

# Review of Colorado Benchmark Employment 2020



cber.co  
Colorado-based Business and Economic Research  
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# Overview

The purpose of this chartbook is to review a small set of U.S. indicators to show the U.S. economy is slowly recovering from COVID-19 policies. The level of economic activity will be more robust in Q2 and Q3.

It also gauges how COVID-19 policies had different impacts on Colorado industry sectors and MSA areas. As a result, they are recovering at different rates.

## Highlights

### United States

- Real GDP and Industrial Production
- Employment and Unemployment
- Major Indices
- S&P 500 and WTI Oil Prices
- Summary US

### Colorado

- Total Employment Change and Wage-level Categories
- Total Employment Change for High-level Wage Sectors
- Total Employment Change for Mid-level Wage Sectors
- Total Employment Change of MSAs
- Summary Colorado

# Highlights

## Key Points

- The reduction in COVID-19 cases, the rollout of the vaccine, and federal stimulus have improved economic activity and the labor market.
- The equity markets remain strong.
- The price of oil has increased.
- The labor market is improving unevenly.
- In Colorado the most significant number of job losses related to COVID-19 policy are in the Denver, Colorado Springs, and Boulder MSAs.
- The sectors with the highest rate of job recovery are financial activities, MCE, PST, TWU, federal government, and retail trade.
- The sectors with the lowest rate of job recovery are the extractive industries, state government, information, local government, leisure and hospitality, administrative services, private education, and other services.
- There has been a tendency for sectors with higher wages to recover more quickly.

## Questions and Concerns

- Will vaccinations continue to be delivered and will they be effective?
- What disruptions will occur in the supply chains that can be attributed to COVID-19?
- Fears of inflation or stagflation
- How long will interest rates remain low?
- How will stimulus programs impact the economy?
- What adjustments will the Federal Reserve make?
- How will demand be affected by spending patterns in 2020?
- How will low-wage workers be affected?

# The United States Economy



# Real Gross Domestic Product and Industrial Production United States

## Key Points

The near-term forecasts for economic activity continue to improve. Real GDP will grow by 5.5% in 2021. The value of real GDP will return to pre-COVID levels in Q2 of 2021. It will take U.S. employment much longer to return to pre-COVID levels, most likely late 2022 or 2023.

During 2020, industrial production was volatile. Growth will be much more robust in Q2 and Q3 as the volatility subsides.

# U.S. Real GDP Growth

## The Conference Board Forecast (March 11, 2021)

### Real GDP in 2021

Over the past six months, there have been upward revisions to the U.S. economic forecasts. The Conference Board March 11 forecast calls for real GDP growth of 3.0% in Q1 2021, down from 4.1% in Q4 2020. Real GDP growth for 2021 will be 5.5%, with an increase in personal consumption of 6.2%. There will be strong growth in the housing market. Also, real investment will increase in 2021. The value of real GDP will return to pre-pandemic levels in Q2 2021.

### Assumptions of the Forecast

Forecast assumptions call for the number of new COVID-19 cases to decline as the vaccine proves to be effective. As a result, there will be a reduction in the number of restrictions. State and federal stimulus programs will support increased personal consumption and business investment. Also, the labor markets will improve as the year progresses with the strongest level of growth in Q2 and Q3. Economic activity will taper off to a more modest level in 2022.

**Conference Board 2021 US Real GDP Growth Forecast**

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	2019	2020	2021
<b>Real GDP</b>	- 5.0%	- 31.4%	33.4%	4.1%	3.0%	8.5%	6.9%	4.8%	2.2%	- 3.5%	5.5%
<b>Personal Consumption</b>	- 6.9%	- 33.2%	41.0%	2.4%	3.9%	9.9%	7.9%	5.1%	2.4%	- 3.9%	6.3%
<b>Residential Investment</b>	19.0%	- 35.5%	63.0%	35.0%	20.0%	16.0%	10.0%	7.0%	-1.7%	6.0%	19.5%
<b>Real Capital Spending</b>	- 6.7%	- 27.2%	22.9%	14.0%	7.5%	8.5%	7.3%	6.3%	2.9%	- 4.0%	7.9%
<b>Exports</b>	- 9.5%	- 64.4%	59.6%	21.8%	10.2%	8.6%	7.1%	6.6%	-0.1%	- 13.0%	8.2%

