Economic Outlook and Trends Through June 2022

United States and Colorado

cber.co
Colorado-based Business and Economic Research
Prepared
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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 six months of 2022. The number and magnitude of the headwinds have increased as the year has progressed. Through the first six months of 2022, the strength of the economic activity and the labor market momentum has exceeded the headwinds.

It was a shock to the system when the Federal Reserve increased the fed funds rate by 75 basis points on June 15 and again on July 27. Although the rates rose quickly, they are low compared to other periods of high inflation – it could be much worse.

Stay tuned!

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

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

Highlights – Momentum and Headwinds

Inflation and rising interest rates are at the top of the long list of headwinds that will disrupt economic activity and the labor market. Ideally, the Fed will engineer a soft landing. On the other hand, their actions may push the economy into a shallow recession before the end of 2023. Either way, growth will be slower in the months ahead!

Momentum
Fortunately, there is strong momentum in the economy.

The growth of the labor market has been broad-based. There have been more jobs added in 2022 than expected. The level and rate of unemployment are low.

There is above-normal consumer demand for goods and services. As a result, retail sales are strong.

Labor shortages have driven higher wages, especially in lower-paying occupations.

Headwinds
The headwinds, particularly interest rates and inflation, 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, policies related to the Eastern European conflict, overspending by Congress, and political sideshows associated with the mid-term elections.

Recessions

Rational debate and discussion are needed to address the magnitude and number of headwinds facing the economy, especially when talking about the efforts of the Federal Reserve to curb inflation by raising interest rates and the prospects of pushing the economy into a recession. The Business Cycle Dating Committee of the National Bureau of Economic Research (NBER) determines when the peaks and troughs of recessions occur.

NBER is a private, non-profit, non-partisan organization founded in 1920 to conduct economic research for the betterment of the country. They use a wide range of metrics to identify recession troughs and peaks. The following slide includes a summary of the NBER definition. Additional information is available at https://www.nber.org/research/business-cycle-dating.

National Bureau of Economic Research Definition of Recession

The NBER's Business Cycle Dating Committee maintains a chronology of US business cycles. The chronology identifies the dates of peaks and troughs that frame economic recessions and expansions. A recession is the period between a peak of economic activity and its subsequent trough, or lowest point. Between trough and peak, the economy is in an expansion. Expansion is the normal state of the economy; most recessions are brief. However, the time that it takes for the economy to return to its previous peak level of activity, or its previous trend path may be quite extended.

The NBER's definition emphasizes that a recession involves a significant decline in economic activity that is spread across the economy and lasts more than a few months. The NBER looks at depth, diffusion, and duration as somewhat interchangeable criteria for determining the timing of recessions.

Because a recession must influence the economy broadly and not be confined to one sector, the committee emphasizes economy-wide measures of economic activity.

https://www.nber.org/research/business-cycle-dating

The determination of the months of peaks and troughs is based on a range of monthly measures of aggregate real economic activity published by the federal statistical agencies. These include real personal income less transfers, nonfarm payroll employment, employment as measured by the household survey, real personal consumption expenditures, wholesale-retail sales adjusted for price changes, and industrial production. There is no fixed rule about what measures contribute information to the process or how they are weighted in making decisions. In recent decades, the two measures that have received the most weight are real personal income less transfers and nonfarm payroll employment.

The committee's approach to determining the dates of turning points is retrospective. In making its peak and trough announcements, it waits until sufficient data are available to avoid the need for major revisions to the business cycle chronology. In determining the date of a peak in activity, it waits until it is confident that a recession has occurred. Even in the event that activity began to rise again immediately after the announcement of a peak, the committee would find that a new expansion was underway, and the upturn would not be a continuation of the previous expansion. As a result, the committee tends to wait to identify a peak until a number of months after it has actually occurred. Similarly, in determining the date of a trough, the committee waits until it is confident that an expansion is underway.

Source: NBER.org, cber.co.

Economic Outlook and Trends

U.S. Real Gross Domestic Product

The Conference Board U.S. Economic Forecast projects real GDP growth will slip to 1.7% in 2022, down from 5.7% in 2021. Over the past month, the rate of real GDP growth, real disposable income, and real consumer spending was revised downward.

Economic activity will be lackluster in 2023. As usual, real personal consumption will drive economic growth. It will increase by 2.2% in 2022, down from 7.9% in 2021.

The national forecast calls for a slight decline in residential construction in 2022. The story in Colorado will be different. Housing demand will continue to exceed supply.

Despite slower economic conditions, labor shortages will continue for essential occupations. Finally, inflation will remain elevated through 2023.

U.S. Real GDP Growth

The Conference Board Forecast (July 12, 2022)

Real GDP and Economic Growth

Over the past month, the Conference Board 2022 and 2023 U.S. economic forecasts were revised downward. The latest Conference Board forecast points to real GDP growth of 1.7% for 2022. The U.S. is currently not in a recession and should not slip into one in 2022. The technical definition of a recession requires widespread weaknesses. That is not the case in the current economy.

Other Economic Factors

The labor market will reflect strong growth in the first half of 2022, followed by weaker growth in Q3 and Q4. Job growth will be stagnant in 2023. The U.S. unemployment rate will increase slightly to 3.7% in 2023. PCE inflation will be 5.9% in 2022. Inflation will taper off at the end of 2022 and into 2023. Next year the PCE will be 3.0%, which is above the Fed's target rate.

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%	0.5%	-0.2%	5.7%	1.7%	0.5%
Real Disposable Income	54.7%	-29.1%	-4.1%	-4.5%	-7.8%	-0.5%	-1.0%	-2.0%	2.2%	-6.3%	-1.0%
Real Personal Consumption	11.4%	12.0%	2.0%	2.5%	1.8%	1.0%	1.0%	-0.5%	7.9%	2.2%	0.2%
Residential Investment	13.3%	-11.7%	-7.7%	2.1%	0.4%	-14.0%	-2.0%	-2.0%	9.2%	-2.0%	-1.3%
Nonresidential Investment	12.9%	9.2%	1.6%	2.9%	10.0%	-0.1%	3.4%	-0.8%	7.4%	5.1%	0.3%
Total Gov't. Spending	4.2%	-2.0%	0.9%	-2.6%	-2.9%	-1.9%	2.0%	3.6%	0.5%	-0.8%	3.5%
Exports	-2.9%	7.6%	-5.3%	22.4%	-4.8%	18.0%	5.3%	2.0%	4.5%	5.0%	2.6%
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%	6.6%	6.3%	4.2%	3.9%	5.9%	3.0%
Core PCE Inflation (%Y/Y)	1.7%	3.4%	3.6%	4.6%	5.2%	5.9%	5.1%	4.4%	3.3%	5.2%	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 six months of 2022, the U.S. and Colorado labor markets have exceeded expectations. As the year progresses, the headwinds will cause a decline in the number of jobs added.

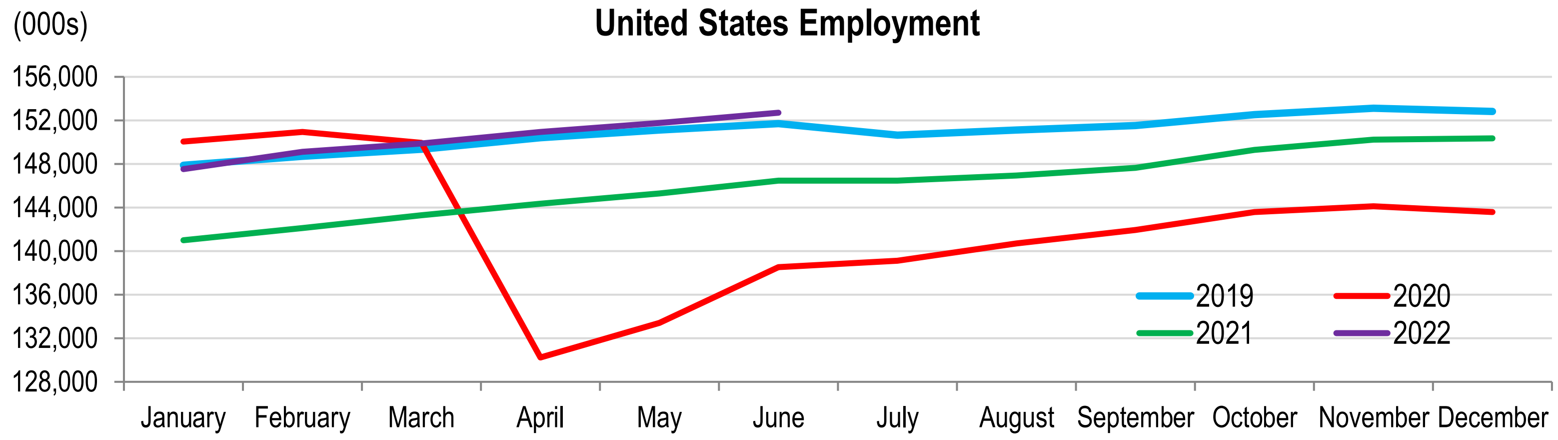
The number of job openings, separations, and quits is near record levels. The labor shortages will continue as long as U.S. and Colorado unemployment rates remain low.

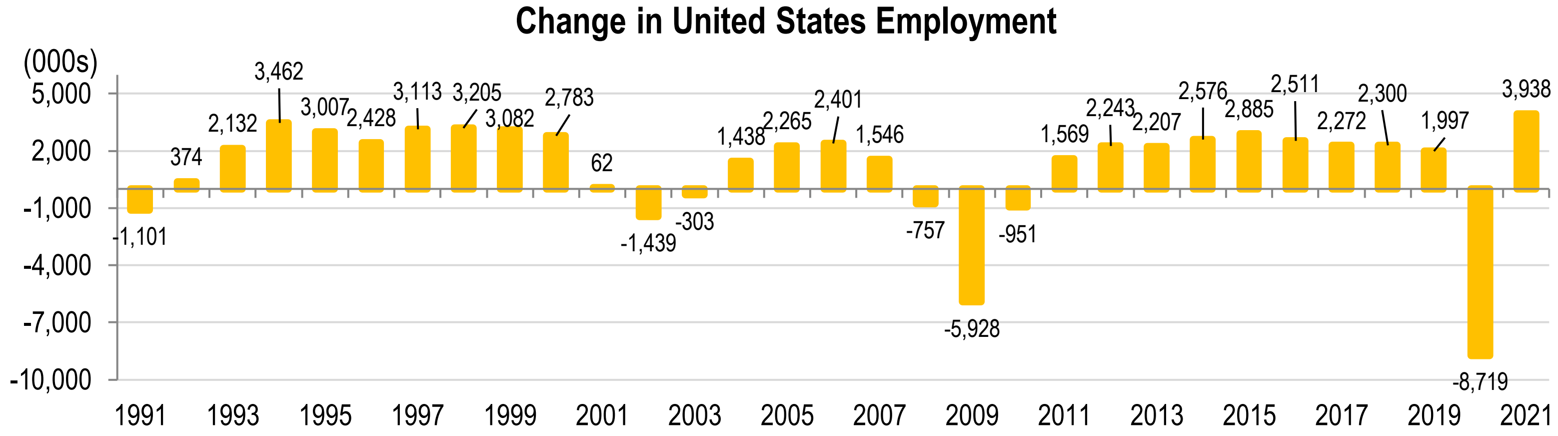
As the U.S. and Colorado unemployment rates have declined, there have been improvements in the employment-to-population ratios.

Unlike past recessions, the Colorado labor market and economy are not among the top states in the economic recovery.

Employment and Change in Employment

United States





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

The average annual U.S. employment (NSA) through the first six months of 2022 (purple) is about 6.6 million more than the same period in 2021 (green). By comparison, average U.S. employment increased by about 2.4 million annually between 2012 and 2019.

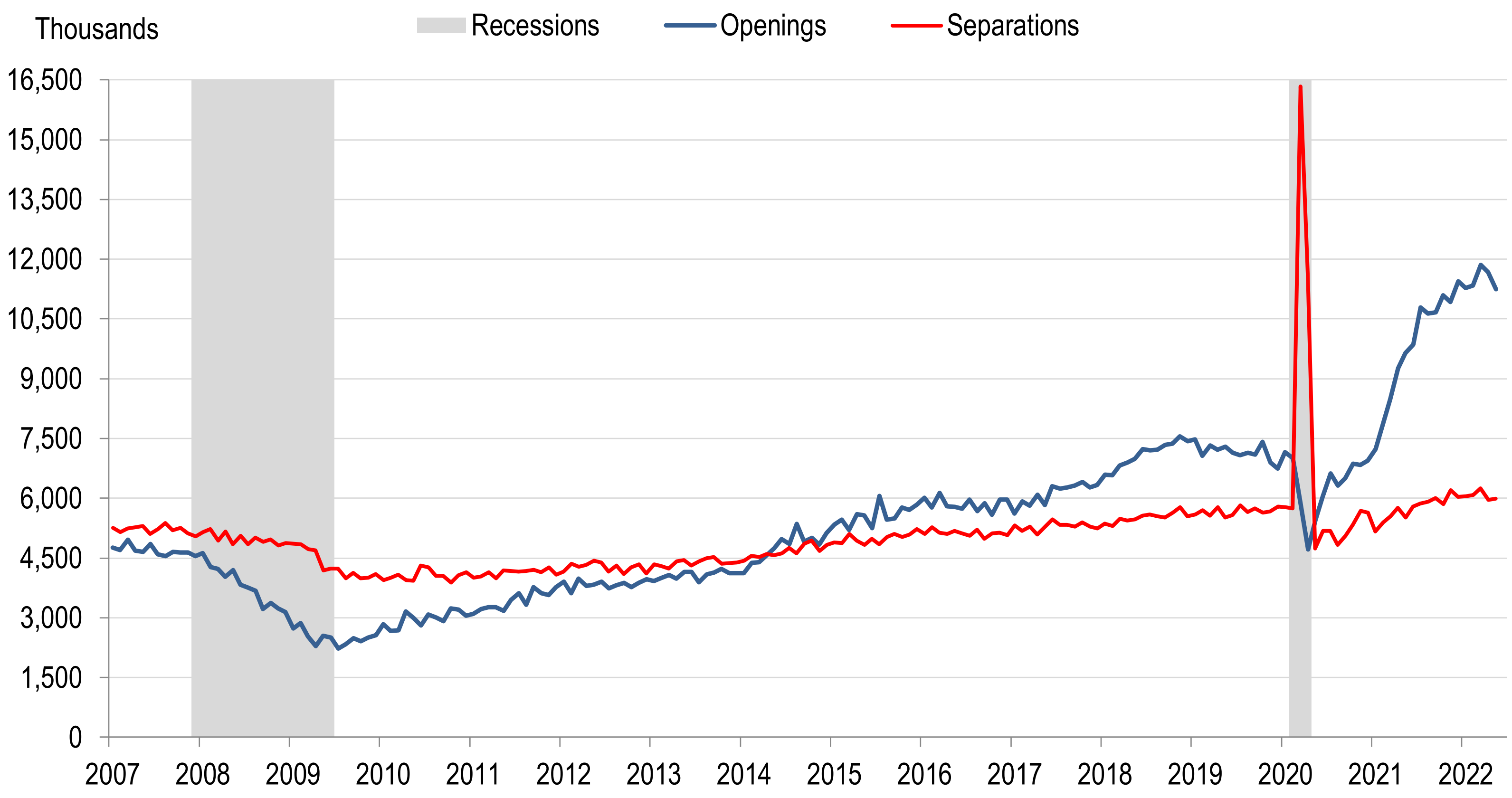
In the recovery from the COVID-19 recession, there has been strong employment growth and a low unemployment rate. Wage growth is solid because there is a shortage of workers and high demand for many goods and services.

