

Review of Colorado Economy Through October 2021



Colorado-based Business and Economic Research, cber.co
Prepared November 22, 2021

Overview

The purpose of this chartbook is to review U.S. and Colorado data that show how both economies are recovering from COVID-19 policies.

The U.S. added 5.8 million employees through the first ten months of 2021, or about 580,000 per month. By comparison, the monthly average was about 200,000 pre-pandemic.

Colorado employment increased by 129,600 during the first ten months of 2021, or a monthly average of about 13,000. The average growth was about 5,000 per month in 2019.

Confidence in the labor market is the primary driver of the U.S. and Colorado economies. At the same time, there are considerable headwinds. Currently, the momentum of the growth in the labor markets outweighs the headwinds.

Chartbook Highlights

United States

- Real GDP and Partisan Index
- U.S. and Colorado Employment
- Major Indices
- Other Key Metrics

Colorado

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Highlights – Momentum and Headwinds

Through the first ten months of 2021, the Colorado and United States economies have moved erratically as momentum from the recovery struggled to overcome formidable headwinds. At the moment, the strength of the recovery is overshadowing the headwinds.

Momentum

There is customer demand for goods and services. Retail sales are strong, and there will be record sales this holiday season. There is roughly \$2.5 trillion in excess savings, and credit card balances are lower than usual. There is confidence in the labor market and increased wages, especially in lower-paying occupations. The wealth effect puts consumers in a spending mood.

Labor shortages may subside because schools have reopened, allowing parents to return to work. In some parts of the country, the COVID variants have declined, and some federal unemployment benefits have expired. In Colorado, the ski areas lack snow but having fewer skiers may reduce the spread of the COVID variants.

Headwinds

Inflation will continue into 2022 (energy costs, supply chain disruptions, and wage increases). Will businesses absorb rising costs or pass them on to customers?

There is uncertainty about how the COVID-19 variants will spread. The Conference Board reports that two-thirds of companies support vaccination mandates, and one-third oppose them. There is no common ground between the two sides.

It is possible that existing labor shortages may continue to rise. Many older retirees will not return. Workers are quitting their current jobs for higher wages or better conditions at other companies. Some industries are many months away from being fully opened again for business.

The United States Economy



Real Gross Domestic Product and Partisan Index United States

Key Points

As expected, the economy is expanding at a slower rate in the second half of 2021.

Real GDP will increase by 5.5% in 2021, with consumer spending of 7.9%.

The Partisan Conflict Index shows that partisanship increased in the second year of Obama's first term. It has remained at a high-level during the Trump and Biden administrations.

U.S. Real GDP Growth

The Conference Board Forecast (November 10, 2021)

Real GDP and Economic Growth in 2021

The latest Conference Board forecast shows real GDP growth of 2.0% in Q3 2021, followed by 5.0% in Q4. Real GDP growth for 2021 will be 5.5%, and a growth rate of 7.9% for personal consumption. Real GDP will increase at a rate of 3.3% in 2022. The U.S. unemployment rate will drop from 5.4% in 2021 to 4.0% in 2022.

Other Economic Factors

The combination of disruptions in the supply chain and the level of stimulus spending led to increased inflation. Supply chain disruptions and inflation will continue into 2022. The Fed is likely to raise interest rates to counter increased inflation. Extensive government spending will support economic growth in 2022 and beyond.

Conference Board US Real GDP Growth Forecast

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	2020	2021	2022
Real GDP	- 5.1%	- 31.2%	33.8%	4.5%	6.3%	6.7%	2.0%	5.0%	- 3.4%	5.5%	3.5 %
Personal Consumption	- 6.9%	- 33.4%	41.4%	3.4%	11.4%	12.0%	1.6%	3.5%	- 3.8%	7.9%	3.3%
Residential Investment	20.3%	- 30.8%	60.0%	34.4%	13.3%	-11.7%	-7.7%	1.0%	6.8%	9.1%	-0.1%
Nonresidential Investment	- 8.1%	-30.3%	18.7%	12.5%	12.9%	9.2%	1.8%	4.5%	-5.3%	7.5%	4.8%
Total Gov't. Spending	3.7%	3.9%	-2.1%	-0.5%	4.2%	-2.0%	0.8%	2.0%	2.5%	0.8%	2.3%
Exports	-16.3%	- 59.9%	54.5%	22.5%	-2.9%	7.6%	-2.5%	2.0%	- 13.6%	3.7%	3.0%
Unemployment Rate	3.8%	13.1%	8.8%	6.8%	6.2%	5.9%	5.1%	4.5%	8.1%	5.4%	4.0%
PCE Inflation (%Y/Y)	1.7%	0.6%	1.2%	1.2%	1.8%	3.9%	4.3%	4.5%	1.2%	3.6%	3.1%
Core PCE Inflation (%Y/Y)	1.8%	1.0%	1.5%	1.4%	1.7%	3.4%	3.6%	3.9%	1.4%	3.1%	2.9%

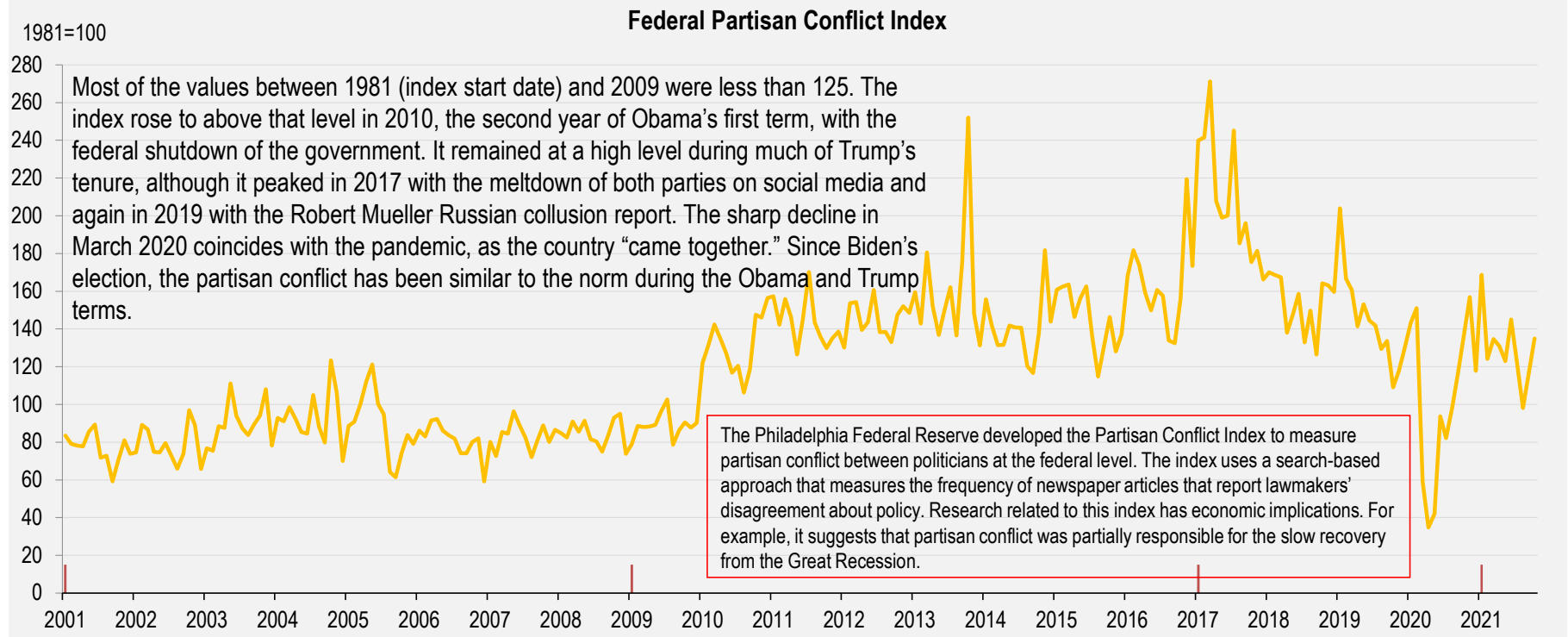
Source: The Conference Board and cber.co.

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

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Partisan Conflict Index

2001 to 2021



Source: Philadelphia Federal Reserve, <https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/partisan-conflict-index>, cber.co.

U.S. and Colorado Employment

Employment, Employment to Population, Unemployment, JOLTS

Key Points

U.S. employment has added 5.8 million jobs through the first ten months of 2021.

The Colorado unemployment rate continues to be greater than the U.S. rate.

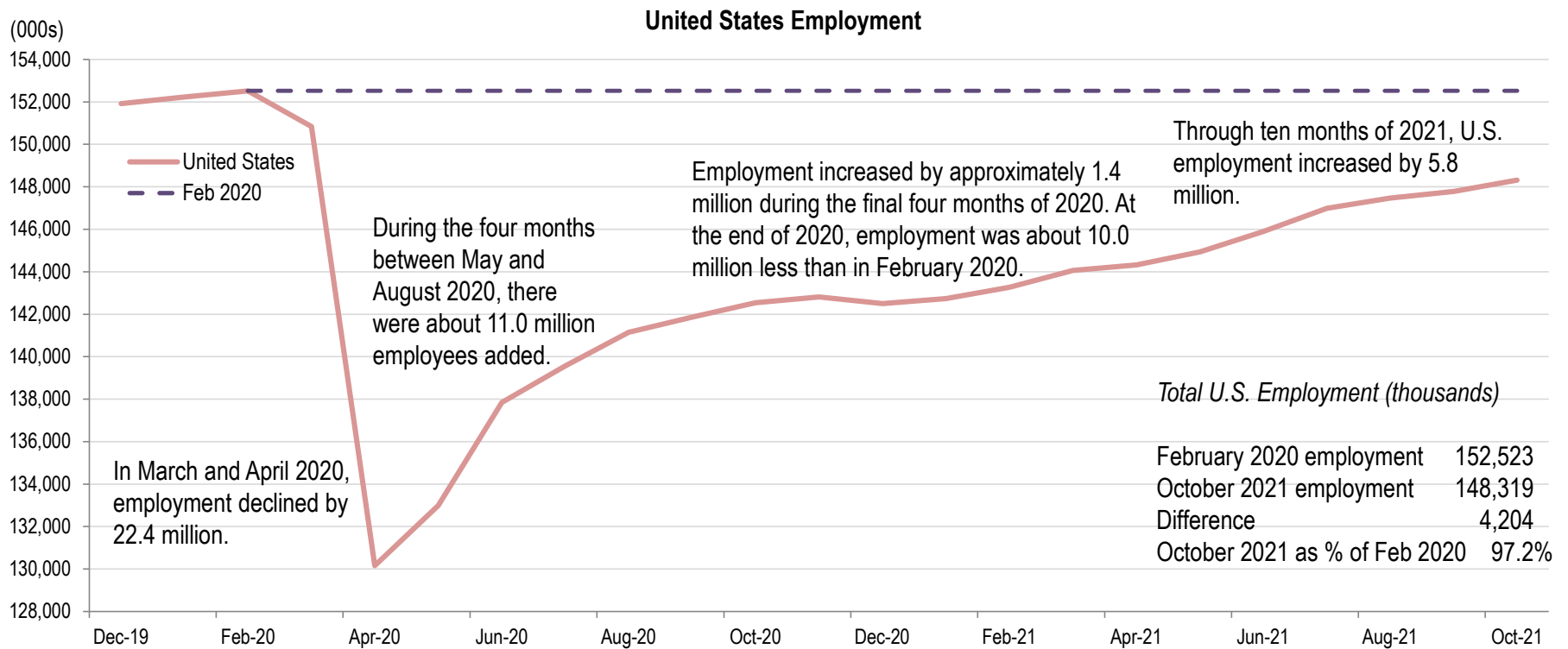
Wages are increasing in the five major occupation categories.