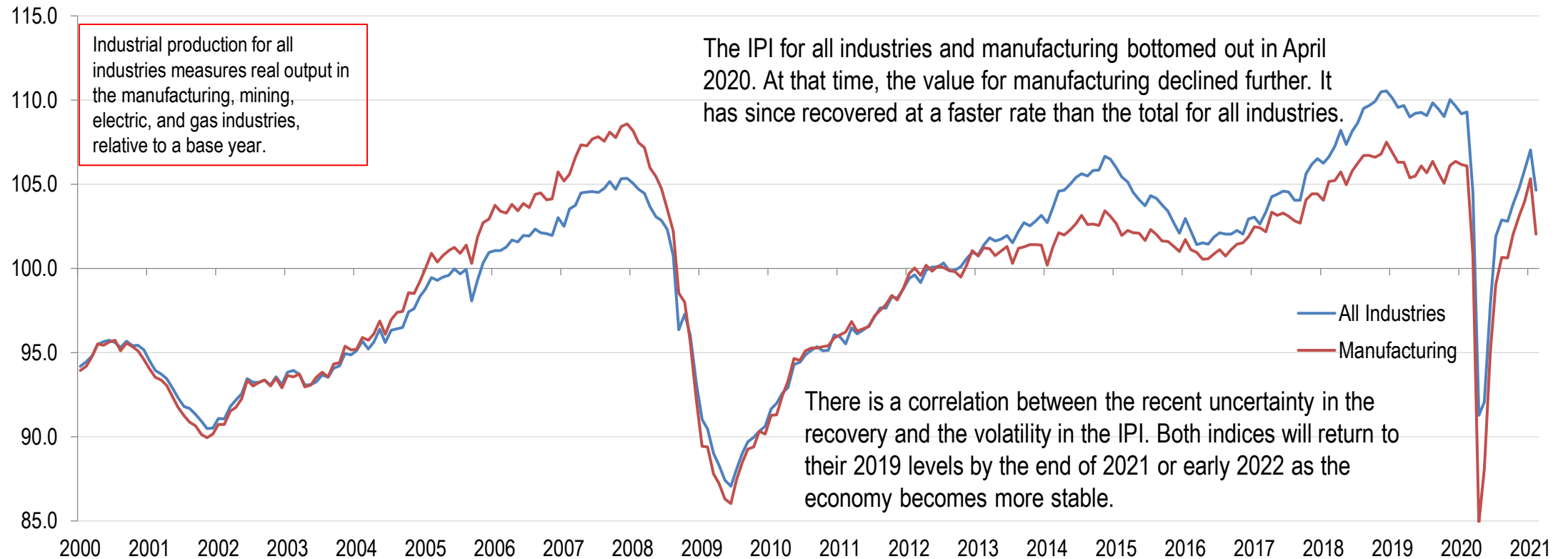
Source: The Conference Board and cber.co.

# Industrial Production Index

## All Industries and Manufacturing

**Industrial Production, All Industries and Manufacturing**

Index, 2012 = 100



Source: FRED, Federal Reserve, SA, cber.co.

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# Employment and Unemployment

## United States and Colorado

### Key Points

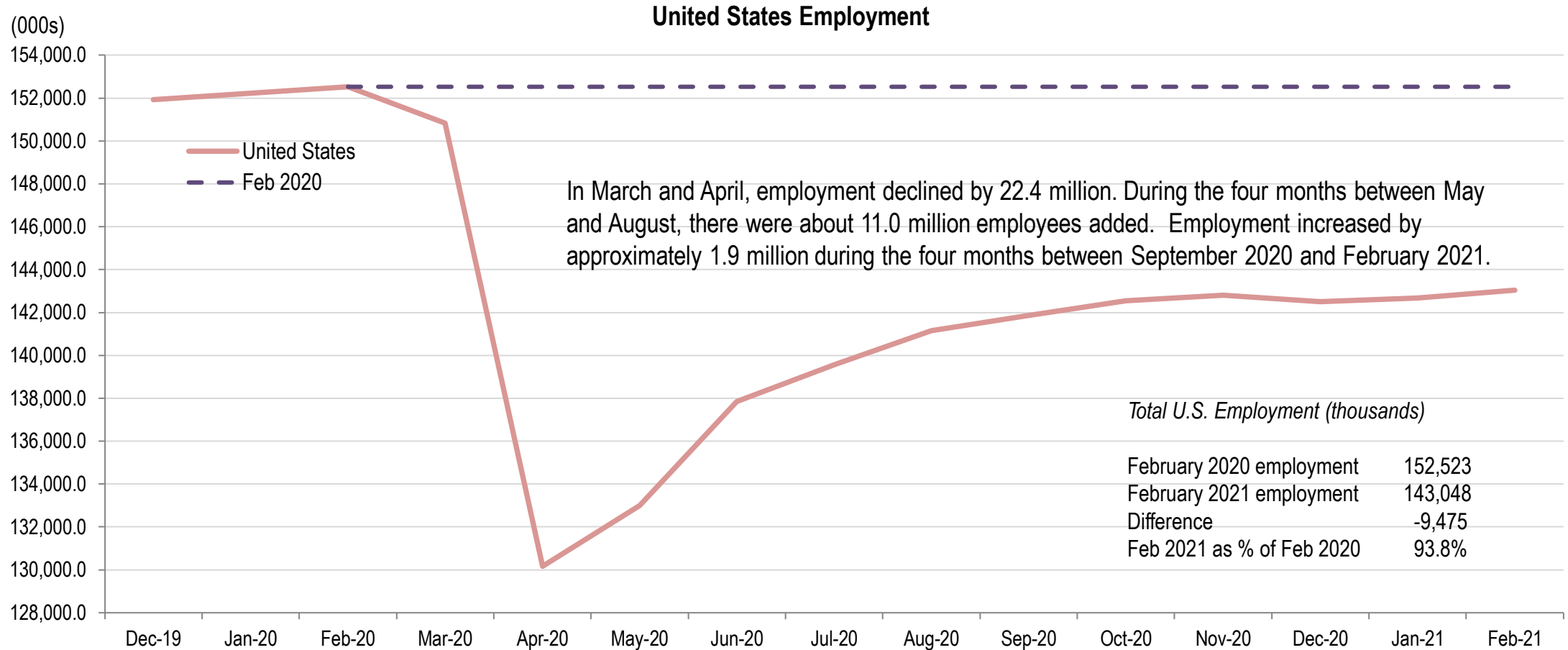
U.S. employment in February 2021 was 93.8% of the total for February 2020.

