

Economic Outlook and Trends Through February 2023

United States and Colorado



Colorado-based Business and Economic Research, cber.co
Prepared March 27, 2023

Economic Outlook and Trends

Purpose and Summary

The purpose of this chartbook is to review the performance and outlook of the Colorado and U.S. economies for 2023. The analysis will focus on employment and unemployment through February 2023.

The list of headwinds for the year includes inflation, rising interest rates, energy issues, a banking crisis, labor shortages, a debt crisis, wage increases, housing issues, state legislation that is not business friendly, and the conflict in Eastern Europe.

The discussion focuses on the following topics.

- Gross Domestic Product
- Colorado Population
- U.S. and Colorado Employment
- Inflation
- Saving, Borrowing, Consumption, and the Wealth Effect
- U.S. Industry Indicators
- Colorado Industry Indicators
- 2003 Colorado Economic Outlook.

Gross Domestic Product and Disposable Income

U.S. Real GDP

The Economic Forecast Still Calls for a Recession

Conference Board Calls for Recession

The Conference Board U.S. GDP Forecast is the base for the 2023 cber.co forecast. Three months ago, TCB called for a shallow recession by the end of 2022 or early 2023. Today, TCB thinks the recession will occur between Q2 through Q4 2023, based on their leading economic indicator and consumer confidence research.

Headwinds

On March 22, the Fed raised interest rates by 25 basis points to curb inflation. It is now in the range of 4.75% to 5.0% and will peak later this year. Inflation will remain high in 2023 and return to the target rate in 2024. Based on what we know today, the failure of Silicon Valley Bank and other smaller banks is not likely to expand; however, it has caused much-deserved concern and discussion about the stability of the banking system. Pay attention!

Over the summer months, there will be a lot of saber-rattling around the federal debt ceiling issue as the deadline approaches. The worst-case scenario is unlikely to happen.

The conflict in Ukraine has taken second fiddle to many of these issues. The obvious concerns are the lives of people, the amount of U.S. financial assistance to the country, the direct and indirect effects on the EU, relations with China, and the unintended consequences of the sanctions. In addition, there is the dreadful thought that the war will become more deadly.

U.S. Real GDP Growth

The Conference Board Forecast (March 15, 2022)

Real GDP and Economic Growth

The latest Conference Board forecast projects real GDP growth of 0.7% in 2023. Real disposable income will increase slightly in 2023, and real personal consumption will post a slight gain. It will decline in the second half of 2023. Residential investment will fall further in 2022, and nonresidential investment will increase slightly.

Other Economic Factors

Despite the downward trend in the economy, some industries and occupations will see labor shortages. Surprisingly, the U.S. unemployment rate will be 3.6% in 2023. The quarterly inflation rate peaked in Q2 2022. The annual rate will drop to 3.8% in 2023, and the core rate will be 3.9%. It will approach the Fed's target rate of 2.0% in 2024.

Conference Board US Real GDP Growth Forecast

	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	2022	2023	2024
Real GDP	-1.6%	-0.6%	3.2%	2.7%	1.0%	-0.9%	-1.8%	-0.6%	2.1%	0.7%	0.9%
Real Disposable Income	--10.6%	-2.3%	3.2%	4.8%	2.0%	0.5%	0.3%	0.6%	-6.1%	1.8%	1.0%
Real Personal Consumption	1.3%	2.0%	2.3%	1.4%	1.9%	-0.4%	-1.6%	-0.8%	2.8%	0.8%	0.6%
Residential Investment	-3.1%	-17.8%	-27.1%	-25.9%	-15.0%	-15.0%	-10.0%	-5.0%	-10.7%	-18.0%	-2.1%
Nonresidential Investment	7.9%	0.1%	6.2%	3.3%	2.5%	--0.8%	-1.9%	-1.5%	3.8%	1.5%	1.6%
Total Gov't. Spending	-2.3%	-1.6%	3.7%	3.6%	3.0%	3.2%	2.3%	2.5%	-0.6%	2.8%	2.5%
Exports	-4.6%	13.8%	14.6%	-1.6%	6.0%	2.0%	0.0%	1.0%	7.2%	4.2%	1.4%
Unemployment Rate	3.8%	3.6%	3.6%	3.6%	3.4%	3.4%	3.6%	4.1%	3.6%	3.6%	4.3%
PCE Inflation (%Y/Y)	6.4%	6.6%	6.3%	5.7%	4.9%	3.9%	3.4%	3.1%	6.3%	3.8%	2.2%
Core PCE Inflation (%Y/Y)	5.3%	5.0%	4.9%	4.8%	4.5%	4.2%	3.7%	3.1%	5.0%	3.9%	2.2%

Source: The Conference Board and cber.co.

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

Colorado-based Business and Economic Research <https://cber.co>

Contribution to GDP By Sector

Colorado

Economic Drivers (Contribution) Q1 2021 to Q3 2022

The table on the right shows the quarterly change in the Colorado real GDP in the top row. The quarterly change in real GDP was between -2.0% and 10%. That is a wide range!

The real GDP changed by 10.0% in Q1 2021. The values in that column show the contribution to GDP for each of the 20 sectors.

The twenty sectors are categorized based on their 2022 performance. The sectors in the top group had positive contributions for all three quarters of 2022. The sectors in the second group had positive contributions in two of the three quarters of 2022. The group at the bottom had positive contributions in zero or one quarter during 2022.

Obviously, the sectors in the top group performed most consistently. The top sectors for contribution have been PST and real estate, rental, and leasing.

The contributions of information, AFS, and AER have generally been positive. They have contributed less than the sectors in the top group. The sectors in the bottom group have contributed the least.

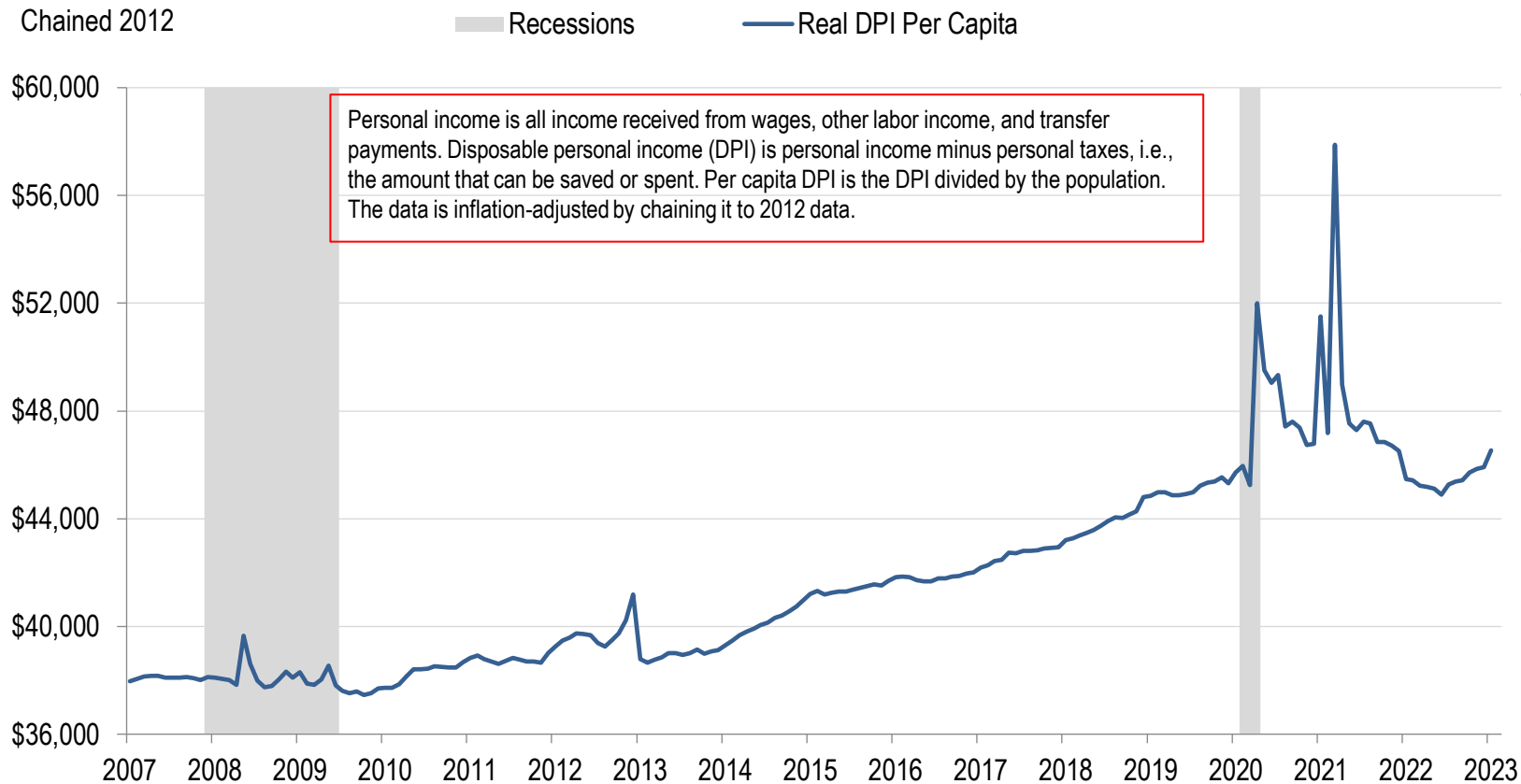
Source: BEA, cber.co.

Sector	2021:Q1	2021:Q2	2021:Q3	2021:Q4	2022:Q1	2022:Q2	2022:Q3
Quarterly % Change	10.0	5.7	2.8	8.8	2.9	-2.0	3.5
Professional, scientific, and technical	2.4	1.8	1.4	1.1	1.5	0.6	1.0
Real estate and rental and leasing	1.7	0.6	1.2	1.9	0.3	0.8	0.7
Transportation and warehousing	0.5	0.3	1.2	0.5	0.2	0.0	0.3
Administrative services	0.7	0.1	0.6	0.5	0.3	0.1	0.0
Management of companies (MCE)	0.3	0.4	-0.3	0.7	0.3	0.2	0.2
Health care and social assistance	-0.2	-0.1	0.0	0.7	0.2	0.1	0.4
Other services (Personal)	-0.1	0.2	0.3	0.2	0.1	0.0	0.1
Total Positive Contribution 2022	5.3	3.2	4.3	5.6	2.8	1.8	2.7
Information	0.8	0.5	0.8	1.0	2.7	-1.2	1.2
Accommodation and food services	1.4	2.2	0.7	0.3	0.2	0.0	-0.3
Arts, entertainment, and recreation	0.4	0.1	0.4	0.4	-0.2	0.5	0.4
Educational services (private)	0.0	0.1	0.2	0.1	0.1	-0.1	0.0
Retail trade	0.6	-0.9	-0.6	0.4	-0.7	0.1	0.3
Total Positive Cont. Two Qtrs.	3.2	2.0	1.5	2.1	2.1	-0.7	1.5
Government and government	0.6	0.3	0.5	0.4	-0.3	-0.2	0.3
Wholesale trade	0.3	1.0	-0.9	0.1	0.5	-0.4	-0.1
Finance and insurance	0.2	-0.1	-0.3	0.7	-0.1	0.1	-0.4
Manufacturing	0.2	0.8	-0.3	1.1	-1.4	-0.5	0.2
Utilities	-0.2	0.6	-0.6	0.0	0.1	0.0	-0.2
Agriculture	0.5	-0.8	-0.7	-0.1	0.0	-0.2	0.1
Extractive Industries	-0.3	-1.2	-0.3	-1.2	-0.1	-1.0	0.6
Construction	0.1	0.0	-0.5	0.0	-0.8	-1.1	-1.1
Total Positive Cont One or Zero Qtrs.	1.5	0.5	-3.1	1.0	-2.0	-3.2	-0.6

Real Disposable Personal Income Per Capita

United States

Real Disposable Personal Income Per Capita



Real DPI Per Capita

The real DPI PC behaved very differently in the COVID recession than during the Great Financial Crisis. It has been more volatile than usual between 2000 and 2022. Volatility will continue in 2023.

Real Disposable PCPI Annual (Average)

Year	RDPICP	% Change
2016	\$41,822	1.1%
2017	\$42,669	2.0%
2018	\$43,826	2.7%
2019	\$45,105	2.9%
2020	\$47,729	5.8%
2021	\$48,534	1.7%
2022	\$45,406	-6.4%

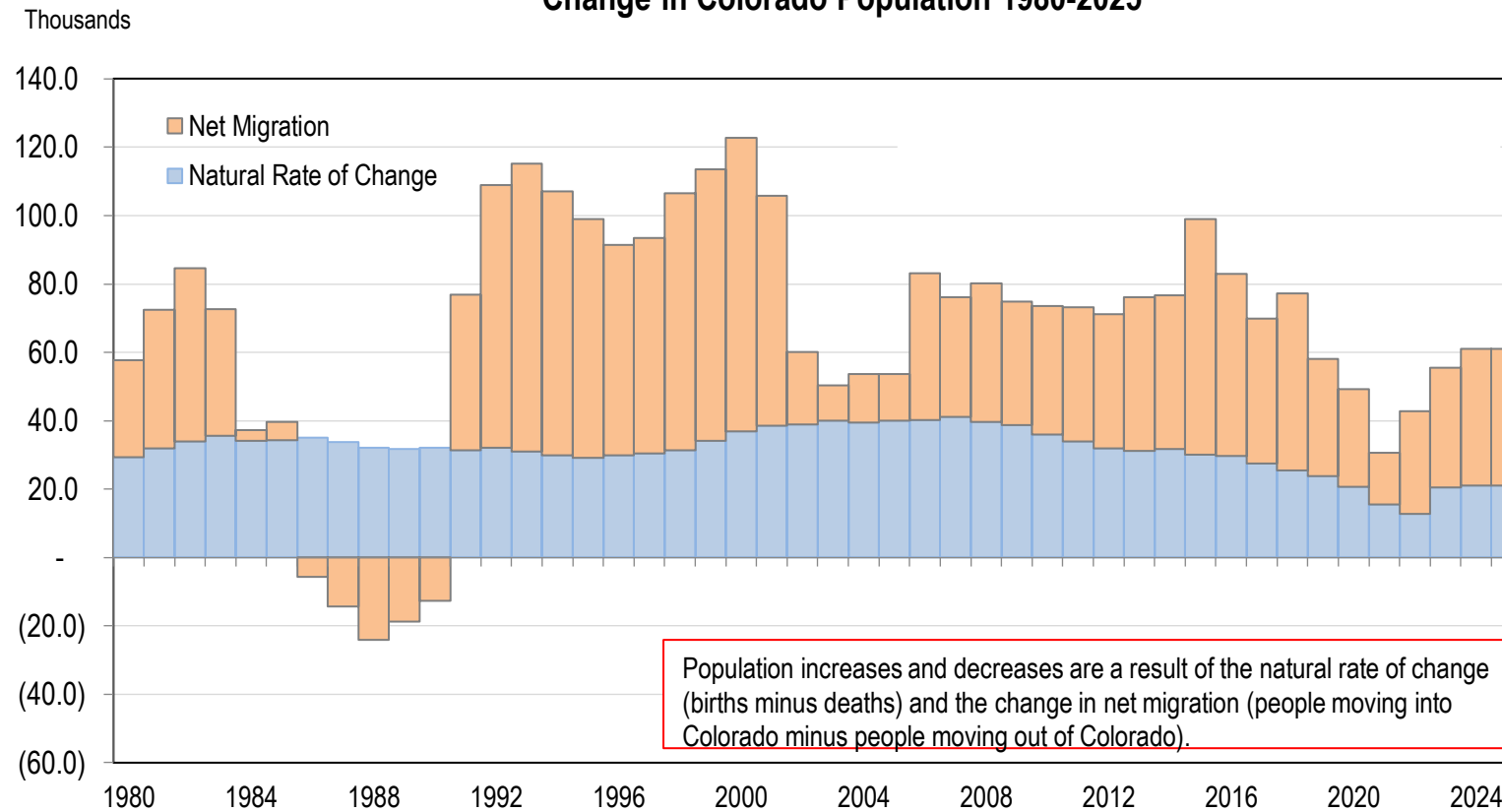
Source: FRED, BEA, SAAR, chained on 2012 dollars cber.co.

