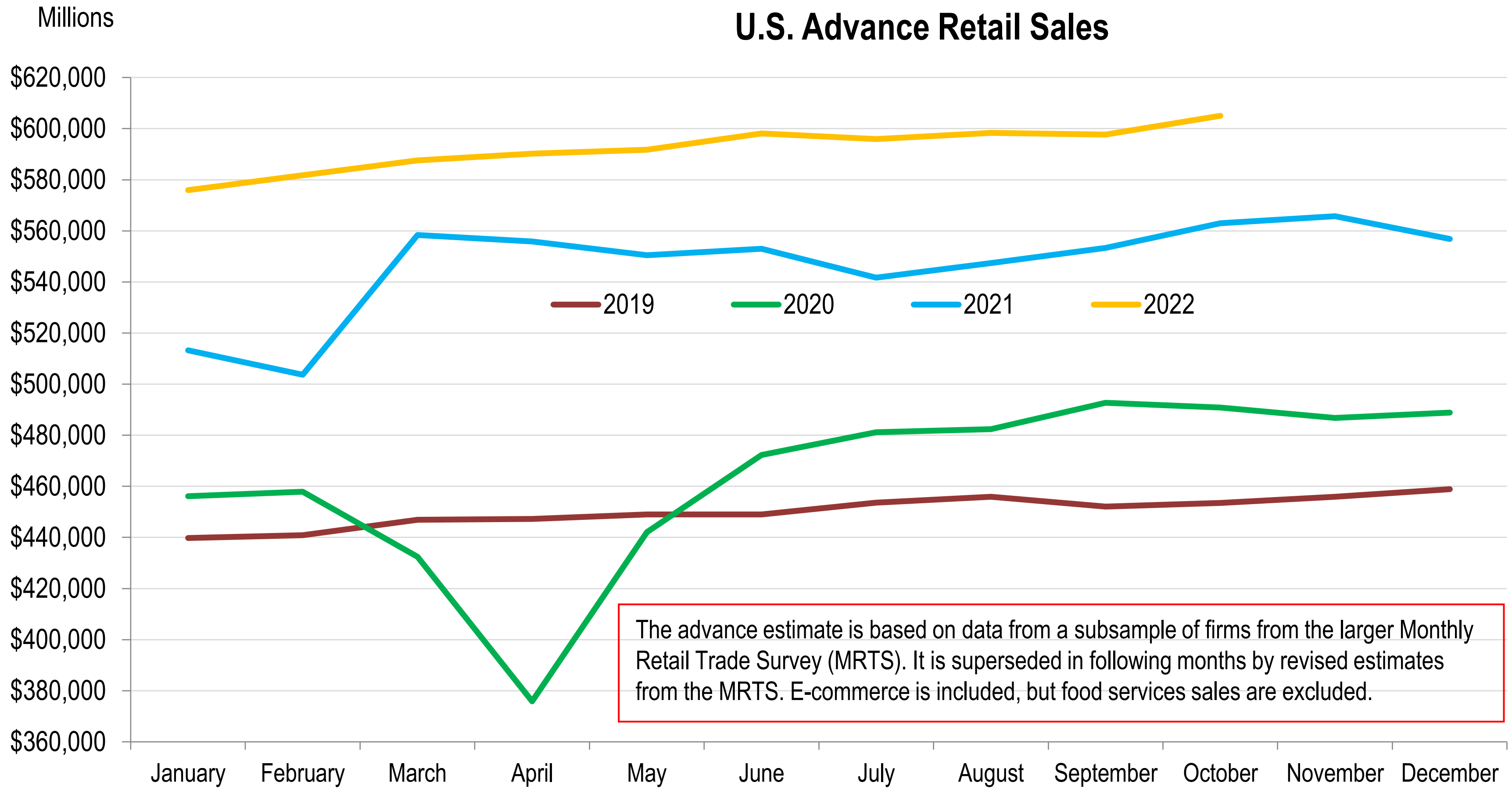
In April 2020, SAAR sales plummeted to 8.6 million units (The February 2009 total was 9.0 million). There was a sharp rebound, and sales peaked at 18.3 million in April 2021 before falling sharply. Sales in 2021 and 2022 have been lackluster. In October 2022, sales remained below expectations at 14.9 million annualized.

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

U.S. Advance Retail Sales

Monthly



Sales through the first ten months of 2022 (yellow) were 8.9% greater than the same period in 2021 (blue). The YOY rate of growth will continue to decline as the year progresses. The National Retail Federation projected that 2022 sales would be 6.0% to 8.0% greater than the 2021 value, with a similar amount during the holiday season.