The employment to population ratio for Colorado was flat in Q3 but improved in Q4. The U.S. rate is increasing.

The number of job terminations is at a record level.

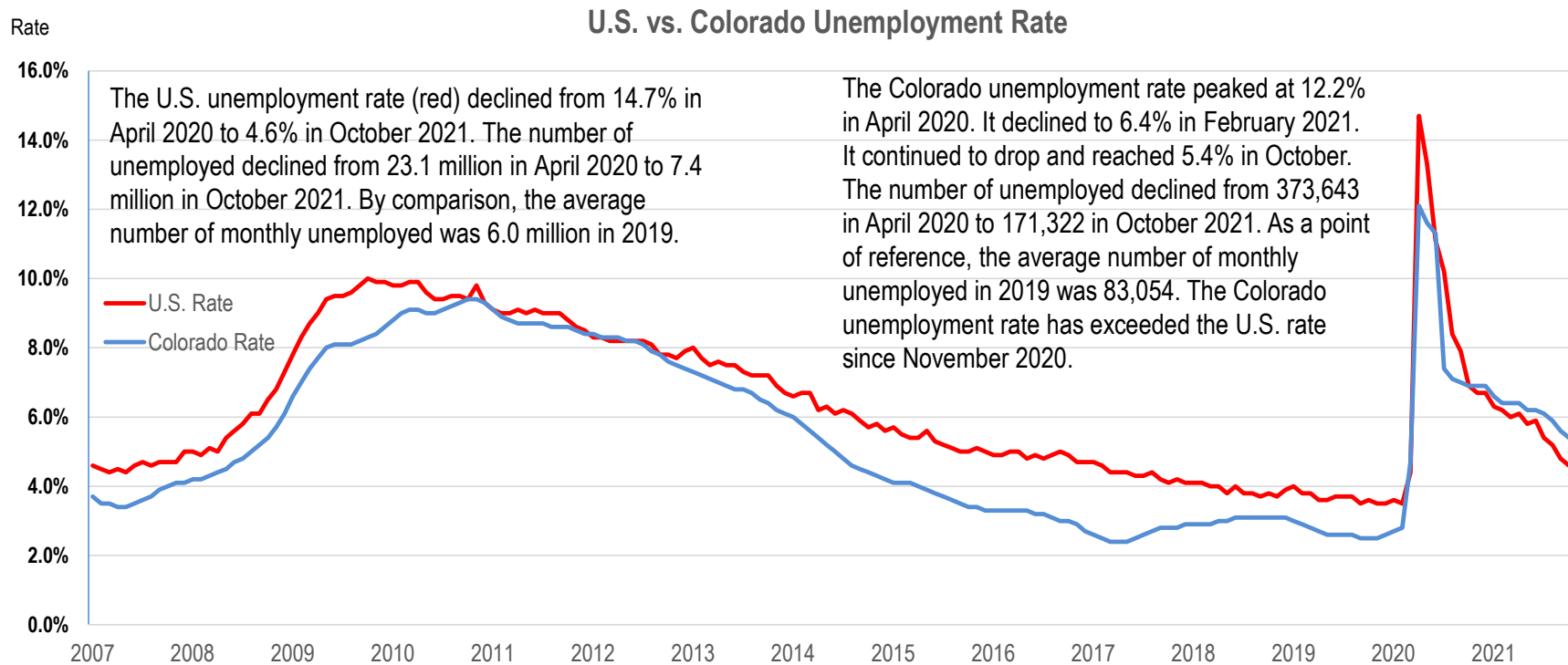
Employment

United States



Source: Bureau of Labor Statistics, cber.co.

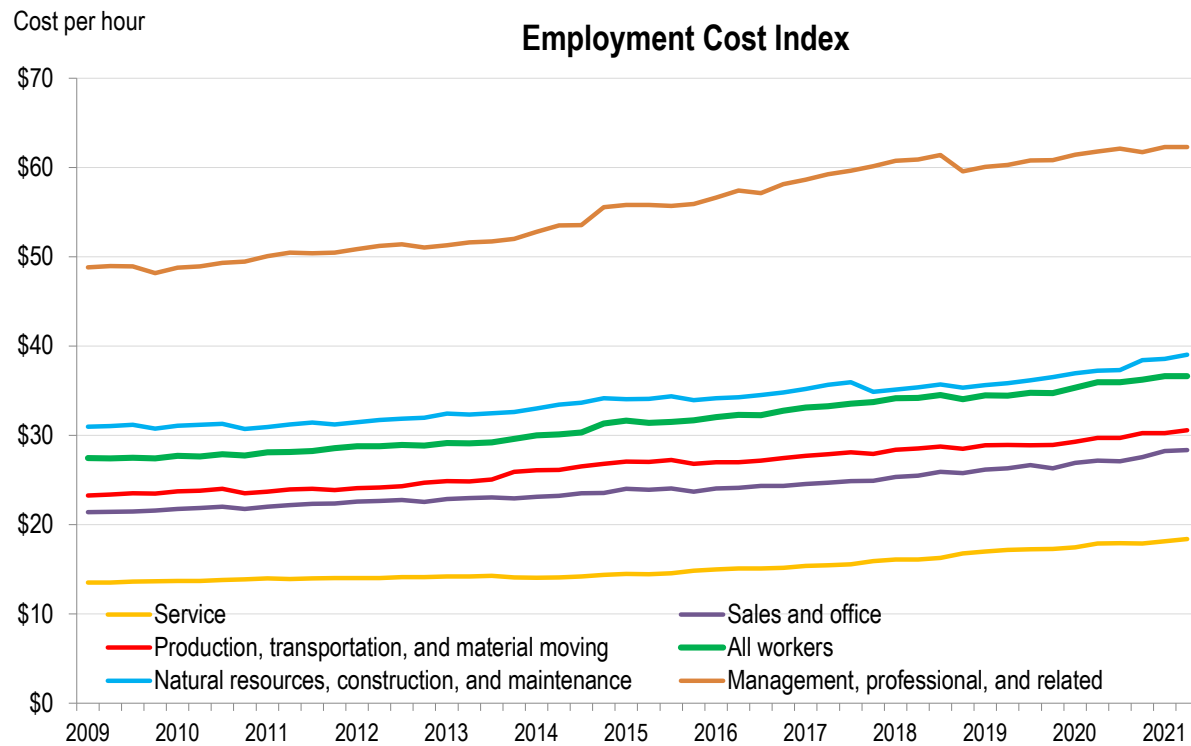
U.S. and Colorado Unemployment Rate



Source: Bureau of Labor Statistics and cber.co.

Employment Cost Index

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



Increase in Compensation Q2 2021 vs. Q2 2020
 Over the past year, compensation has increased across the following five occupation categories. These average wage increases are below the rate of change in inflation.

- Management, professional, and related*
 (Orange) \$.50, 0.9% to \$18.40
- Natural resources, construction, and maintenance*
 (Blue) \$1.81, 4.9% to \$28.35
- All Workers*
 (Green) \$.68, 1.9% to \$30.57
- Production, transportation, and material moving*
 (Red) \$.84, 2.8% to \$36.64
- Sales and Office*
 (Purple) \$1.18, 4.3% to \$39.06
- Service*
 (Yellow) \$.50, 2.8% to \$62.06