Colorado Population – The Economy Begins with a Job

Colorado Population

Components of Change

Change in Colorado Population 1980-2025



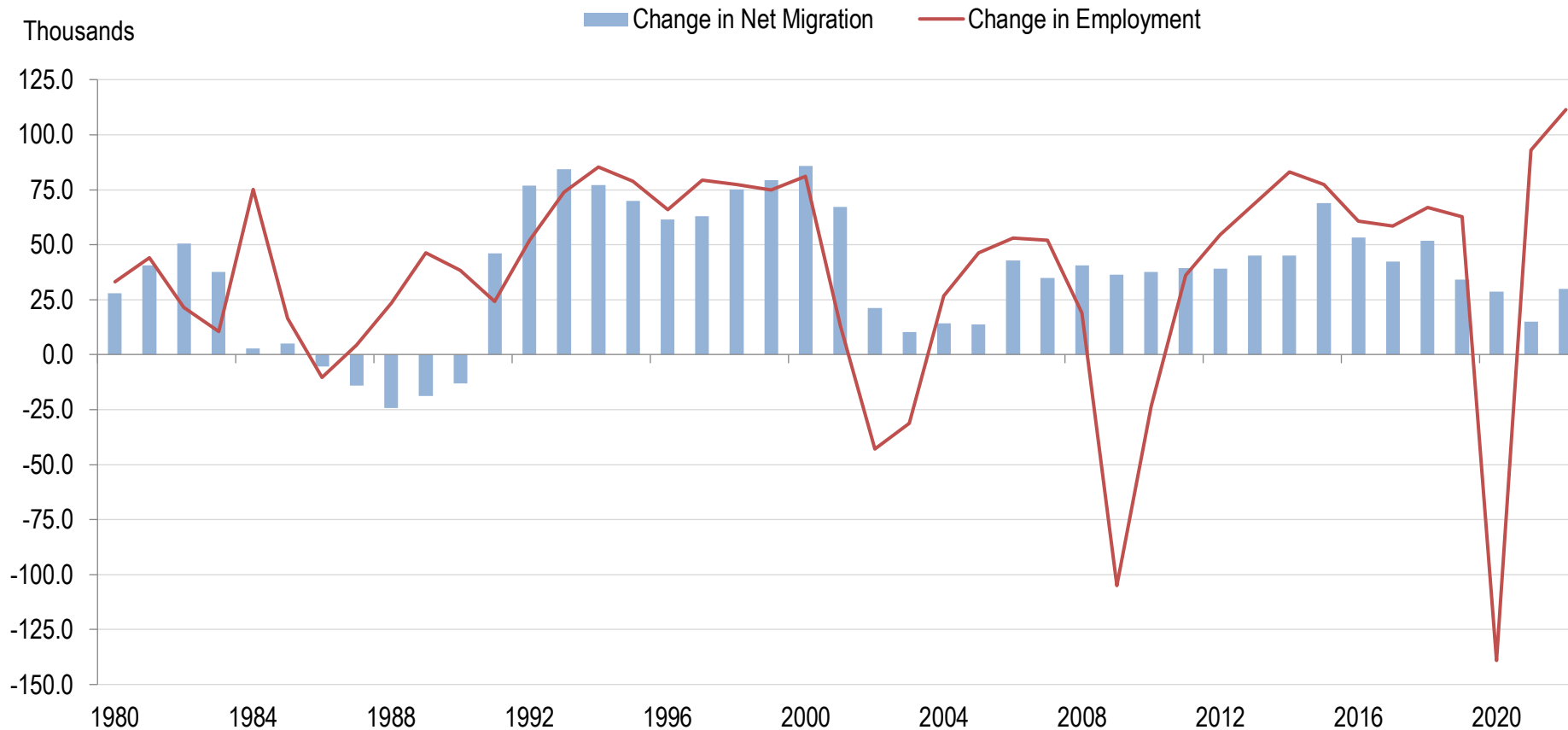
Since 2000, the Colorado population has increased at a decreasing rate. Growth has been less than in the past because of increased deaths, a lower fertility rate, and lower net migration.

In 2020 and 2021, more significant population changes occurred because of pandemic-related policies. There were altered migration patterns and fewer births.

In 2023, the level of net migration (orange) will increase by 20,500, the natural rate (blue) will increase by 35,000, and the population will increase by 55,500. The total Colorado population will be 5,913,007.

Change in Colorado Net Migration and Employment

Change in Colorado Net Migration and Employment



Net Migration and Employment Level

There is a loose relationship between the change in net migration (blue bars) and the change in employment (red line).

Since 2013, the increase in employment has been more than the change in net migration in all but one year.

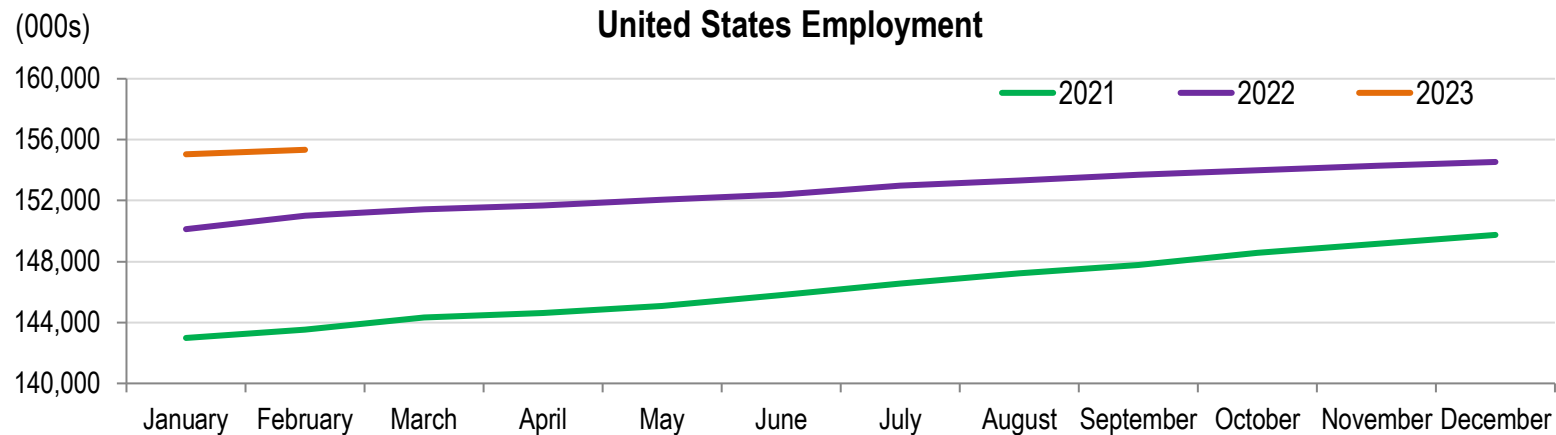
As a result, there is a low unemployment rate and a shortage of workers in Colorado.

Source: BLS, SDO, cber.co.

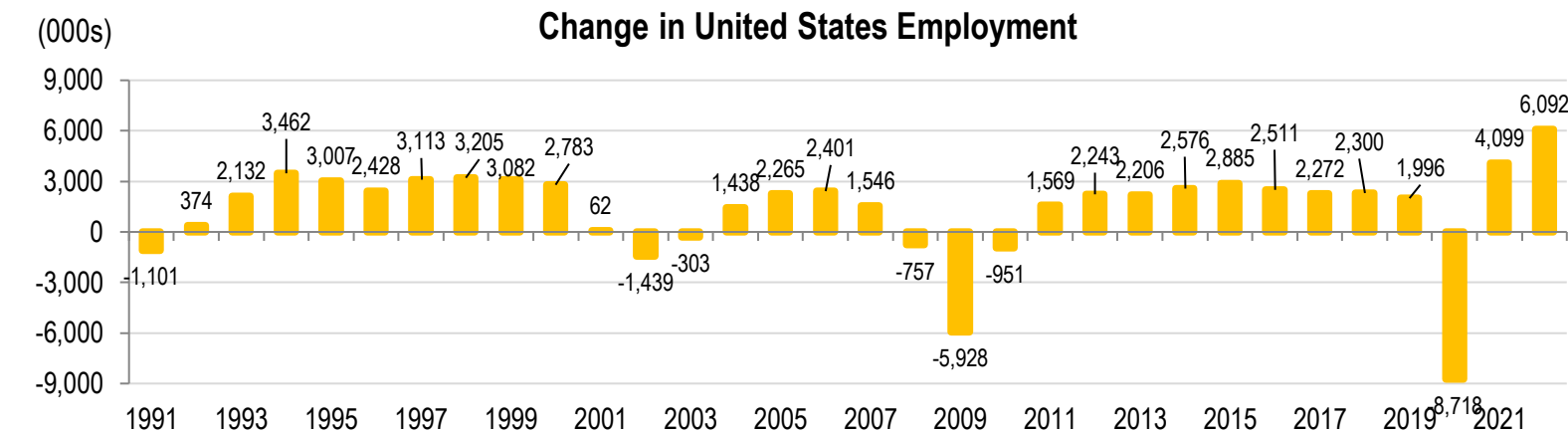
U.S. and Colorado Employment and Unemployment

Employment and Change in Employment

United States



U.S. Employment (Monthly)
 The change in YOY employment has decreased since March 2022. The slowdown in jobs added will continue through 2023, as evidence by slower growth in January and February.

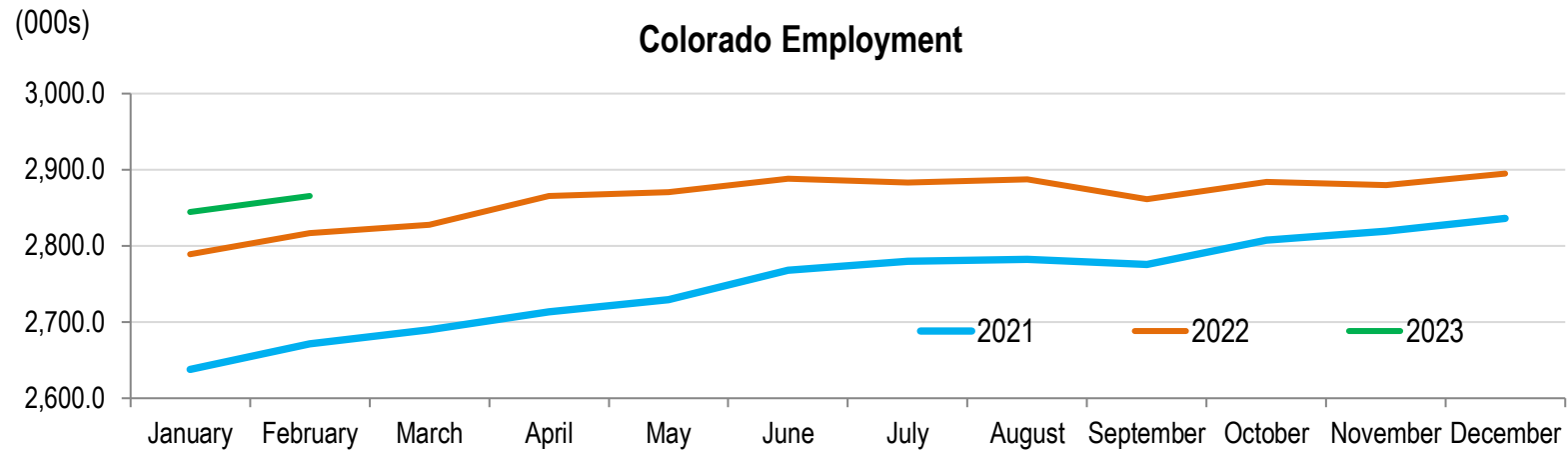


U.S. Employment (Annual)
 The average annual U.S. employment (NSA) for 2022 (purple) was about 6.0 million more than in 2021 (green). There was also record job growth, a low unemployment rate, and a severe shortage of workers.

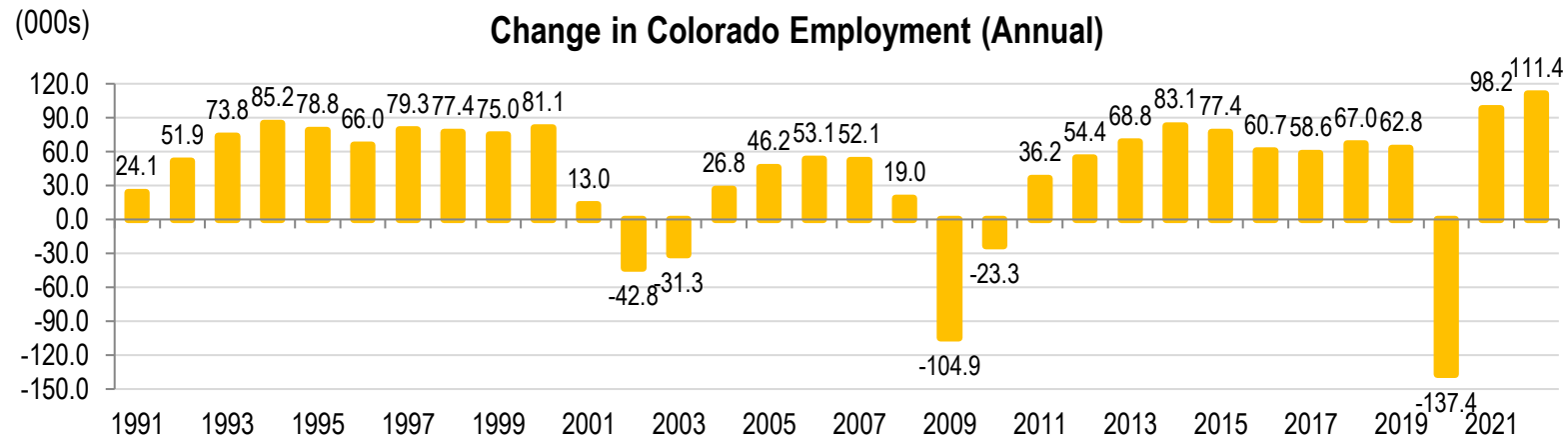
Source: Bureau of Labor Statistics, NSA cber.co.

Employment and Change in Colorado Employment

Colorado



Colorado Employment (Monthly)
 The change in YOY employment has trended downward since April 2022. There has been slower job growth (green) in the first two months of 2023. Employment increased by 5,500 in January and February.

