



COLORADO BUSINESS REVIEW

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“The national economy is defying expectations in 2023...”



COLORADO 2023 MIDYEAR ECONOMIC UPDATE

First quarter gross domestic product (GDP) was revised up from the 1.1% initial estimate to 2% in the final estimate, and the advance estimate for Q2 came in at 2.4%, according to the Bureau of Economic Analysis.

Personal consumption expenditures, which represent more than 70% of the economy, continued to post gains in Q1 and Q2, up 4.2% and 1.6%, respectively. Nonresidential fixed investment made an about-turn from a decrease of 11.9% in Q1 to grow 5.7% in Q2. Government expenditures expanded 2.6% from Q2 while net exports improved by

\$2.9 billion (chained 2012 dollars). The labor market continued to show resiliency, too, with an average of 258,000 jobs added per month from January through July 2023. Job openings, labor force growth, and low unemployment point to continued strength in the labor market and strong demand for workers.

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The labor market remained strong through the first half of 2023, but there are a few modest signs of slowing. The job openings rate published by the Bureau of Labor Statistics remained steady at 5.8% in June. The ratio of job openings to unemployed people decreased from 1.8 in April to 1.6 in June, and has remained above 1 for 26 consecutive months. The U.S. added 1.8 million jobs in the first seven months of 2023, and stood 2.6% above the prerecession peak as of July 2023. The U.S. is effectively at full employment—the unemployment rate stood at 3.5% in July 2023, and jobless claims remain low. The civilian labor force was at an all-time high in July, growing 1.9% year-over-year while the labor force participation rate and the employment-population ratio both remained 0.2 percentage points below February 2020.

Colorado ranked 44th for year-over-year employment growth in June 2023. The state recorded 2.9 million jobs, 1.5% above June 2022 levels. The unemployment rate stood at 2.8% for the 4th-consecutive month in June, ranking 20th in the nation. Labor force continues to set records in Colorado. Year-over-year growth ranked the state 14th in June, and the labor force participation rate ranked Colorado 4th nationally.

Heading into 2023, the Colorado Business Economic Outlook estimating committees projected job growth of 57,100 jobs. These estimates were revised down to 48,130 during the March update. At a meeting held in early July, the chairs of the 14 Colorado Business Economic Outlook Forum committees deliberated on the headwinds and tailwinds for each industry. The revised outlook for Colorado employment growth in 2023 is 54,400, with gains spanning all but four major industries in the state, with declines in Construction; Trade, Transportation, and Utilities; Information; and Financial Activities.

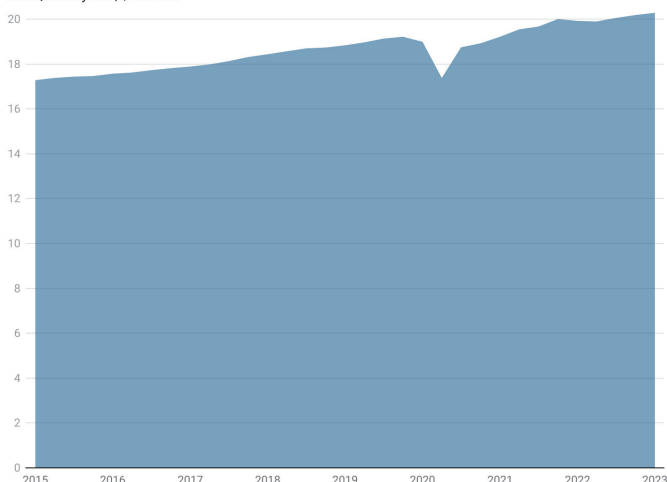
According to the Leeds Business Confidence Index (LBCI), Colorado Business leaders' pessimism extended for another quarter ahead of Q3 2023, driven down by anxieties about inflation, interest rates, worker shortages, and general concerns about a recession. Leaders remained bearish on the national economy, state economy, industry sales, industry profits, hiring, and capital expenditures. The outlook remained pessimistic looking ahead two quarters, to Q4 2023.

Other surveys, too, are still reflecting pessimism, but sentiment has been on the rise. The National Federation of Independent Business's Optimism Index increased for the third consecutive month in July, reaching the highest level since November 2022, with respondents pointing to the quality of labor and inflation as the two single-most important current problems. The Consumer Confidence Survey increased 6.9 points in July to the highest level in two years, and the expectations index climbed from 80 to 88.3—an important improvement as 80 tends to prelude a near-term recession. The University of Michigan's Index of Consumer Sentiment rose to 71.6 in July—the highest level since October 2021. While the Institute for Supply Management's Services PMI registered 52.7 in July, signaling expansion among services, it fell 1.2 percentage points from June. In addition, the Manufacturing PMI remained below the notable 50 threshold for the 9th-consecutive month, signaling contraction.

While the country is signaling resilience, Colorado's economy is sending mixed signals. The state continues to outperform in terms of GDP growth and labor force participation, but appears a little more average in terms of population and income growth, and is lagging in job and home price growth.

U.S. Real GDP

U.S. Quarterly GDP, \$ Trillions



Source: Bureau of Economic Analysis and Consensus Forecast • Created with Datawrapper

Colorado's Rank Among Other States

Metric	1-Year
Real GDP Growth	24
Employment Growth	44
Population Growth	19
Personal Income Growth	31
PCPI Growth	37
PCPI	8
Average Hourly Wage % Growth	24
Average Annual Pay % Growth	10
Average Annual Pay	7
Unemployment Rate	20
Labor Force % Growth	14
LFPR	4
FHFA Home Price Index Growth	43

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, U.S. Census Bureau, Colorado Department of Local Affairs, Federal Housing Finance Agency All Transaction Index, BRD Calculations. *Unemployment rate for the last month. Created with Datawrapper

FROM THE EDITOR

The national economy is defying expectations in 2023, with GDP, employment, and income outperforming growth expectations set last fall, inflation showing improvement, and confidence on the rise. We present the midyear review of the Colorado economy in this issue of the Colorado Business Review, where we evaluate observed data halfway through 2023 and update our expectations for the remainder of the year. The information presented is compiled from remarks made by Colorado Business Economic Outlook Estimating Group chairs at a roundtable meeting held in July. Industry sector summaries include comparisons of the current economic situation to the forecast presented last December. In addition, key factors influencing recent economic trends are noted.

We greatly appreciate the time and input from the individuals

who contributed to this update; their names are listed on the back page. I also acknowledge the BRD research staff—Brian Lewandowski, Adam Illig, Jayson Brubaker, and Roberto Berkowitz—who collected data and conducted additional analysis for this issue.

Last, I would like to thank WhippleWood CPAs for their continued support of the Colorado Business Economic Outlook. Their support helps with the distribution of the analysis shared in the annual publication and this midyear update.