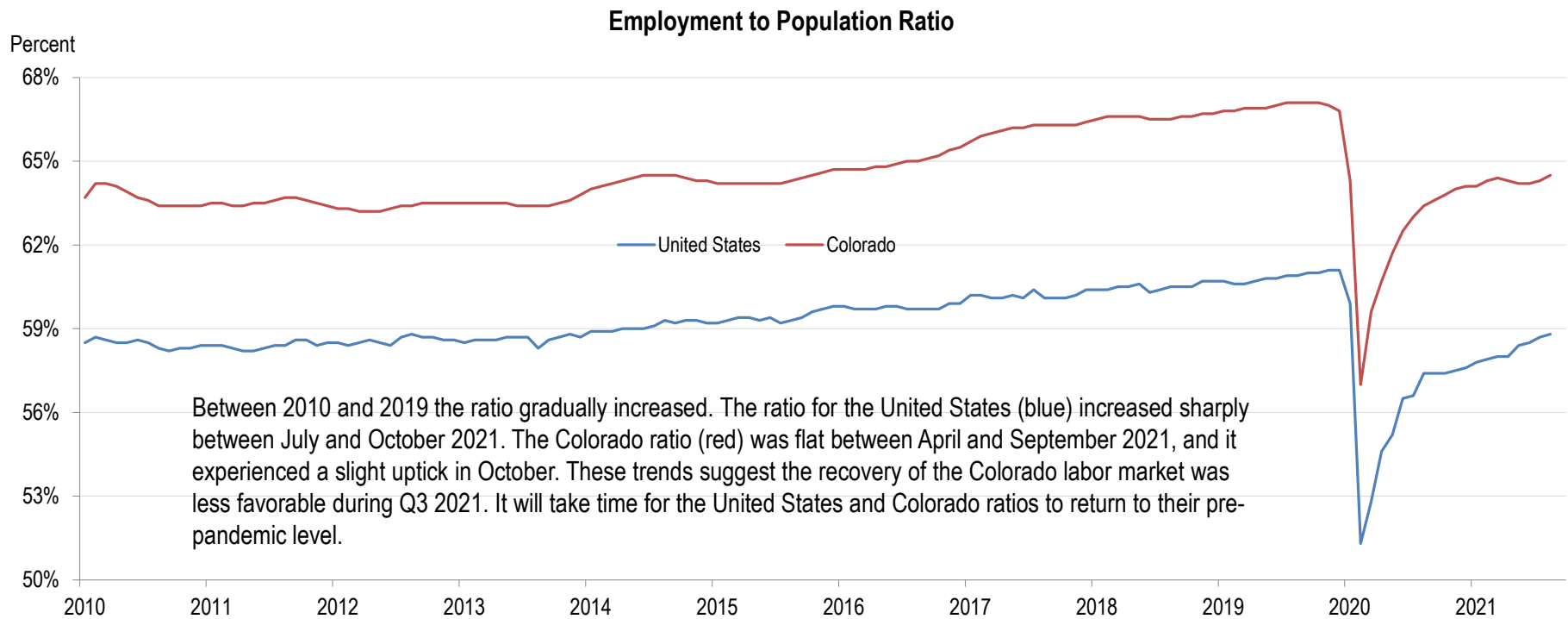
Note: line color, amount of 12-month change, rate of change, 2021 Q2 value.

Source: BLS. Note: Not adjusted for inflation.

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Employment to Population Ratio

United States to Colorado

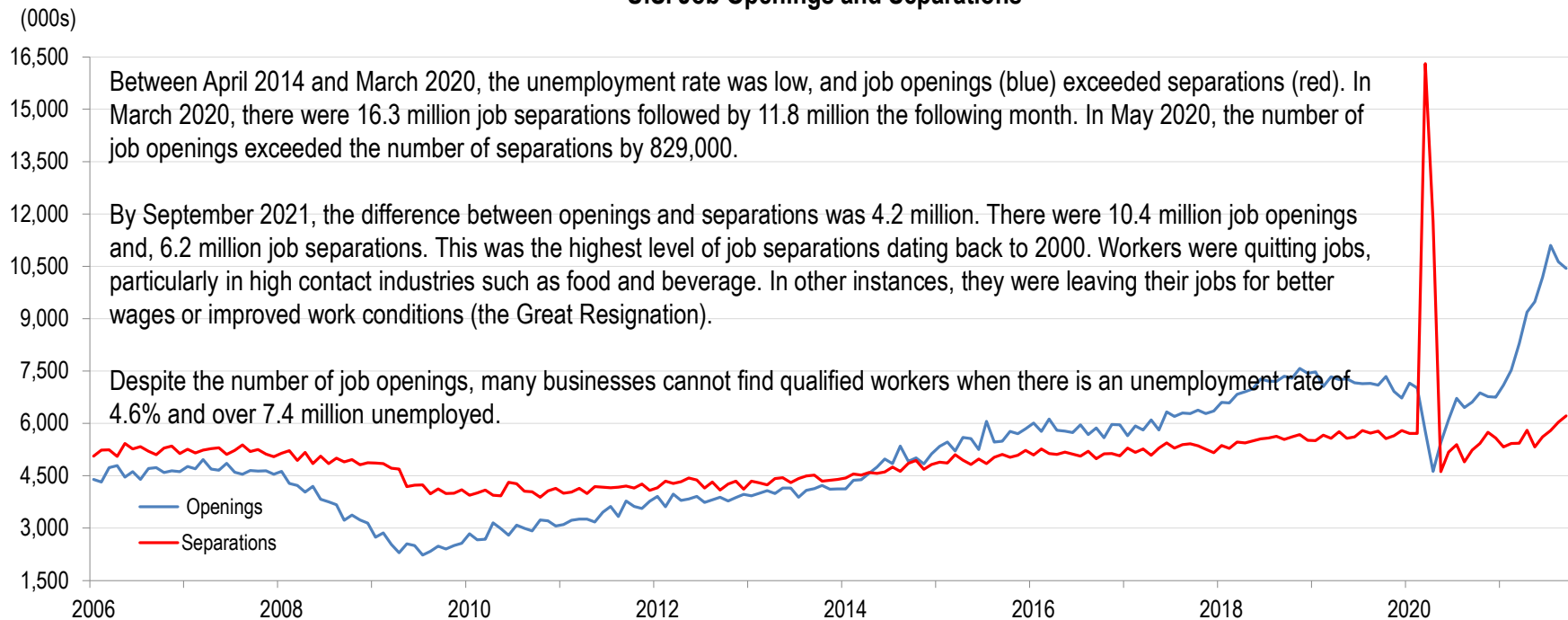


Source: FRED, BLS, cber.co.

Job Openings and Separations

United States

U.S. Job Openings and Separations



Source: JOLTS, BLS, cber.co.

Major Indices

NAHB, Consumer Sentiment Index, NFIB Small Business Optimism Index, and Manufacturing and Services PMI Indices

Key Points

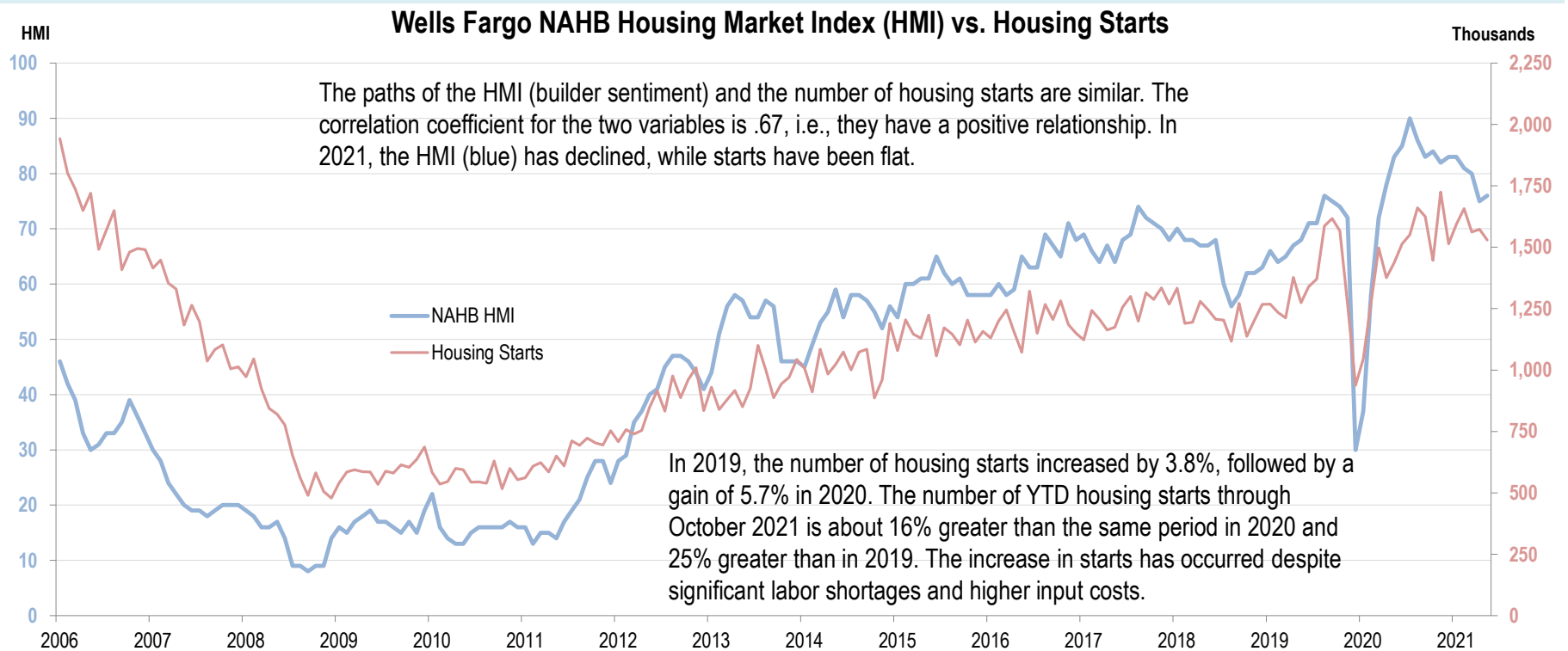
The HMI declined from a high in November 2020, but it remains strong. Housing starts are solid.

The Michigan Consumer Sentiment Index has declined since April.

The NFIB Small Business Optimism Index declined slightly in October. There are concerns about the availability and cost of labor and the impact of inflation.

The indices for manufacturing and services have been in expansionary territory for 17 consecutive months. Labor shortages and supply chain issues are a concern.