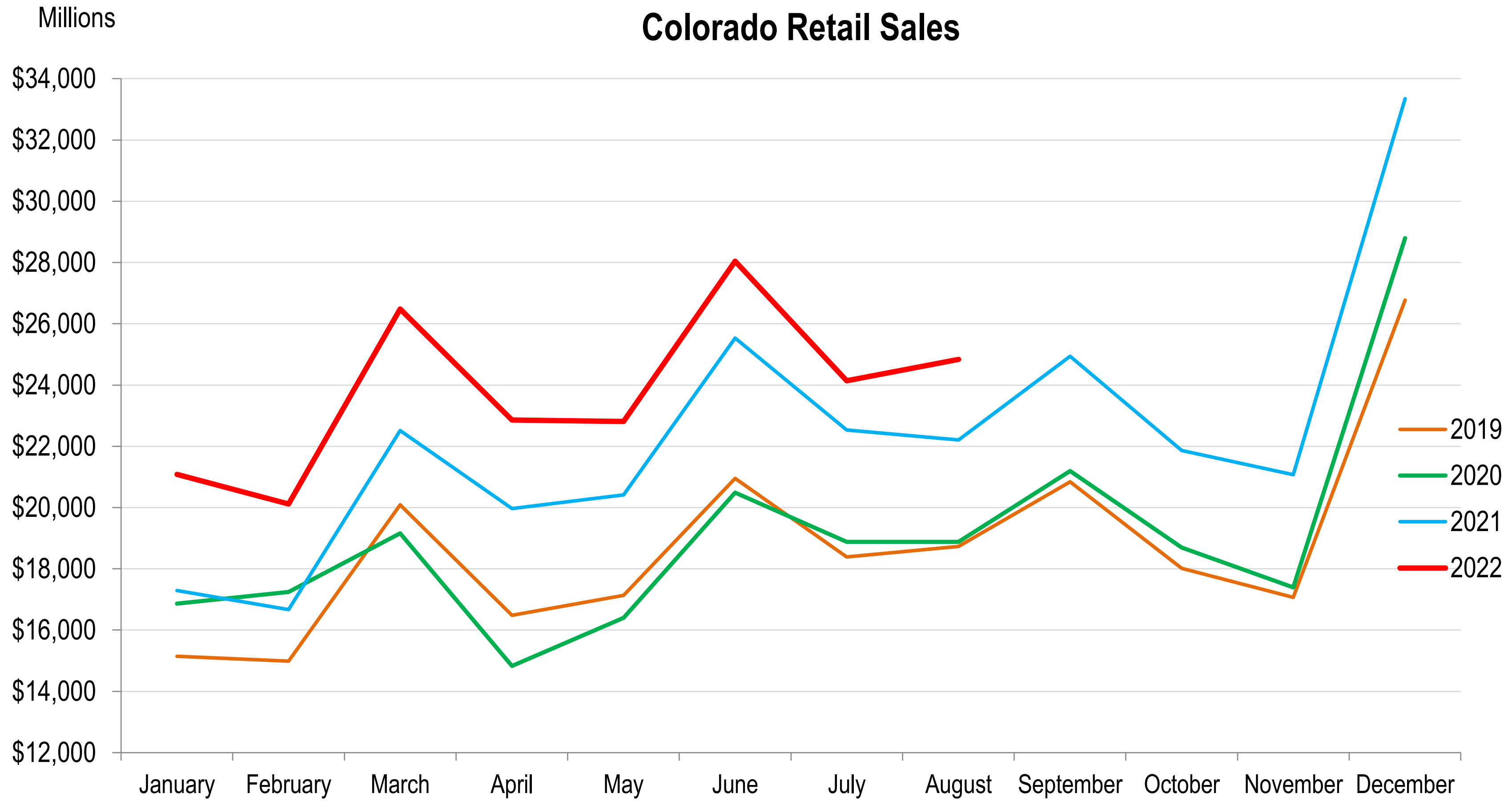
Annual Retail Sales (Trillions)

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

Average retail sales for the first eight months of 2022 (red) were 13.9% greater than the same period in 2021 (turquoise).

Sales for 2022 have been volatile and have increased at a decelerating rate starting in April.

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.

Retail Sales

Deck the Halls, Hit the Malls (And Don’t Forget Your Local Small Businesses)

HO HO HO!

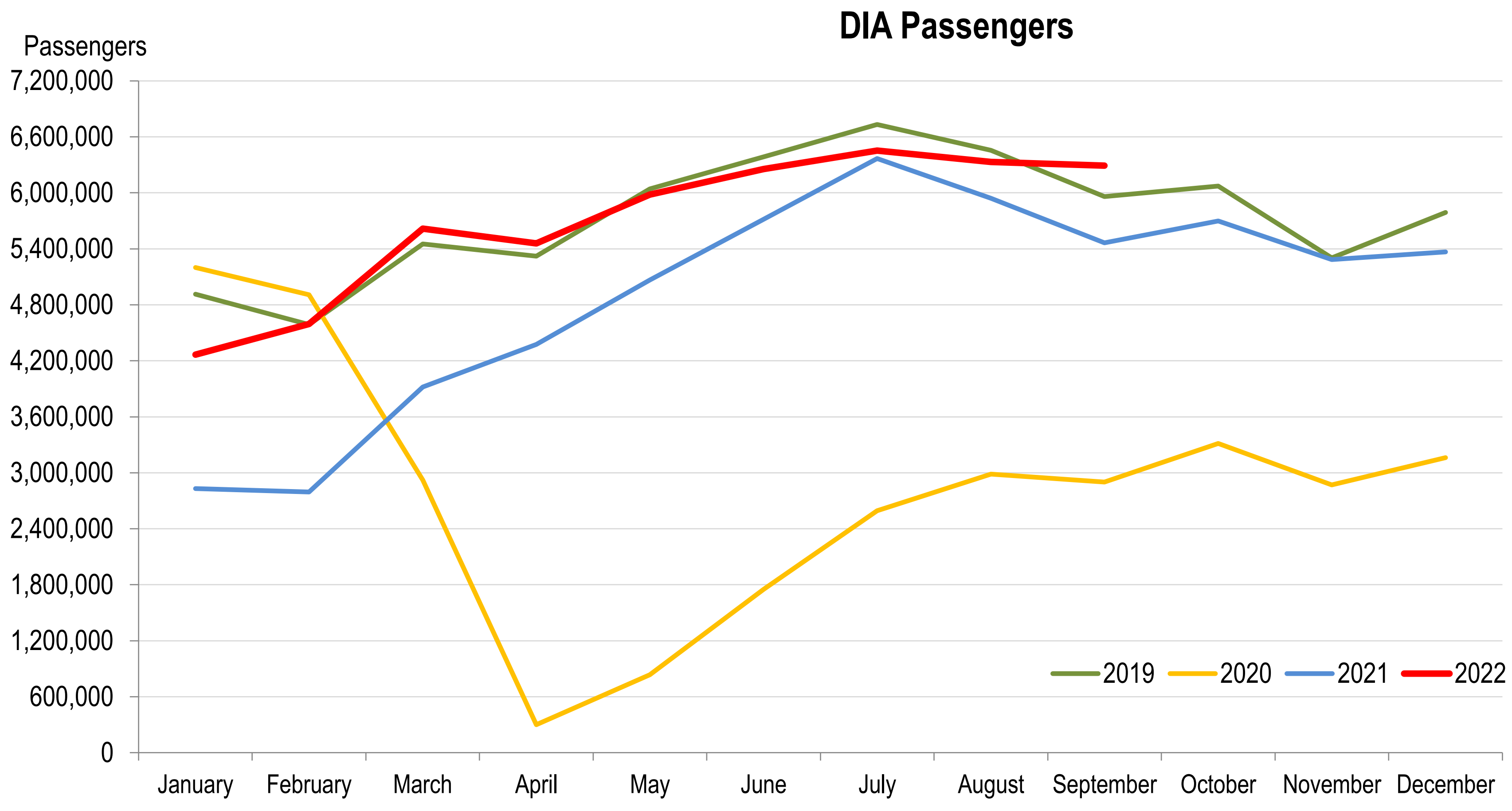
Montgomery Wards, Robert May, Johnny Marks, and Gene Autry were at the forefront of commercializing Christmas with the release of the book and classic song *Rudolph, the Red-Nosed Reindeer.* For those who cannot remember, the year was 1939.