Job growth will increase more slowly in the second half of 2022.

Job Openings and Separations

United States

U.S. Job Openings and Separations



Source: BLS, cber.co.

Openings

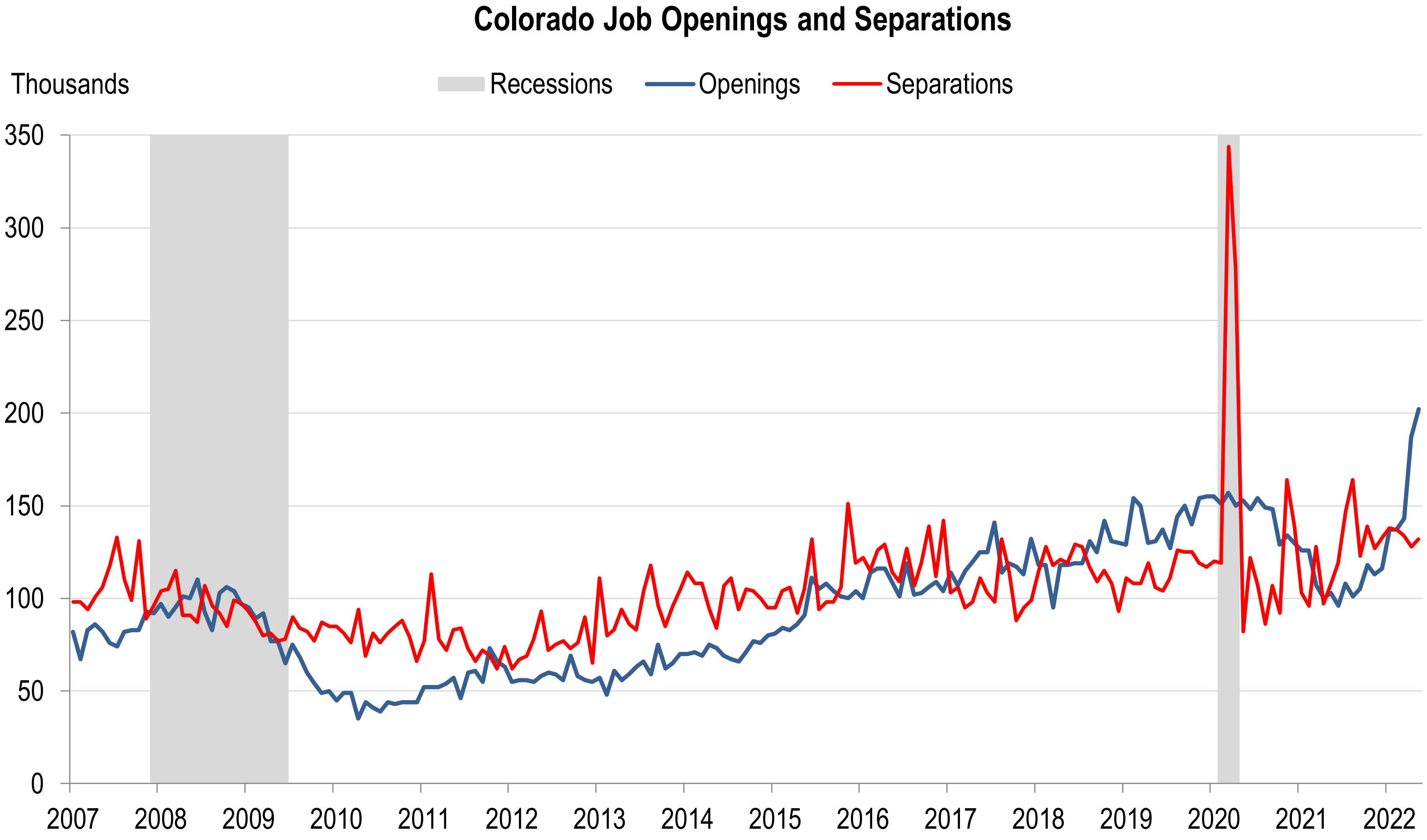
The number of job openings (blue) bottomed out in 2009. After the Great Financial Crisis, openings steadily increased over the next decade and leveled out in 2019. COVID-19 lockdown policies caused the decline in 2020. In July 2021, there were 10.7 million job openings. They have since been at or above that level. In May 2022, there were 11.2 million openings.

Separations

The May 2022 data reflected about 6,000,000 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

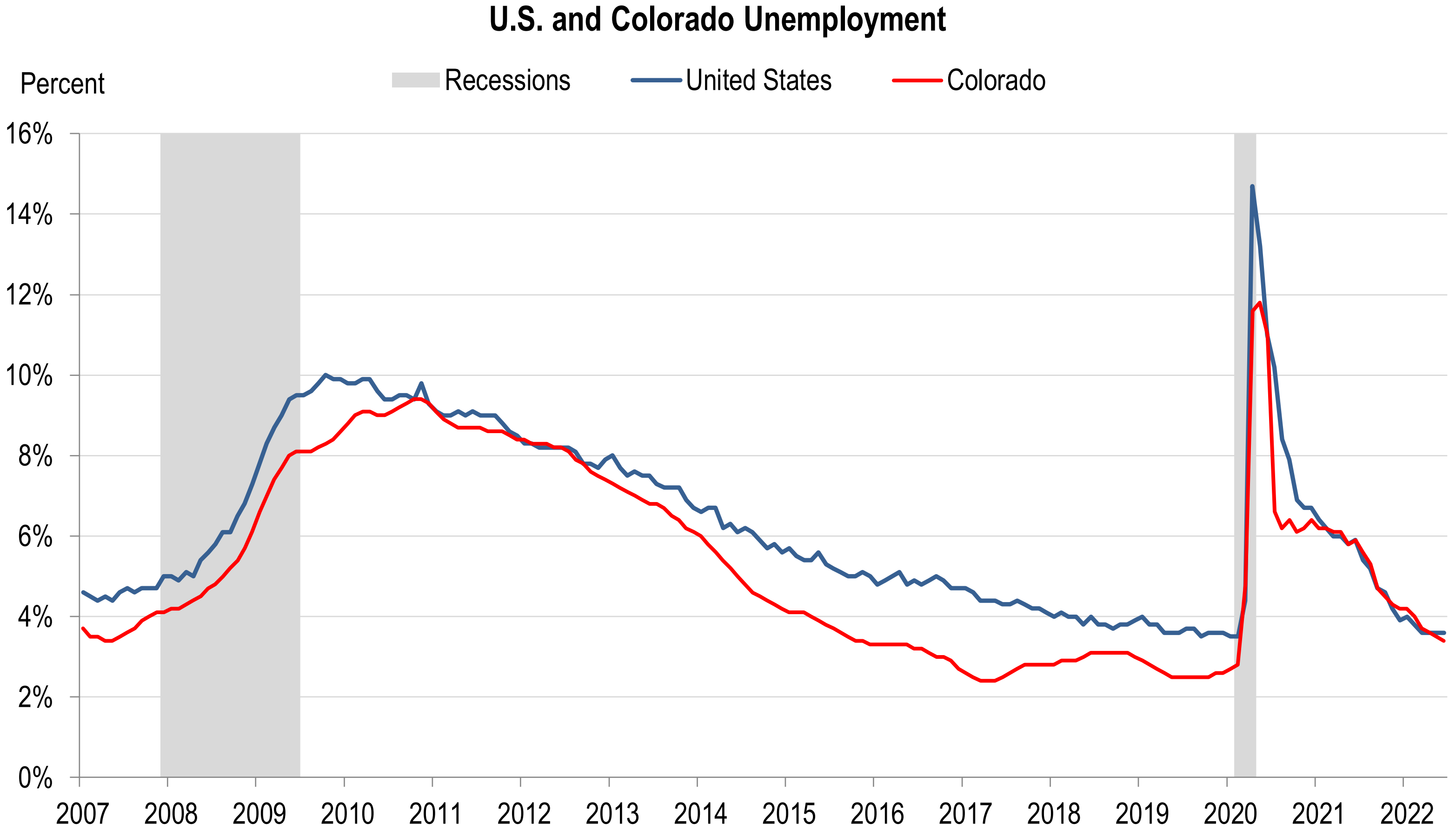
The number of job openings (blue) bottomed out in 2010 at about 35,000. After the Great Financial Crisis, openings steadily increased over the next decade. They peaked in March 2020 and then declined because of COVID-19 lockdown policies. They bottomed out in June 2021. In May 2022, there were 202,000 job openings. Colorado was ranked 20th highest for its rate of job openings, with 7.2%.

Separations

The May 2020 data reflected about 132,000 separations (red). This level is slightly greater than pre-pandemic levels. Since September 2021, at least 70% of the separations have been quits. Colorado was ranked 9th highest for its rate of job separations, with 4.9%.

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. They will bottom out in 2022. The June unemployment rate was 3.4% for Colorado and 3.6% for the U.S. More importantly, businesses will continue to struggle to find workers.

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

June 2022

Unemployment Rate <2.9%		
Rank	State	Rate
1	Minnesota	1.8%
2	Nebraska	1.9%
3	New Hampshire	2.0%
4	Utah	2.0%
5	Vermont	2.2%
6	South Dakota	2.3%
7	Indiana	2.4%
8	Kansas	2.4%
9	Idaho	2.5%
10	North Dakota	2.5%
11	Alabama	2.6%
12	Iowa	2.6%
13	Montana	2.6%
14	Rhode Island	2.7%
15	Florida	2.8%
16	Missouri	2.8%
17	Virginia	2.8%

Unemployment Rate Between 2.9% and 3.8%		
Rank	State	Rate
18	Georgia	2.9%
19	Oklahoma	2.9%
20	Wisconsin	2.9%
21	Maine	3.0%
22	Wyoming	3.1%
23	Arkansas	3.2%
24	South Carolina	3.2%
25	Arizona	3.3%
26	Tennessee	3.3%
27	Colorado	3.4%
28	North Carolina	3.4%
29	Oregon	3.6%
30	West Virginia	3.6%
31	Kentucky	3.7%
32	Massachusetts	3.7%
33	Louisiana	3.8%
34	Mississippi	3.8%

In June 2022, the U.S. unemployment rate was 3.6%. Thirty states had unemployment rates less than or equal to 3.6% (green).

Colorado was ranked 27th with a respectable 3.4% 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 typically have higher unemployment rates.

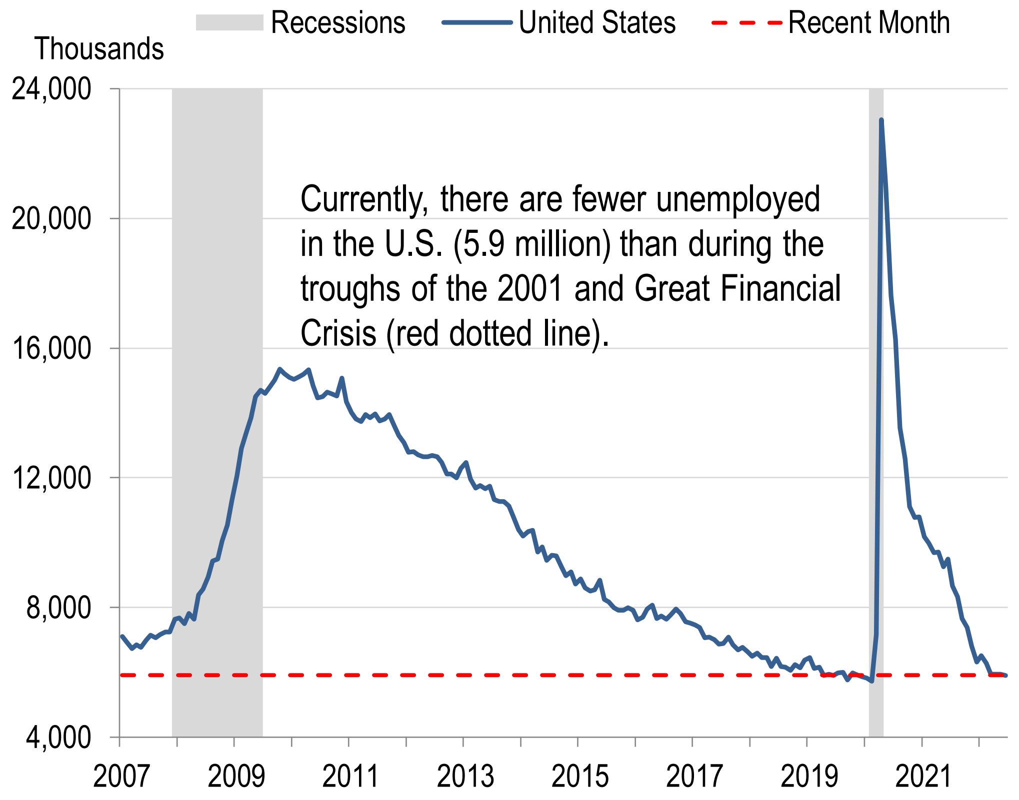
Unemployment Rate is 3.9% or Greater		
Rank	State	Rate
35	New Jersey	3.9%
36	Ohio	3.9%
37	Washington	3.9%
38	Connecticut	4.0%
39	Maryland	4.0%
40	Texas	4.1%
41	California	4.2%
42	Hawaii	4.3%
43	Michigan	4.3%
44	New York	4.4%
45	Delaware	4.5%
46	Illinois	4.5%
47	Pennsylvania	4.5%
48	Alaska	4.6%
49	Nevada	4.7%
50	New Mexico	4.9%
51	District of Columbia	5.5%

Source: Bureau of Labor Statistics, cber.co.