Wells Fargo NAHB HMI vs. Housing Starts

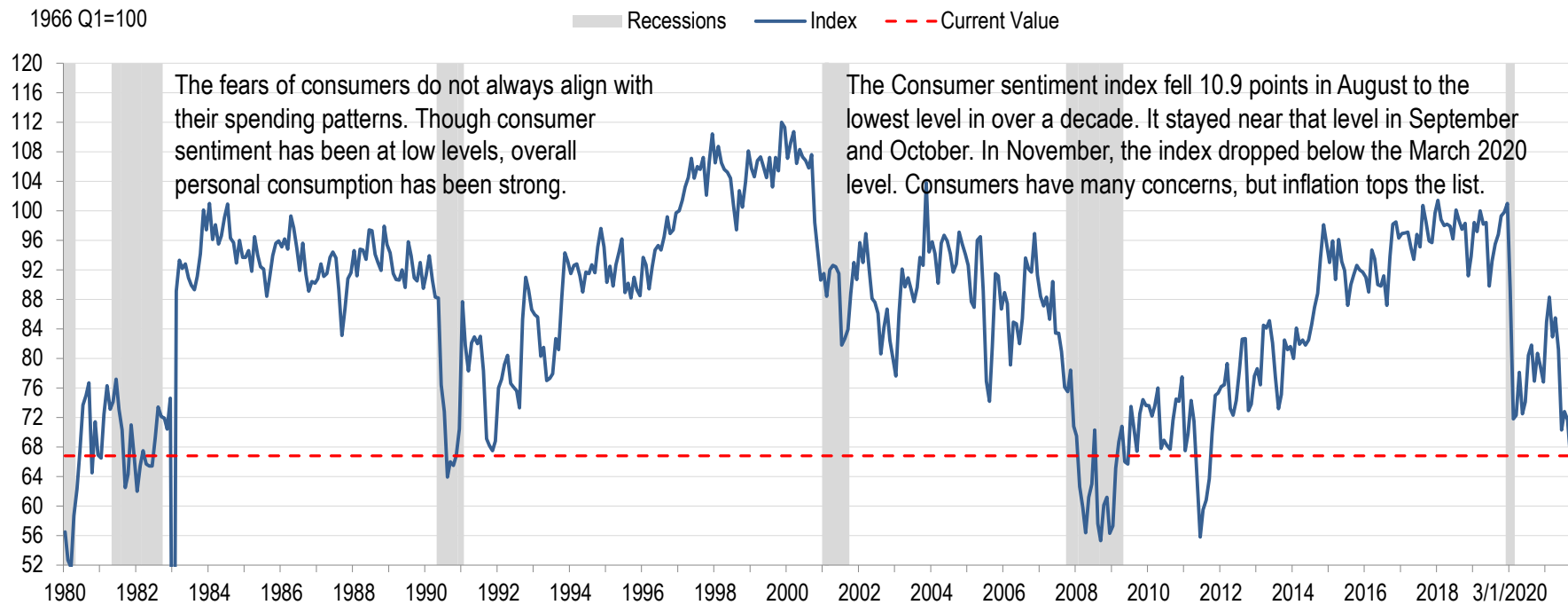


Source: NAHB, cber.co.

Consumer Sentiment Index

University of Michigan

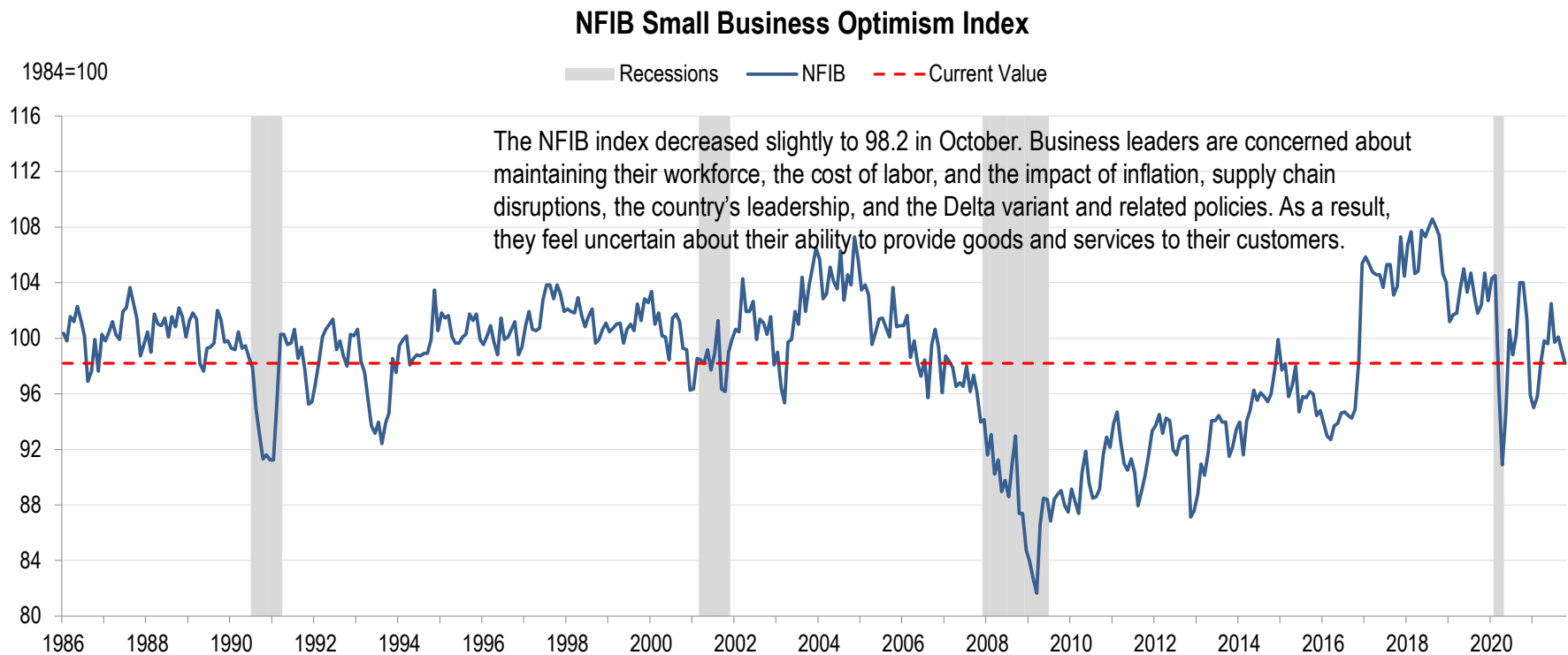
Michigan Consumer Sentiment Index



Source: University of Michigan, cber.co.

NFIB Small Business Optimism Index

United States

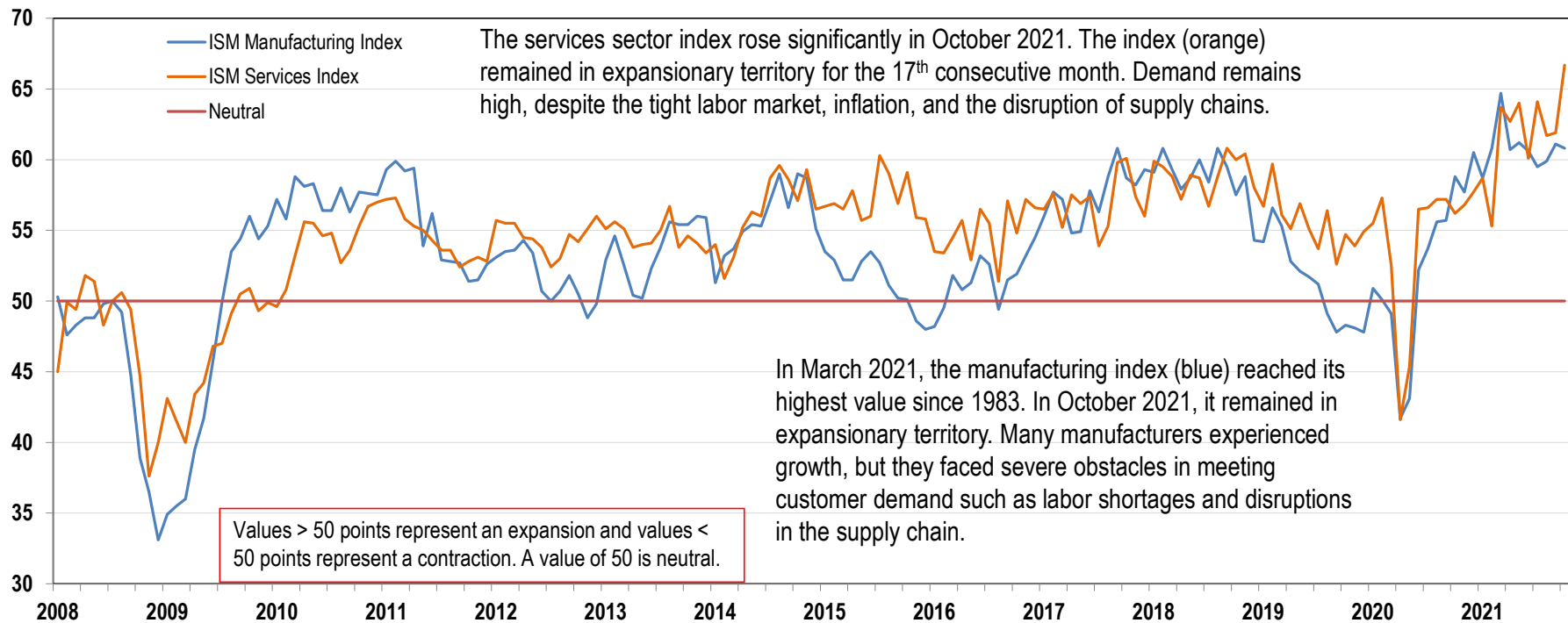


Source: NFIB, cber.co.