Rudolph will shine his nose brightly during the 2022 holiday season. The National Retail Federation projects that 2022 holiday sales will be 6.0% to 8.0% greater than in 2021. (This is the same as their projections for 2022.)

Shoppers and merchants have extended the shopping season to include the months of November and December.

Source: National Retail Federation, cber.co.

Denver International Airport Passengers
Monthly



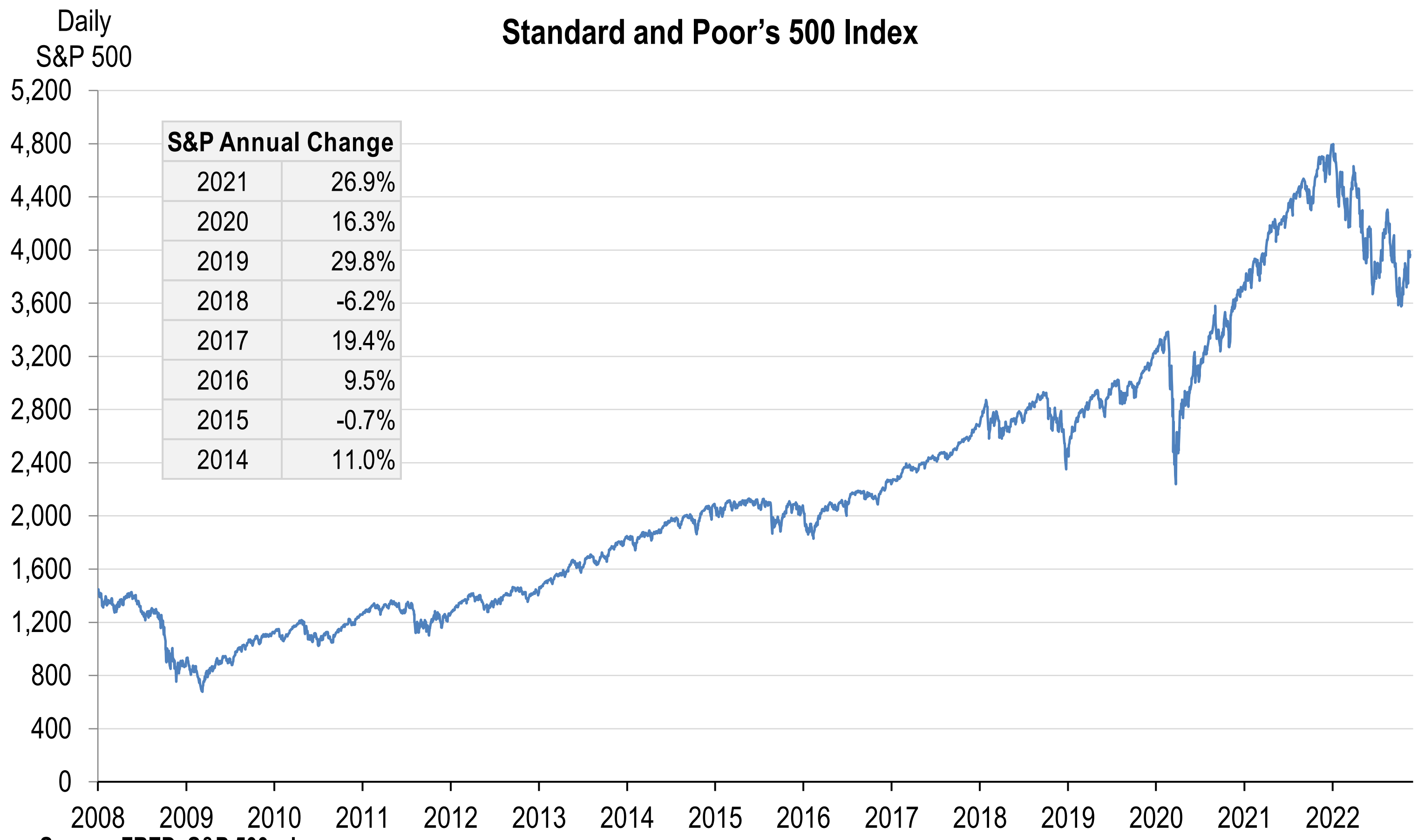
Source: flydenver.com, cber.co.

The number of DIA passengers during the first nine months of 2022 (red) is slightly below the YTD total for 2019 (green) but significantly above the YTD total for 2021 (blue). Business travelers have not returned to pre-COVID levels.

There were 51.2 million DIA passengers during the first nine 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%

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 S&P value on November 18, 2022, was 3,965, 16.8% off the closing value for 2021.

Economic Outlook and Trends

Industry Indices, Construction, Housing, and Extractive Industries

Job growth is no longer broad-based. Ironically, companies in many industries will continue to experience labor shortages in select occupations.