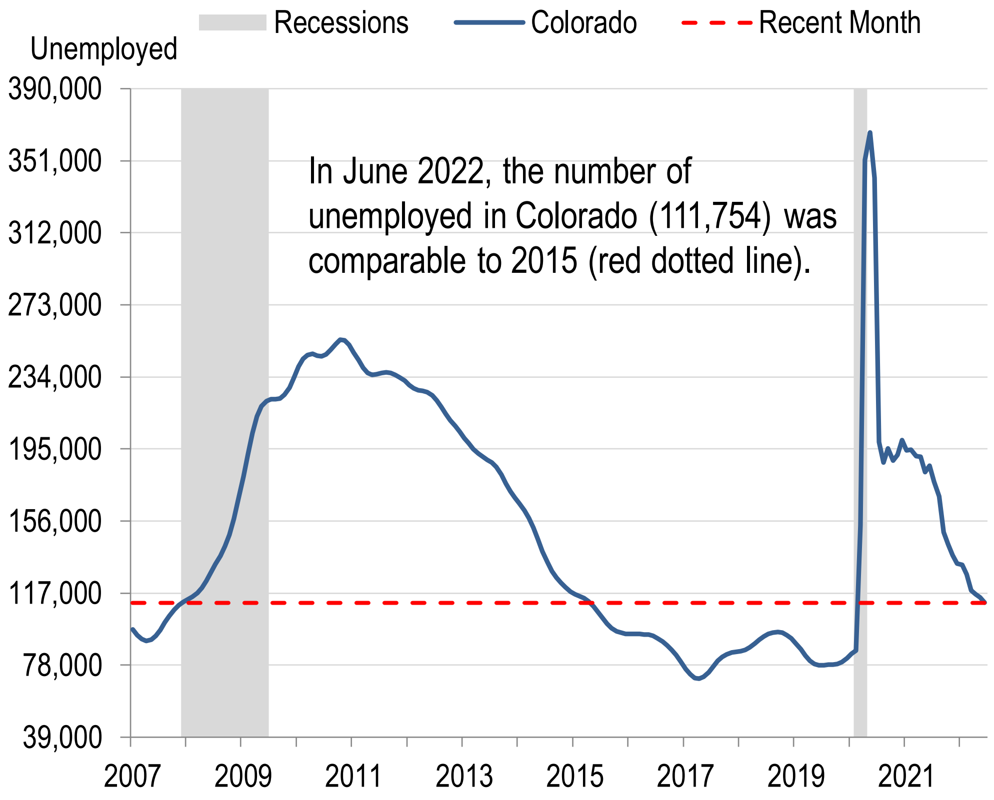
Number of Unemployed

United States and Colorado

U.S. Number of Unemployed (Thousands)

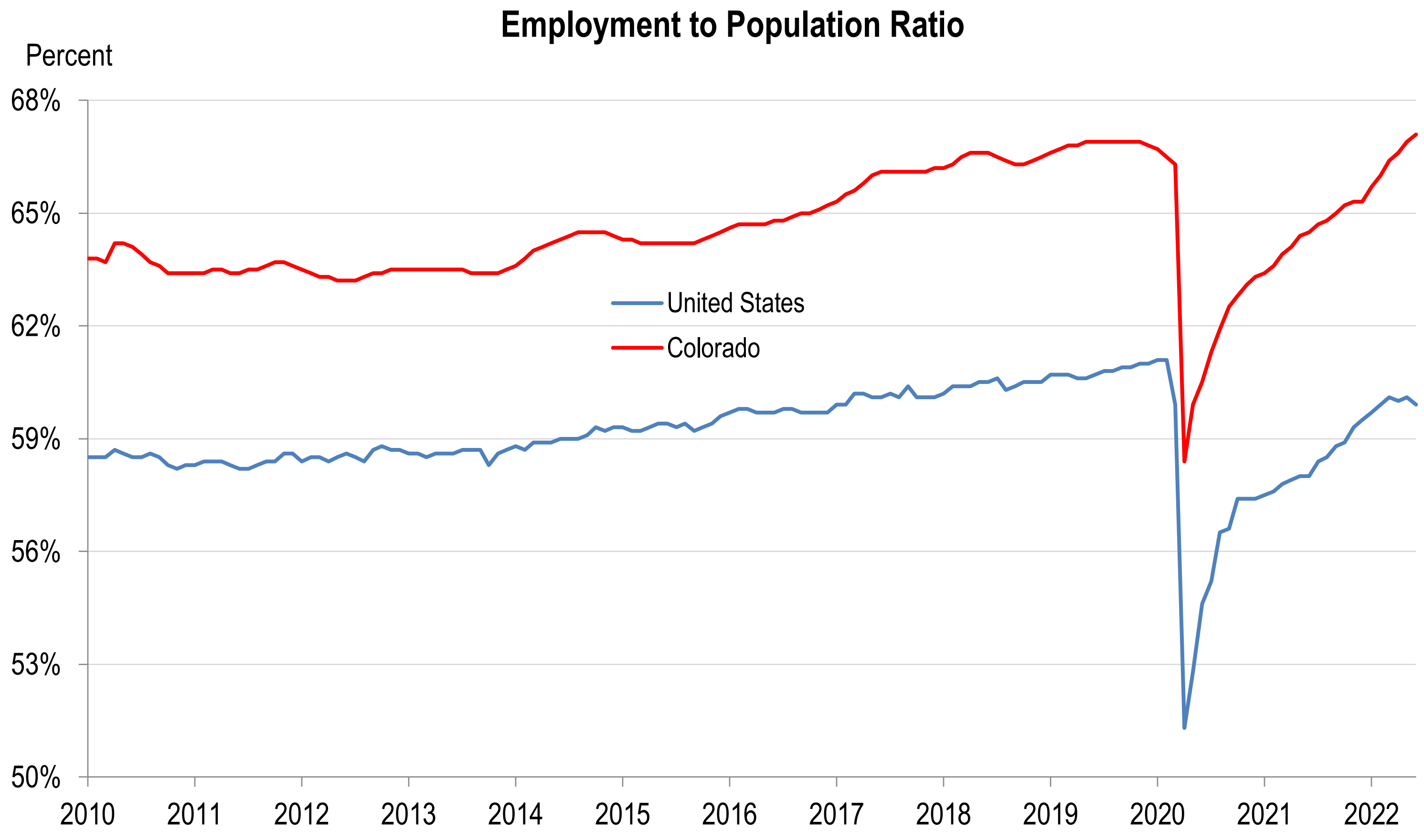


Colorado Number of Unemployed (Thousands)



Source: BLS, cber.co.

Employment-to-Population Ratio
United States to Colorado



Source: FRED, BLS, cber.co.

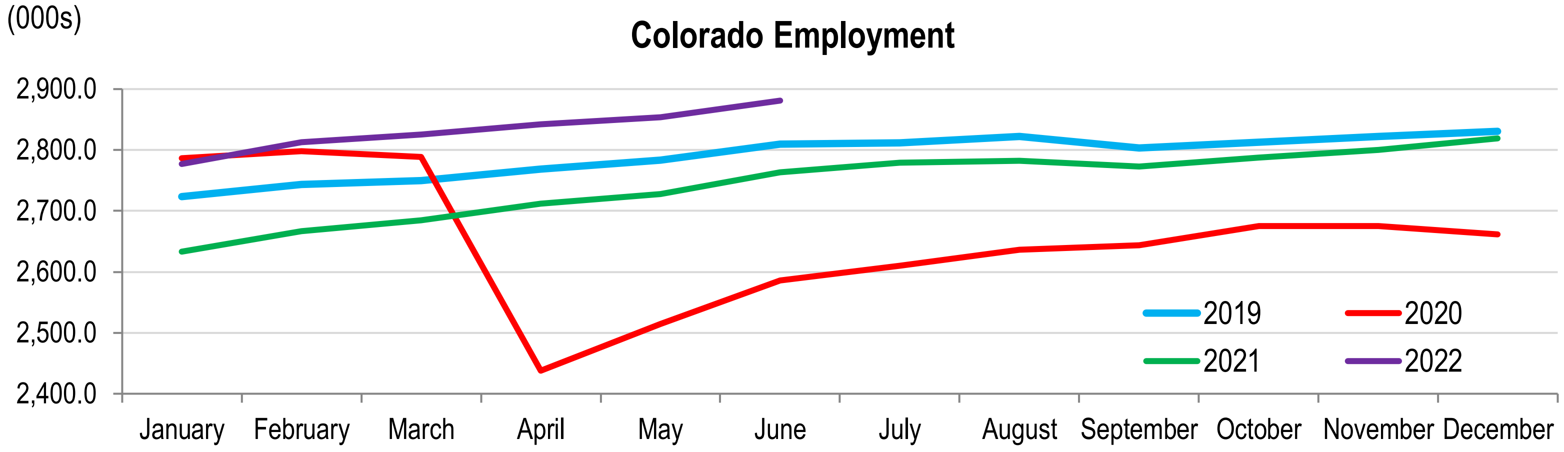
Between 2010 and 2019, the employment-to-population ratios for Colorado and the U.S. gradually increased.

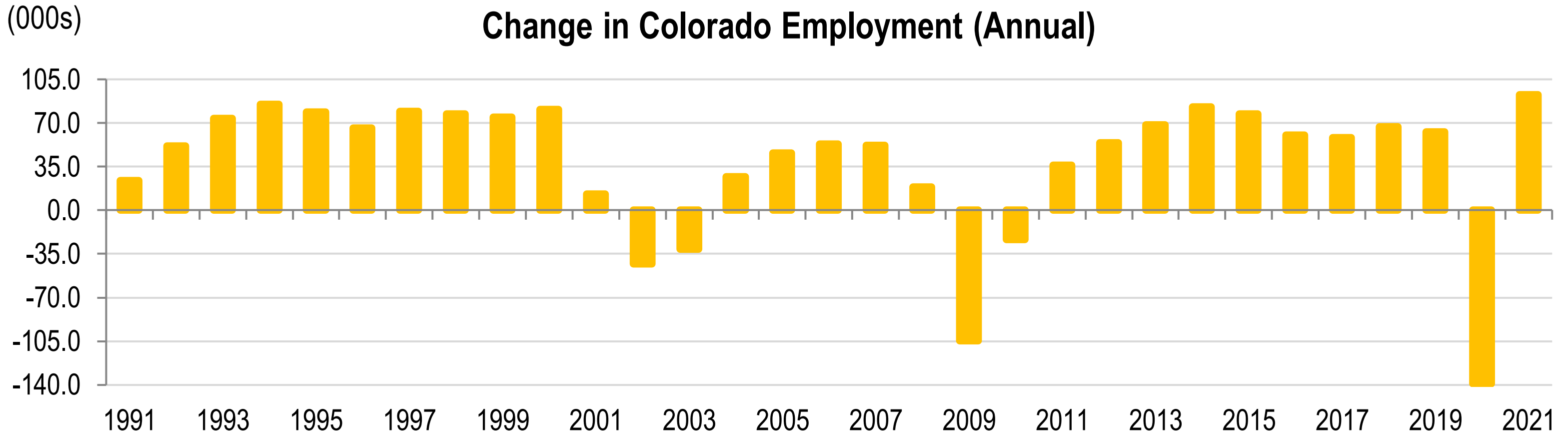
Between May and November 2019, the Colorado ratio peaked at 66.9%. In March 2020, it fell to 58.4% because of COVID-19 lockdown policies. It returned to 67.1% in June 2022.

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 59.9% in June 2022. The U.S. ratio is 1.2 percentage points below the peak in 2020 (61.1%).

Employment and Change in Colorado Employment

Colorado





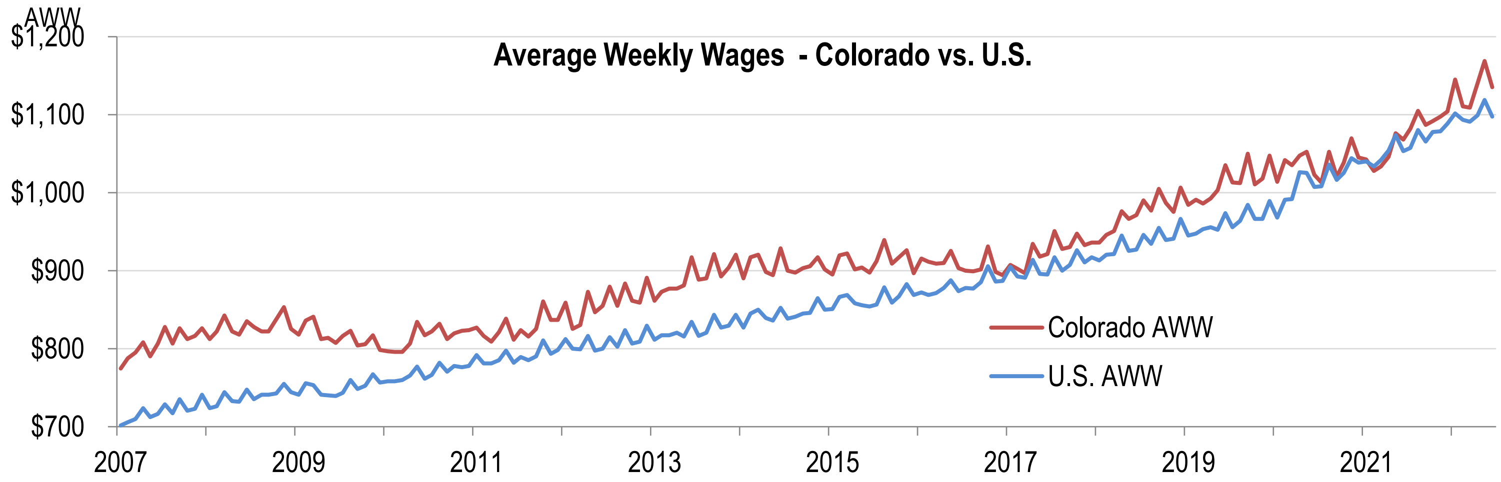
Source: Bureau of Labor Statistics, NSA, cber.co.