ISM PMI Composite Indices

Manufacturing vs. Services

ISM Manufacturing PMI vs. Services PMI Composite Indices



Source: Institute of Supply Management, cber.co

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Other Key Metrics

Advance Retail Sales, Light Truck and Auto Sales,
Holiday Sales, S&P 500 Index, and WTI Crude Oil Prices

Key Points

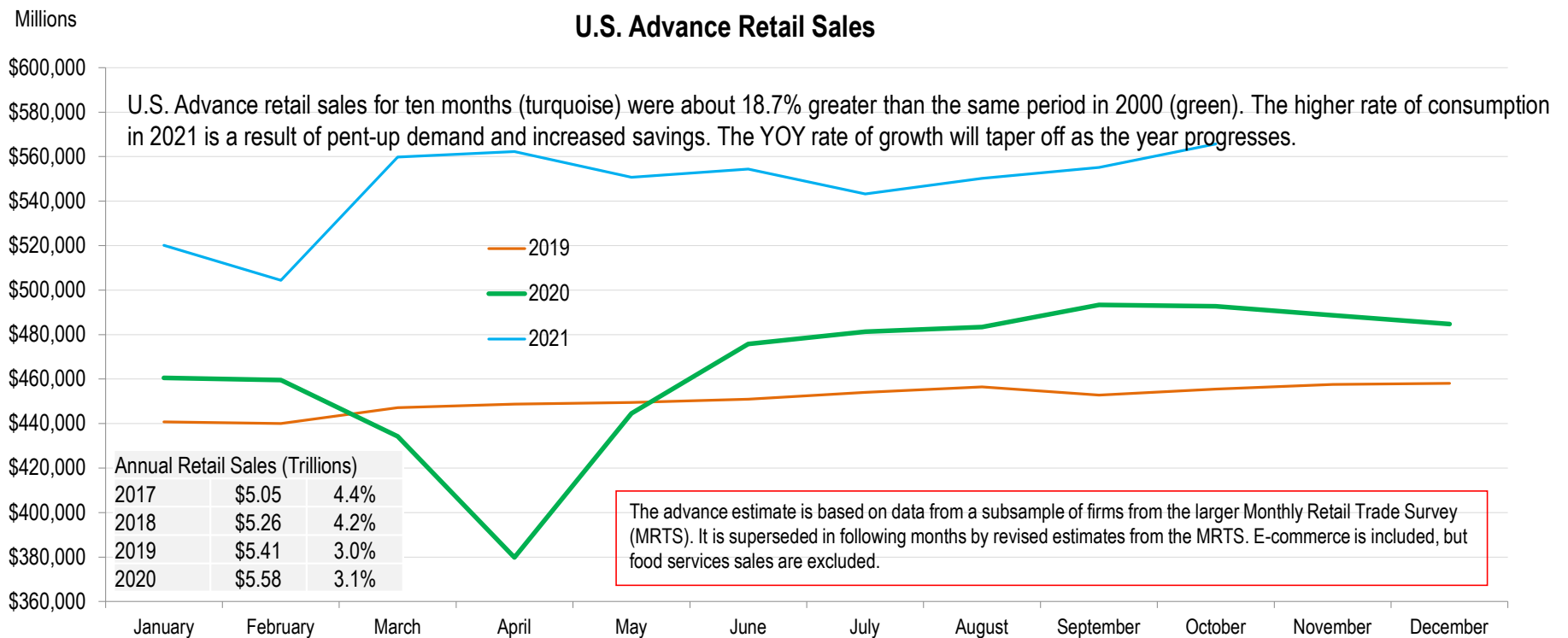
Retail sales remain strong, despite the fact that light truck and auto sales have declined sharply because of supply chain shortages. Holiday retail sales, which exclude autos are projected to be exceptionally strong.

Retail sales remain strong, even though light truck and auto sales have declined sharply because of supply chain shortages. Holiday retail sales, which exclude auto sales, are projected to be exceptionally strong.

The S&P Index posted double-digit gains in 2020. Strong growth has continued in 2021, although the market stalled in mid-September.

U.S. Advance Retail Sales

Monthly

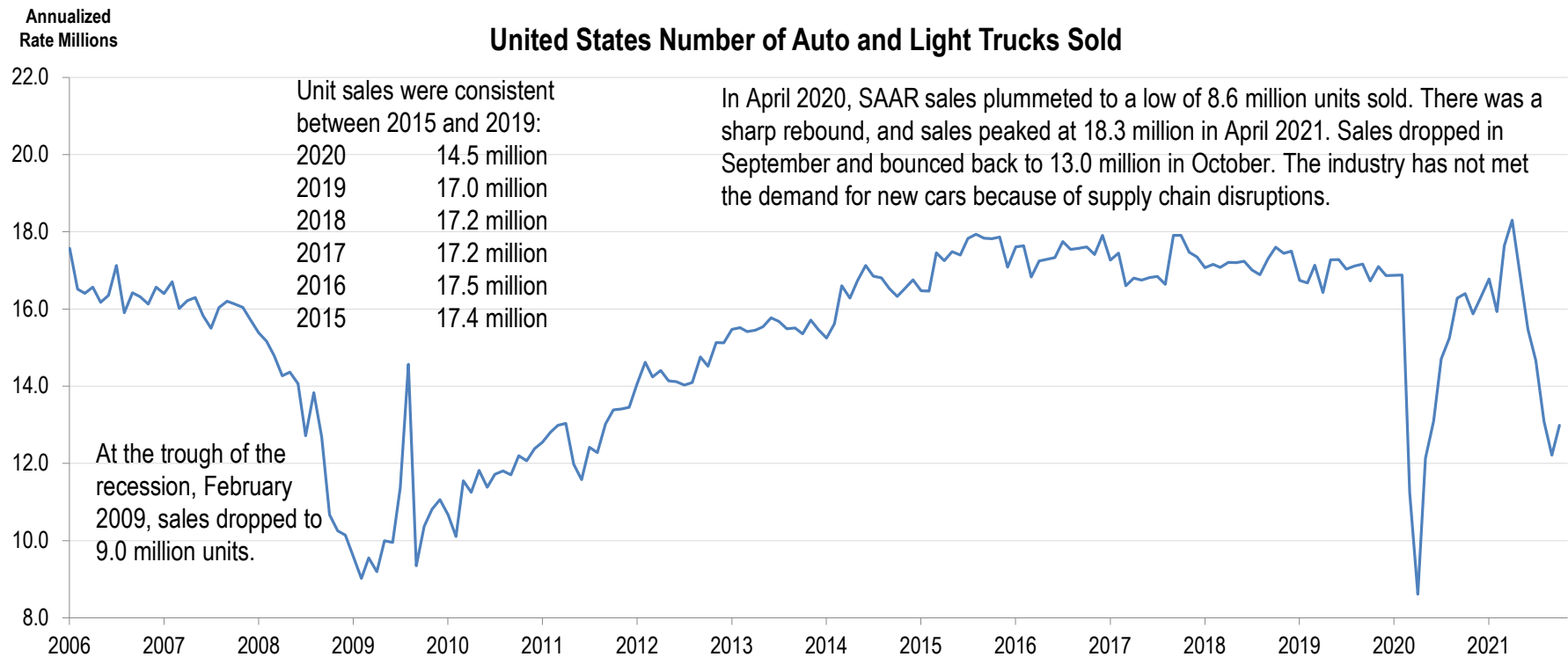


Source: Colorado Department of Revenue, <https://cdor.colorado.gov/retail-sales-reports>, cber.co. Note: Not adjusted for inflation.

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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.

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Retail Sales

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

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*.



Rudolph will shine his nose very brightly during the 2021 holiday season. The National Retail Federation projects that 2021 holiday sales will be 8.5% to 10.5% greater than 2020, compared to an increase of 8.2% last year and an average of 3.9% for the past ten years.

Source: National Retail Federation, NABE, IHSmarkit, cber.co. Note: Not adjusted for inflation. Colorado-based Business and Economic Research <https://cber.co>

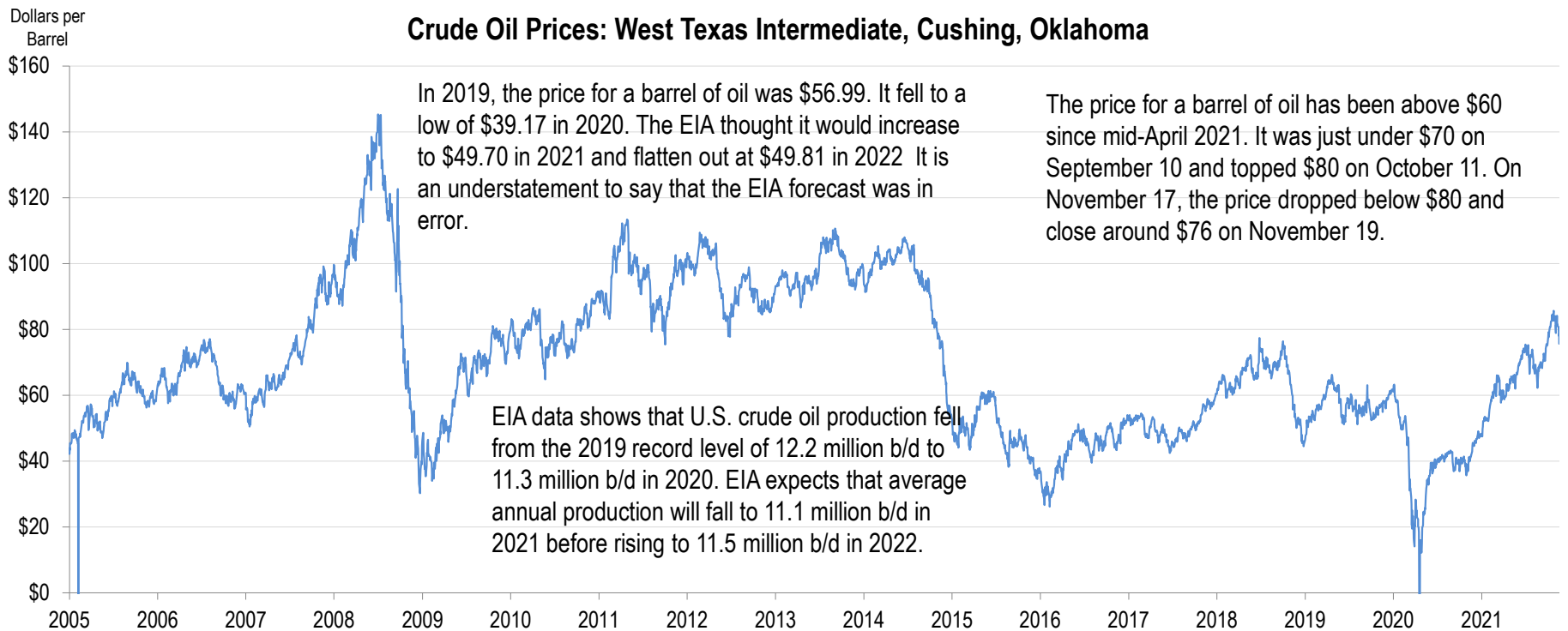
Fundamentals For Holiday Season

There will be record retail sales **HO HO HO!**
Many workers have higher wages
There is confidence in the labor market
Credit card balances are lower than usual
Consumers have about \$2.5 trillion in excess savings
People are more likely to spend because of the wealth effect

BAH HUMBUG!
Inflation, such as rising energy costs
There continues to be uncertainty about COVID-19
Labor shortages will extend into 2022
Earlier shopping may be necessary to get preferred gifts
Supply chain disruptions have caused delays and problems with product availability – there will be more e-commerce, gift certificates, and other gifts (travel, experiential, etc.)
Increased business costs are likely to be passed on