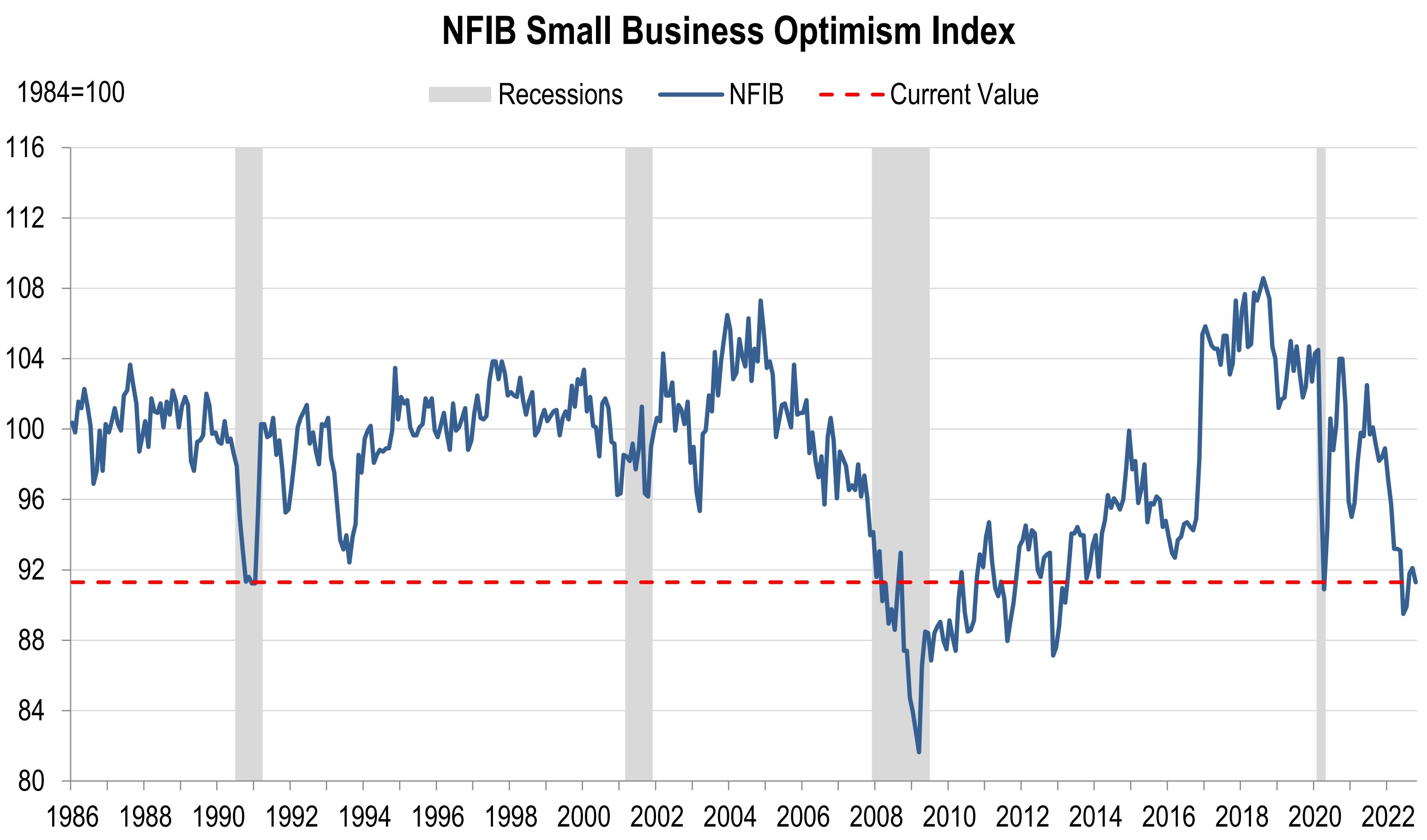
The NFIB and NAHB indices have contractionary values. On the other hand, the ISM Services and Manufacturing indices are in expansionary territory (ISM Manufacturing is borderline).

In Colorado, the number of building permits is increasing at a decelerating rate, and the rate of home price appreciation (Case Shiller) has decreased rapidly.

Colorado oil production has stabilized. Erratic energy policy has caused oil prices to be volatile. As a result, retail gasoline and diesel prices are significantly higher than two years ago. Refineries are producing at capacity.

NFIB Small Business Optimism Index

United States



Source: NFIB, cber.co.

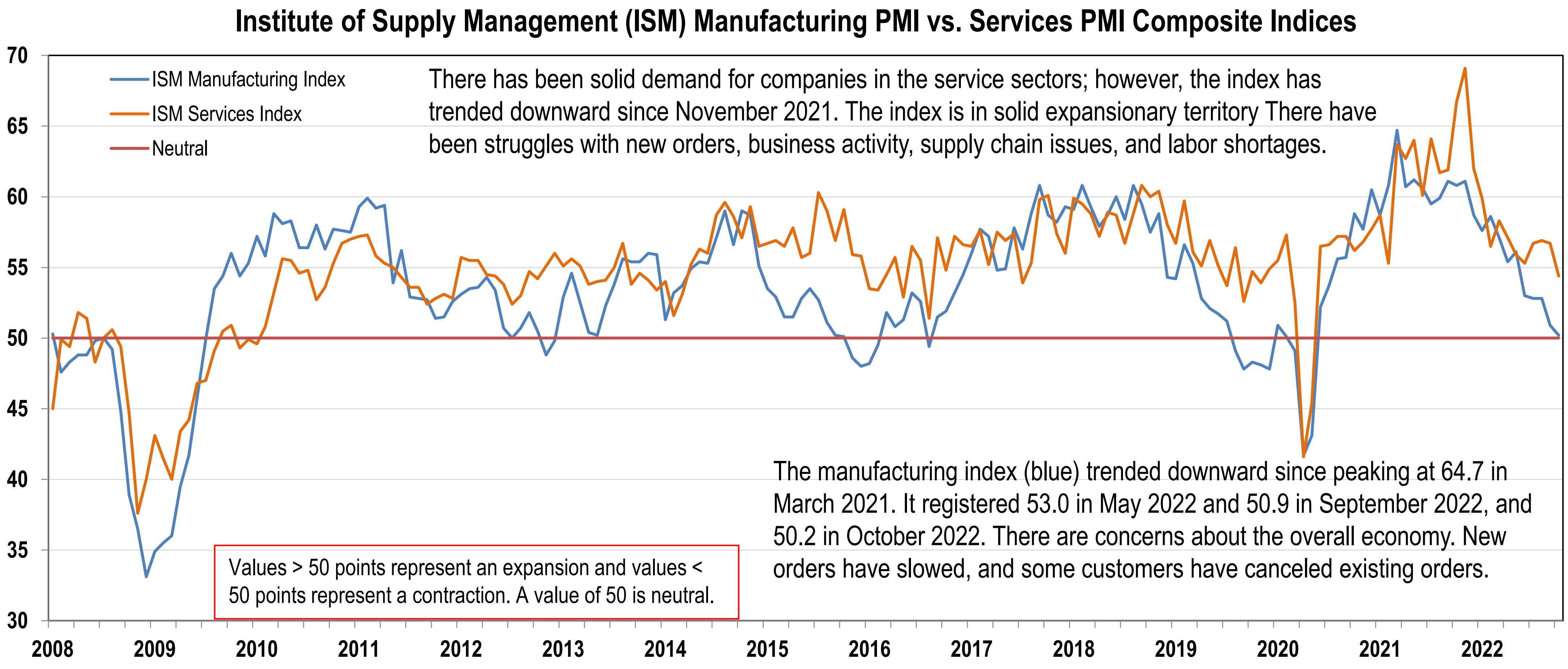
In October, the NFIB index was 91, well below the 49-year average, of 98.0, for the tenth consecutive month.