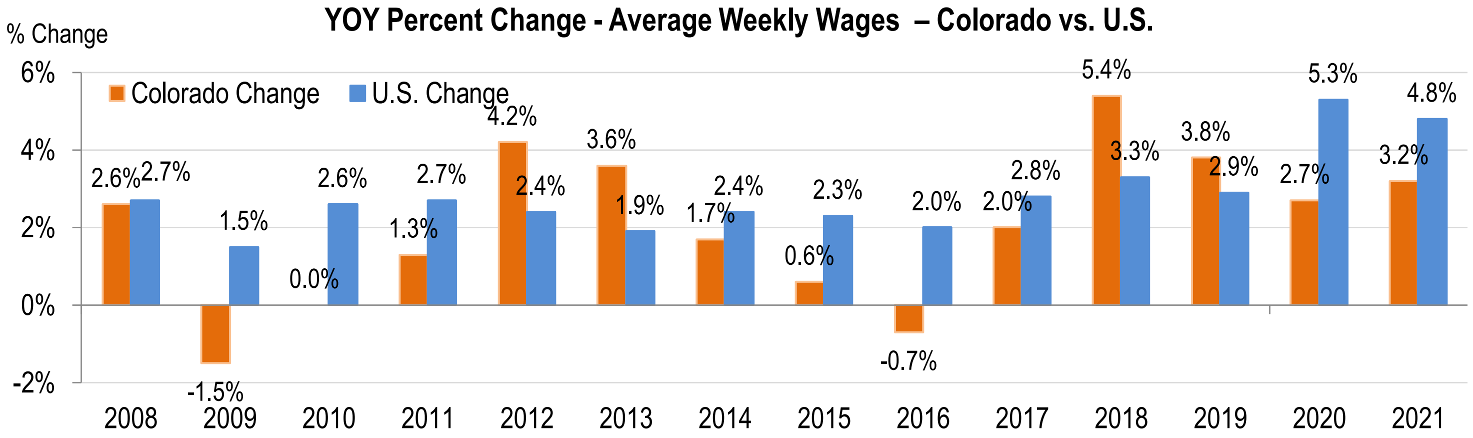
Average annual Colorado employment (NSA), based on the first six months of 2022 (purple), is about 134,100 greater than the same period in 2021 (green). For the first half of the year, Colorado is ranked 16th in absolute and relative job growth. Because of the disruption caused by COVID-19 policies, it is more appropriate to compare 2022 to 2019. The annualized level of employment for 2022 (purple) is about 69,500 greater than 2019 (blue).

The following sectors have not returned to their February 2020 (pre-pandemic) levels: Local Government (-9,300), Food and Accommodations (-6,800), State Government (-6,700), Extractive Industries (-5,800), Healthcare (-2,800), Administrative Services (-1,000), and Federal Government (-800).

Colorado and U.S. Average Weekly Wage Growth

Private Sector (Not Seasonally Adjusted)





Monthly, Colorado (orange) has historically had a greater AWW than the U.S (blue). Between 2007 and 2022, the gap decreased. In April 2007, it was $84.24, and the Colorado AWW was 11.6% greater than the U.S. AWW. In June 2022, the gap was $45.70.

The U.S. growth rate has been more than the Colorado rate for ten-of-the-fourteen years between 2008 and 2022.

For the first six months of 2022, the range of YOY change in the Colorado AWW was from 6.3% to 9.8%. The range for the U.S. AWW was from 4.1% to 5.9%. In both cases, the YOY monthly change has decreased as the year has progressed.

Source: Bureau of Labor Statistics, NSA, cber.co. Note: Wages do not include benefits.

Change in Employment

Colorado Sectors with 2022 Growth Greater than the State Rate (1.8%)

Change in Employment Sectors with Growth Greater Than the State Rate			
Sector	June 2022 (000s)	6/22 vs 12/21 (000s)	% Change
Arts, Entertainment, Recreation (AER)	59.4	5.9	11.03%
Transportation, Warehousing, and Utilities	111.5	5.4	5.09%
Extractive Industries	20.7	0.9	4.55%
Construction	185.6	6.7	3.75%
Professional, Scientific, and Technical Services	271.5	8.6	3.27%
Education (Private)	46.2	1.4	3.13%
Management or Corporations and Enterprises	45.8	1.2	2.69%
Other Services (Personal)	119.8	3.1	2.66%
Manufacturing	154.9	3.7	2.45%
Information	79.3	1.6	2.06%
Total	1,094.7	38.5	3.65%

These ten sectors/sub-sectors had a growth rate more than the state average when comparing June 2022 to December 2021.

Total employment for the state increased by 1.8% during these five months. It increased by an average of 3.65% for these sectors.

The combined employment of these sectors accounted for 38% of Colorado employment and 76% of total job growth during this period.

Sectors such as AER, administrative services, and extractive industries experienced job growth related to the recovery of jobs lost because of pandemic policies. On the other hand, PST is consistently a strong performer.

Source: BLS, SA, cber.co.

Change in Employment

Colorado Sectors with 2022 Growth Less Than the State Rate (1.8%)/Summary

Change in Employment Sectors with a Growth Rate Less Than the State Rate			
Sector	June 2022 (000s)	6/22 vs 12/21 (000s)	% Change
Wholesale Trade	113.6	1.7	1.52%
Food and Accommodation (F&A)	281.9	4.1	1.48%
Administrative Services	161.4	1.8	1.13%
Local Government	266.7	2.8	1.06%
Retail Trade	276.4	2.6	0.95%
Healthcare	306.3	2.7	0.89%
State Government	125.6	(0.5)	-0.40%
Financial Activities	178.3	(1.7)	-0.94%
Federal Government	52.5	(1.4)	-2.60%
Total	1,762.7	12.1	0.69%

Summary Change in Employment (000s)			
	June 2022	6/22 vs 12/21	% Change
Greater than State Rate	1,094.7	38.5	3.65%
Less than State Rate	1,762.7	12.1	0.69%
Total	2,857.4	50.6	1.80%

Source: BLS, SA, cber.co.

These nine sectors/sub-sectors had a growth rate less than the state average when comparing June 2022 to December 2021 employment.

Total employment for the state increased by 1.8% during these six months, but it increased by an average of only 0.7% for these sectors.

The combined employment of these sectors accounted for 62% of Colorado employment and 24% of total job growth during the first six months.

Sectors add jobs at different rates for different reasons. For example, the government is not supposed to be a growth industry. By nature, the financial industry can be volatile, it has always been difficult to fill healthcare positions, and the retail sector is evolving.

Economic Outlook and Trends

Momentum and a Touch of 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.

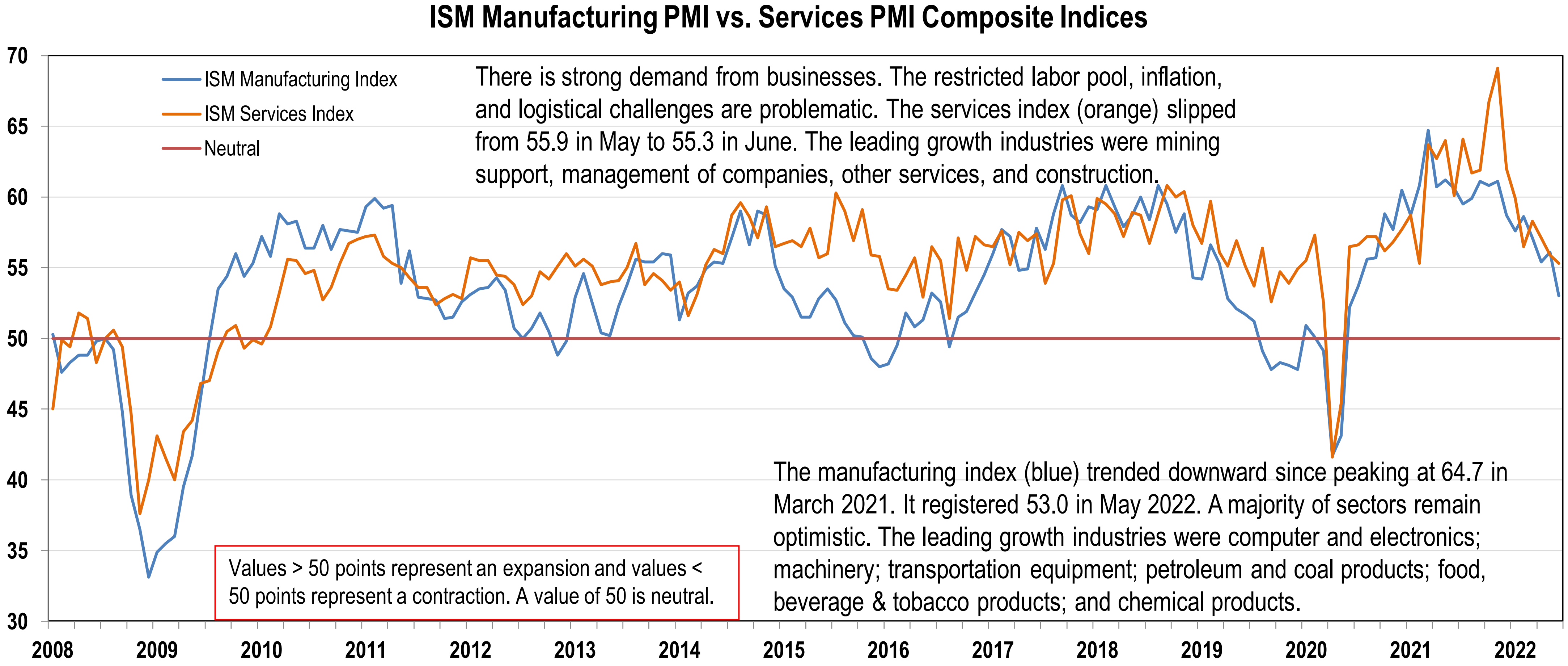
Some consumers are willing to extend their credit to continue spending. On the other hand, more consumers now have limited savings.

Housing demand remains high, and the inventory has increased. 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

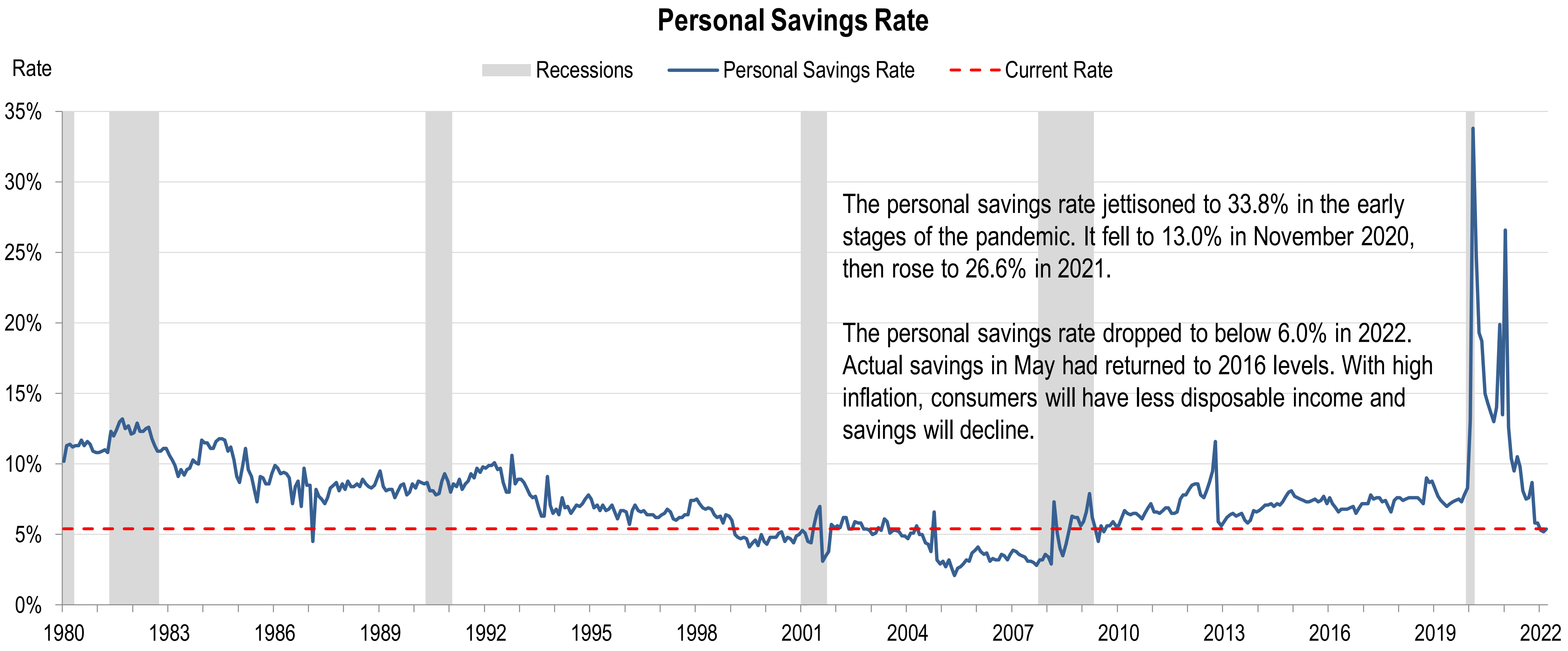
Manufacturing vs. Services



Source: Institute of Supply Management, cber.co

U.S. Personal Savings Rage

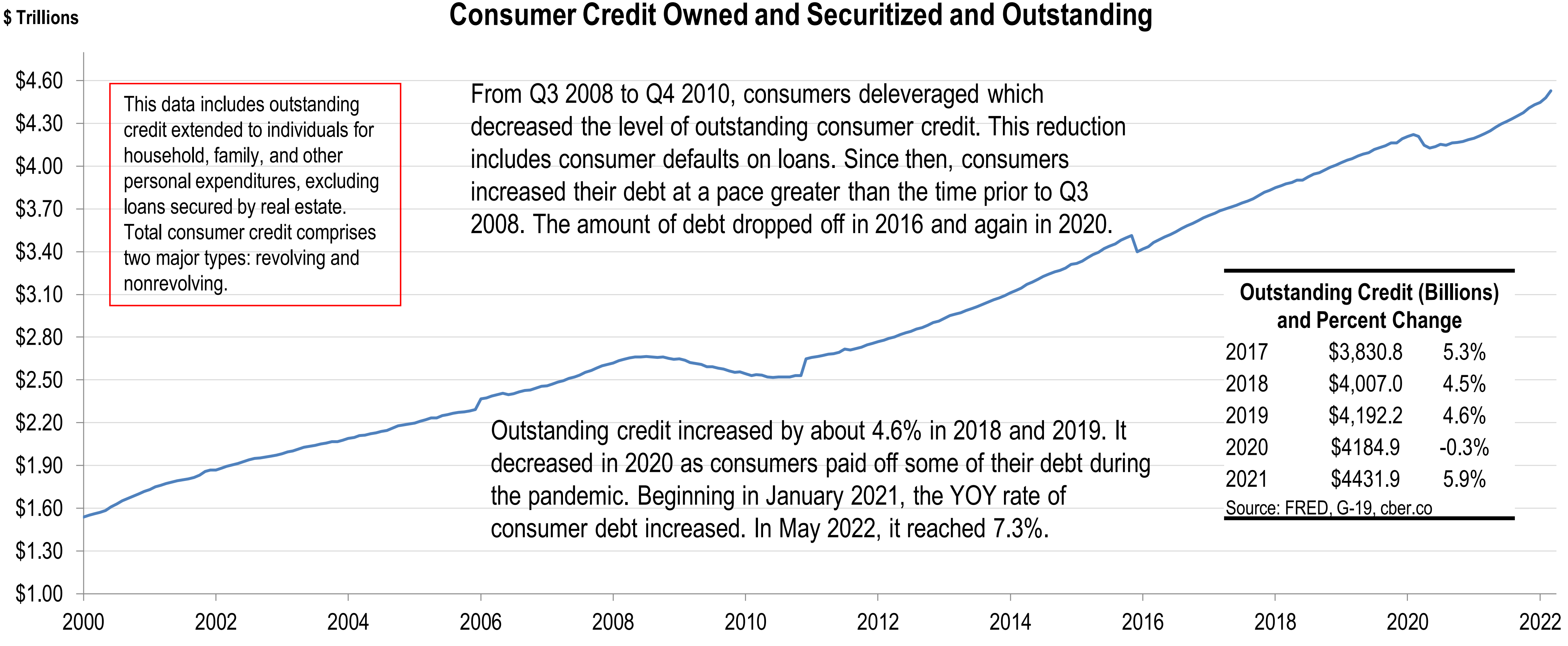
Percentage of Disposable Personal Income



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 which decreased the level of outstanding consumer credit. This reduction includes consumer defaults on loans. Since then, consumers increased their debt at a pace greater than the time prior to Q3 2008. 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 of their debt during the pandemic. Beginning in January 2021, the YOY rate of consumer debt increased. In May 2022, it reached 7.3%.