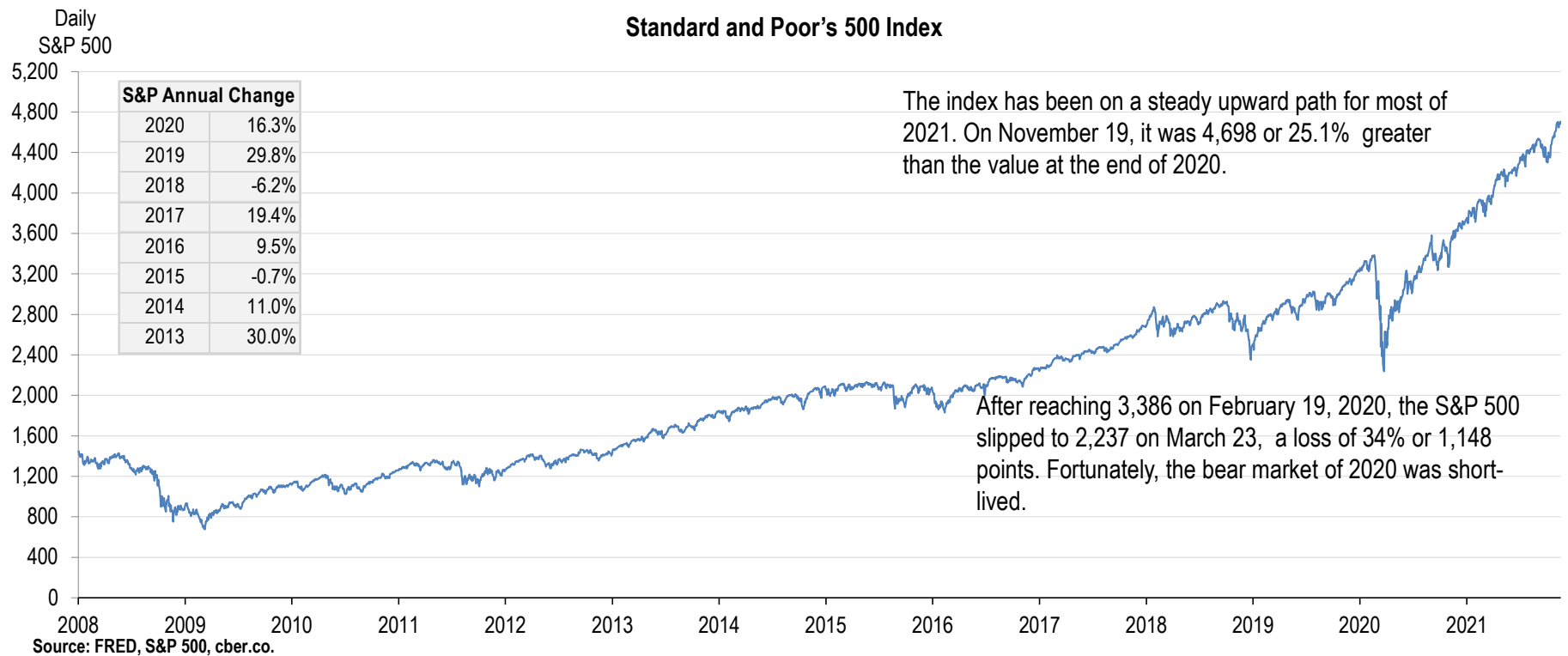
Crude Oil Prices

West Texas Intermediate



Source: FRED, EIA, cber.co.

Standard and Poor's 500 Index



Colorado



Colorado Employment

Colorado Employment, Job Openings and Separations, Employment by MSA, and Summary of Employment

Key Points

For most of 2021, the number of job openings has exceeded the number of unemployed and the number of separated workers.

The September seasonally adjusted wage and salary employment for Colorado was 62,700 less than February 2020.

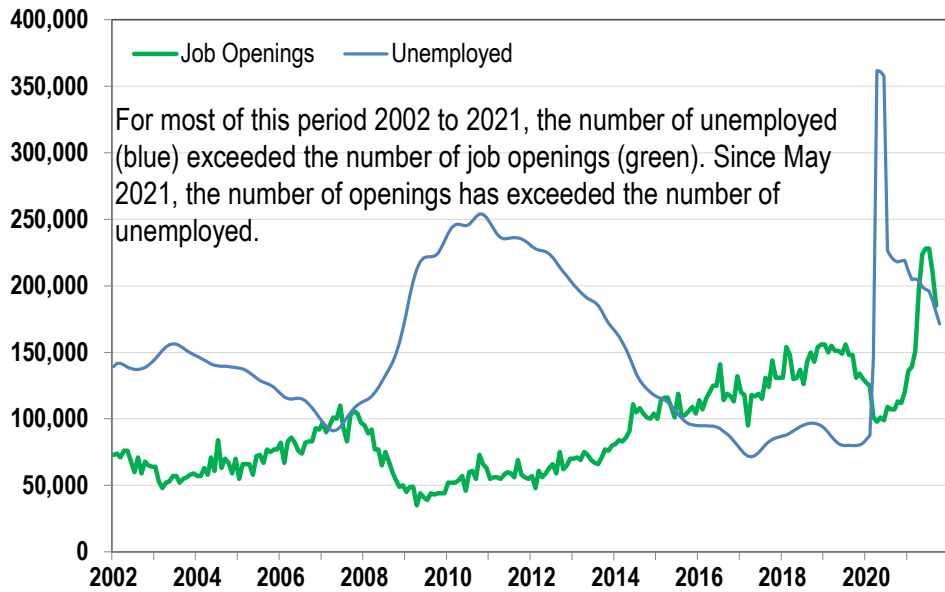
The Colorado Springs and Denver MSAs have recovered at a faster rate than other state MSAs.

Most of the Colorado employment shortfall is in the leisure and hospitality, administrative, and local government sectors.

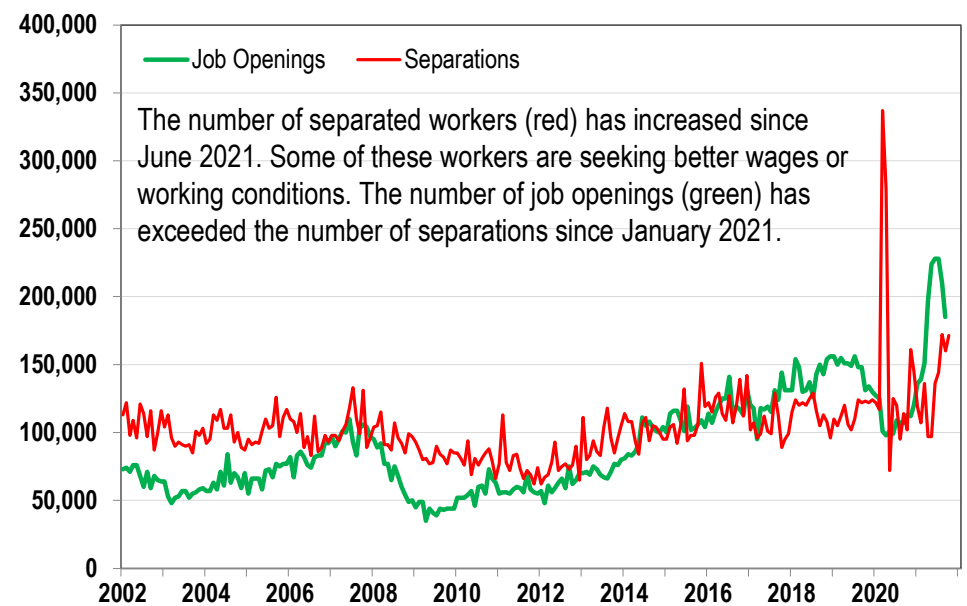
Colorado Job Openings vs. Number of Unemployment

Colorado Job Openings vs. Separations

Job Openings vs. Number of Unemployed



Job Openings vs. Number of Separations

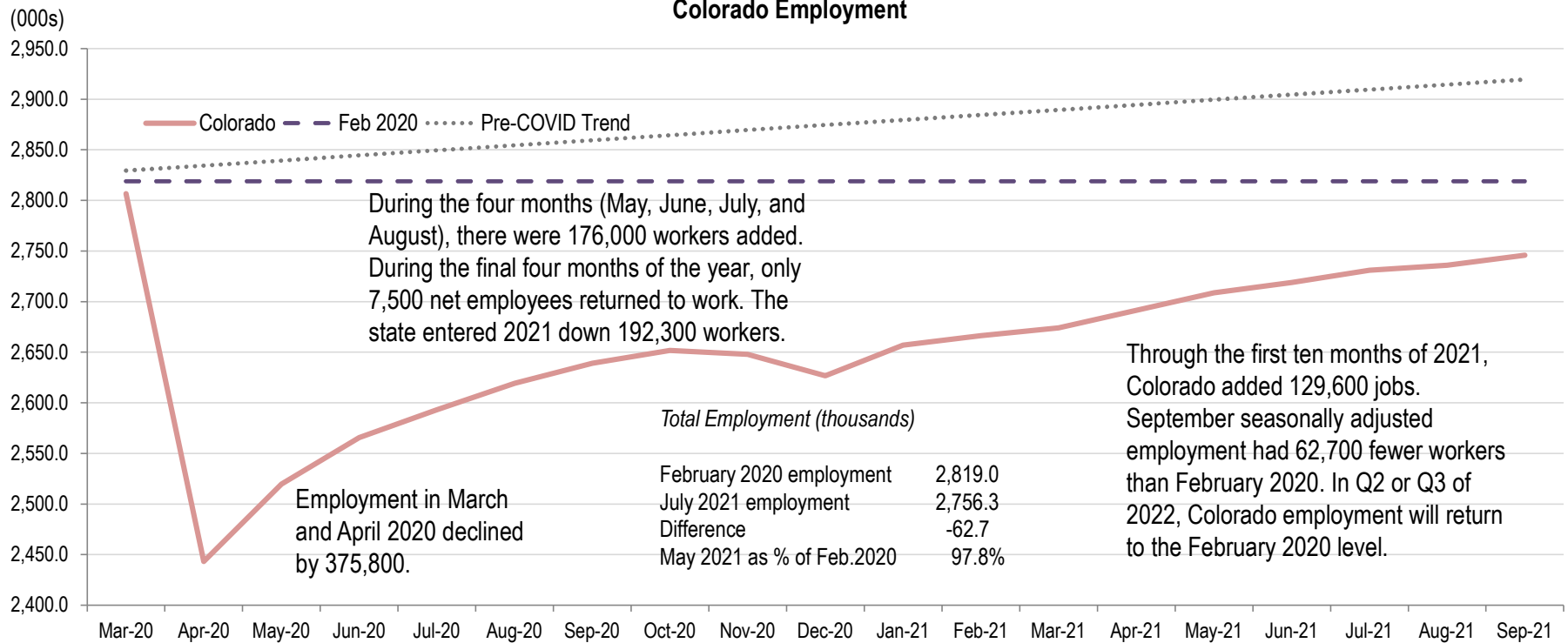


Source: Bureau of Labor Statistics, SA, cber.co.