Please contact me directly at 303-492-1147 with any comments or questions.

-Richard Wobbekind

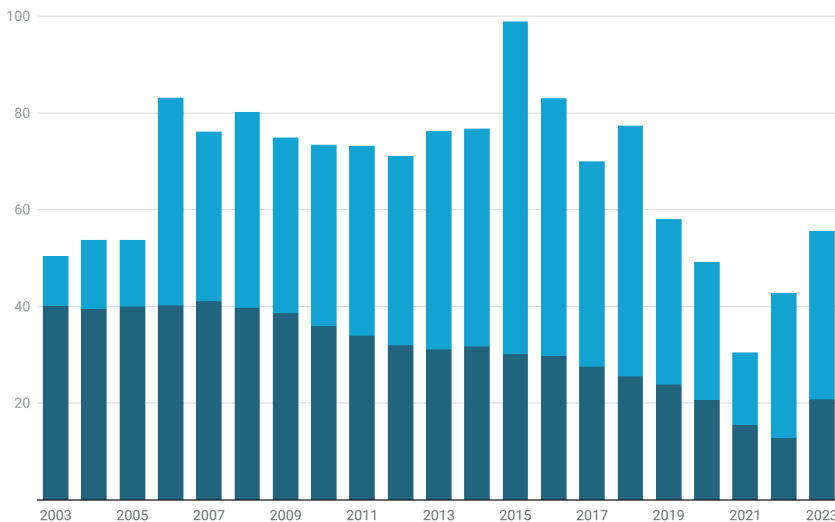
POPULATION AND EMPLOYMENT

According to the State Demography Office, Colorado's population increased by approximately 26,500 in 2021 and 27,700 in 2022.

Colorado Change in Population

Population Change, Thousands

■ Natural Increase (Births - Deaths) ■ Net Migration



Source: Colorado Demography Office, U.S. Census Bureau, and the Business Research Division • Created with Datawrapper

Both net migration and the natural increase slowed in 2021, driving down population growth, but net migration rebounded slightly in 2022. Natural increase and net migration are expected to rebound

further in 2023.

For 2023, births are forecast to remain around 62,500, slightly above 2022, with a sizable decrease in deaths, to 45,000. Natural increase is forecast to be at

17,500, recovering from 2022's natural increase of 13,000, which is the lowest ever seen in the state. Net migration is expected to be around 35,000 in 2023; 2022 projections are 15,000, with strong international and weak domestic components. Overall population growth in Colorado is expected to be around 52,000, up significantly from 2022's projected 28,000. Over half of Colorado counties are in natural increase, meaning that local births exceed deaths. However, deaths in Colorado reached a peak in 2022, causing the natural increase to be the lowest recorded in the past 15 years.

Migration into the state has remained steady for the year; however, the state has recorded greater out-migration among the older-adult population. The out-migration among this cohort could be happening for a myriad of reasons—cashing out equity from high-valued homes, following children and grandchildren, and retiring to other places to take advantage of different taxing policies. Forecasts show migration to return due to increasing job openings in the state; however, consideration for change is required due to the increased competitive nature of filling jobs across the United States.

Colorado's total nonfarm employment in June 2023 topped 2.9 million, growing 42,400 (1.5%) year-over-year. Seven industry sectors notched employment gains year-over-year, while four

posted losses. The fastest growing sectors in June were Leisure and Hospitality, Mining, and Government, while Financial Activities and Information recorded the largest rate of losses.

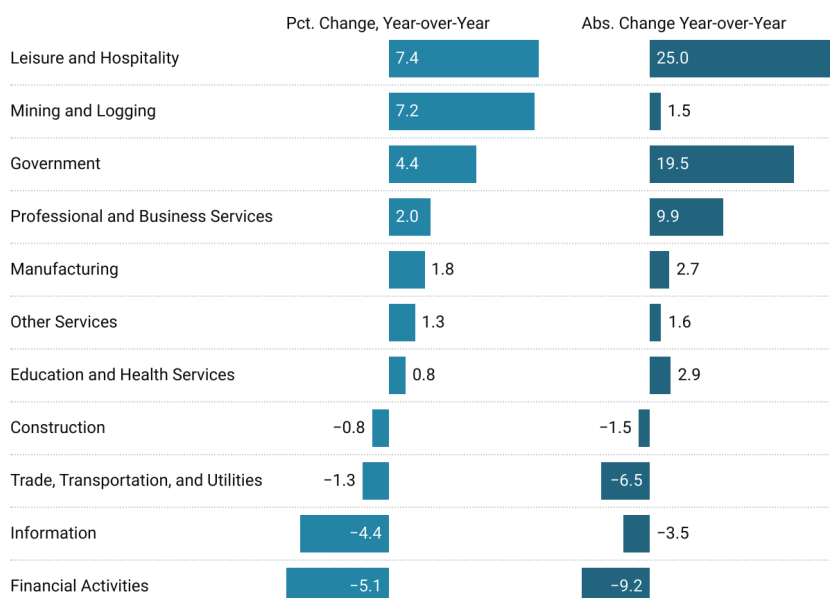
The Colorado Springs MSA observed the highest year-over-year employment growth in June 2023 (2.2%), followed by Fort Collins-Loveland (2%), Greeley (1.6%), Boulder (1.2%), Grand Junction (0.6%), Denver-Aurora-Lakewood (0.3%), and Pueblo (flat). Colorado's seasonally adjusted unemployment rate has significantly retreated from the record highs seen in April 2020 due to the pandemic, sitting at 2.8% in June 2023, tied for 20th-lowest unemployment rate in the nation (the not seasonally adjusted rate was 3.3%). The Fort Collins MSA had the lowest unadjusted unemployment rate in the state in June at 3%, followed by Boulder (3.1%), Denver-Aurora-Lakewood (3.3%), Colorado Springs (3.5%),

Greeley (3.5%), Grand Junction (3.7%), and Pueblo (4.4%). The seasonal variations tend to drive unadjusted unemployment rate higher in June each year.

Colorado's nominal GDP was \$502 billion as of Q1 2023, the 16th-largest in the country, led by Real Estate, Rental, and Leasing; Government; and Professional and Business Services.

Colorado's Q1 2023 real (inflation-adjusted) GDP increased at a seasonally adjusted annual rate of 1.9% for the quarter and at 1.5% year-over-year. Overall, the largest year-over-year percentage gains in Colorado were recorded in the following industries: Agriculture, Forestry, Fishing, and Hunting (14.5%); Arts, Entertainment, and Recreation (13.9%); and Management of Companies and Enterprises (8.9%). The largest losses were in Construction (-12.9%) and Finance and Insurance (-4.3%).