Outstanding Credit (Billions) and Percent Change

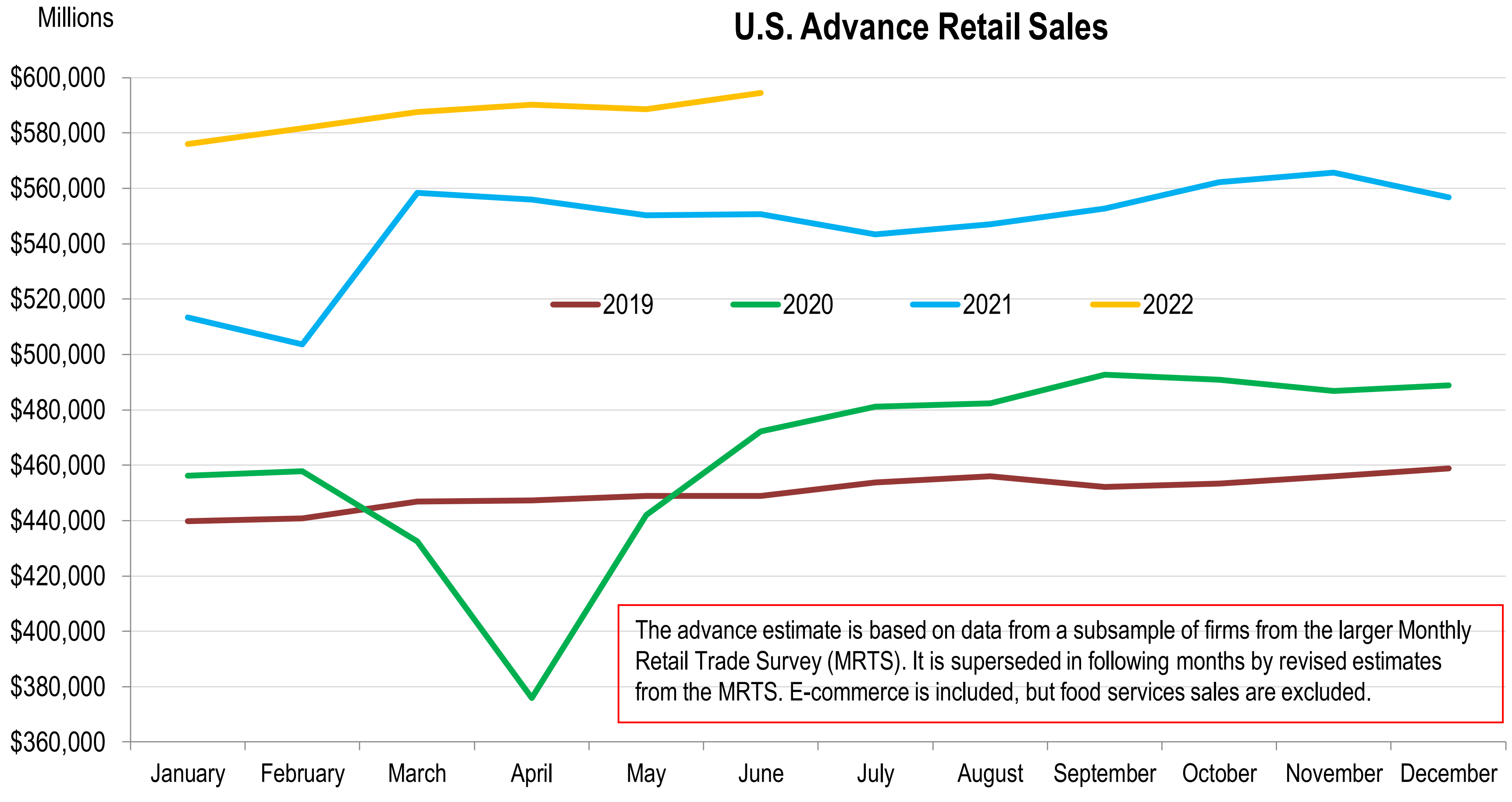
2017	$3,830.8	5.3%
2018	$4,007.0	4.5%
2019	$4,192.2	4.6%
2020	$4184.9	-0.3%
2021	$4431.9	5.9%

Source: FRED, G-19, cber.co

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

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 six months of 2022 (yellow) are 8.9% greater than the same period in 2021.

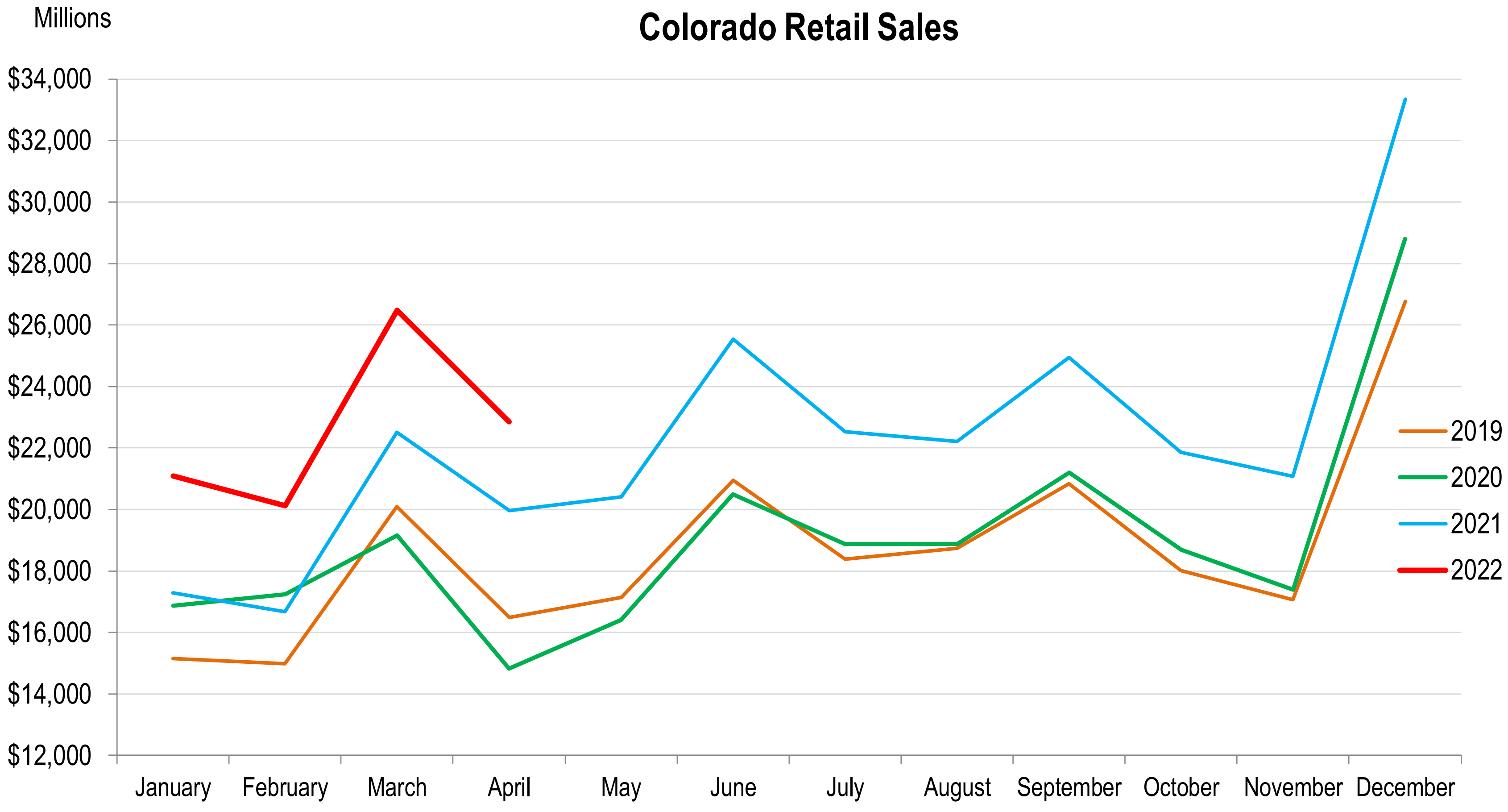
Annual Retail Sales (Trillions)

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



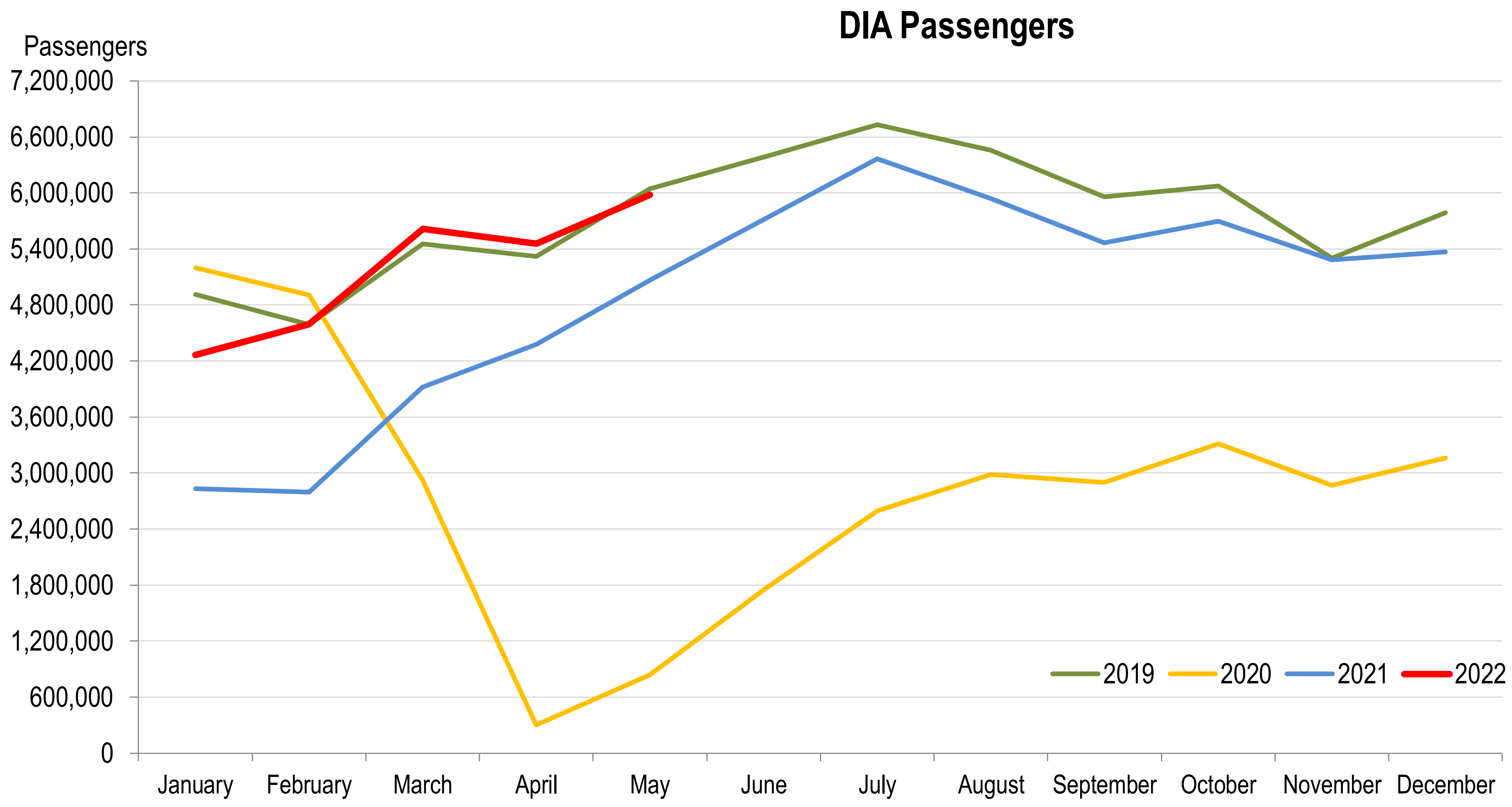
Colorado Retail Sales

Retail sales for the first four months of 2022 (red) were 18.4% greater than the same period in 2021 (turquoise). Inflation will cause a reduction in spending in Q3 and Q4.

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 five months of 2022 (red) is below the YTD total for 2019 (green) but above the YTD total for 2021 (blue).