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Employment Colorado

Colorado Employment



Source: Bureau of Labor Statistics, cber.co.

Change in Employment by Area

MSAs and non-MSA

Change in Employment by MSA/Non – MSA October 2021 vs. February 2020

Area	Employment (000s) February 2020	October 2021 vs. February 2020 (000s)	October 2021 vs. February 2020 %
Colorado	-62.7	97.8%	Colorado
Colorado Springs	0.9	100.3%	Colorado Springs
Denver	-30	98.1%	Denver
Non-MSA	-8.5	97.5%	Non-MSA
Pueblo	-2.1	96.8%	Pueblo
Grand Junction	-2.3	96.5%	Grand Junction
Boulder	-7.8	96.1%	Boulder
Fort Collins	-7.2	95.9%	Fort Collins
Greeley	-5.7	95.0%	Greeley

Source: BLS, cber.co
Note: The table is sorted in descending order by the far-right column/

Over the past year, the Colorado economy has had an uneven recovery across regions, industries, and occupations.

As of October, the Colorado Springs and Denver MSAs have recovered faster than other areas. Both are above the state average.

The combined 47 non-MSA counties are next, followed by Grand Junction and Pueblo.

Boulder, Fort Collins, and Greeley have the lowest recovery rates.

Overall, Colorado employment for October 2021 is 97.8% of the employment for February 2020.

Source: BLS, cber.co.

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Summary of Employment Recovery

United States and Colorado

Colorado employment through October 2021 was 62,700 below the February 2020 value, and the U.S. October 21 value was 4.20 million below February 2020. Most of the employment shortfall is in the leisure and hospitality, administrative services, and local government sectors.

Recovered or Least Losses	Short-Term Recovery (2022)	Mid-Term Recovery (2022+)	Long-Term Recovery (2023+)
<ul style="list-style-type: none"> Wholesale trade Management of companies Transportation, warehousing, and utilities Professional, scientific, and technical services Federal government 	<ul style="list-style-type: none"> Retail trade Financial activities Educational services (private) Information 	<ul style="list-style-type: none"> Educational services (private) Manufacturing Other services Extractive industries Healthcare Construction State government 	<ul style="list-style-type: none"> Local government Administrative Arts and entertainment Accommodations and food
<p>Colorado +25,400. These sectors account for about 21% of total state employment.</p>	<p>Colorado -10,900. These sectors account for about 20% of total state employment.</p>	<p>Colorado -37,300. These sectors account for about 32% of state employment.</p>	<p>Colorado -39,900. These sectors account for about 27% of total state employment.</p>
<p>U.S. +218,800. These sectors account for about 18% of total U.S. employment.</p>	<p>U.S. -403,000. They account for about 21% of total U.S. employment.</p>	<p>U.S. -1,547,100. About 35% of U.S. employment is in these sectors.</p>	<p>U.S. -2,472,700. About 26% of U.S. employment is in these sectors.</p>

Source: BLS, cber.co.

Select Industry Data

Inflation, Retail Sales, DIA Passengers, Building Permits,
and Oil Production

Key Points

Inflation has risen rapidly in recent months. Greater inflation will continue into 2022.

Retail sales have rebounded after a sluggish start in 2021.

The number of passengers at DIA continues to increase.

The total number of permits issued for single-family and multi-family housing through September is significantly greater than the same period in 2020.

The production of oil in Colorado is trending downwards because of state regulations and reduced global demand.

Inflation

Last fall, some of the country's top economists said that pigs would fly before inflation rose significantly. To their chagrin, the inflation rose. At one point, they indicated the flight time of the pigs would be short-lived (transitory). They are now saying inflation will continue into 2022.

The following are examples of the YOY increase in inflation in Colorado for September 2021.

Recreation	8.6%	Household Energy	6.7%
Medical	0.8%	Food and Beverage	3.4%
Housing	1.4%	Household Furnishing	5.4%
Food at home	2.6%	Transportation	17.5%
School fees/childcare	1.2%	Apparel	16.8%
Electricity	2.4%	Used Vehicles	24.8%
Alcoholic Beverages	4.0%	Motor Fuel	54.9%

The Colorado CPI is not reported monthly. The YOY U.S. CPI for the first half of 2021 was 3.4% and it was 1.9% for Colorado. For September, the YOY U.S. rate was 5.4%, and the Colorado rate was 4.5%. The YOY U.S. rate for October was 6.2%.

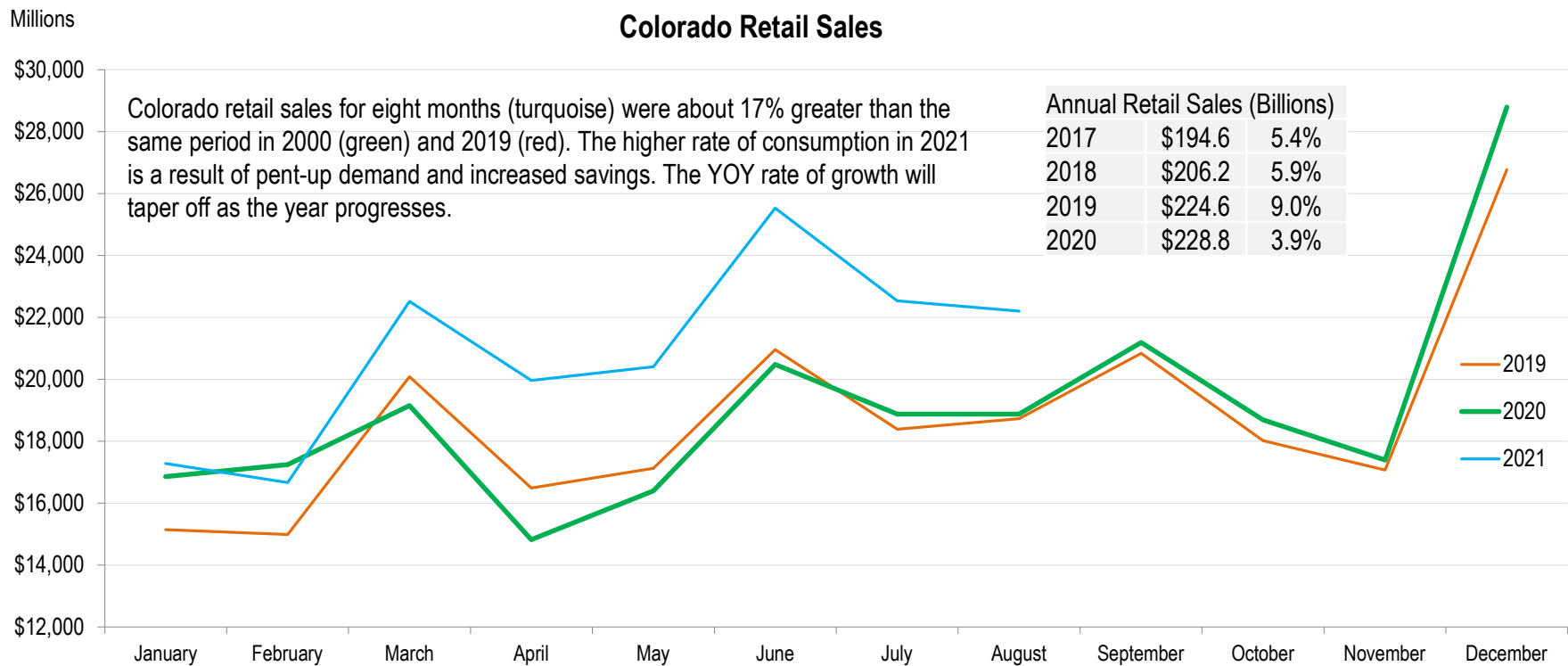
Source: BLS, cber.co.

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Colorado Retail Sales

Monthly



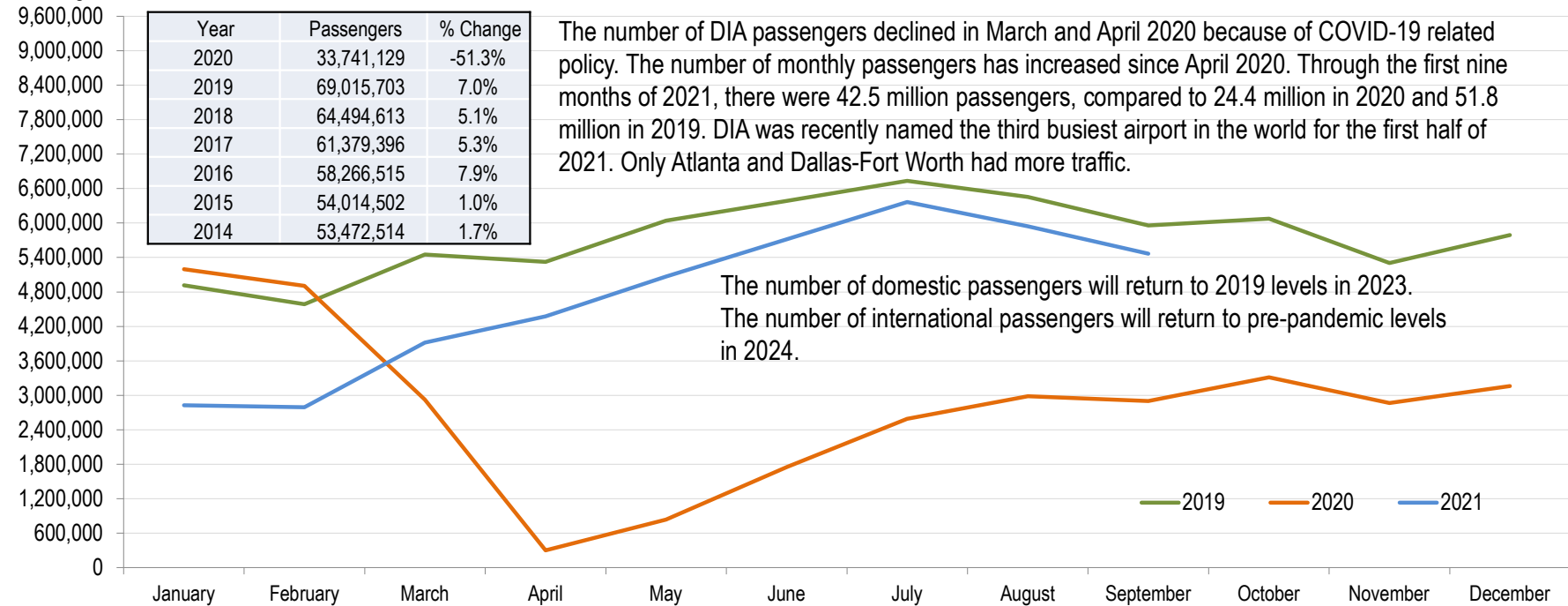
Source: Colorado Department of Revenue, <https://cdor.colorado.gov/retail-sales-reports>, cber.co. Note: Not adjusted for inflation.
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Denver International Airport Passengers