Small businesses are concerned about the state of the economy. Most importantly, they are overwhelmed by inflation and supply chain disruptions. They have a dismal view of the economy because they are limited in their ability to meet the demand for their products.

Their monthly SBET report is recommended reading for small business owners and is available online at https://www.nfib.com/.

ISM Purchasing Managers Composite Indices

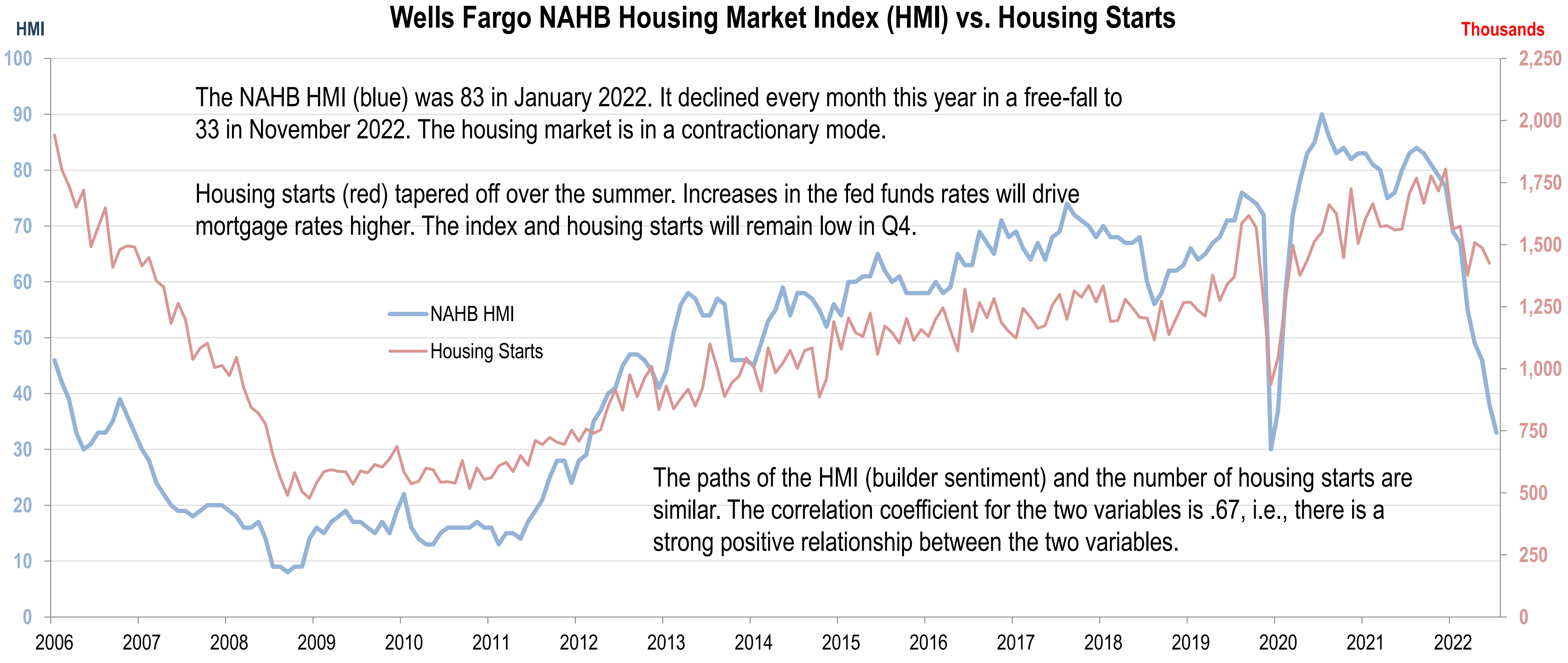
Manufacturing vs. Services



Source: Institute of Supply Management, cber.co

Wells Fargo NAHB HMI vs. Housing Starts

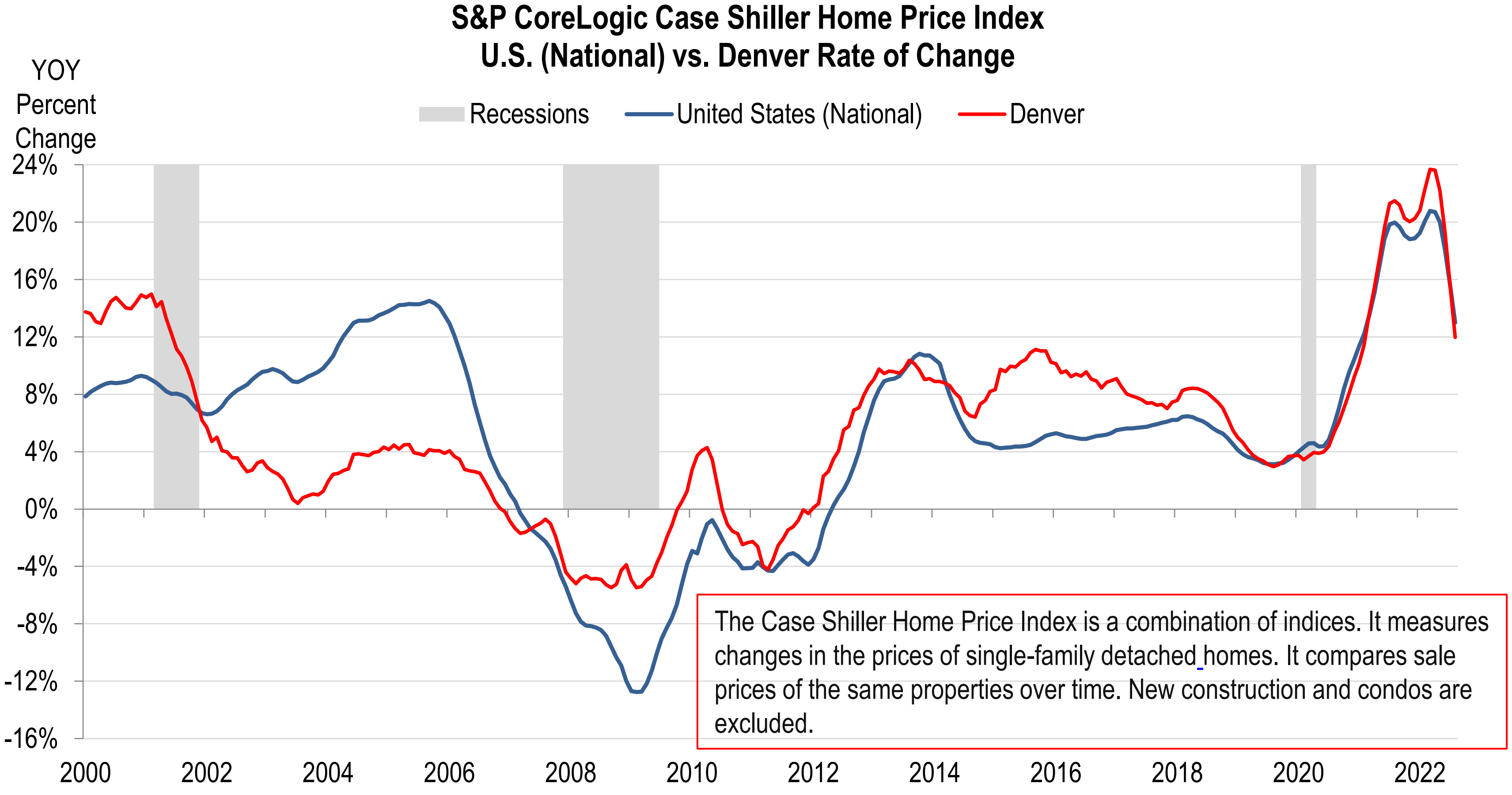