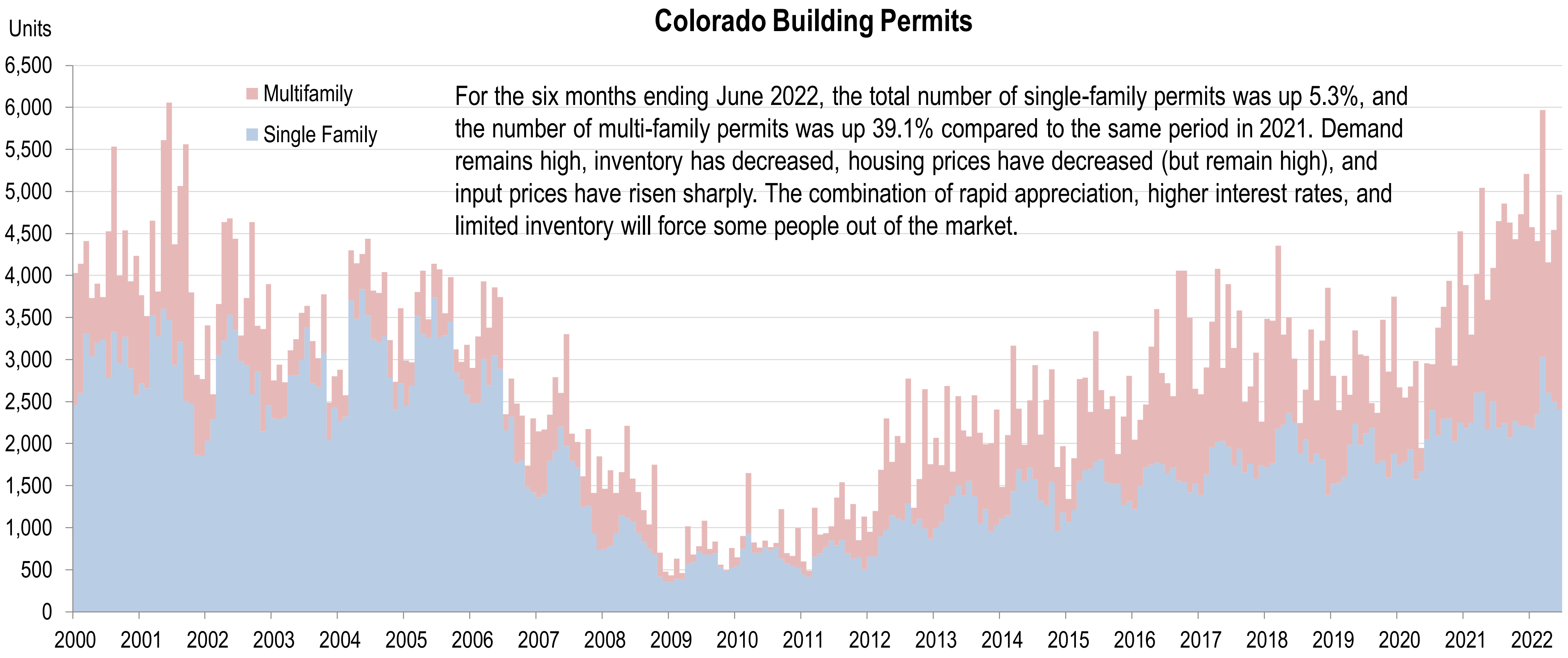
There were 25.9 million DIA passengers during the first five months of 2022.

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

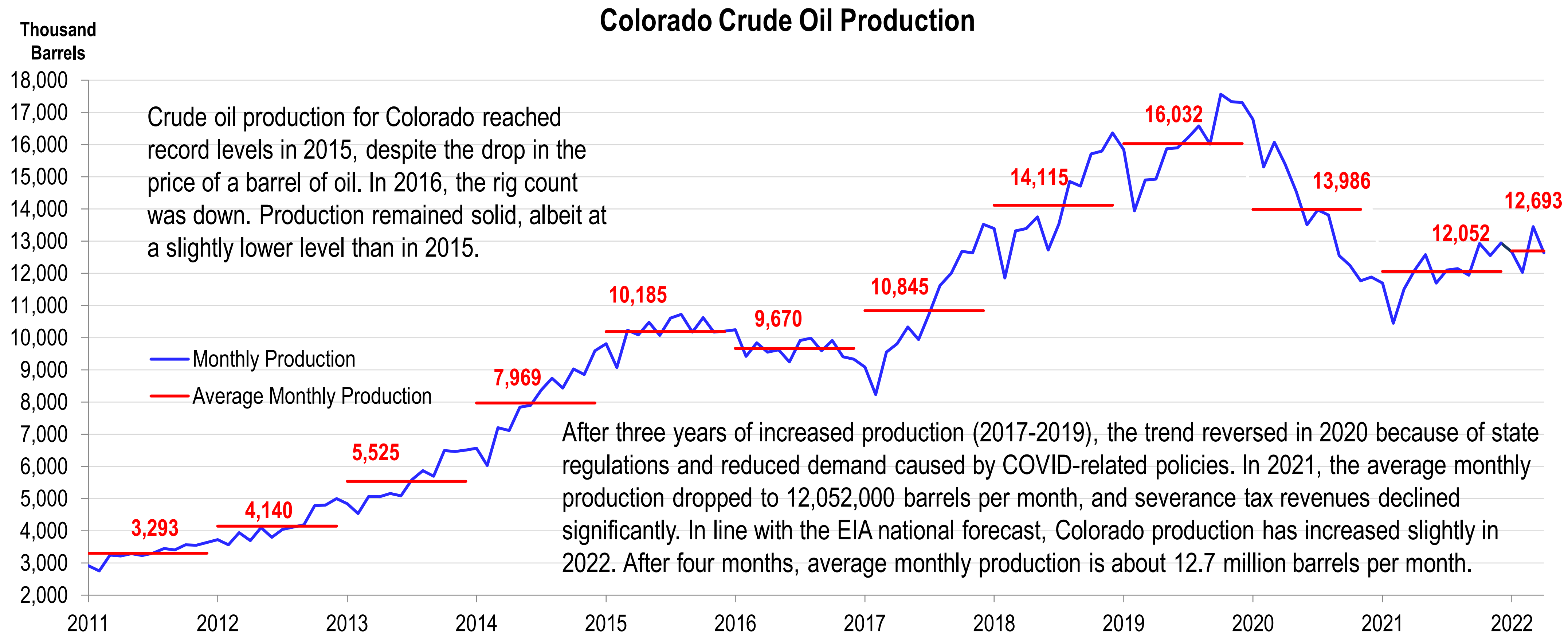
Units



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

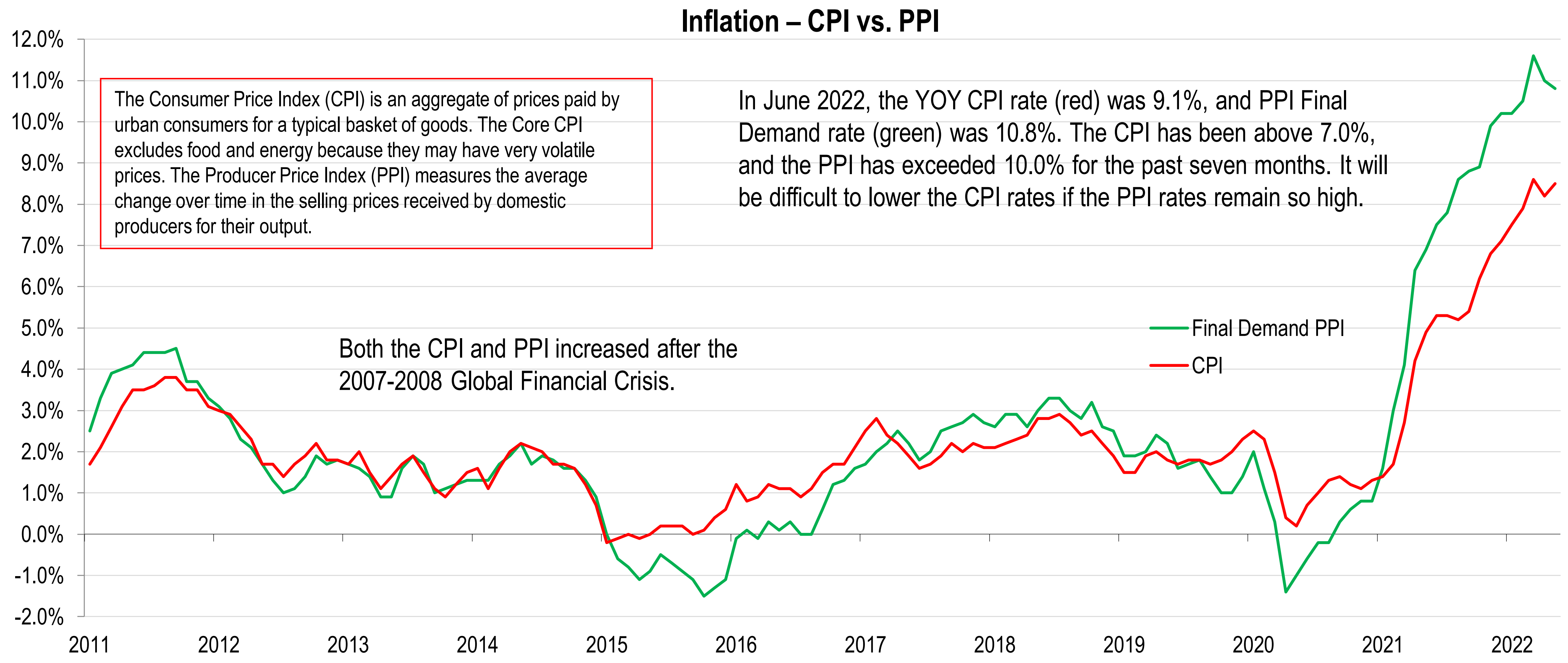
Headwinds

Inflation is at the top of the list of many headwinds. Consumers will ultimately pay higher prices for rising costs from energy, higher wages, increased input costs, housing appreciation, supply chain disruptions, and policy decisions related to the conflict in Eastern Europe. In particular, the U.S. and Colorado will struggle to resolve their energy problems.

The Federal Reserve interest rate hikes will disrupt the housing market and reduce demand in other parts of the economy. The labor market is strong. There is a record level of job openings and quits.

The labor shortages in many industries will continue. Unlike past recessions, the Colorado labor market and economy is not among the top states in the economic recovery.

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. CPI rates for select categories are listed below.

On June 15 and July 27, the Fed raised interest rates by 75 basis points each time. There is solid logic behind frontloading the rate increases, given the circumstances. Most economists expect inflation to decline in 2023 but remain above the Fed's target rate. Time will tell!

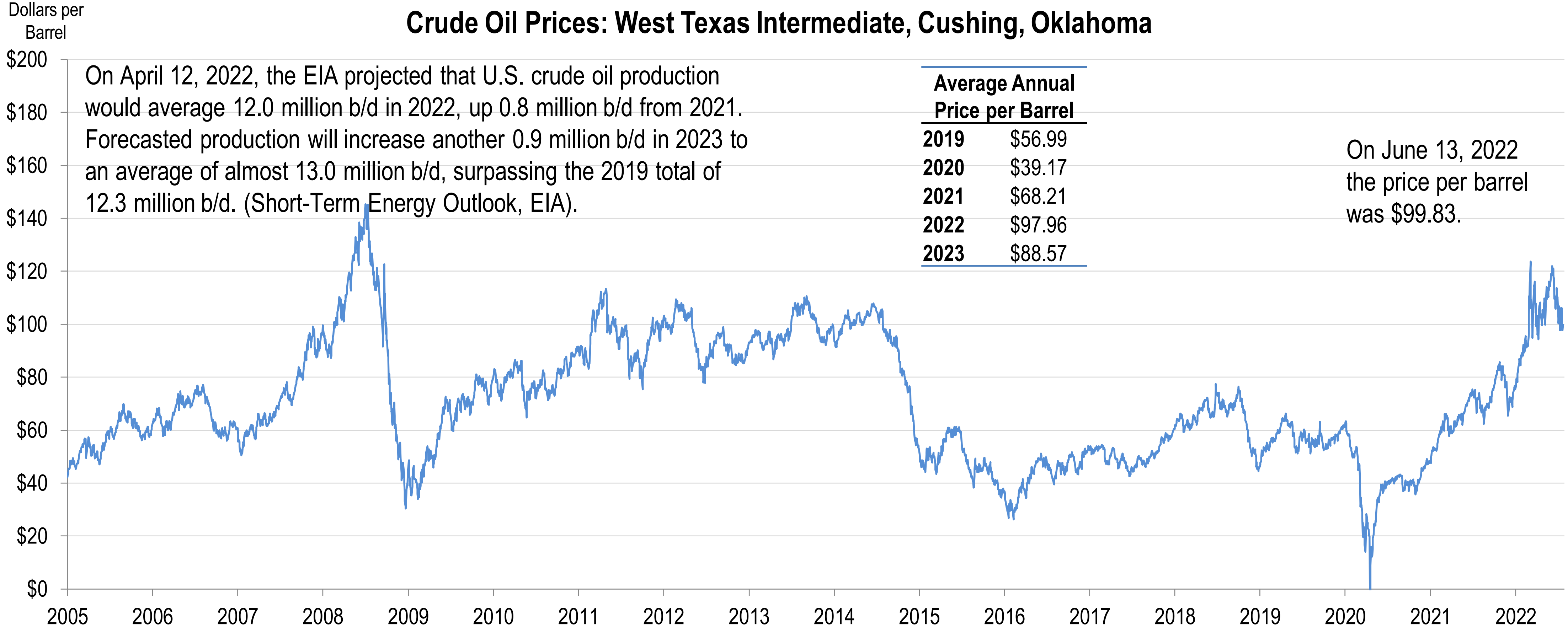
Consumer Purchasing Index for Denver-Aurora-Lakewood and the U.S. – First Half of 2022