Colorado Employment Change (as of June 2023)



Source: Colorado Department of Labor and Employment. • Created with Datawrapper

NATURAL RESOURCES AND MINING

The Natural Resources and Mining sector comprises the subsectors of agriculture, forestry, fishing and hunting, mining, quarrying, and oil and gas extraction. This includes mineral solids such as coal and petroleum extraction, as well as natural gas and carbon dioxide.

Agriculture

According to the Bureau of Economic Analysis, Agriculture,

Fishing, and Hunting nominal GDP totaled \$3.5 billion in Q1 2023, and real (inflation-adjusted) GDP increased 14.5% year-over-year.

Cooler than usual weather and above average rainfall benefited both crop and livestock producers in the first half of 2023. Market prices for corn, wheat, milk, hogs, and sunflower are all generally lower across the board than a year ago. Corn prices are down 3.4% year-over-year from last July (\$5.62 per bushel), and beef prices remain on the rise this year. There is global uncertainty around grain markets as Russia walked away from the Black Sea grain agreement. Input prices are less expensive across the board than a year ago: fuel, seed, feed, pesticides, and fertilizer have experienced price decreases, whereas farm labor, trucking and shipping, repairs, and equipment have increased since last year. In June 2023, cattle on feed numbers are 8% lower than the same period last year. Drought in prior years has caused ranchers to decrease the size of their herds, limiting the number of calves to sell in 2023. Hay prices are expected to decrease because farmers will be able to grow their own rather than outsourcing. Additionally, high interest rates will significantly impact operating expenses.

Wheat prices recorded a decrease of 26% year-over-year in May 2023 (\$8.07/bushel). Better growing conditions with lower temperatures and more rain in wheat-growing areas throughout the U.S. have increased supply, while demand remains stable. The Colorado wheat crop was projected at 68 million bushels in July 2023, an increase of 91% year-over-year in



“The Colorado wheat crop totaled 53 million bushels in June 2023, and is expected to increase as high as 62 million bushels due to the widespread moisture across the Eastern Plains.”

2023, according to the USDA.


Colorado agricultural exports January-May totaled \$953 million, down 7% compared to the same period last year. Beef and beef byproducts are Colorado's top agricultural export, comprising 66% of the total.

Colorado drought conditions improved after an unexpectedly rainy spring. As of August 2023, 73% of the state was experiencing no drought. The 27% of counties experiencing abnormally dry conditions to moderate drought conditions were mostly focused on the Southwest region of the state. With the absence of drought conditions in Colorado, dryland crops thrive, and farmers typically increase planting, pasture conditions improve, and reservoirs increase to higher levels.

According to the USDA, U.S. farm income increased in 2022 to \$167.3 billion, an 8.3% increase from the prior

year. Farm income is expected to decrease to \$137 billion in 2023. Additionally, the price of food in the U.S. surged 6.7% in the 12 months ending in May 2023, the highest level since 1981.

Additional uncertainties for farmers beyond the weather include legislation. The Farm Bill protects the livelihood of farmers by providing farm insurance and creates nutrition programs such as Supplemental Nutrition Assistance Program (SNAP) and The Emergency Food Assistance Program (TEFAP). A total of 80% of the Farm Bill is allocated to food assistance programs with \$221 billion supporting commodity programs for wheat, corn, soybeans, and sugar. The Farm Bill was enacted in 2018 and expires on October 1, 2023. Historically, the Farm Bill has been extended when a new one has not been passed by Congress at the expiration date, and this seems likely to be the case this fall.



Mining and Logging

Mining GDP totaled an annualized \$14.6 billion in Q1 2023. Real GDP grew 2.4% year-over-year. Mining and Logging employment increased 5.1% in 2022 and 7.2% year-over-year in June 2023. Industry employment is expected to remain strong in the second half of 2023 in conjunction with elevated energy prices and inventory demand. The industry is projected to end 2023 up 5.5%. In Colorado, the average annual pay for a Mining and Logging job in 2022 was \$159,447, compared to the \$75,557 average annual pay for all industries. The industry made up 0.8% of Colorado's covered nonfarm employment in June 2023, compared to 0.4% for the nation.

The average monthly price of WTI oil has decreased since peaking in June 2022. Prices averaged \$70.25 in June 2023, a decrease of 4.3% year-over-year. According to the U.S. Energy Information Administration, Colorado ranked fourth in crude oil production among U.S. states in April 2023. According to the Colorado Energy and Carbon Management Commission, Colorado field production of crude oil increased 38.5% year-over-year to 160.2 million barrels in 2022, with 82% of production



concentrated in Weld County. Year-to-date data through April indicate a 0.9% increase year-over-year. (Note: the Colorado Oil and Gas Conversation Commission was renamed the Energy and Carbon Management Commission to reflect the shift in department focus to include carbon capture enolization, geothermal energy, and gas storage.)

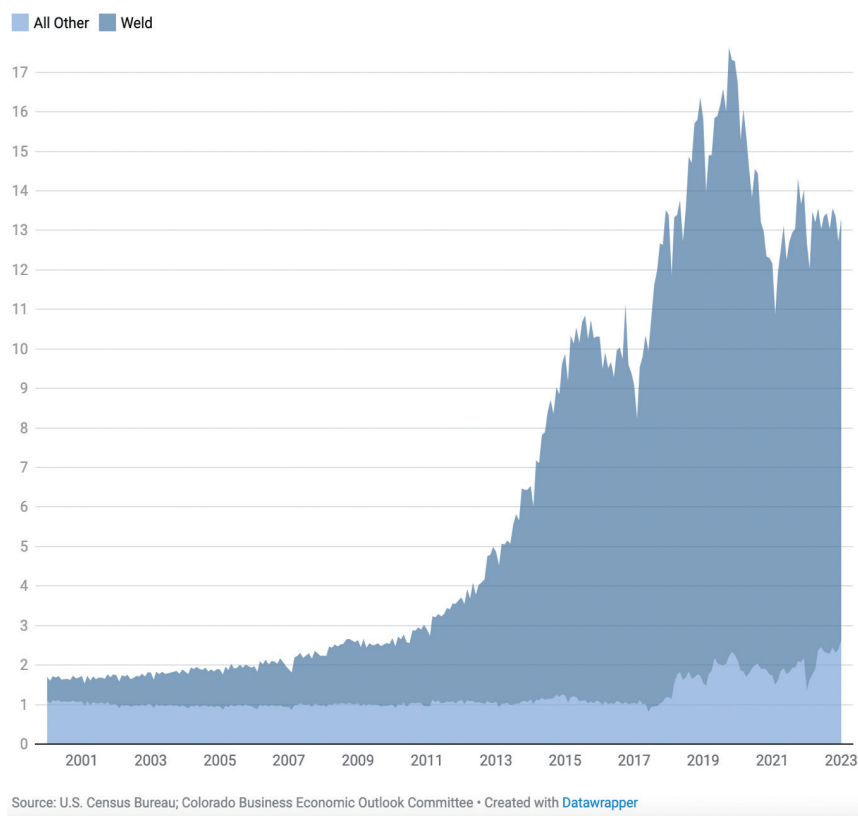
The Baker Hughes rig count continues to rise after falling to a low of four rigs observed in November 2020. As of July 2023, there were 15 active oil rigs in Colorado. The

U.S rig count in July 2023 was 669, a year-over-year decrease of 11.7%.