United States



Source: NAHB, cber.co.

Case Shiller Home Price Index

YOY National vs. Denver Rate of Change



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

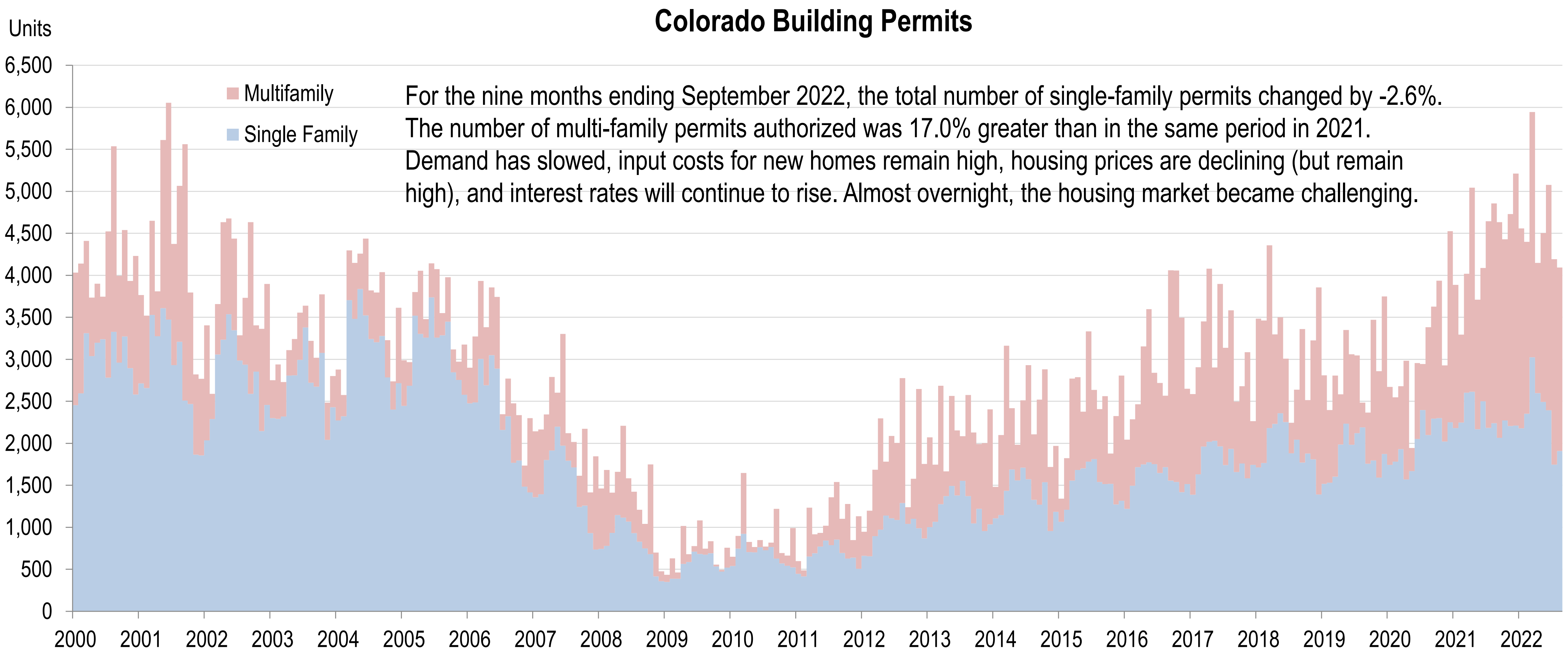
In 2019, the housing market favored buyers, and the U.S. YOY appreciation rate was about 4.0%.

In the summer of 2020, the market began to favor sellers. In August 2021, YOY appreciation rates peaked at rates more than 20%.

In August 2022, the YOY appreciation for the U.S. was 13.0% and 12.0% for Denver. The level of appreciation for the U.S. and Denver will continue to decelerate as the rate hikes continue.