	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

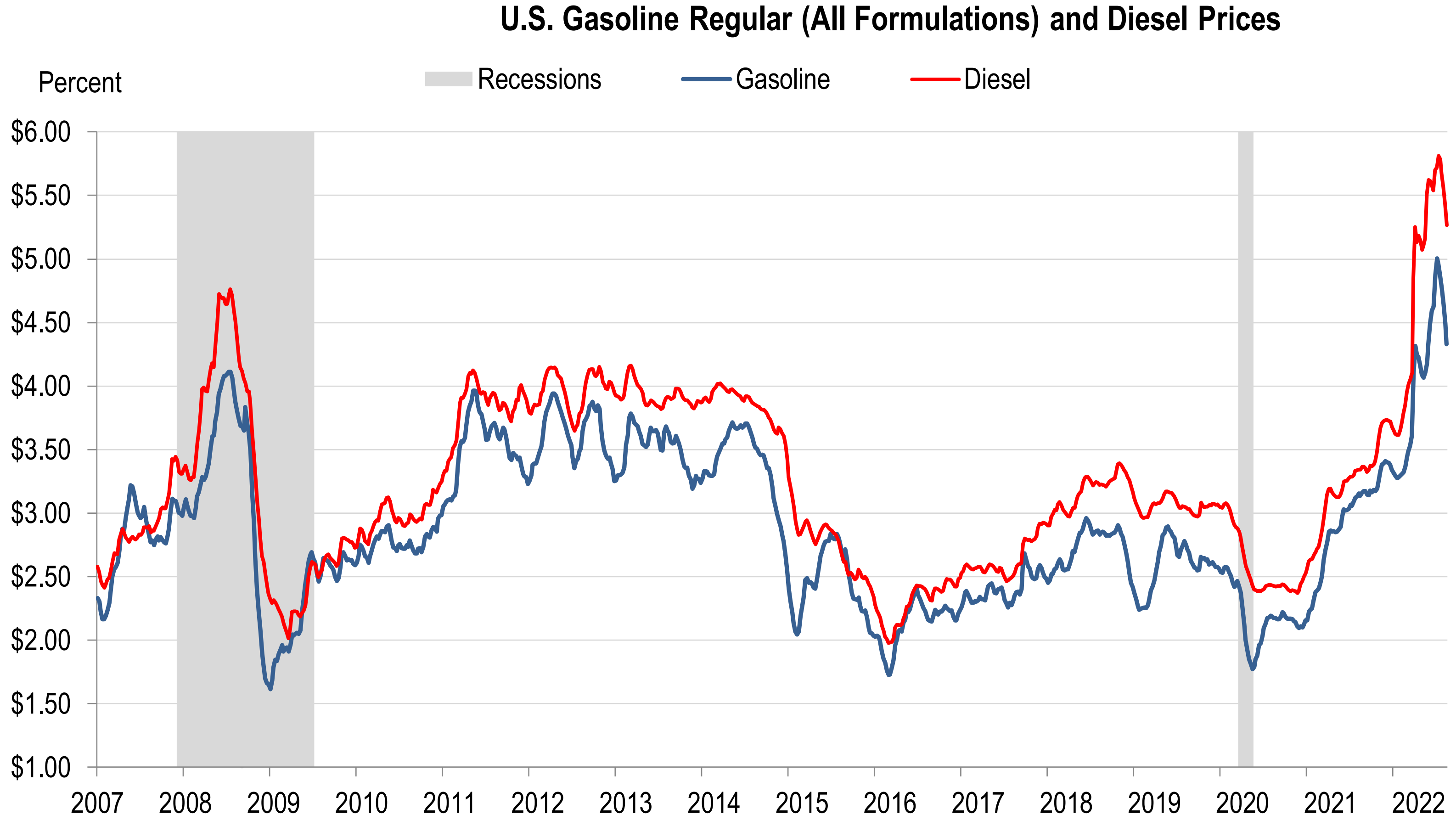


Average Annual	Price per Barrel
2019	$56.99
2020	$39.17
2021	$68.21
2022	$97.96
2023	$88.57

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.

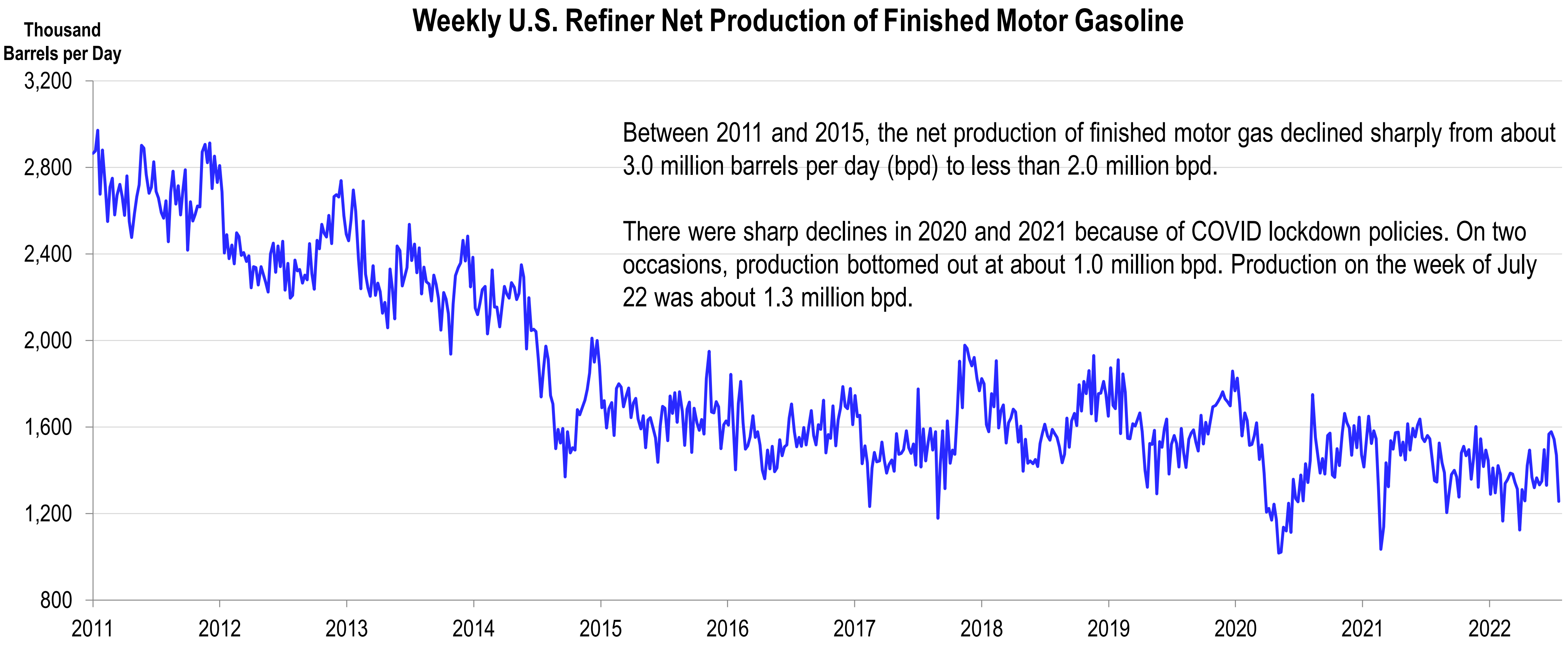
Gas and Diesel Prices

On February 21, 2021, the price for a gallon of gasoline was $2.63, and a gallon of diesel was $2.97. On July 25, 2022, a gallon of gasoline cost $4.33, and a gallon of diesel was $5.27. Fuel prices started increasing about a year before the Eastern European conflict escalated on February 24, 2022.

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

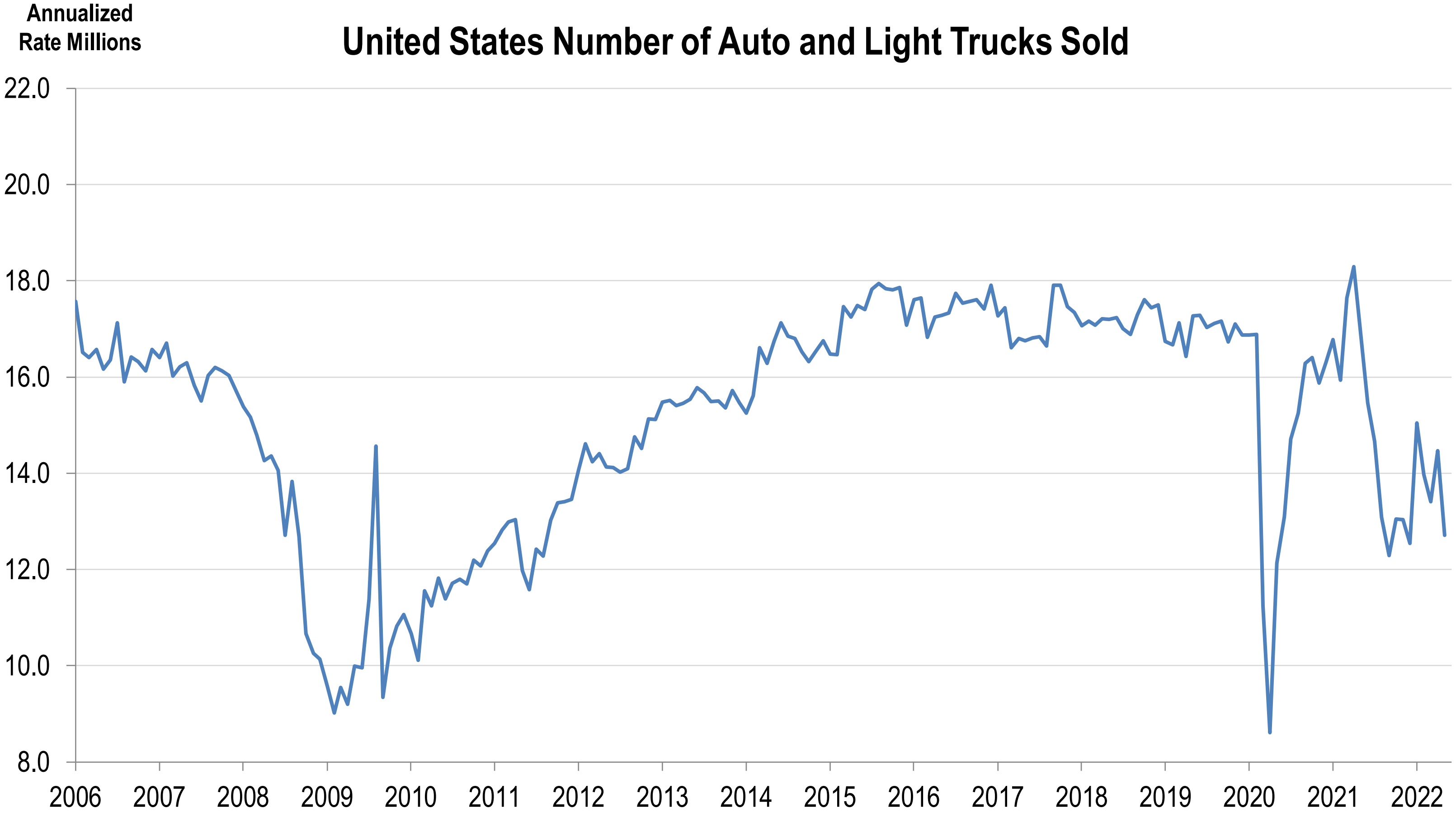
Weekly U.S. Refiner Net Production of Finished Motor Gasoline
(Thousand Barrels per Day)



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.

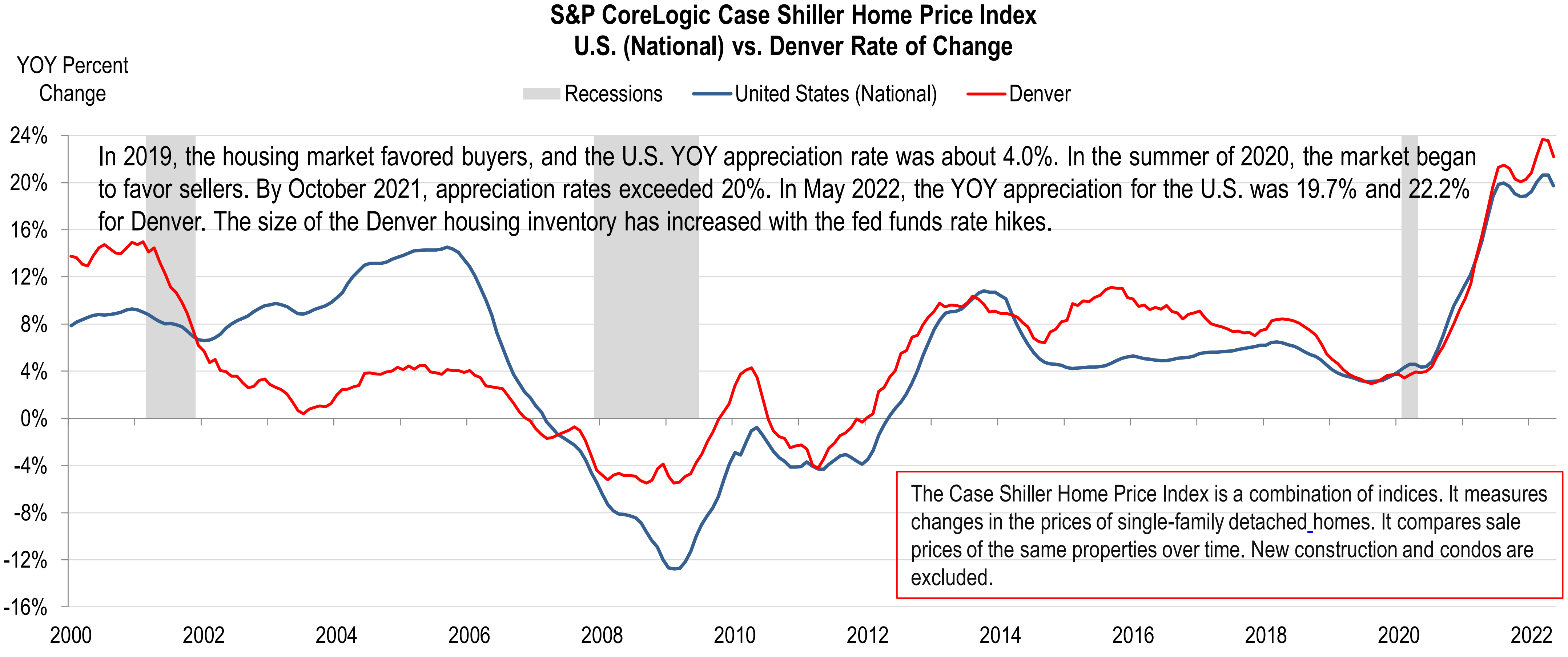
In April 2020, SAAR sales plummeted to 8.6 million units (The February 2009 total was 9.0 million). There was a sharp rebound, and sales peaked at 18.3 million in April 2021. In 2021, the industry did not meet the demand for new cars because of supply chain disruptions. Sales in June 2022 were below expectations at 13.0 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