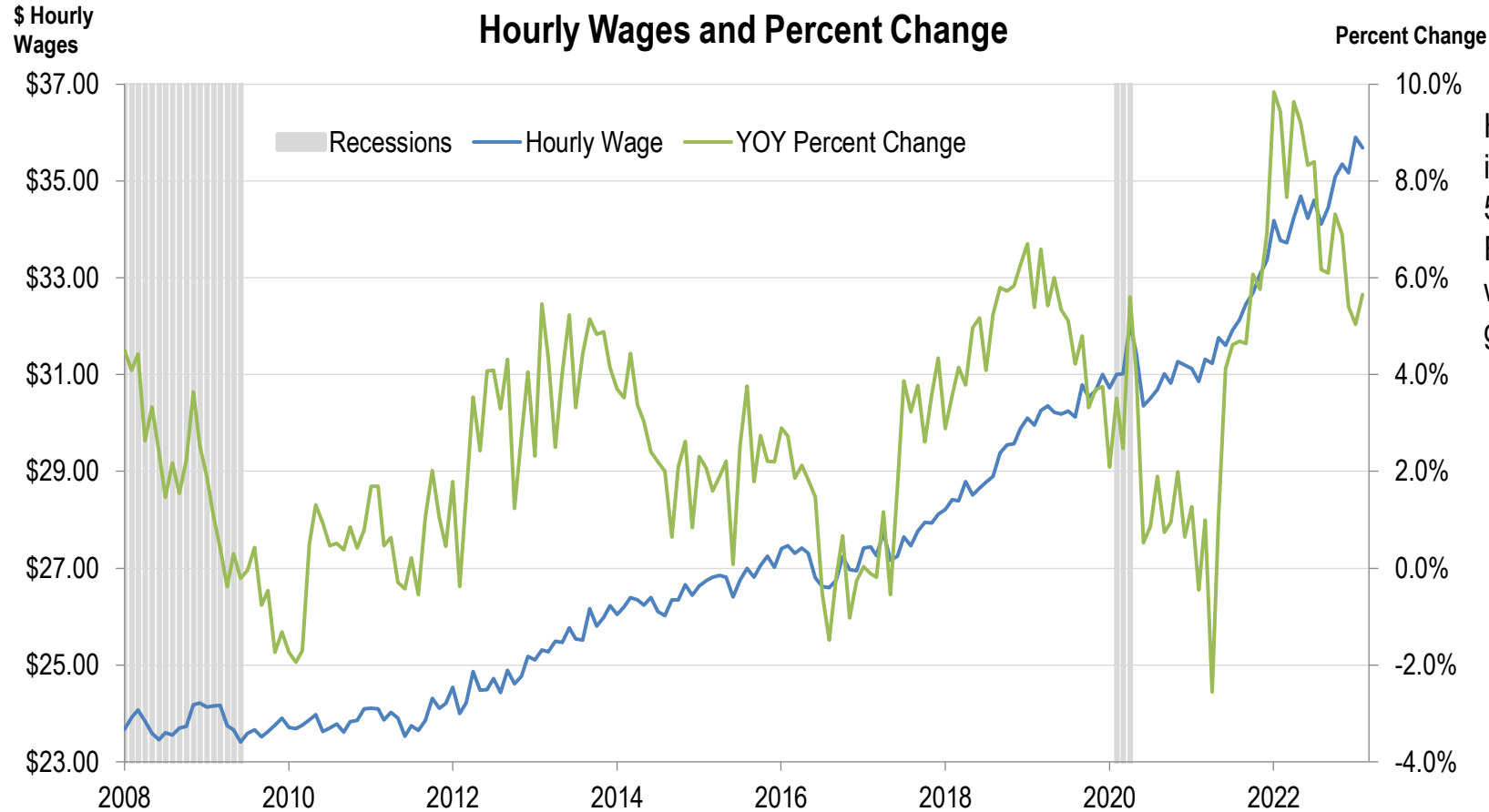


Colorado Employment (Annual)
 In 2022, Colorado had record job growth, a low unemployment rate, and a severe shortage of workers. Job growth will be much weaker in 2023.

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

Hourly Wages

Colorado



Source: BLS, cber.co.

Hourly Wages and Change
 Hourly wages (blue) increased to \$35.68 in February 2023, a YOY increase of 5.7%, down from a rate of 9.4% in February 2022. Annual wage increases were usually less than the rate of CPI growth between 2017 and 2022.

Annual Wages and Change			
Year	CO CPI	Wages	Change
2017	3.4%	\$27.60	2.0%
2018	2.7%	\$28.92	4.8%
2019	1.9%	\$30.37	5.0%
2020	2.0%	\$30.99	2.0%
2021	3.5%	\$31.97	3.2%
2022	8.0%	\$34.47	7.8%

Source: BLS, cber.co

Major Front Range County Employment (NSA)

Major Front Range County Employment				
County	Q4 2019	Q3 2022	Difference	% Diff.
Douglas	133,668	139,772	6,104	4.6%
El Paso	286,909	297,140	10,231	3.6%
Denver	535,760	552,863	17,103	3.2%
Larimer	166,833	172,055	5,222	3.1%
Broomfield	40,656	41,747	1,091	2.7%
Adams	232,966	238,923	5,957	2.6%
Other 54	486,872	489,070	2,198	0.5%
Boulder	191,702	192,355	653	0.3%
Jefferson	244,865	242,807	(2,058)	-0.8%
Arapahoe	338,190	334,331	(3,859)	-1.1%
Weld	114,343	112,809	(1,534)	-1.3%
Colorado	2,772,764	2,813,872	41,108	1.5%

The above table uses QCEW County employment data (NSA) to analyze employment change. The change is the difference between September 2022 employment (most current QCEW data) and December 2019 employment for ten metro counties. Approximately four of five employees (82%) work in these ten counties. About 95% of the change in the number of workers is in these ten counties.

Major Front Range County Employment

- Douglas, El Paso, Denver, and Larimer counties had relative growth rates greater than 3.0% for this period.
- Denver and El Paso added more than 10,000 jobs during this period.
- Douglas, Adams, and Larimer added between 5,000 jobs and 10,000 jobs during this period.
- Total employment of the 54 counties not listed in this table increased by 2,198. Employment increased by 0.5%.
- Employment decreased in Jefferson, Arapahoe, and Weld counties during this period.
- In the near term, employment will increase the most in Denver, El Paso, Douglas, Adams, and Larimer counties.

Summary of Colorado Annual Sector Employment

December 2022 vs. February 2023

NAICS Sector	Dec. 2022	Feb. 2023	Feb. 23 less Dec. 22	Percent Change
Total Employment	2,882.2	2,887.7	5.5	0.19%
Healthcare	307.7	308.0	0.3	0.10%
Food and Accommodation (AFS)	294.7	297.2	2.5	0.85%
Professional, Scientific, and Technical Services	286.0	286.9	0.9	0.31%
Retail Trade	273.9	273.9	0.0	0.00%
Local Government	266.5	270.1	3.6	1.35%
Construction	182.0	180.1	-1.9	-1.04%
Financial Activities	179.6	177.7	-1.9	-1.06%
Administrative Services	156.0	157.0	1.0	0.64%
Manufacturing	154.6	154.5	-0.1	-0.06%
State Government	129.2	129.7	0.5	0.39%
Other Services (Personal)	123.6	124.1	0.5	0.40%
Wholesale Trade	115.7	114.6	-1.1	-0.95%
Transportation, Warehousing, and Utilities	111.5	111.2	-0.3	-0.27%
Information	77.7	77.5	-0.2	-0.26%
Arts, Entertainment, Recreation (AER)	55.5	54.3	-1.2	-2.16%
Federal Government	53.5	54.0	0.5	0.93%
Management of Corporations and Enterprises	47.8	48.7	0.9	1.88%
Education (Private)	45.1	46.4	1.3	2.88%
Extractive Industries	21.6	21.8	0.2	0.93%

Source: BLS, cber.co. Note: Jobs are in thousands.

Changes in Sector Employment for 2023

In 2022, job growth was broad-based. That has not been the case through the first two months of 2023.

The five largest sectors account for about half of February 2023 employment. They added 7,300 jobs.

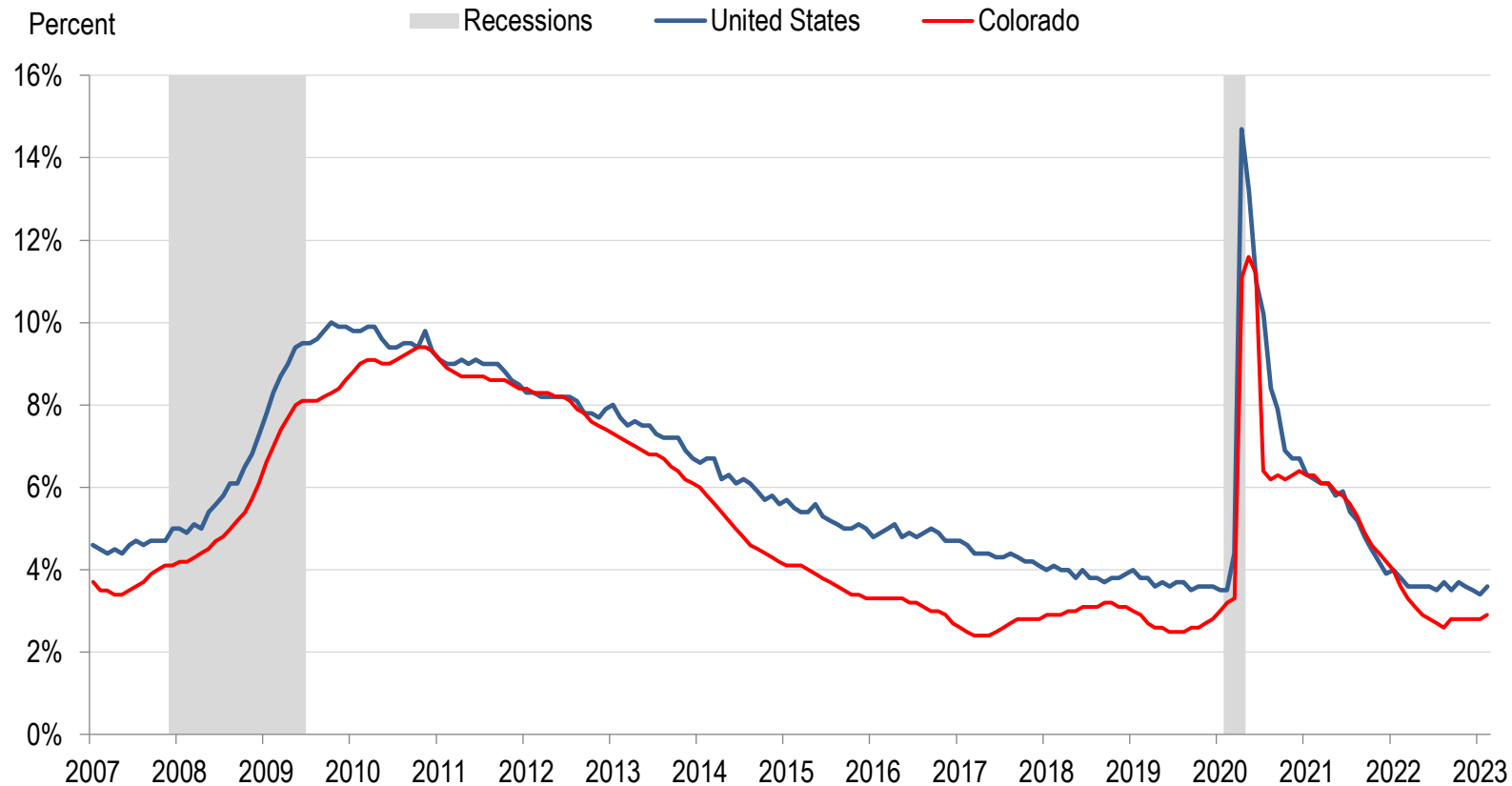
Combined, the fourteen other sectors lost 1,800 jobs.

After two months, Colorado has added 5,500 jobs. The growth rate is much slower than in 2022 because most industries have fully recovered from the pandemic-related lockdowns. In addition, obstacles include inflation, higher interest rates, and workforce issues.

Unemployment Rate

United States and Colorado

U.S. and Colorado Unemployment



Unemployment Rate

The Colorado unemployment rate rose to 2.9% in February, and the U.S. rate was 3.6%. There will continue to be a shortage of workers in some occupations. The unemployment rate will remain low.

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%	2.7%
2020	8.1%	6.8%
2021	5.3%	5.4%
2022	3.6%	3.0%

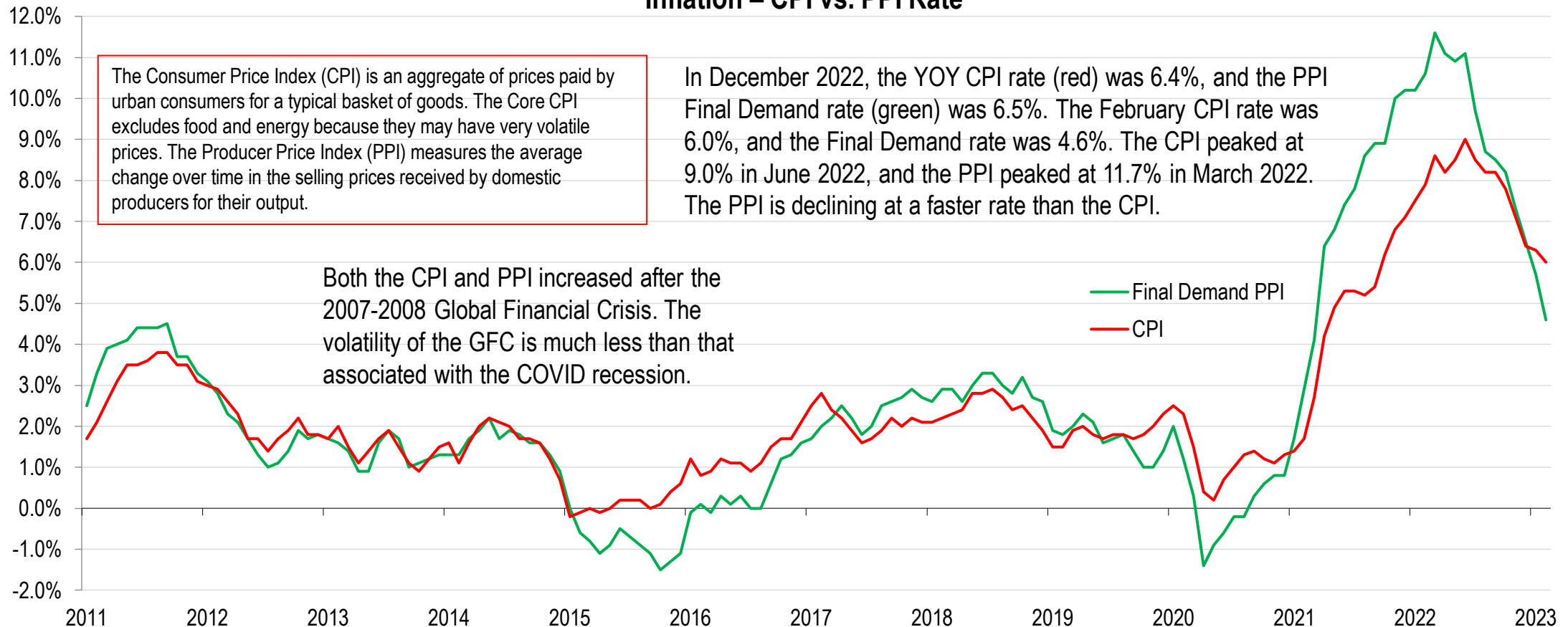
Source: BLS, SA, cber.co.