Colorado Residential Building Permits

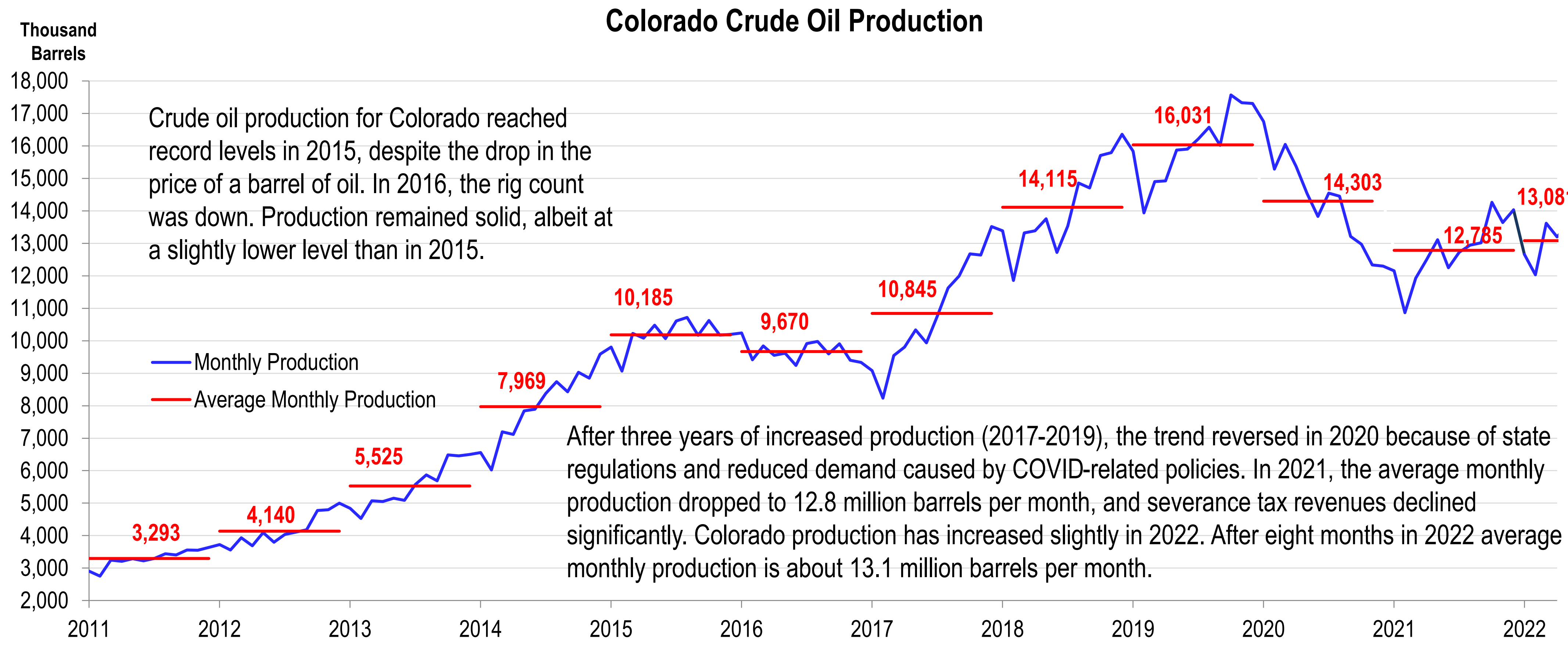
Units



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

Colorado Field Production of Crude Oil

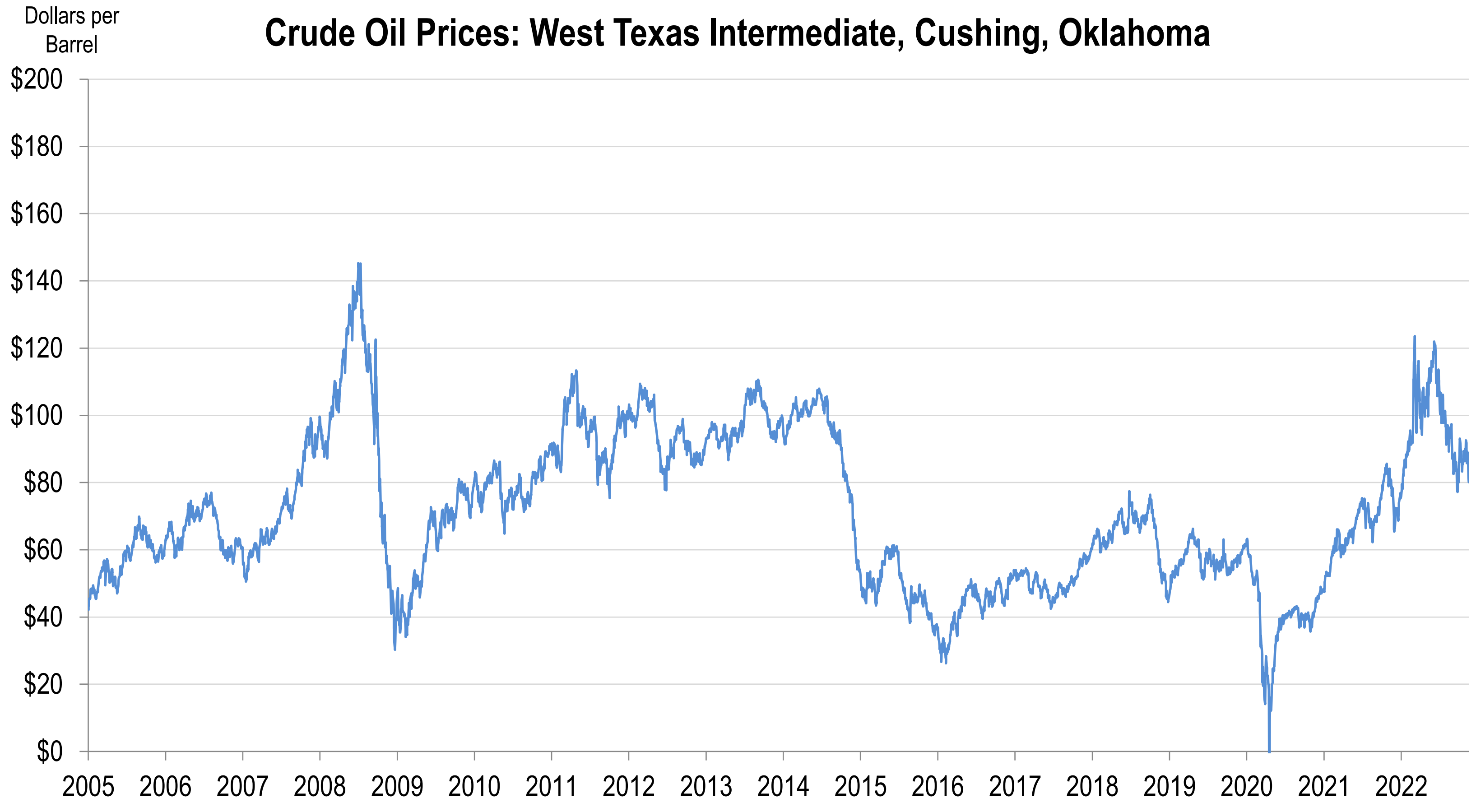
2011 to 2022 (Thousand Barrels)