Case Shiller Home Price Index

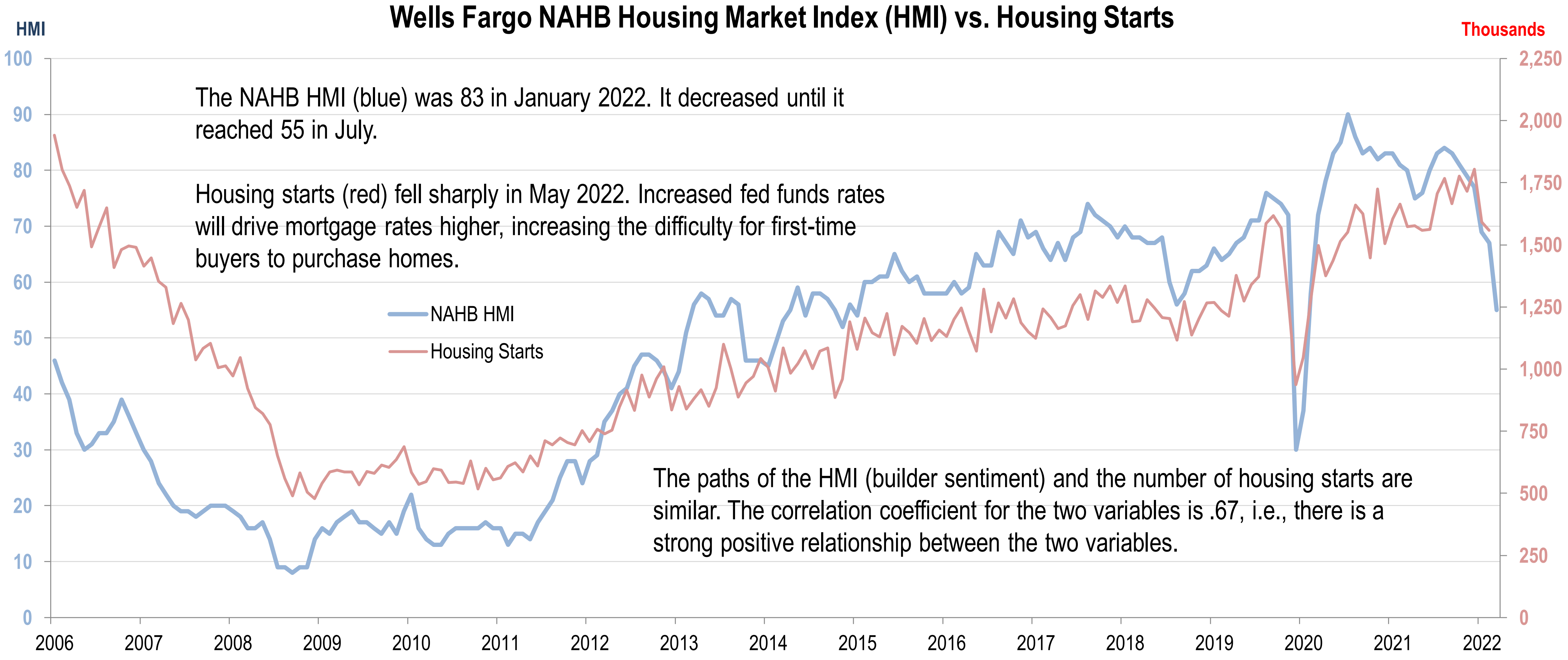
YOY National vs. Denver Rate of Change



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

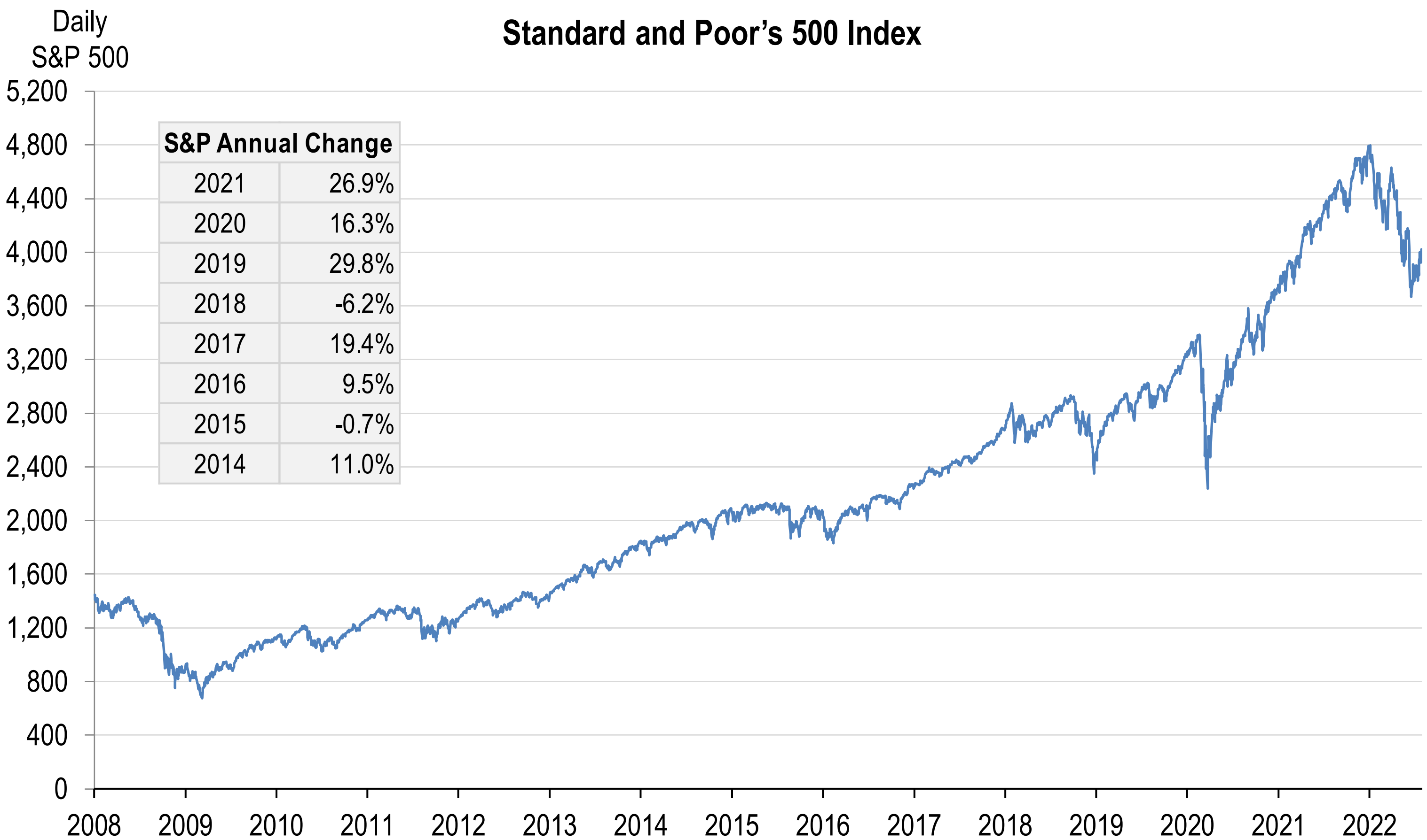
Wells Fargo NAHB HMI vs. Housing Starts

United States



Source: NAHB, cber.co.

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).

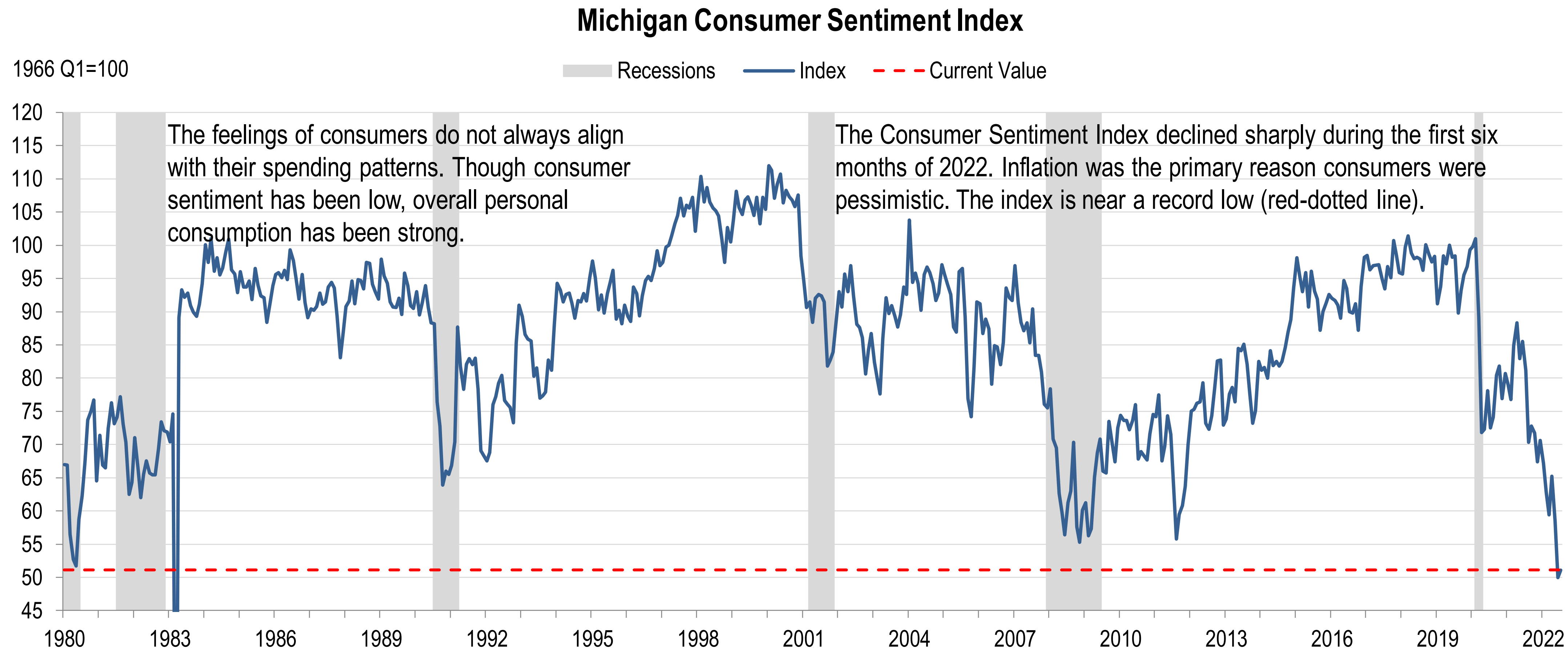
Year-End 2021
The S&P index increased at a steady rate for most of 2021. On December 31, it was 4,766 or 26.9% greater than the December 2020 closing value.

YTD Change - 2022 Bear Market
On July 27, 2022, the S&P 500 closed at 4,024, a change of -15.6%, or 743 points off the December 2021 value.

The appreciation of stocks contributes to the wealth effect of investors.

Consumer Sentiment Index

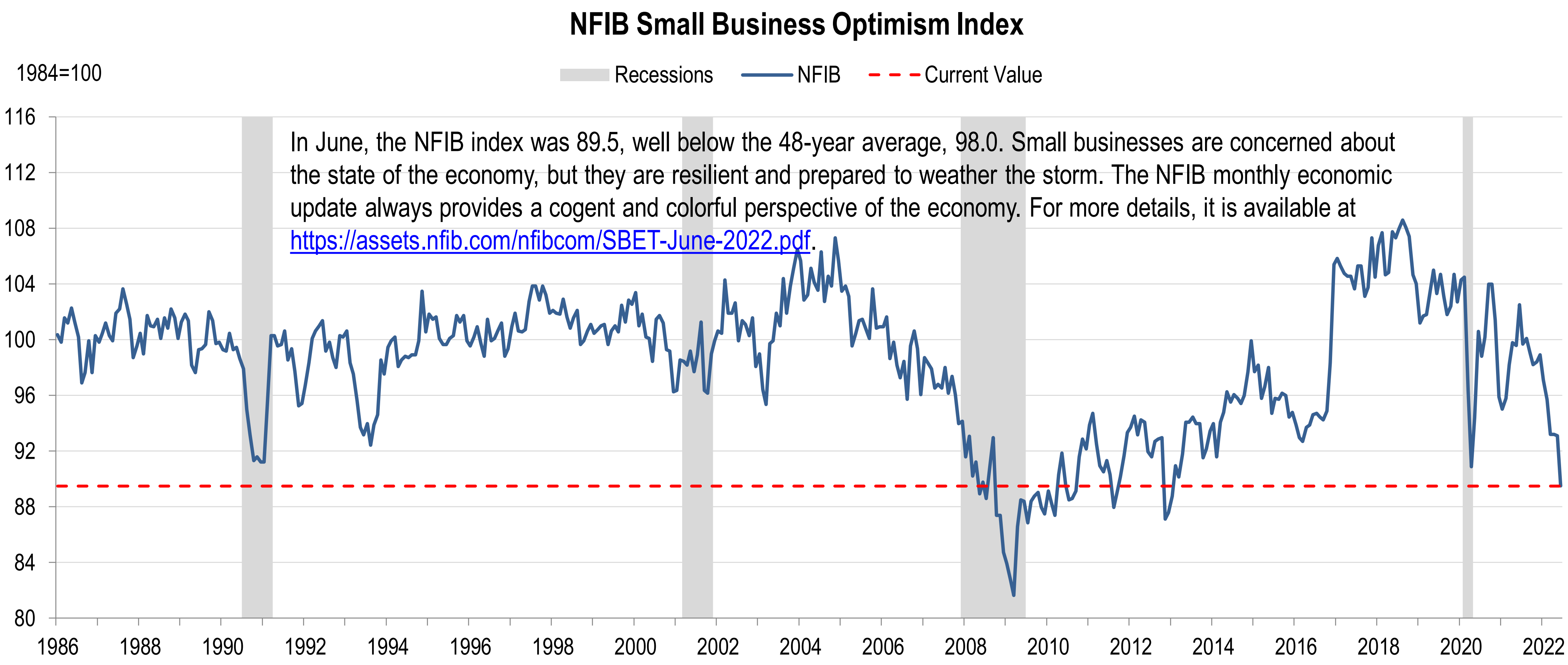
University of Michigan



Source: University of Michigan, cber.co.

NFIB Small Business Optimism Index

United States



Source: NFIB, cber.co.

Economic Outlook and Trends

Summary of Colorado
Employment and Economic Outlook and Trends

During past economic recoveries, Colorado was a national leader. That was not the case during the recovery from the COVID-19 recession. The Colorado recovery has been lackluster compared to the top states.

The number of passengers at DIA will be a strong point in the economy. The low housing inventory bodes well for residential construction, although demand has begun to soften. Retail sales will remain solid but may soften as consumer spending is affected by inflation. The PST sector will be a leader in job growth.

During the remainder of the year, there will be a decline in economic activity and job and wage growth. Headwinds will 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, but the annual total will remain solid.

The state labor market will remain strong and with volatility in some sectors. Most of the growth occurred in the first half of 2022.

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

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

Colorado Economic Forecast

	2019	**2020**	**2021**	**2022**
Real GDP Value (billions)	$356.77	$346.01	$365.90	$377.24
% Change Real GDP	4.2%	-3.0%	5.8%	3.1%
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	64.0
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	148,000

The number of DIA passengers increased rapidly over 2021. The year-end total will be slightly less than 2019.

There was an increase in the number of building permits issued in 2021. Demand 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 2022. Higher input costs, rising prices, and interest rates will impact construction and home sales.

The production of crude oil declined in 2011 because of state regulations. Oil production will increase slightly in 2022.

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

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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.