Inflation

U.S. Inflation

CPI vs. Producer Price Index (Final Demand)

Inflation – CPI vs. PPI Rate

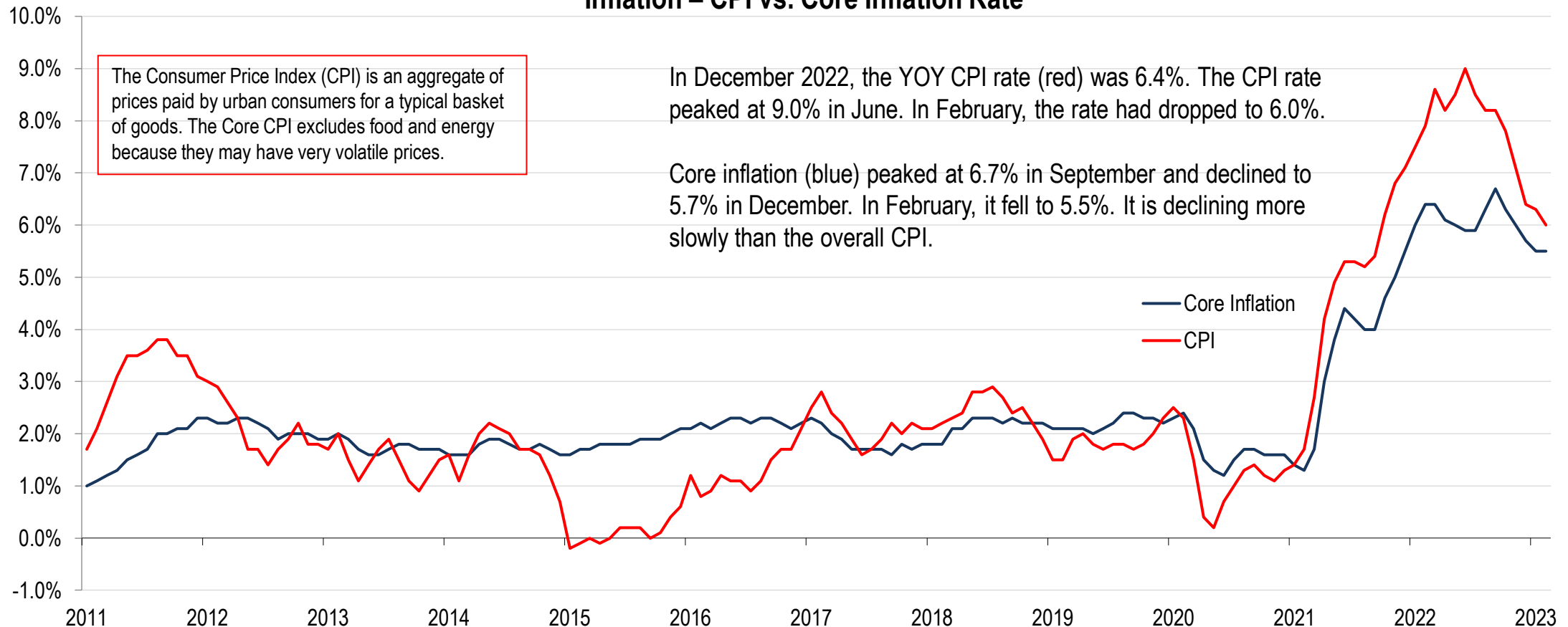


Source: Bureau of Labor Statistics, PPI Commodity Data, Final Demand SA; CPI All Items City Average SA, cber.co.
 Colorado-based Business and Economic Research <https://cber.co>

U.S. Inflation

CPI vs. Core Inflation

Inflation – CPI vs. Core Inflation Rate



Source: Bureau of Labor Statistics, Core Inflation is the CPI less food and energy; CPI All Items City Average SA, cber.co.
Colorado-based Business and Economic Research <https://cber.co>

Inflation

Denver-Aurora-Lakewood

Consumer Purchasing Index for Denver-Aurora-Lakewood and the U.S.									
	Half 1	Half 2	Annual '22	Jan 2023		Half 1	Half 2	Annual '22	Jan 2023
Colorado CPI	8.6%	7.5%	8.0%	6.4%	Colorado Core CPI	7.4%	6.8%	7.1%	5.9%
Alcoholic Beverages	4.2%	6.8%	5.5%	7.5%	Housing	6.9%	8.4%	7.6%	9.4%
Apparel	4.2%	2.2%	3.2%	8.5%	Meats, Poultry, Fish, Eggs	14.5%	10.8%	12.6%	7.7%
Dairy	6.4%	15.0%	10.6%	8.7%	Medical	10.1%	9.4%	9.7%	NA
Food and Beverage	8.8%	10.9%	9.9%	9.1%	Motor Fuel	38.4%	7.2%	21.1%	5.9%
Food at Home	9.0%	13.2%	11.1%	11.5%	Non-Alcoholic Beverage	7.5%	14.1%	10.8%	16.7%
Food Away From Home	9.5%	8.7%	9.1%	6.4%	Recreation	6.1%	3.5%	4.7%	7.7%
Fruits and Vegetables	5.1%	11.5%	8.3%	12.9%	School Fees/Childcare	-0.3%	1.0%	0.3%	2.8%
Household Energy	12.4%	12.3%	12.3%	13.4%	Transportation	19.3%	6.8%	12.7%	1.8%
Household Furnishings	9.6%	8.6%	8.1%	5.1%	Used Vehicles	28.6%	3.9%	15.1%	-10.6%

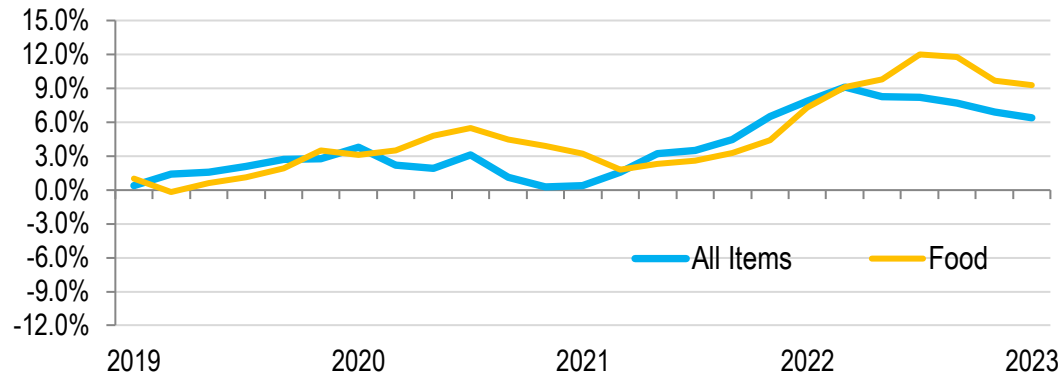
The overall inflation rate was 8.0% for 2022, and core inflation (CPI less food and energy) was 7.1%. The inflation rate has been above the target rate for nearly two years. In addition, housing, energy, and food costs have been persistently high.

The BLS produces the Colorado CPI bi-monthly. It increased 6.4% in January, and core inflation was up 5.9%. These rates decreased over the past year but are much higher than in 2021.

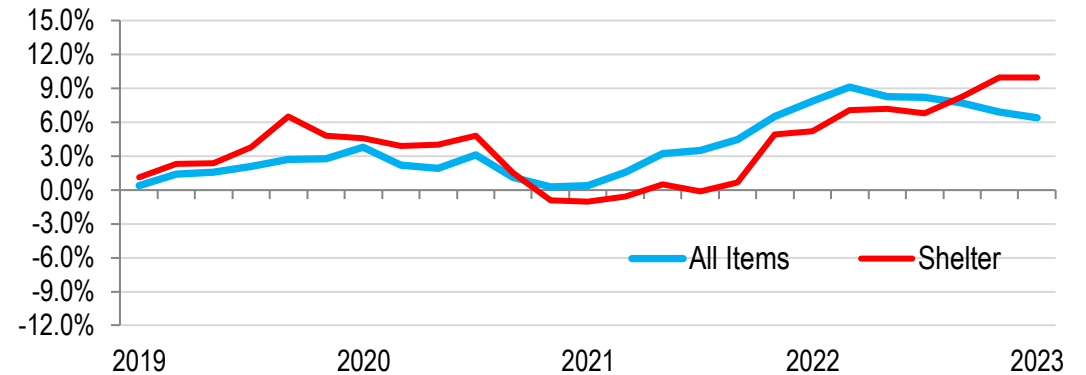
Bi-Monthly Change in Colorado CPI

All Items vs. Food, Shelter, and Household Energy

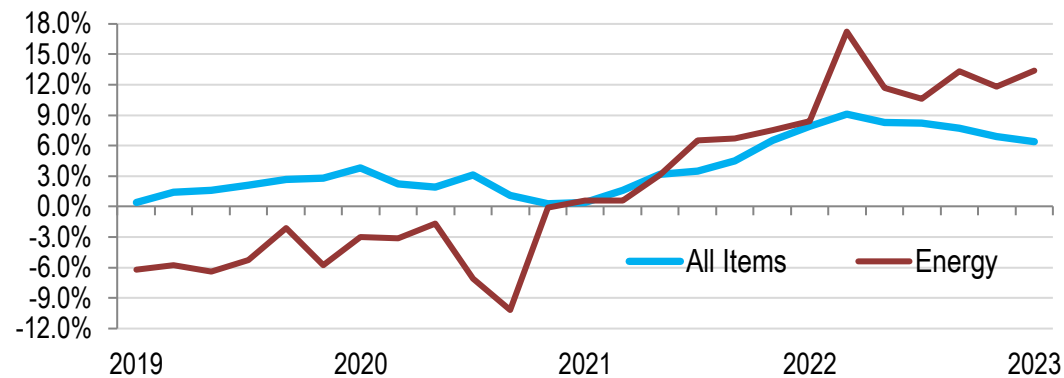
Colorado All Items vs. Food



Colorado All Items vs. Shelter



Colorado All Items vs. Energy



Colorado CPI

The three charts illustrate that the CPI for each component moves differently than the CPI for all items (blue). Coloradans have different needs for food (yellow), shelter (red), and energy (burgundy). For example, the impact of increases in interest rates on housing prices will not impact those who do not have a mortgage or own a home with a fixed-rate mortgage.

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

Inflation

Rural Colorado

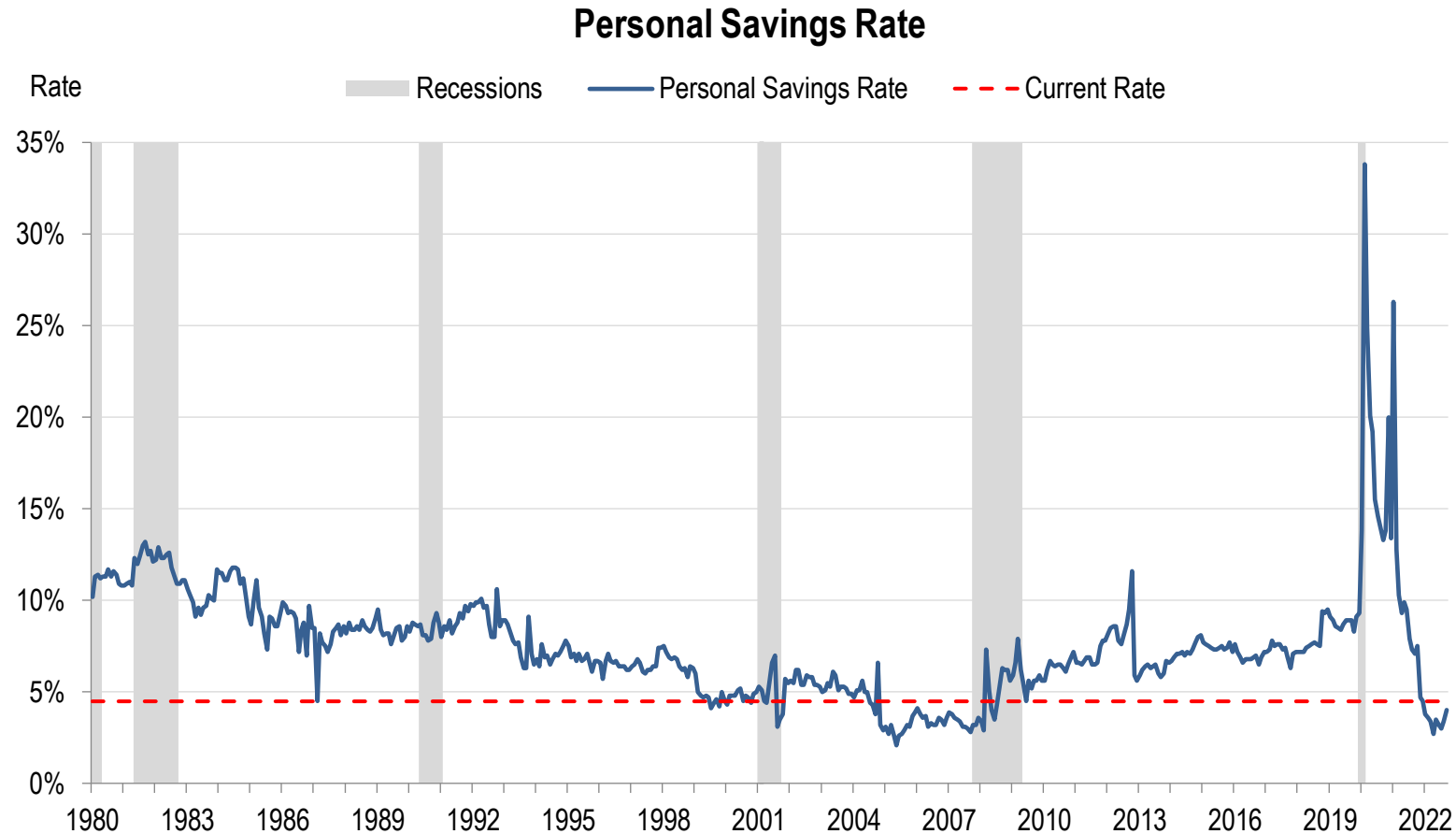
The CPI measure of inflation for Colorado measures price changes for the Denver – Aurora – Lakewood area. CSU researcher Stephen Weiler, an expert in rural economics, has published articles discussing how the changes in the cost of living are often very different for rural and urban areas. That difference is captured anecdotally because there is no measure for rural areas.

- Transportation – Cars, pickups, or four-wheel drive vehicles may be mandatory. Bicycles, golf carts, and motorcycles are usually not an option.
- Housing – In some areas, housing may be less expensive, such as the Eastern Plains. In mountain areas, it may be more costly, such as Routt County.
- Maintenance - Commute times are often longer. As a result, vehicle maintenance costs may be higher.
- Childcare - Childcare options are often more limited and may be more expensive, when travel costs are included.
- Utilities – The cost of utilities may be higher, and service may not be as dependable. In some cases, potable running water is not available. It may be necessary to drill wells or have water hauled.
- Food – Food options are often limited to eating at home. There may be few options for dining out. There may be fewer rural grocery stores. Costs may be higher, and there may be a limited selection.
- Communications – Availability and costs of Internet, television, telephones, and other communication and entertainment options may be more costly.
- Health care – The options for health care are often limited. Travel time and costs may be more, especially for specialists.
- Farming and Ranching – There are often extensive costs and risks associated with equipment, buildings, animals, seeds, and fertilizer.