Natural gas production has increased 65.8% annually in 2022, totaling 1,880 billion cubic feet. The revised production outlook for 2023 is approximately 1,763–1,900 billion cubic feet. The Henry Hub natural gas spot price decreased 65% in July 2023 compared to the year prior, from \$7.28 per million btu to \$2.55 per million btu. Colorado is the eighth-largest natural gas producing state and the eighth largest in natural gas reserves. The pricing of natural gas has proven to be very volatile over the past year.

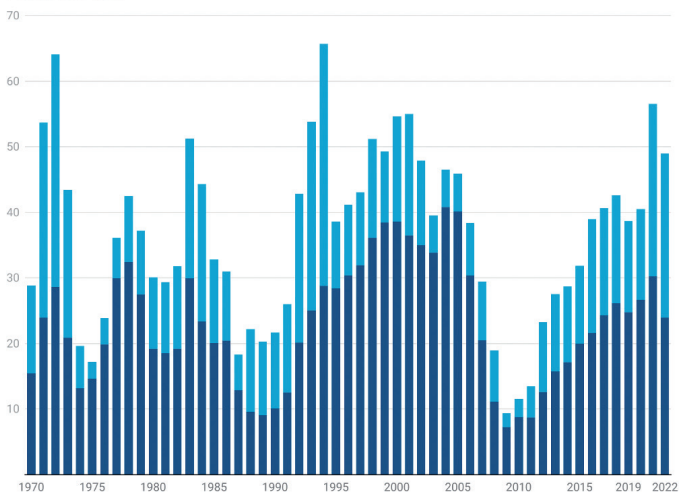
As the industry continues to change, industry consolidation will occur. For example, Chevron (15% market share) merged with PDC (18%) to become the largest producer in the state. Concerns have risen about the decreasing jobs and production in the state from these mergers; however, consolidation will allow for better compliance with the increased regulation.

Colorado coal production increased from 12.1 million tons in 2021 to 12.3 million tons in 2022, and a 6.8% year-to-date increase as of March 2023. There are currently 10 coal mines operating in Colorado and 6 coal-fueled power plants. The state has begun to phase out coal-fired plants, with most slated to close by 2030. Xcel Energy remains the only provider with coal plants not scheduled to close before 2031. In 2023, 11.6 million tons of coal are expected to be produced.



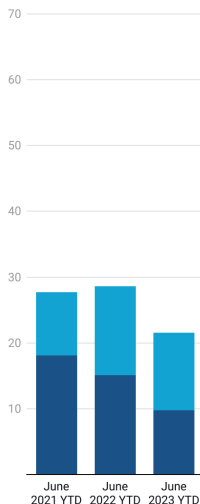
Single Family and Multifamily Residential Building Permits

Permits, 1970-2022



Source: U.S. Census Bureau, Colorado Business Economic Outlook Committee • Created with Datawrapper

June YTD Permits



U.S. Census Bureau. Single-family permits decreased 20.8%, while multifamily fell 4.7%. Residential permits fell further in 2023, decreasing 24.6% year-to-date through June (single-family permits were down 35.2%, and multifamily decreased 12.9%). In July, the average 30-year mortgage rate increased to 6.81% according to Freddie Mac, straining affordability, pricing, and development. The value of residential construction published by Dodge Data & Analytics decreased year-to-date through June 2023, down 33.9% over the same period last year. The Federal Housing Finance Agency Purchase Only Index decreased 1.1% in Q1 2023 year-over-year, while the All-Transactions Index increased 4.8%.

After growing 18.1% in 2022, non-residential construction spending in Colorado was down 11% year-to-date through June 2023. The number of mega-private projects is dwindling, with smaller projects comprising the bulk of nonresidential, publicly

funded projects. The industrial area is also showing signs of expanding, with increases in laboratories, data centers, and industrial spaces. As with other industries, nonresidential construction is experiencing cost issues related to inflation and labor shortages. New bids will reflect higher labor costs, as well as higher input costs.

The nonbuilding (infrastructure) sector continues to benefit from the government stimulus, but uncertainty about when spending from the federal infrastructure bill will impact Colorado. The value of nonbuilding construction rose 35.8% in 2022 and 8.6% year-to-date through June 2023.

CONSTRUCTION

The Construction sector encompasses industries including Construction of Buildings, Heavy and Civil Engineering, and Specialty Trade Contractors.

The Construction sector encompasses industries including Construction of Buildings, Heavy and Civil Engineering, and Specialty Trade Contractors. Construction GDP totaled an annualized \$26.6 billion in Q1 2023. Real GDP fell 12.9% year-over-year. In June 2023, the Construction sector recorded 182,100 jobs in Colorado, the sixth-largest sector in the state with 6.3% of total employment. Employment in the sector was down 0.8% in June 2023 (1,500 jobs) year-over-year, contrasting with the nation, which grew 2.6% over the

same period. Construction industry employment is projected to increase 200, or 0.1%, in 2023.

Construction is composed of three subgroups: residential, including single-family homes and multifamily units like apartment complexes; non-residential, including office, commercial, retail buildings or hospitals; and nonbuilding, including infrastructure projects.

The residential sector pulled back in 2022, with residential permits declining 13.3%, according to data from the



MANUFACTURING

The Manufacturing sector is composed of the durable goods sector and the nondurable goods subsector.

Durable goods last for a significant period of time, whereas nondurable goods are typically consumed quickly. Manufacturing GDP in current dollars totaled an annualized \$33 billion in Q1 2023. Real GDP fell 0.1% year-over-year on an inflation-adjusted basis. In Colorado, manufacturing employment grew 2.7% (4,100 jobs) in 2022, but the industry is projected to lose 2,300 jobs in 2023.

Manufacturing was the eighth-largest employment sector in Colorado in June 2023, with 156,400 jobs, or 5.4% of total employment. Although recent data indicate the industry grew 1.8% year-over-year in June, expected revisions released by the Colorado Department of Labor and Employment indicate the sector in the state has contracted, compared to growth of 1.3% nationally.