Source: EIA, cber.co.

Crude Oil Prices

West Texas Intermediate



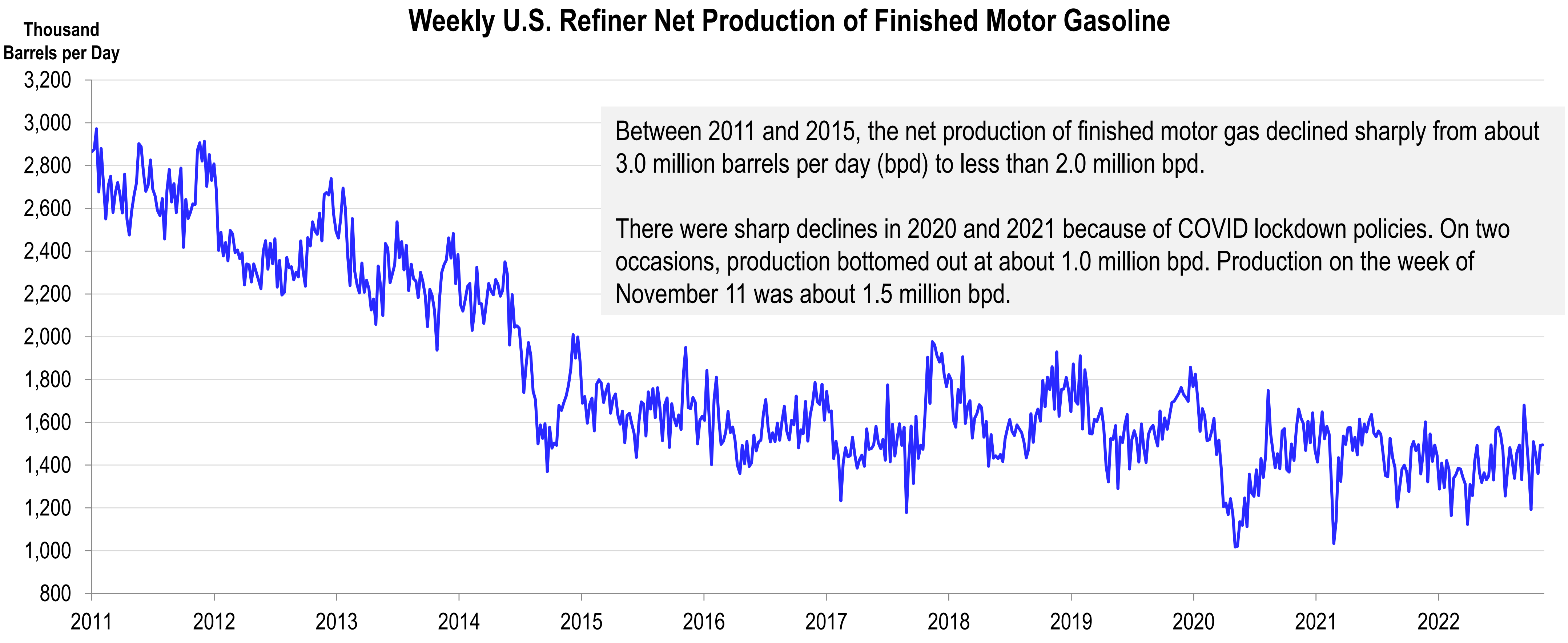
Source: EIA, cber.co, https://www.eia.gov/outlooks/steo/#:~:text=U.S.%20crude%20oil%20production%20in,b%2Fd%20set%20in%202019.

On November 8, 2022, the EIA projected that U.S. crude oil production would average 11.7 million bpd in 2022 and 12.4 million bpd in 2023.

On November 18, the price per barrel of oil was $80.08.

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

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



Source: EIA, cber.co.

Economic Outlook and Trends

Summary of Colorado

This year, Colorado will add at least 98,000 jobs. Job growth in 2023 will be dismal.

As usual, the PST sector will be a leader in job growth in 2022 and 2023.

In 2022, government, healthcare, extractive industries, and leisure and hospitality employment had not returned to their pre-pandemic levels.

In 2022 and 2023, tourism activities have bounced back, and the number of passengers at DIA has been a strong point in the economy. Business travel has not returned.

The housing, real estate, and financial markets have slowed because of higher interest rates.

The oil and gas industry was flat in 2022.

Retail sales will remain strong in 2022 but decelerate as consumer spending is affected by inflation and higher interest rates.

Colorado Economic Forecast 2022

The 2022 Colorado real GDP growth rate will be significantly less than 2021.

The change in the state labor market has been better but more volatile than expected through ten months. Weaker growth will continue through most of 2023.

Retail sales for 2022 will be stronger than in 2021. Slower sales will occur in 2023.

Colorado businesses will face headwinds from increased inflation, interest rate hikes, labor shortages, and 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%	3.6%
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

Colorado's inflation has peaked, but the return to the Fed's target rate will take time.

The number of DIA passengers in 2022 will surpass 2021 but will be less than the record total for 2019. Business travel is lagging.

The total number of 2022 building permits will be slightly more than in 2021. Higher input costs, rising prices, and interest rates will negatively impact construction, home sales, and financial services.

Crude oil production declined in 2021 because of state regulations and reduced demand. It has increased slightly in 2022.

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

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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.