Saving, Borrowing, Consumption, and the Wealth Effect

U.S. Personal Savings Rate

Percentage of Disposable Personal Income



Source: BEA, FRED, cber.co.

Personal Savings

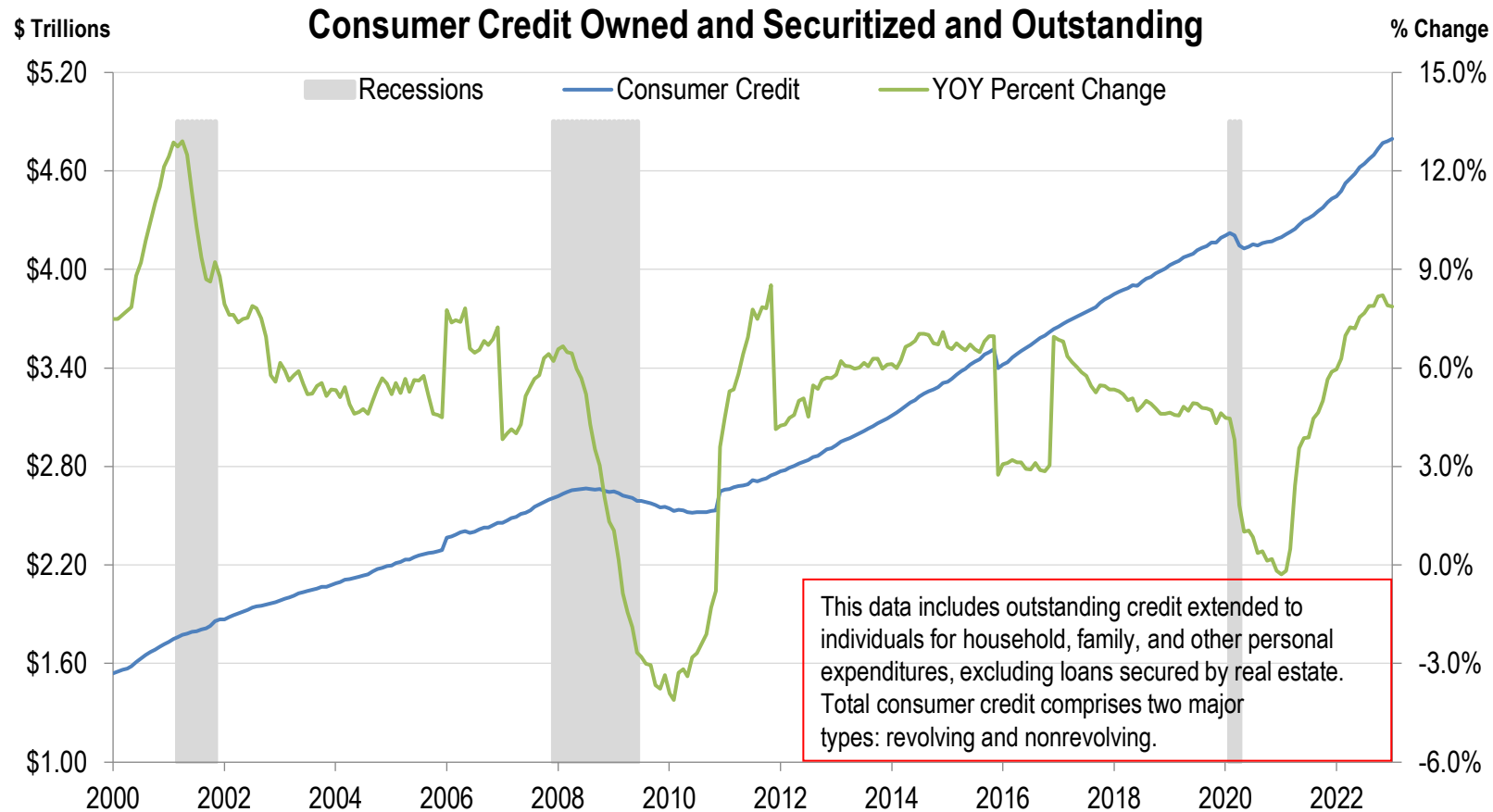
The personal savings rate jettisoned to a monthly high of 33.8% in the early stages of the pandemic. It fell to 13.0% in November 2020, then rose to 26.3% in March 2021. In September 2022, the personal savings rate was 3.0%. The January rate increased to 4.7%, and savings were \$918.8 billion, down from \$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%
2022	\$858.2	4.5%

Source: BEA, cber.co

U.S. Consumer Credit Outstanding



Consumer Credit

From Q3 2008 to Q4 2010, consumers deleveraged and decreased the amount 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 (blue). In January 2022, the YOY rate of consumer debt increased by 6.0% (green). In January 2023, debt increased by 7.9%.

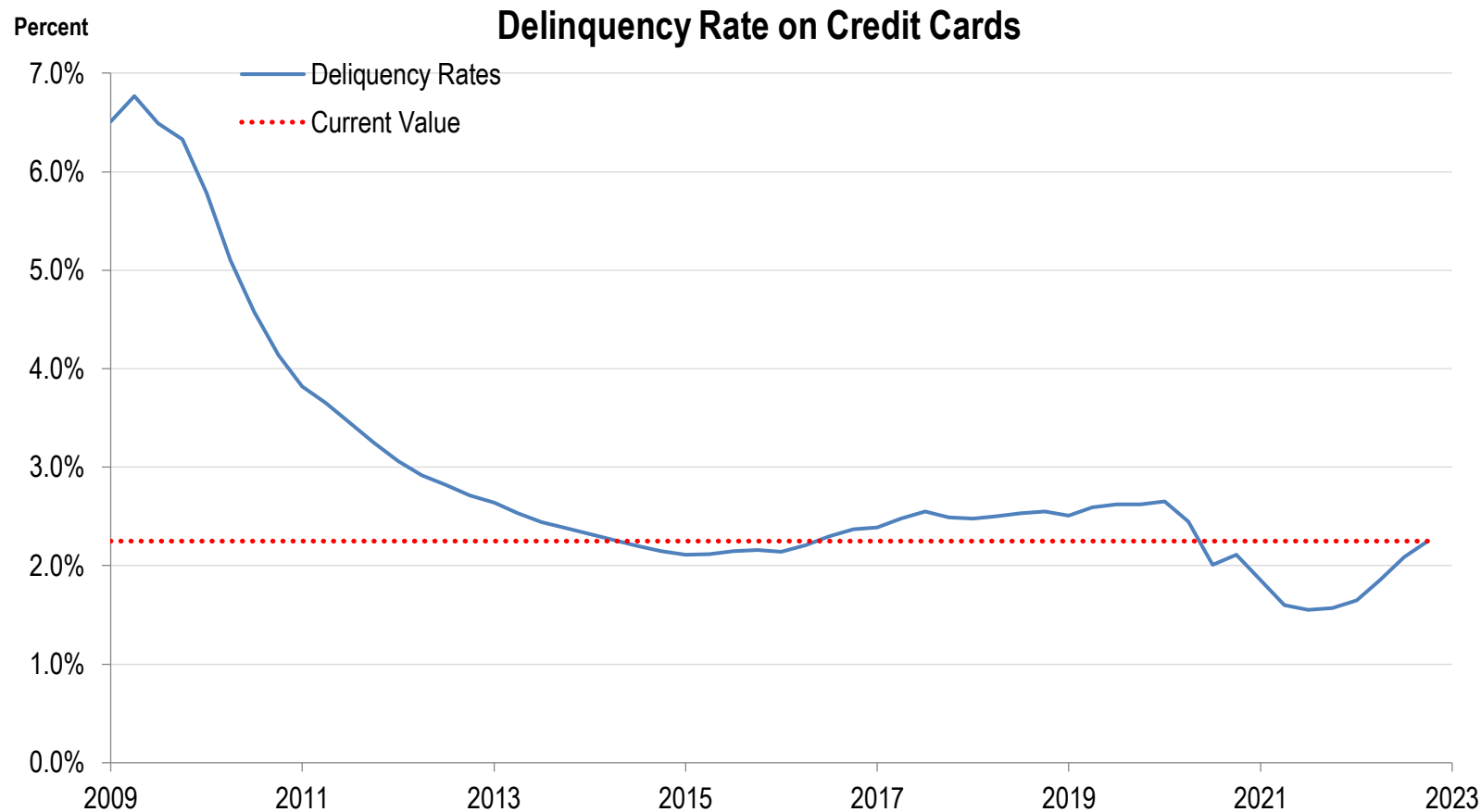
Outstanding Credit (Billions) and Percent Change

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%
2022	\$4,780.8	7.9%

Source: FRED, G-19, cber.co

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

Delinquency Rate on Credit Cards



Delinquency Rate

In Q2 1999, the delinquency rate on credit cards at all commercial banks reached 6.77%.

Since 2012 it has been below 3.0%.

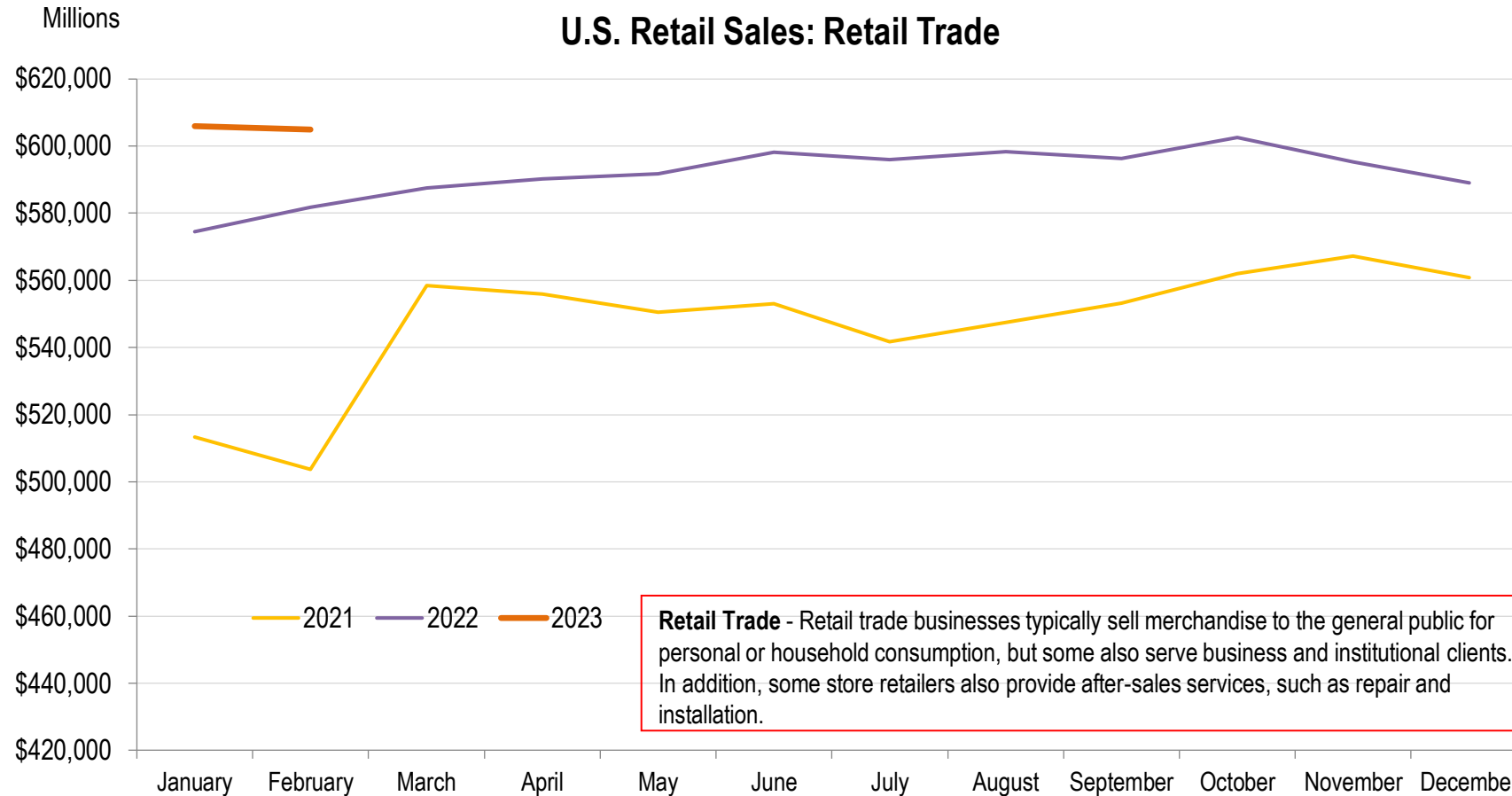
In Q1 2016, it reached 2.14%, then rose to 2.65% in January 2020.

It then dropped to 1.55% in Q3 2021 and rose to 2.25% in Q3 2022.

Source: FRED, Federal Reserve, SA.

U.S. Retail Sales: Retail Trade

Monthly



Retail Trade Sales
 January 2023 sales (orange) were 5.5% greater than the prior year (purple).

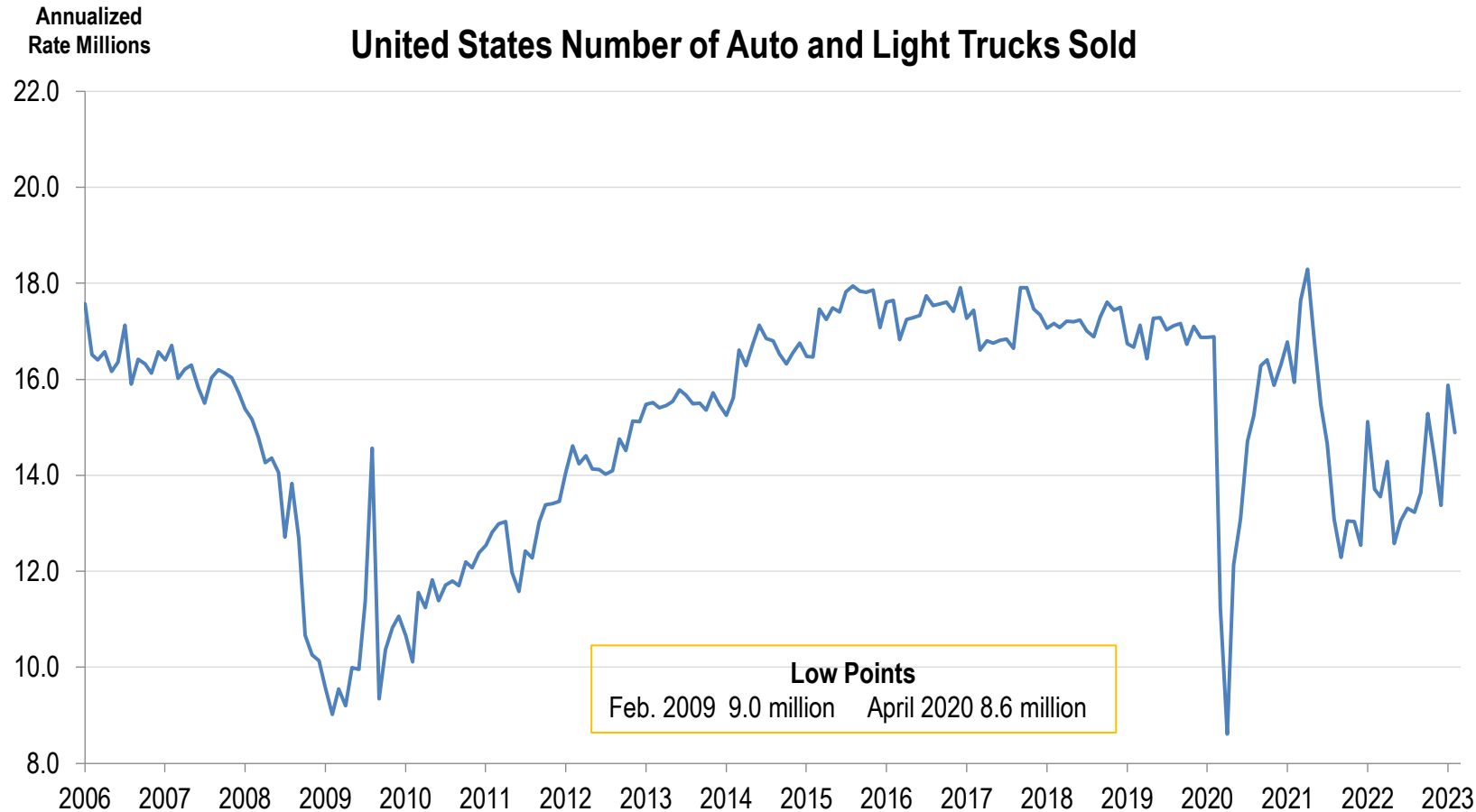
The estimated YOY growth rate for February will be less than 5.0%.