Durable goods manufacturing makes up the larger share of the two subsectors in the state, at 61.3%, or 95,900 jobs in June. Within this subsector, there is manufacturing of wood and metal products; machines, including computers, electronic parts and aerospace materials; and transportation equipment. Among the durable goods subsectors, data indicate transportation equipment manufacturing increased 4.2% (500 jobs) year-over-year, fabricated metal manufacturing increased 2.1% (300 jobs), and computer and electronic product manufacturing added 100 jobs (0.4%).

Nondurable manufacturing, which consists of food and beverages, makes up the other half of Colorado's Manufacturing sector, with 38.7% of total Manufacturing employment, or 60,500 jobs, in June 2023. Nondurable manufacturing employment increased 2%, or 1,200 jobs, year-over-year in June.

Within nondurable manufacturing is beverage manufacturing, which decreased 1% (100 jobs) year-over-year in

June. Most Colorado MSAs recorded no change in Manufacturing jobs year-over-year, including Boulder, Colorado Springs, Fort Collins, and Grand Junction. Growth was recorded in the Denver-Aurora-Lakewood MSA (2.6%), Pueblo MSA (2.1%), and Greeley MSA (1.5%). Due to the large expected revisions for the sector overall, patterns within the subsectors and geographically across the state may change once data are finalized.

Challenges in the state's manufacturing sector are corroborated in national and regional surveys. The ISM Manufacturing Index measures manufacturing activity through a monthly survey of purchasing managers at manufacturing firms. In July 2023, the index recorded a reading of 46.4, a decrease of 2 points from the end of 2022. The index was below 50 (contraction territory) for the ninth-consecutive month. The Kansas City Fed also produces a manufacturing survey, which identifies manufacturing activity, such as production and shipments, as well as price changes of raw materials and finished goods. The composite index registered a reading of -12 in June 2023, versus the prior month. The index registered a reading of -12 versus one year ago, and an expected index of -3 in the next six months.

Challenges related to the macroeconomy are expected to impact the manufacturing industry in 2023. According to the Kansas City Fed manufacturing index, June 2023 prices decreased significantly and are expected to lower in the second half of the year. Several factors—including uncertain demand expectations—are causing firms to slow their hiring and employment activity. It is reported that 43% of firms have stopped hiring for new positions and reduced hours within the past three months, and 29% of firms will do so in the next six months.

TRADE, TRANSPORTATION, AND UTILITIES

Within the Trade, Transportation, and Utilities (TTU) sector, the trade subsector consists of wholesale and retail trade firms.

The Trade, Transportation, and Utilities industry totaled an annualized \$73.5 billion in Q1 2023. Wholesale real GDP decreased year-over-year, while retail and transportation and warehousing increased.

Overall, TTU employment in Colorado increased by 14,200 (2.9%) in 2022 but decreased 1.3% (6,500 jobs) year-over-year in June 2023. TTU was the largest industry by employment in the state, consisting of one out of

every six jobs. The industry is projected to add 1,500 jobs (0.3%) in 2023.

The Transportation, Warehousing, and Utilities subsector observed losses of 2.6% (2,900 jobs) year-over-year in June 2023. This decrease may reflect both a maturing warehousing sector, as well as a worker supply shortage for the transportation industry. Utilities are expected to add jobs. Air transportation employment grew 7.2%



in June; but truck transportation, couriers and messengers, and warehousing and storage all posted year-over-year losses. All these industries are adversely impacted by the cost of fuel and inflation.

Wholesale trade employment was down 2.9% in June 2023 year-over-year, with national wholesale trade employment up 1.4%. Retail trade employment in Colorado fell 0.1% year-over-year in June 2023, resulting in a decrease of 300 jobs, compared to a 0.5% national growth.

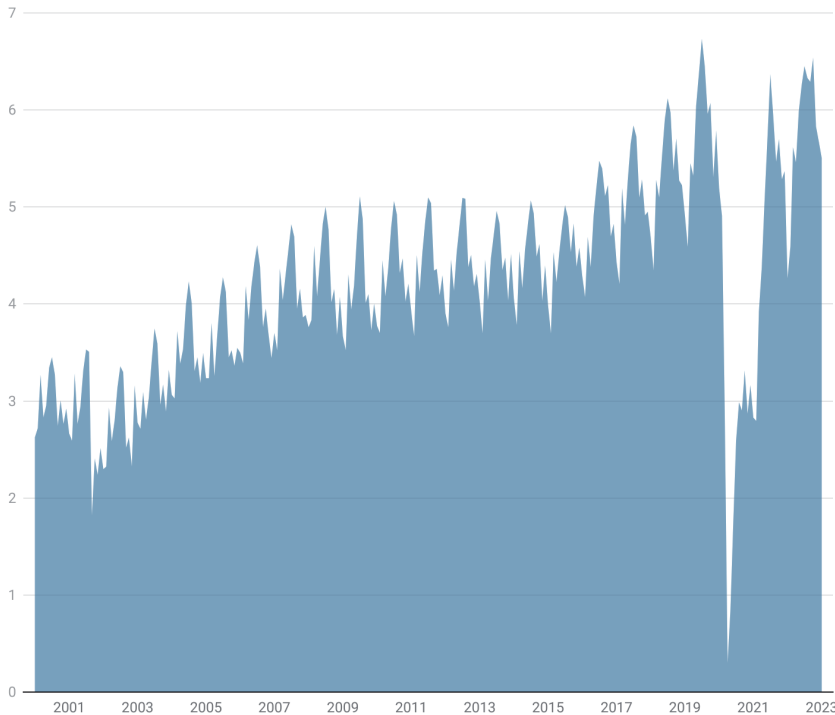
National retail sales were up year-over-year, growing 1.5% in June 2023 compared to the same period in 2022, and increased 0.2% from May to June. The growth in retail falls short of the growth in inflation; thus, real retail sales are negative. The multifaceted drivers of these changes range from changing prices (up and

down) and changing consumer preferences to perhaps an indication that inflation is catching up with household spending. Sales at gasoline stations fell sharply year-over-year as fuel prices fell from the all-time high reached last June. Furniture, department, building materials, and sporting goods stores all posted year-over-year declines, while restaurants, health, and motor vehicle and parts stores posted the strongest gains. Ecommerce retail continued to outperform total retail in Q1 2023. Colorado retail sales have fallen short of those for the nation. Taxable sales in the state were up 1.8% year-over-year in May 2023.

According to data from Airports Council International, Denver International Airport ranked the third-busiest airport in the nation as of April 2023. DEN recorded 29.8 million passengers through May 2023.

DIA Enplanements and Deplanements

DIA Monthly Passenger Traffic, Millions



Source: Denver International Airport • Created with Datawrapper

“According to the Federal Aviation Administration, Denver International Airport ranked the seventh-busiest airport in the nation as of April 2023.”