Monthly

DIA Passengers

Passengers

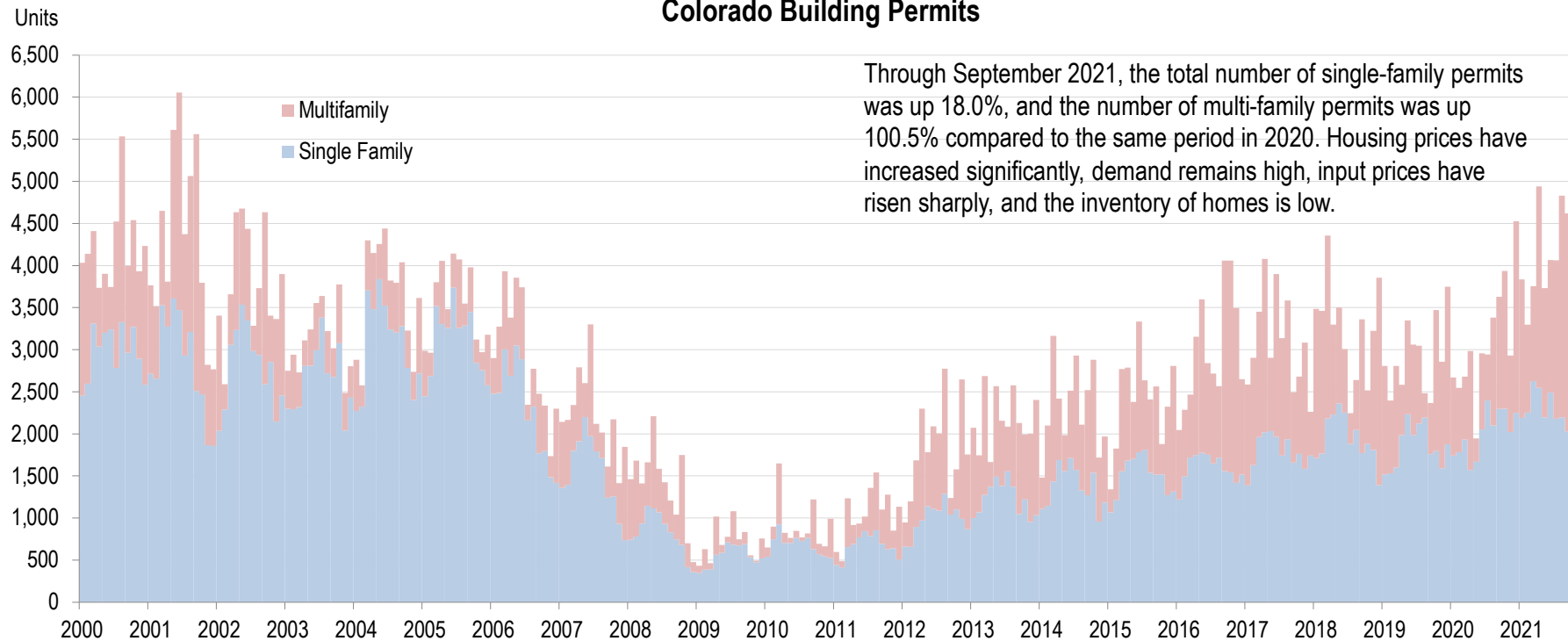


Source: flydenver.com, cber.co.

Colorado Residential Building Permits

Units

Colorado Building Permits

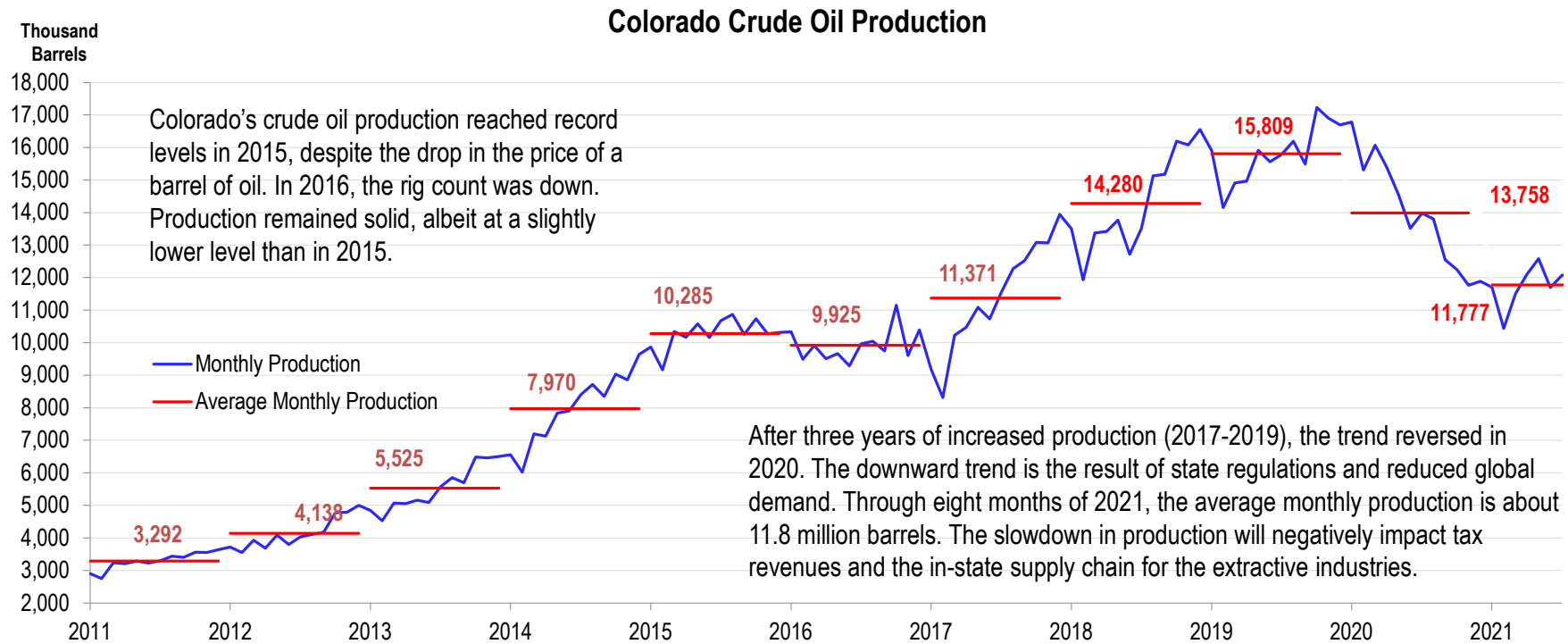


Source: TAMU Real Estate Center, U.S. Census Bureau, cber.co.

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Colorado Field Production of Crude Oil

2011 to 2021 (Thousand Barrels)



Source: EIA, cber.co.

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Summary

Colorado

Summary of Colorado Forecast

Colorado's real GDP growth rate will be greater than the U.S. rate in 2021 and 2022.

Employment will return to its 2019 level in the Q2 or Q3 of 2022. Growth in 2021 has been strong, but it will taper off in the final quarter of the year.

Retail sales rebounded in 2021 as a result of pent-up demand. Growth will be slower in 2022.

In 2021 and 2022, Colorado inflation will be greater than in recent years. The increased inflation will negatively impact the growth of the economy in the months ahead.

Colorado Economic Forecast				
	2019	2020	2021	2022
Real GDP Value (billions)	\$356.28	\$351.07	\$375.00	\$393.00
% Change Real GDP	3.9%	-1.5%	6.8%	4.8%
CES Employment (thousands)	2,790.1	2,644.6	2,728.6	2,794.6
Annual Change (thousands)	62.8	(145.5)	134.0	56.0
% Change	2.3%	-5.2%	5.1%	2.0%
Unemployment Rate	2.7%	7.3%	6.1%	5.1%
Retail Sales (billions)	\$224.6	\$228.8	\$264.9	\$277.8
% Change	9.0%	1.9%	15.8%	4.8%
Consumer Price Index	1.9%	2.0%	3.2%	2.9%
DIA Passengers (millions)	69.0	33.0	56.0	64.0
Single Family Permits	24,756	26,489	28,900	27,350
Multi-family Permits	13,877	13,738	18,950	14,200
Oil Production (thousands) barrels	189,707	172,000	142,000	155,000

In 2020, the number of passengers through DIA was about half of the 2019 total. Domestic flights will return to their 2019 level in 2023. International flights will return to their pre-pandemic level in 2024.

There was an increase in the number of building permits issued in 2020. There will be strong growth in the number of permits issued in 2021 as demand for new homes remains high. Also, there is a need for affordable housing in many metro and mountain communities.

State regulations and reduced demand caused a decline in oil production in 2020 and 2021. Oil production will increase slightly in 2022.

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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.