Annual Retail Sales (Trillions)		
2017	\$4.21	4.4%
2018	\$4.38	4.2%
2019	\$4.50	2.7%
2020	\$4.63	2.9%
2021	\$5.47	18.1%
2022	\$5.92	8.1%

Source: Census, cber.co

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

Monthly (Seasonally Adjusted Annualized Rate in Millions)



ALT Sales SAAR

Sales peaked at 18.3 million in April 2021 and dropped to 12.3 million in September. They have been lackluster but have trended upward since then. In February 2023, sales remained below expectations at 14.9 million.

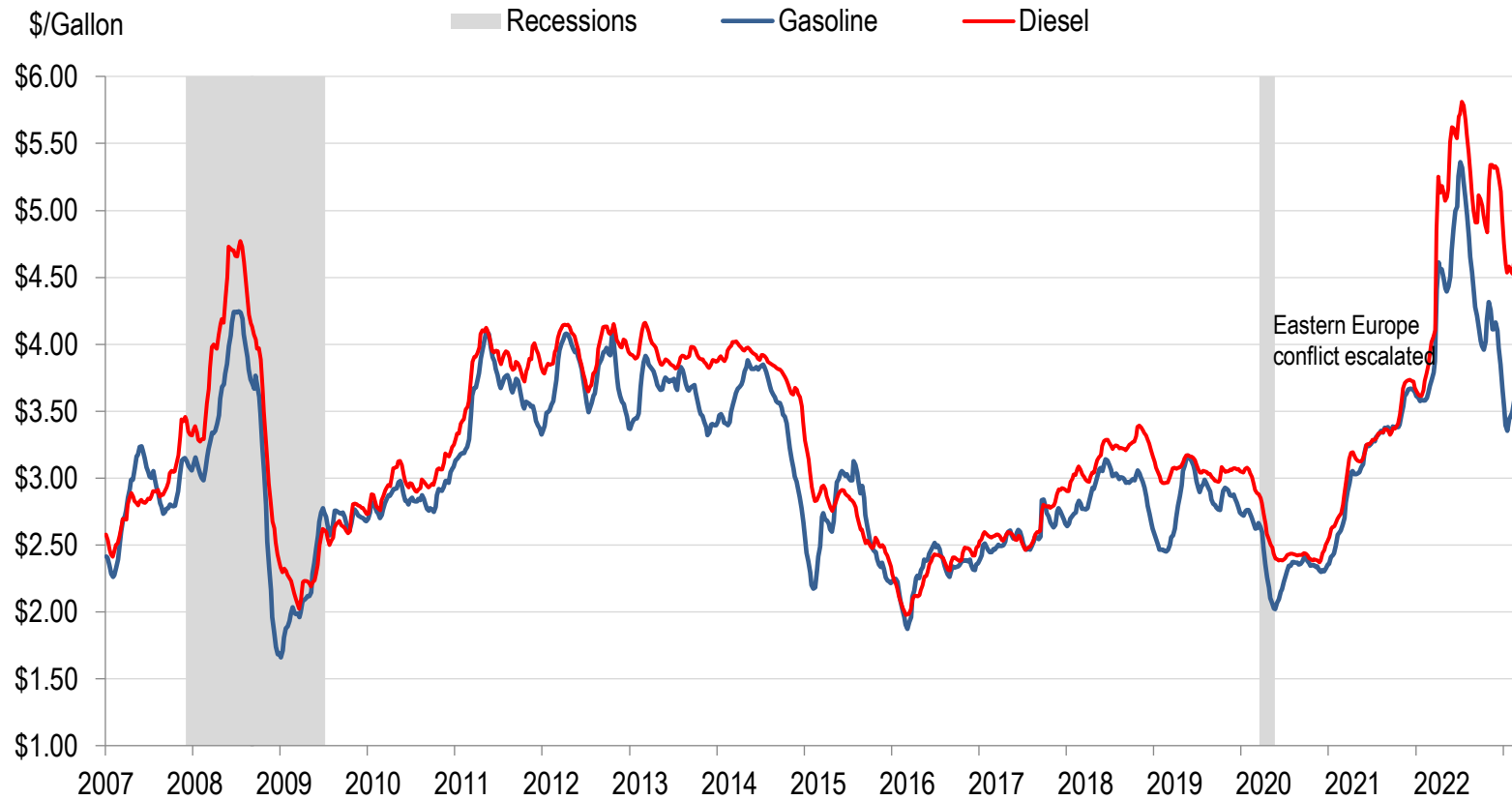
ALT Unit Sales	
Year	Units Sold (Millions)
2015	17.4
2016	17.5
2017	17.2
2018	17.2
2019	17.0
2020	14.5
2021	14.9
2022	13.8

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

Colorado-based Business and Economic Research <https://cber.co>

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

U.S. Gasoline Regular (All Formulations) and Diesel Prices



Gas and Diesel Prices

On March 20, 2023, a gallon of gasoline was \$3.64, down from a peak of \$5.51. A gallon of diesel was \$4.19 compared to its peak of \$5.78.

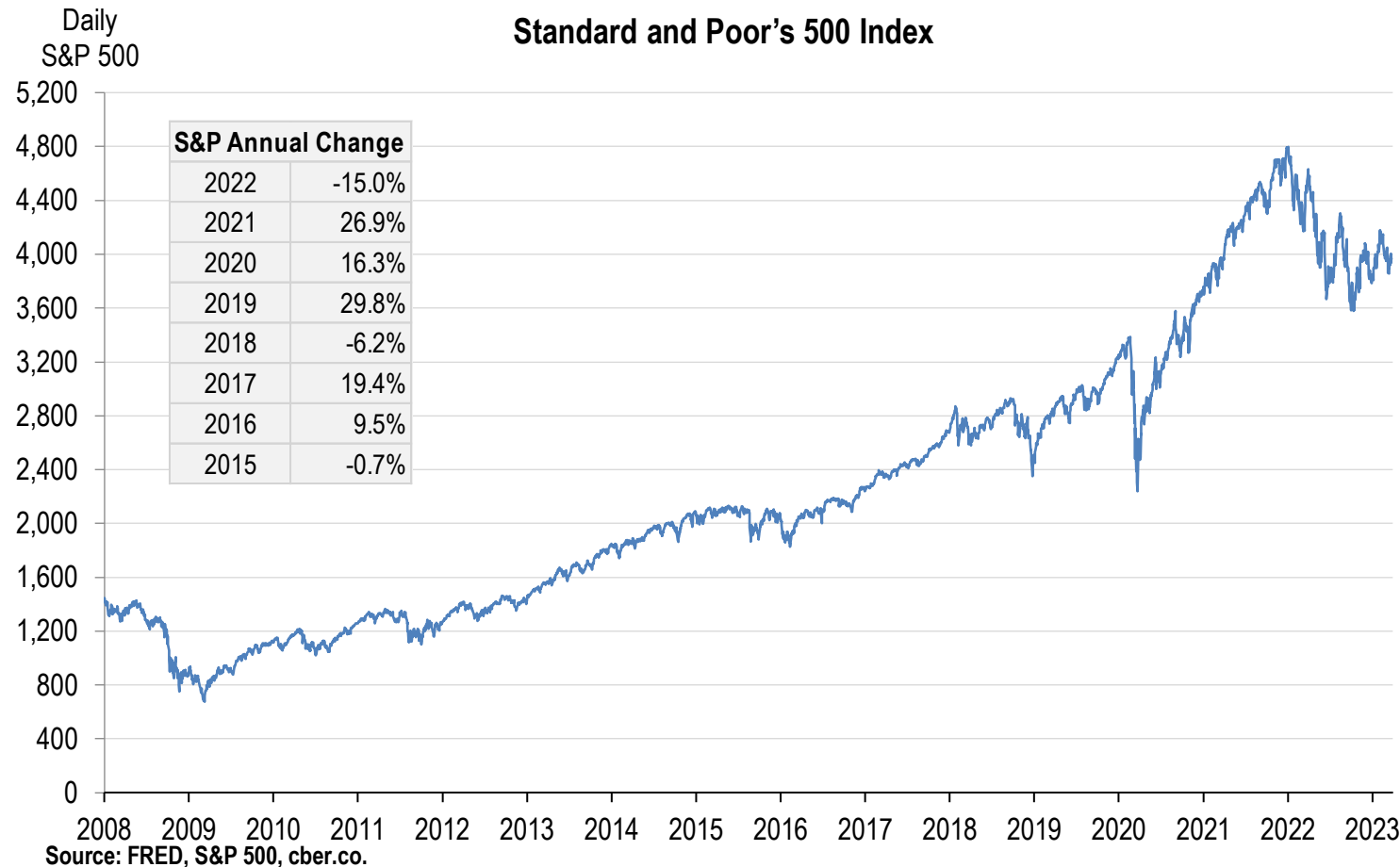
Average Annual

Year	Diesel	Gasoline
2015	\$2.71	\$2.63
2016	\$2.30	\$2.30
2017	\$2.65	\$2.26
2018	\$3.18	\$2.90
2019	\$3.06	\$2.83
2020	\$2.55	\$2.37
2021	\$3.29	\$3.22
2022	\$4.99	\$4.274

On February 21, 2022, the price for a gallon of gasoline was \$3.75, and a gallon of diesel was \$4.06. It should be noted that on February 21, 2021, the price for a gallon of gasoline was \$2.82, and a gallon of diesel was \$2.93. On February 24, 2022, the Eastern European conflict escalated.

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.

Standard and Poor's 500 Index



COVID-19 Policies - 2020

February 19, 2020 3,386
 March 23, 2020 2,237 change **-34%** to 1,148
 August 18, 2020 3,386. bear market was 149 days
 2020 change was **+16.3%**

Year-End 2021 Bull Market

For most of 2021 – steady growth
 December 31, 2021 4,766, 2121 change was **26.9%**.

2022 Bear Market

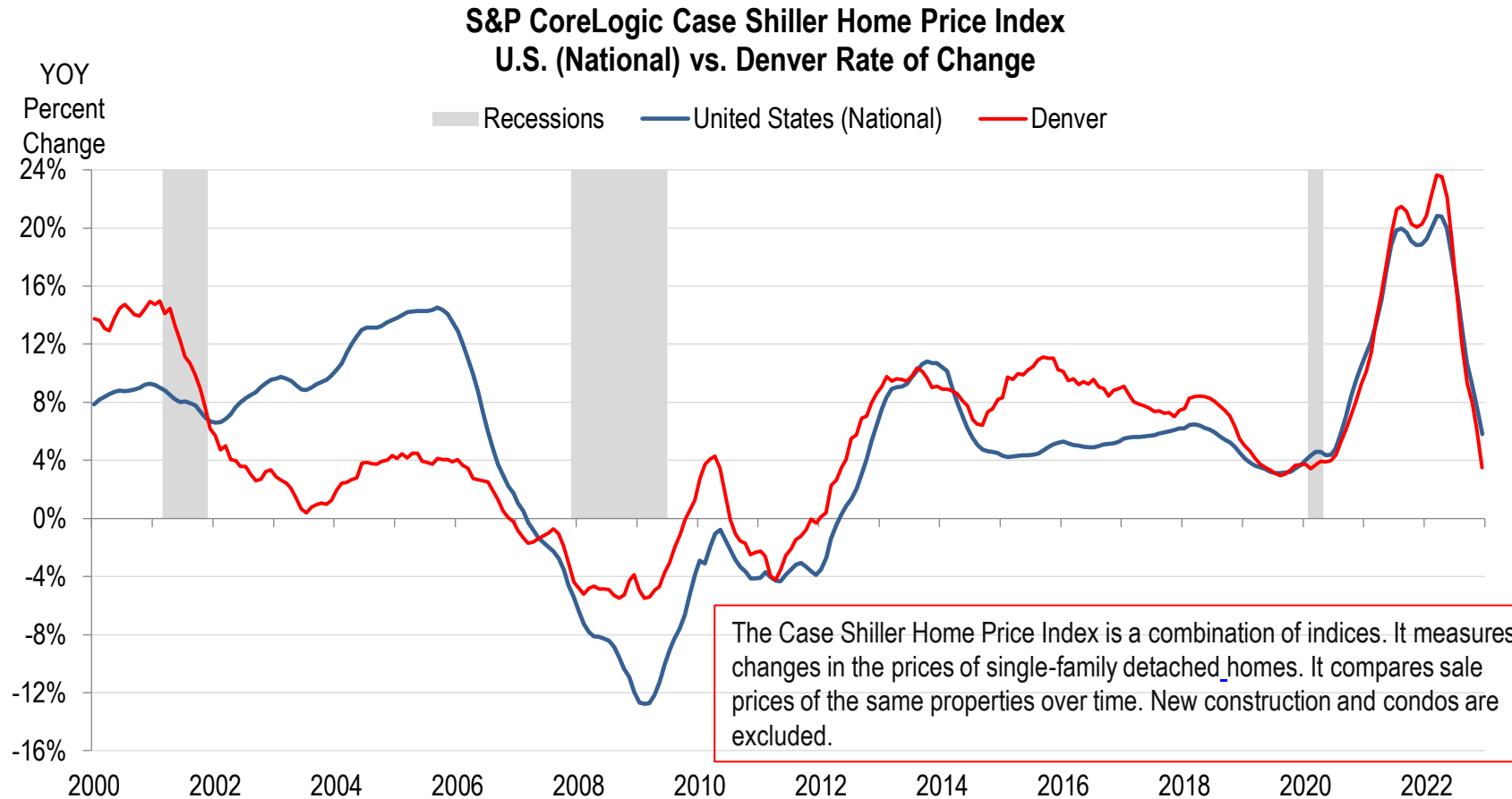
December 31, 2022 3,839.5, change **-15.0%**

2023

March, 24, 2023 3971, change 3.4%

Case Shiller Home Price Index

YOY National vs. Denver Rate of Change



S&P CoreLogic Case Shiller

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 peaked above twenty percent.