INFORMATION

Information GDP totaled an annualized \$32.5 billion in Q1 2023.

Industry real GDP increased 2.4% year-over-year. Information employment rose in 2022, up 2,400 jobs, or 3.1%, but fell sharply year-over-year in June (-4.4%, -3,200 jobs). By component, Publishing industries, the largest employment subsector, posted a 5% decline in employment in June 2023 year-over-year; Telecommunications decreased 3.2%; and Software Publishers decreased 6.3%. Information is projected to add 900 jobs in 2023, an increase of 1.2%.

FINANCIAL ACTIVITIES

The Financial Activities sector includes establishments primarily engaged in financial transactions, as well as establishments engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets.

Financial Activities GDP totaled an annualized \$26.7 billion in Q1 2023. Real GDP fell 4.3% year-over-year. Financial Activities employment rose 1.2% (2,100 jobs) in 2022 but fell 5.1% (9,200 jobs) year-over-year in June 2023. The industry is projected to lose 7,000 jobs (3.9%) in 2023, as rising interest rates slow some areas of the industry. By subsector, Finance and Insurance lost 8,200 jobs (6.7%) year-over-year in June 2023, and Real Estate, Rental, and Leasing decreased by 1,000 jobs (1.7%).

Capital markets experienced a great deal of volatility in 2022 and 2023, many of which are in bear market territory due to inflation and other economic pressures. The S&P 500 has been steadily increasing, up 14.4% year-over-year as of late July. The NASDAQ followed suit, experiencing a 33% increase since the beginning of the year. The



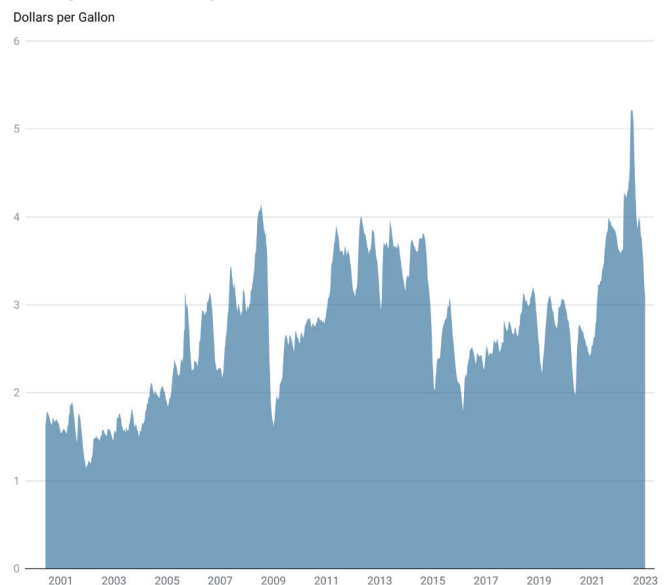
NASDAQ year-over-year growth was 16% as of July 23, 2023. Capital markets continue to be uncertain as the Fed takes measures to combat inflation, increasing short-term interest rates. Office real estate, especially in central business districts, faces additional risks from low occupancy as workers choose to work remotely.

In an effort to stabilize inflation, the Fed targeted short-term interest rates at 5.5% after a quarter point increase in July. As of July 2023, the 10-year government bond yield in the U.S. was 3.84%, one of the highest yields in the world. Comparatively, Germany currently has a 2.45% 10-year government bond yield, the United Kingdom is at 4.28%, and Japan currently has a 0.46% yield. Long-term bond and mortgage rates have also surged.

Across the nation, rising prices and inflation are impacting consumers. Median rent rates have exceeded \$2,000 monthly, and average gasoline prices are recovering from the 2022 surge, standing at \$3.68 per gallon. Colorado's median rent price ranks within the top ten in the nation, at \$2,200 per month, and gasoline prices are below the national average, at \$1.73 per gallon. This rise in the cost of living has a large impact on discretionary spending, which is teetering off while essential purchases cover more of consumers' budgets.

In the cryptocurrency market, bitcoin has increased 25.1% year-over-year as of late July. Other cryptocurrency markets are also seeing massive increases in value over the past year. According to Forbes, the top three

Weekly Colorado Midgrade Conventional Retail Gasoline Prices



Source: U.S. Energy Information Administration - Created with Datawrapper

cryptocurrencies of 2023 are: Bitcoin (market capitalization of \$579.2 billion), Ethereum (\$227.5 billion), and Tether (\$83.8 billion).

According to the Federal Reserve, as of the week of July 19, 2023, commercial deposits have decreased by \$879 billion, or 4.8%, since peaking the week of April 13, 2022.



PROFESSIONAL AND BUSINESS SERVICES

Professional and Business Services (PBS) encapsulates a diverse set of subsectors, such as Professional, Scientific, and Technical Services that includes legal services, accounting, architectural services, computer, and software design, and consulting.

Moreover, the sector also contains the management of companies and enterprises, as well as a variety of administrative services that include waste management, building support, business support, and employment services. PBS jobs are usually high-paying business-to-business jobs, and work in the occupations within this industry is often able to be completed remotely.

PBS GDP totaled an annualized \$81.1 billion in Q1 2023. Real GDP expanded in all three PBS industry sectors: Professional, Scientific, and Technical Services increased (6.8%); Management of Companies and Enterprises (8.9%); and Administrative and Support and Waste Management and Remediation Services (1%).

PBS employment grew 6.7%, or 30,200 jobs, in 2022. The industry employs the second-most workers in Colorado, with 494,400 employees as of June 2023, growing 2% year-over-year. The industry is projected to add 10,800 jobs in 2023, growing 2.2%. This record of success is due to a number of factors, including both the diversity of supply and demand for PBS talent. Importantly, the relatively easy shift to work-from-home in the largest PBS subsectors ensured companies could keep trusted talent. The change in overall earnings or “wage inflation” in the industry rose 21.1% since January 2020 and 9.1% year-over-year.

The Professional, Scientific, and Technical Services (PST) subsector, which employed 292,300 people (59.1% of total PBS employment) in June 2023, is proving to be one of the state’s most dynamic sectors. The sector grew 4.5% year-over-year in June.

Management of Companies and Enterprises is another industry within PBS that is showing consistent growth, up 8% year-over-year in June. Colorado is also home to 26 Fortune 1000 companies, including Arrow Electronics (109th), DISH Network (249th), Ball Corporation (269th), and DaVita Incorporated (357th).

Administrative and Waste Services have grown since suffering the worst losses in the sector during the pandemic. In June 2023, the sector decreased 3.9% year-over-year, or by 6,300 jobs. Despite making up 31% of PBS employment, Administrative and Waste Services consisted of only 18.6% of total wages. Employment in the Employment Services industry fell 8.9% year-over-year, and business Support Services declined 6.9% year-over-year in June. Services to Buildings and Dwellings grew 1.8%.