In December 2022, the YOY appreciation for the U.S. was 5.8% (blue) and 3.5% (red) for Denver. The level of appreciation for the U.S. and Denver will continue to decelerate as interest rate hikes continue.

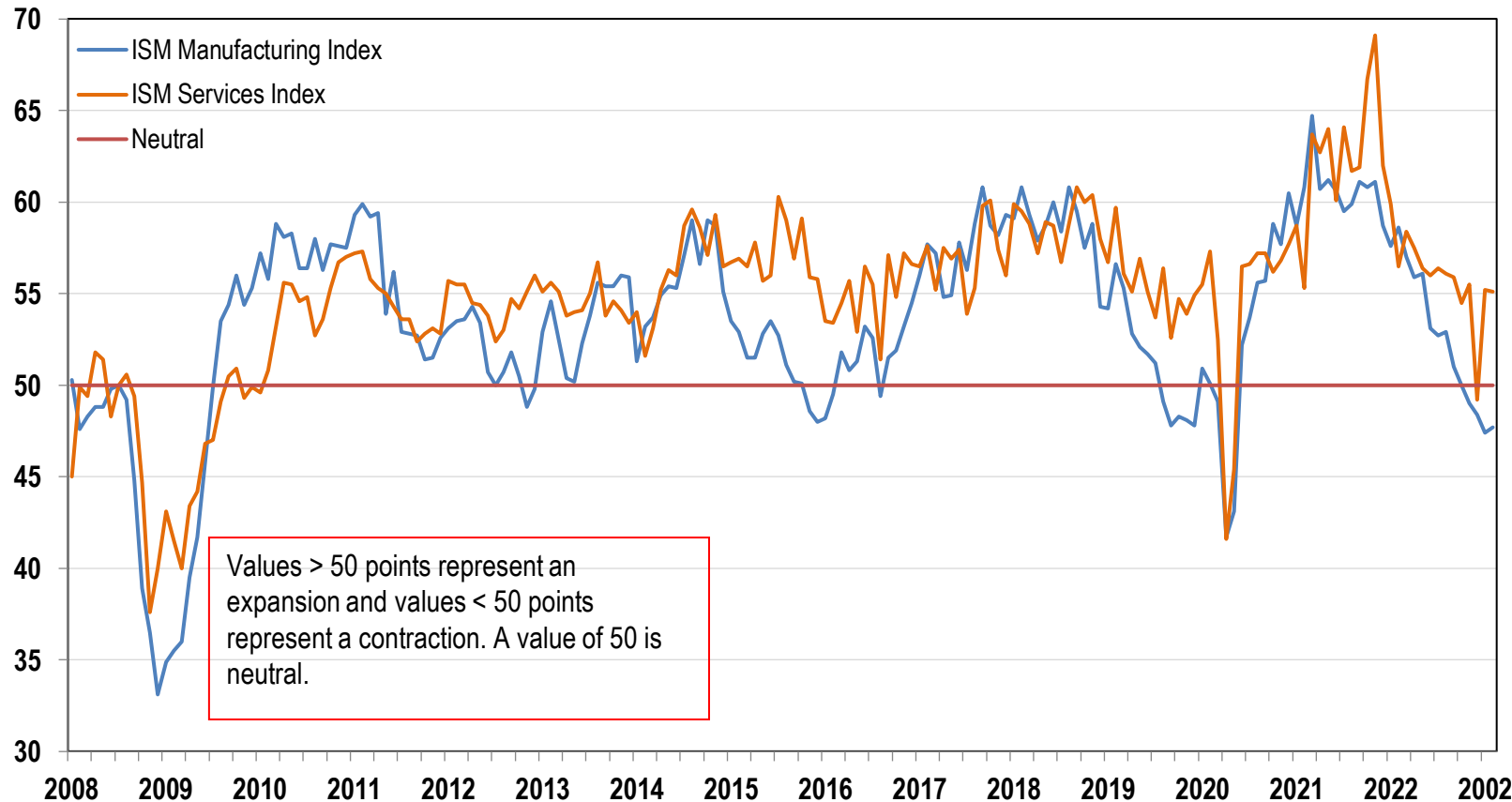
Source: S&P Case Shiller, cber.co.

U.S. Industry Indicators

ISM Purchasing Managers Composite Indices

Manufacturing vs. Services

ISM Manufacturing PMI vs. Services PMI Composite Indices



Values > 50 points represent an expansion and values < 50 points represent a contraction. A value of 50 is neutral.

Manufacturing and Services PMI
The ISM manufacturing index (blue) trended downward after peaking at 64.7 in March 2021. It dropped below 50 and has been there for four months.

The service index has trended downward since November 2021. It fell below 50 in December 2022 but returned to expansionary territory in January 2023.

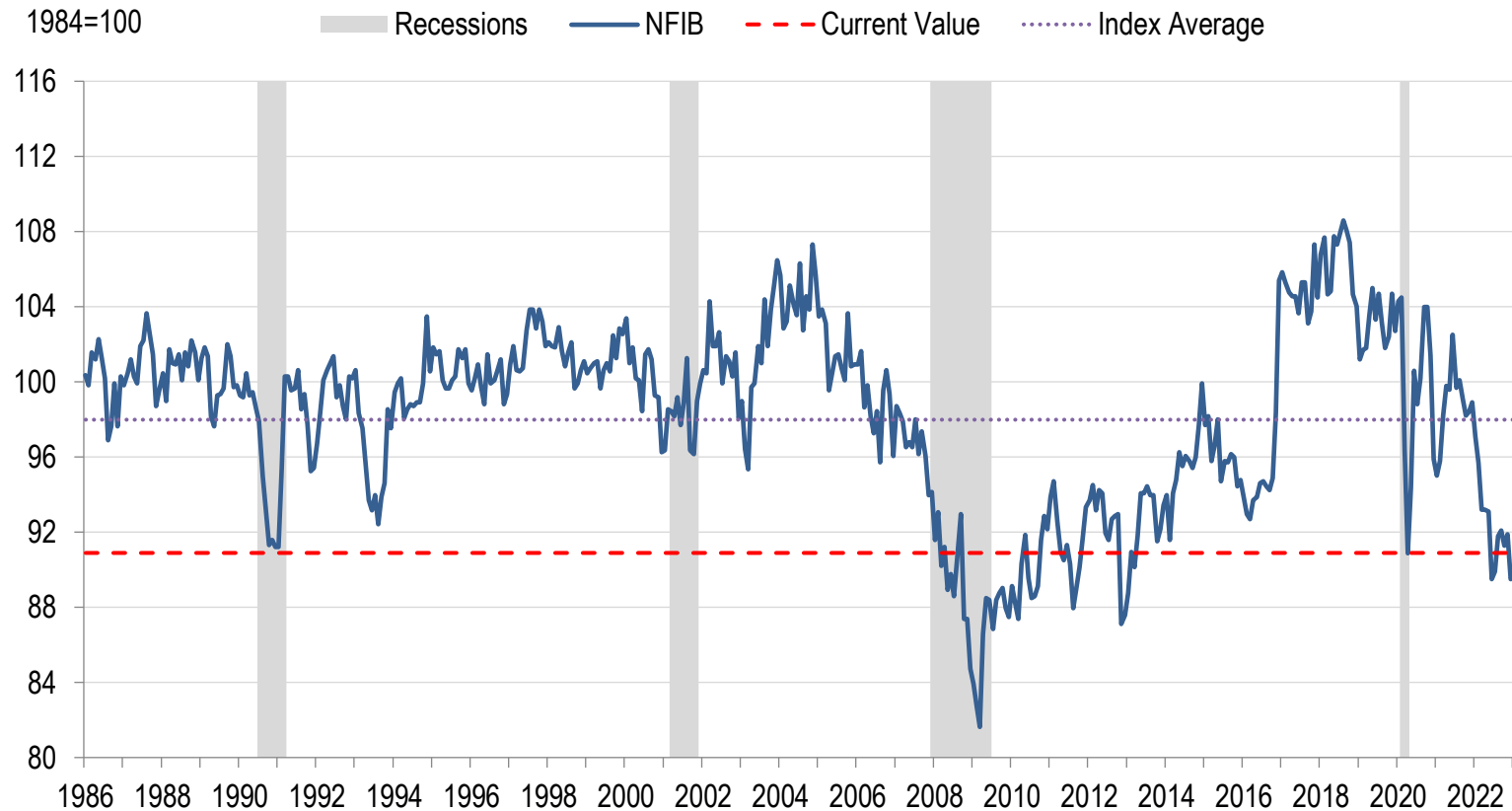
The obvious takeaway is that the service sector is outperforming manufacturing.

Source: Institute of Supply Management, cber.co

NFIB Small Business Optimism Index

United States

NFIB Small Business Optimism Index



Source: NFIB, cber.co.

Colorado-based Business and Economic Research <https://cber.co>

NFIB Small Business Index

In February 2023, the NFIB index was 89.8, well below the 49-year average, of 98.0 (purple dotted line).

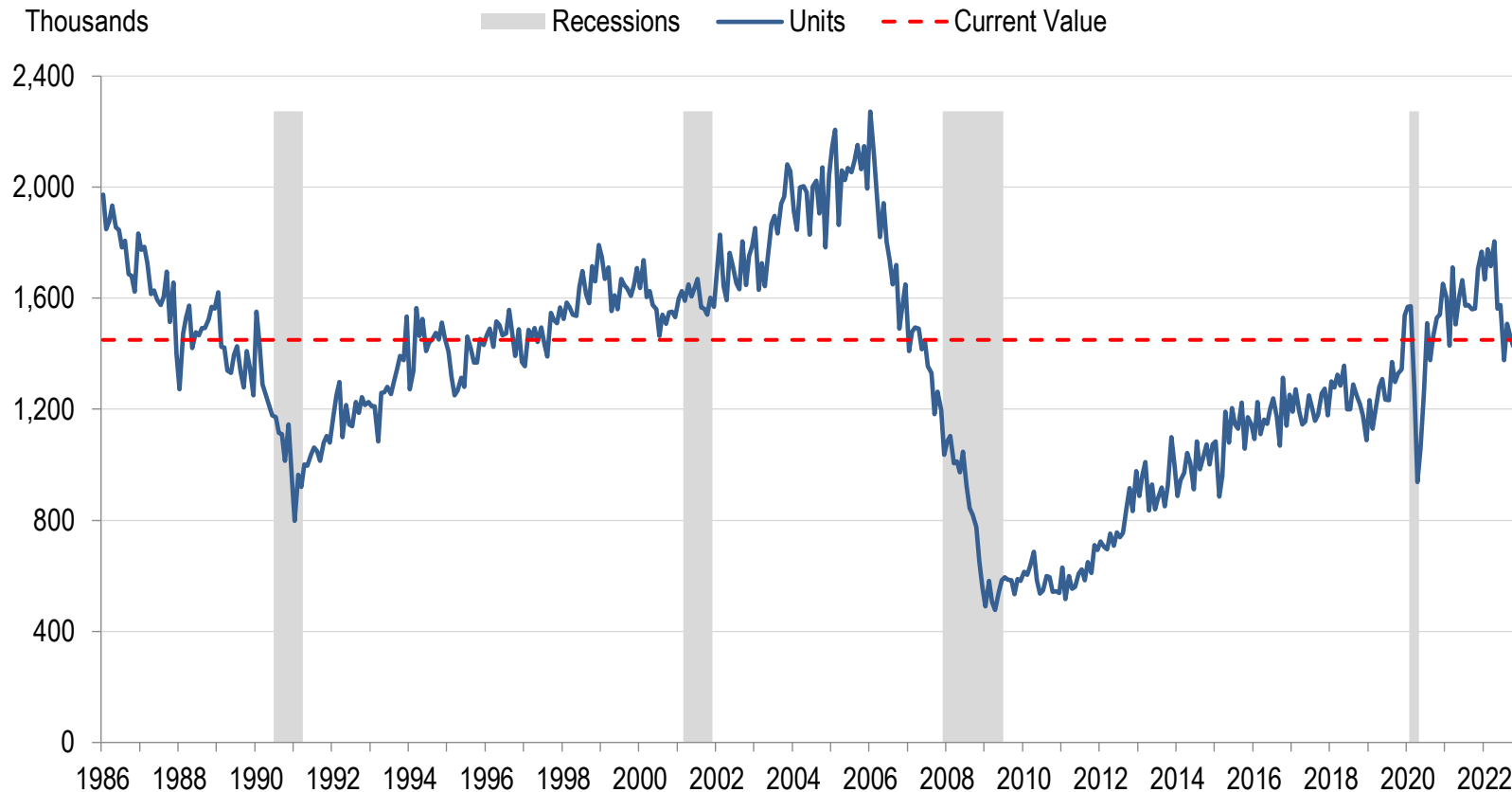
The most critical concerns for small businesses are the ongoing labor shortage and how to move forward in a market that many believe is headed into a recession, but they do not know when it will arrive.

The NFIB monthly SBET report provides insight into the challenges of being a small business owner in this economy. It is available online at <https://www.nfib.com/>.

New Privately-Owned Housing Units Started

United States

New Privately Owned Housing Units Started



Source: U.S. Census Bureau, cber.co.

New Privately Owned Housing Units Started

The number of housing starts has trended downward since April 2022.