EDUCATION AND HEALTH SERVICES

The Education and Health Services (EHS) Sector includes private-sector establishments that provide instruction and training by private schools and universities, as well as establishments that provide health care and social assistance to individuals.

EHS GDP totaled an annualized \$34.2 billion in Q1 2023. Real GDP grew in the two sectors: Educational Services (0.8%) and Health Care and Social Assistance (4.1%). Approximately 12.2% of Colorado's workforce is employed in the EHS Sector, the fourth-largest sector in the state; the national average is 16.2%.

Employment in Education and Health Services grew 1.2% (4,200 jobs) in 2022, and growth continued in 2023, with a gain of 0.8% year-over-year in June. Industry employment is projected to increase 10,000 jobs, or 2.8% for the full year. The Educational Services subsector experienced a 1.5% employment increase year-over-year, while the Health Care and Social Assistance subsector was up 0.7%.

Private education makes up 13% of the Education and Health Services Sector. Employment growth in education is expected to be flat this year. This is due to a decline in enrollment numbers for private education institutions.

Health Care and Social Assistance makes up for 87% of Education and Health Services. Hospitals continue to experience significant staffing shortages, especially for nurses. According to the Bureau of Labor Statistics, nurse practitioners, nurse anesthetists, and nurse midwives are the largest growing occupation through 2031, with expectations to grow 40% nationally. A median salary is \$123,780 and growing at a substantial rate. Additionally, employment for medical and health services managers and physicians' assistants is expect-

ed to grow 28%, with a median salary of \$101,340 and \$121,530, respectively. However, labor shortages are a huge contributor to high levels of stress and burnout for healthcare workers.

Colorado Department of Health Care Policy and Financing (HCPF) began Medicaid eligibility redetermination for the first time since COVID in May 2023. In the first month, 120,000 Coloradans were evaluated, and 42% lost coverage. Around 1.7 million people were enrolled in state Medicaid in May, and the department released an estimate that 325,000 will lose coverage.

The COVID pandemic also heralded a mental health crisis. CDC data show a high occurrence of depression among adults post-COVID-19 and the numbers are increasing over time. Colorado passed legislation that allocates \$500 million to mental health in 2022; however, significant structural and systemic barriers still exist to increasing the mental health workforce needed to support demand.

Record high levels of drug shortages across the nation have been impacted by factors, including high demand for "trendy" weight loss drugs (e.g., Ozempic and Wegovy), the over-prescription of antibiotics, and the generic drug market that is lowering prices to edge out domestic suppliers such as Akorn. Generic drug prices have dropped 50% since 2016. The increased demand of generic drugs has raised quality control issues from low-cost overseas manufacturers, specifically in cancer drugs.

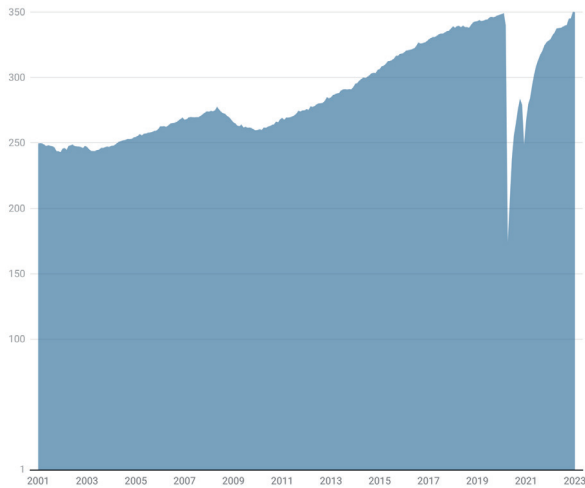


LEISURE AND HOSPITALITY

The Leisure and Hospitality (L&H) sector covers establishments in the tourism, travel, and recreational industries.

Leisure and Hospitality

Employment, Thousands



Source: Bureau of Labor Statistics, Current Employment Statistics • Created with Datawrapper

U.S. Total Retail Sales, Food Services and Drinking Places

Advance Monthly Sales, Billions of Dollars



Source: U.S. Census Bureau • Created with Datawrapper

Real GDP showed strong year-over-year growth in Arts, Entertainment, and Recreation (13.9%), while Accommodation and Food Services decreased 1.7%. This is the fifth-largest sector in Colorado, making up 12.5% of total employment. The industry grew 10.8% (33,000 jobs) in 2022, and growth continued to climb 7.4% in June 2023. The industry is projected to add an average of 14,800 jobs in 2023, a 4.4% increase. The Arts, Entertainment, and Recreation industry recorded modest losses year-over-year in June (-0.2%), while Accommodation and Food Services increased 8.9%. Accommodation and Food Services make up the majority of the sector, accounting for 84.2% of industry jobs. Much debate has been held surrounding the labor shortages preventing these industries from fully recovering from the mass layoffs during the pandemic. Potential causes aside, restaurants, hotels, and other hospitality employers

have lamented being short-staffed.

Food services and drinking places gained 20,900 jobs in 2022. Growth continued in 2023 as the industry added 13,000 jobs year-over-year in June 2023 (5.3%). According to data gathered by the U.S. Census Bureau, national sales at food services and drinking places surged 5.4% in May 2023, an increase of more than \$4.81 billion (seasonally adjusted). Sales increased 15.7% annually in 2022.

With leveling fuel prices and the increasing cost of airline tickets, the AAA travel survey revision reflected more optimism, with tourism and visitations becoming more financially feasible. International travel remains to be seen, with 17% of Colorado respondents planning on taking a trip out of the county.



OTHER SERVICES

The Other Services industry includes automotive repair, car washes, nail salons, barber shops, religious organizations, funeral homes, grantmaking foundations, labor unions, and others.



Industry GDP totaled an annualized \$11.6 billion in Q1 2023. Real GDP increased 0.5% year-over-year. Industry employment grew 4.6% in 2022 and 1.3% in June 2023 year-over-year. The Repair and Maintenance subsector was up 6.5%; Personal and Laundry Services was down 1%; and the largest subsector, Religious, Grantmaking, Civic, Professional, and Similar Organizations, was down 1.9% in June year-over-year. Employment in the Other Services industry is projected to increase 3,400 in 2023 (2.7%).

GOVERNMENT

The Government supersector comprises federal, state, and local government, including higher education institutions and public schools.

GDP from government (federal, state, and local combined) totaled an annualized \$56.6 billion in Q1 2023. Real GDP increased 1.1% year-over-year. Government employment increased 2.8% in 2022. In June 2023, the Government sector employed 467,300 individuals, a year-over-year increase of 4.4%. The annual gains came from federal (2.3%), state (0.5%), and local (6.7%) government. Employment is projected to increase by 20,900 jobs for the year.