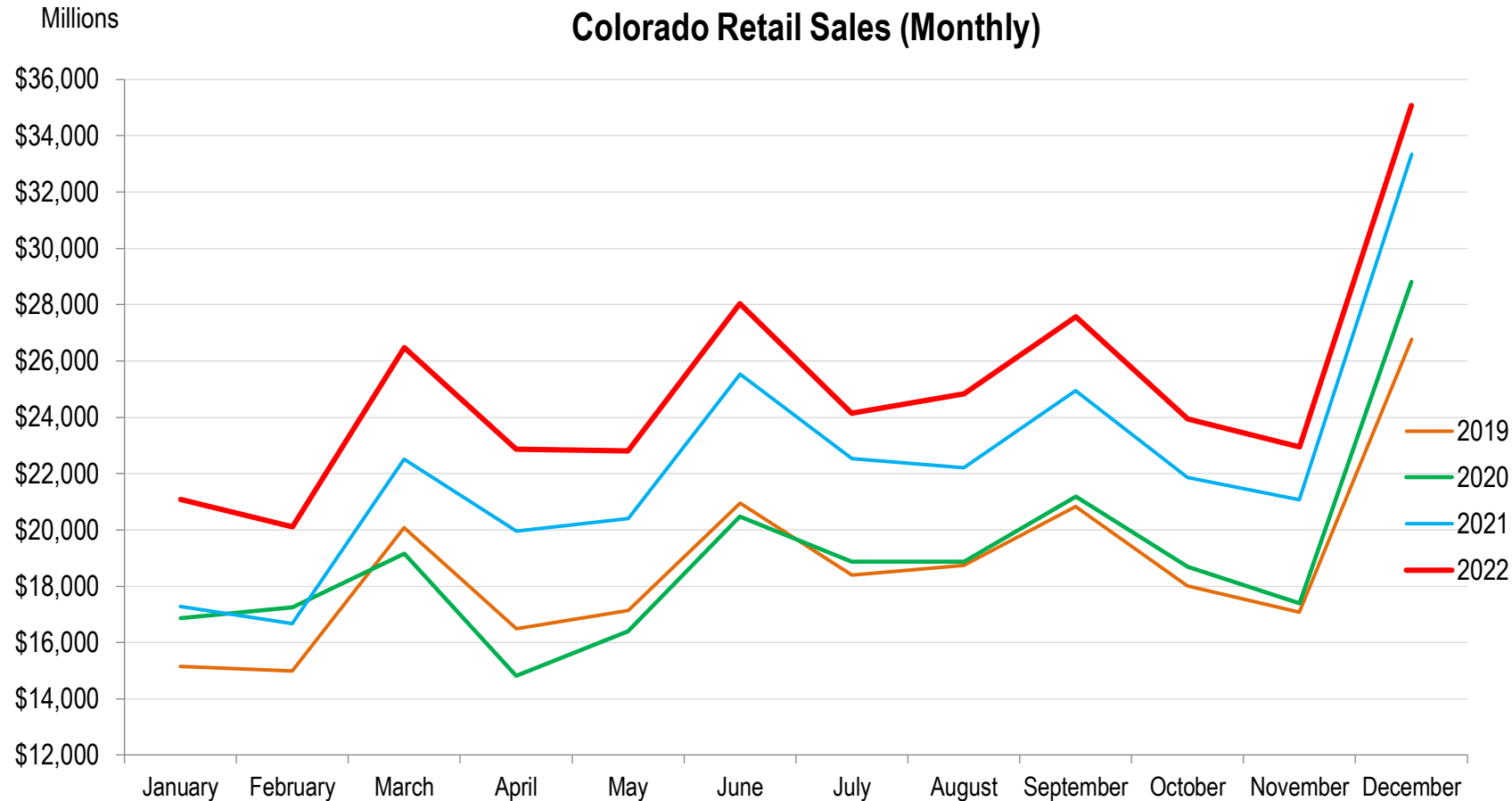
Inflation, increased interest rates, and other headwinds have caused reduced demand.

On a positive note, there was an uptick in February 2023. Time will tell whether this is the start of a trend or normal volatility.

Colorado Industry Indicators

Colorado Retail Sales

Monthly



Colorado Retail Sales
Retail sales for 2022 (red) were 11.8% greater than in 2021 (turquoise). Sales increased at a decelerating rate starting in April 2022. Consumers have begun changing their shopping patterns.

Annual Retail Sales (Billions)		
2017	\$194.6	5.4%
2018	\$206.2	5.9%
2019	\$224.6	9.0%
2020	\$228.8	1.9%
2021	\$268.3	17.3%
2022	\$299.9	11.8%

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

Colorado Auto Sales

Colorado Auto Dealers have had a rough ride the past couple of years. The following list includes challenges and opportunities they faced in 2022.

Opportunities

- Labor market is near full employment.
- Household wealth increased.
- New products and advanced technology.
- There were 70,000 vehicle sales postponed because of consumer reaction to Covid-related policies.

Challenges

- Supply chain problems/microchips.
- New vehicle affordability took a turn for the worse.
- Chance of recession increased.

There was a significant decrease in new car registrations in 2020 and 2022 but there were gains in 2021. The outlook is for a solid increase in 2023.

Registrations		
Year	Units Registered	Percent Change
2023f	205,500	5.8%
2022	194,186	-13.3%
2021	223,985	22.9%
2020	182,291	-12.7%

Source: CADA, Experian Automotive.

Brand Market Share	
Brand	Share
Toyota	14.4%
Ford	11.3%
Subaru	9.4%
Chevrolet	6.4%
Hyundai	5.6%

Source: CADA, Experian Automotive.

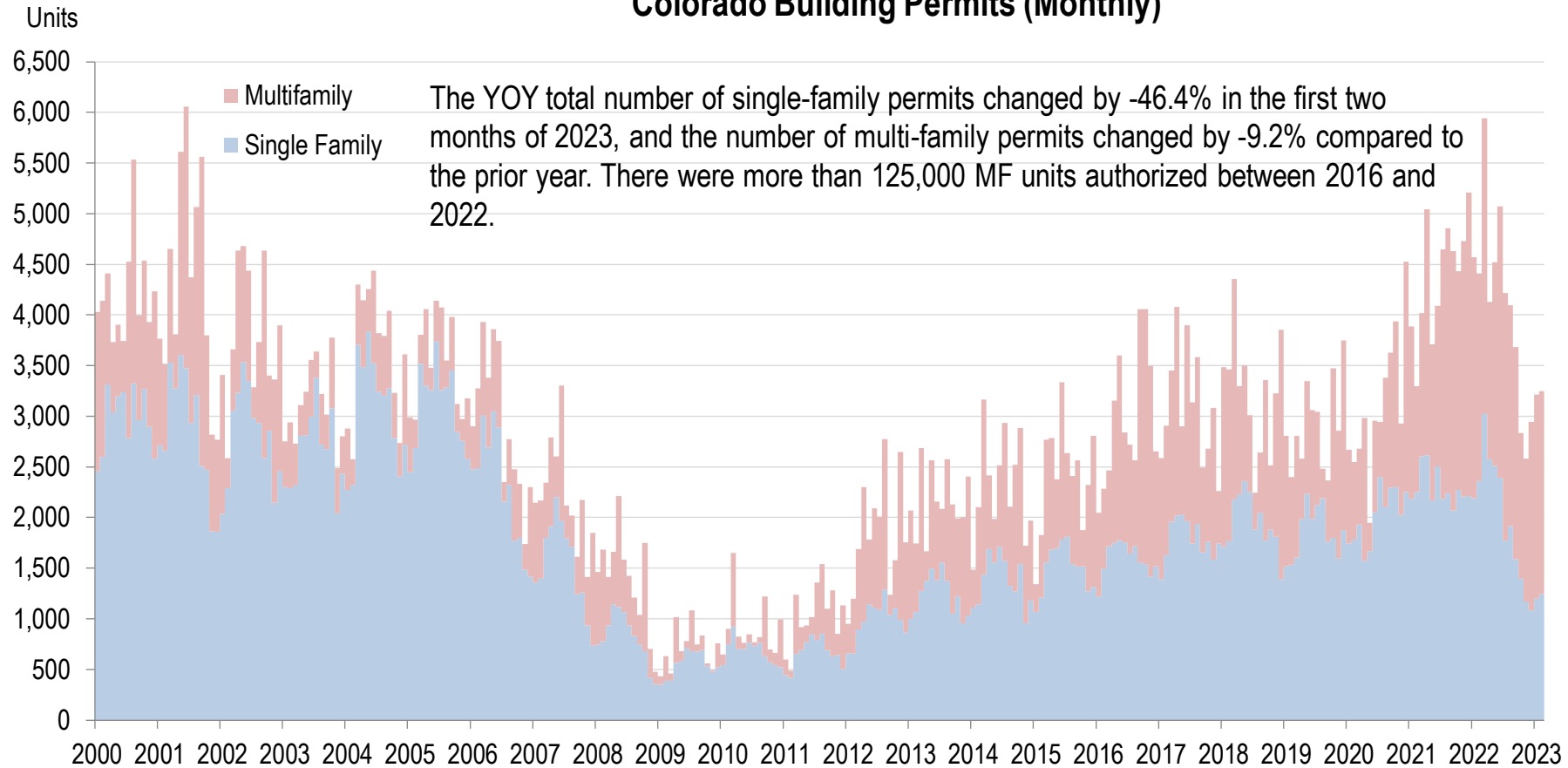
Model Market Share	
Model	Share
Ford F-Series	14.4%
Toyota Rav 4	11.3%
Ram Pickup	9.4%
Subaru Crosstrek	6.4%
Chevy Silverado	5.6%

Source: CADA, Experian Automotive.

Colorado Residential Building Permits

Units

Colorado Building Permits (Monthly)



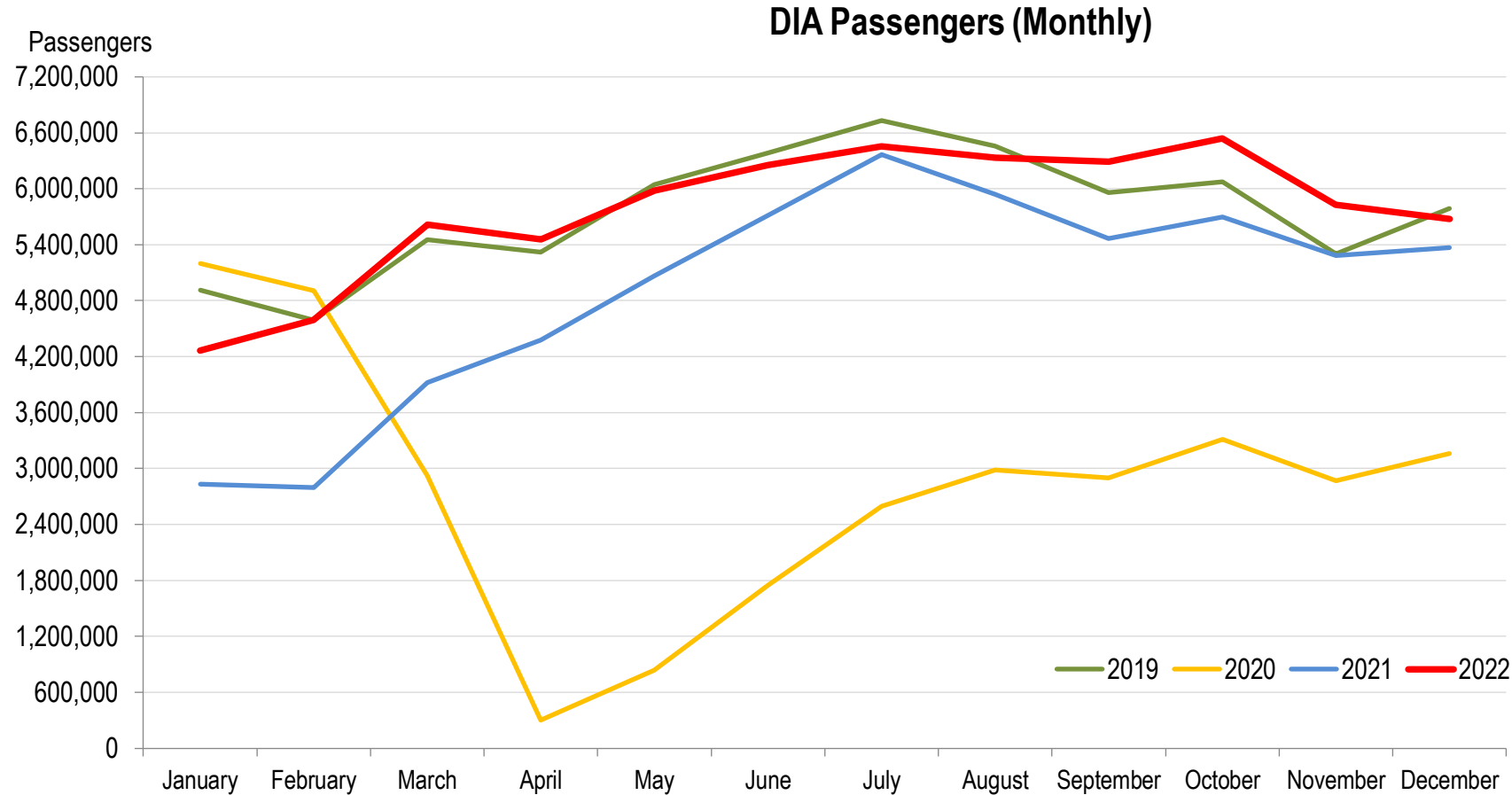
Annual Building Permits		
Year	Single Family	Multi-Family
2000	38,588	16,008
2001	36,437	18,570
2002	35,042	12,878
2003	33,894	5,732
2004	40,753	5,746
2005	40,018	5,732
2006	30,365	7,978
2007	20,516	8,938
2008	11,147	7,851
2009	7,261	2,094
2010	8,790	2,801
2011	8,729	4,779
2012	12,618	10,684
2013	15,773	11,745
2014	17,100	11,591
2015	20,025	11,846
2016	21,577	17,397
2017	24,338	16,335
2018	26,134	16,493
2019	24,756	13,877
2020	26,636	13,833
2021	30,246	26,278

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

Colorado-based Business and Economic Research <https://cber.co>

Denver International Airport Passengers

Monthly



DIA Passengers

The number of DIA passengers during 2022 (red) was slightly above the YTD total for 2019 (green) but significantly above the total for 2021 (blue). The 2022 peak was 6.5 million passengers in October, a record for that month.

In addition, the Colorado Springs airport saw 2.1 million passengers in 2022.

Year	Passengers	% Change
2022	69,286,461	17.8%
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 Forecast

Colorado Economic Forecast 2023

In 2023, the Colorado real GDP growth rate will be 1.5% compared to 0.7% for the U.S.

Colorado's job growth in 2023 will be more volatile and much weaker than in 2022.

Retail sales for 2023 will increase at a slower rate than during the past two years.

Colorado businesses will continue to face headwinds from increased inflation, interest rate hikes, labor shortages, the debt ceiling debate, and the SVB collapse. It will be 2024 before inflation returns to the Federal Reserve target rate.

		Colorado Economic Forecast			
		2020	2021	2022	2023
Real GDP Value (billions)		\$353.35	\$373.76	\$388.7	\$395.0
% Change Real GDP		-1.4%	5.8%	4.0%	1.5%
CES Employment (thousands)		2,652.7	2,750.9	2,862.3	2,886.3
Annual Change (thousands)		-137.4	98.2	111.4	24.0
% Change		-4.9%	3.7%	4.0%	0.8%
Unemployment Rate		6.8%	5.4%	3.0%	3.3%
Retail Sales (billions)		\$228.8	\$268.3	\$308.7	\$319.5
% Change		1.9%	17.3%	12.8%	3.5%
Consumer Price Index (CPI)		272.2	281.8	304.3	317.4
		2.0%	3.5%	8.0%	4.3%
DIA Passengers (millions)		33.0	59.0	69.0	72.0
Single Family Permits		26,636	30,246	24,000	22,000
Multi-family Permits		13,833	26,278	25,000	22,000
Oil Production (thousands) barrels		172,000	142,000	146,000	145,000

The number of DIA passengers in 2022 will remain strong in 2023. The airport should top 72 million passengers in 2023. In addition, travel through Colorado Springs will be strong.

The total number of 2023 building permits will be less than in 2022. Multi-family permits will be popular. Higher input costs, rising prices, and interest rate hikes have negatively impacted construction, home sales, and financial services.

Crude oil production declined in 2021 because of state regulations and reduced demand. Production increased in 2022 and will post a slight decline in 2023.

cber.co
Economic Outlook and Trends Through February 2023
Colorado and the United States

This analysis is for informational purposes only. Any opinions or interpretations of data are those of the presenter. As such, they do not represent the viewpoints of any group or particular organization.

For further information contact Colorado-based Business and Economic Research (cber.co).
©Copyright 2023 by cber.co.

Data contained in the tables, charts, and text of this presentation is from sources in the public domain. With appropriate credit, it may be reproduced and shared without permission. Please reference, “Colorado-based Business and Economic Research” (cber.co). Additional presentations are available at <https://cber.co>.

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.