The state government subsector includes state agencies and departments, such as the Colorado Department of Transportation and the Colorado Department of Regulatory Agencies, and public universities. State government employment totaled 130,100 in June 2023. The local government subsector includes city, county, school, and special district employees. Local government employment totaled 283,000 in June. Federal government employment totaled 54,200.

The state government has passed the Public Employees' Workplace Protection bill (SB23-111) allowing certain public-sector workers to discuss workplace issues and public employee retention; organize, form, join, or assist in employee organizations; and participate in the political process while off-duty. The bill also prohibits discrimination toward employees for participating in these activities.

Government continues to face similar issues as in years prior. Labor shortages and employee retention are the main concerns while continuing to face the costs of competing with private-sector companies whose benefits and non-monetary compensations outweigh those of the public sector.

INTERNATIONAL TRADE

International trade is seen to have an inverse trend in 2023 from the prior year for import and export prices.

The effects of inflation and an economy have fully recovered from COVID, even with the volatility of trade patterns. Goods exports are on track to be the highest ever. As international trade rebounded significantly in both the U.S. and Colorado from the 2020 recession lows and is expected to further recover, there remains uncertainty that could impact trade in the year ahead—namely, declining inflation, tighter monetary policy, and economic uncertainty.

According to data from the Bureau of Economic Analysis (BEA), U.S. exports grew 7.9% in Q1 2023 year-over-year, and imports declined 2.3%. Colorado exports decreased 1.3% year-over-year in May 2023 according to the U.S.

Census Bureau. Year to date, Colorado’s exports have increased 9.2%, with its largest trading partners being Canada (18.1%), Mexico (14.2%), Switzerland (8.9%), South Korea (8.1%), and China (8.1%). Of these, the countries that have experienced a decrease in exports from Colorado year-over-year are Mexico and South Korea, decreasing by 5.4% and 21.1%, respectively. For May 2023, Colorado exports to Canada increased by 9.7%, while exports to China increased 7.1% year-over-year. Colorado exports to Switzerland had the largest year-over-year increase, at 49.2%. This rapid year-over-year growth brought Switzerland into the top five in exports in May 2023. Exports to Canada through May 2023 year-to-date were up 9%, exports to Mexico increased 13.1%, Switzerland increased 81.9%, South Korea increased 8.2%, and China decreased 4.2% year-to-date. While exports to Colorado’s largest trading partners are growing rapidly year-over-year, it is necessary to consider inflation; we can continue to expect slower growth in export valuations as the price of goods decreases relative to three years ago.

Colorado’s top four exports in 2023 year-to-date through May, accounting for about 62.7% of the total value of state exports, were (in order):

- Food & Kindred Products
- Computer & Electronic Products
- Machinery, except Electrical
- Chemicals

A few select commodities recorded astronomical year-over-year growth in May 2023. Exports of Forestry Products, Nesoi rose 133.6% year-over-year, compared to the same period last year; Oil and Gas increased by 93.3%; and Other Special Classification Provisions increased 76.7% year-over-year. Meanwhile, Fish and Other Marine

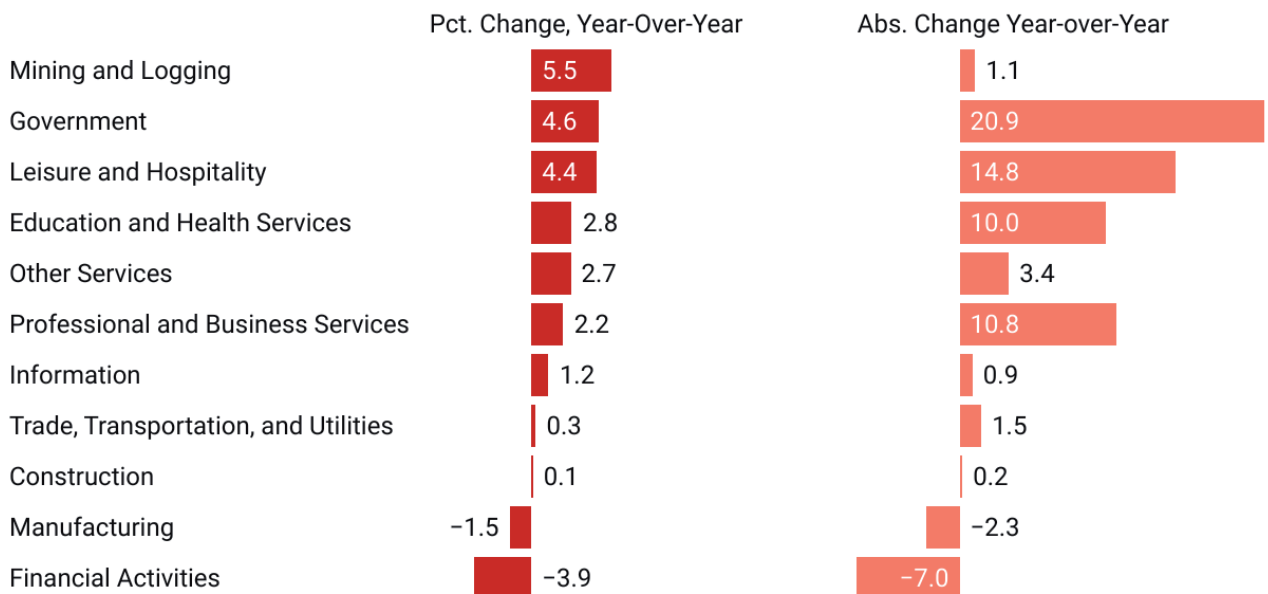


Products fell 67.3%, Livestock and Livestock Product decreased 57.6%, and Minerals and Ores decreased 52.6% year-over-year.

Colorado imports decreased 15.8% in May 2023 year-over-year and are down through May 2023 year-to-date 10.6%. The top three countries that Colorado imports from through May 2023 are (in order): Canada (29.7% of total imports), China (10.2 %), and Mexico (7.9%). The value of imports from Canada decreased 18.5% in May 2023 year-over-year, and 17.6% year-to-date. Imports from China decreased 39% in May 2023 year-over-year and decreased 15.7% year-to-date through May 2023. The value of imports from Mexico decreased 11% in May 2023 year-over-year and dropped 1.7% year-to-date through May 2023.

Nominal data indicate a 5.5% growth for Colorado international trade. However, with the decline in inflation, the real metrics provide a different story—a 13.3% increase in exports from Colorado from 2021 to 2022. Colorado exports, following a similar pattern to national exports, peaked in March of the current year.

Colorado Employment Revised Forecast 2023 YoY



Source: Colorado Business Economic Outlook. • Created with Datawrapper

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