The recovery is different across the U.S., as seen by the wide range of state unemployment rates. The range varies from 3.1% for South Dakota and Utah to 10.2% for Hawaii. Colorado is ranked 36<sup>th</sup> with an unemployment rate of 6.6%.



# Change in Employment

## United States



Source: Bureau of Labor Statistics, cber.co.

# Unemployment Rates by States

January 2021

Unemployment Rate < 4.7%			Unemployment Rate Between 4.7% and 6.6%		
Rank	State	Rate	Rank	State	Rate
1	South Dakota	3.1%	18	Florida	4.8%
2	Utah	3.1%	19	Georgia	5.1%
3	Nebraska	3.2%	20	Tennessee	5.1%
4	Vermont	3.2%	21	Wyoming	5.1%
5	Idaho	3.4%	22	Maine	5.2%
6	Iowa	3.5%	23	Kentucky	5.3%
7	Kansas	3.5%	24	Ohio	5.3%
8	New Hampshire	3.6%	25	South Carolina	5.3%
9	Wisconsin	3.8%	26	Virginia	5.3%
10	Montana	4.0%	27	Michigan	5.7%
11	Indiana	4.2%	28	North Carolina	5.9%
12	Alabama	4.3%	29	Delaware	6.0%
13	Missouri	4.3%	30	Washington	6.0%
14	Oklahoma	4.3%	31	Oregon	6.2%
15	Minnesota	4.5%	32	Maryland	6.4%
16	North Dakota	4.5%	33	Mississippi	6.4%
17	Arkansas	4.6%	34	West Virginia	6.5%

In January, the U.S. unemployment rate dropped to 6.3%. Thirty-four states had unemployment rates lower than 6.7% (green).

Eighteen states had an unemployment rate of 5.0% or less. Only one state had unemployment rates in double digits.

About 17% of the U.S. labor force is in the 17 states, with unemployment rates less than 4.7% (column 1).

About 35% of the U.S. labor force is in the 17 states, with unemployment rates between 4.7% and 6.6% (column 2).

About 48% of the U.S. labor force is in the 16 states and D.C., with unemployment rates greater than 6.5% (column 3).

The states with the largest labor forces are CA, TX, FL, NY, PA, IL, OH, GA, NC, and MI. About 53% of the U.S. labor force resides in these 10 states.

Unemployment Rate is > 6.5%		
Rank	State	Rate
35	Alaska	6.6%
36	Colorado	6.6%
37	Arizona	6.7%
38	Texas	6.8%
39	Rhode Island	7.2%
40	Pennsylvania	7.3%
41	Louisiana	7.6%
42	Illinois	7.7%
43	Massachusetts	7.8%
44	New Jersey	7.9%
45	Connecticut	8.1%
46	Nevada	8.1%
47	District of Columbia	8.4%
48	New Mexico	8.7%
49	New York	8.8%
50	California	9.0%
51	Hawaii	10.2%

Source: Bureau of Labor Statistics, cber.co.

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# Major Indices

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

## Key Points

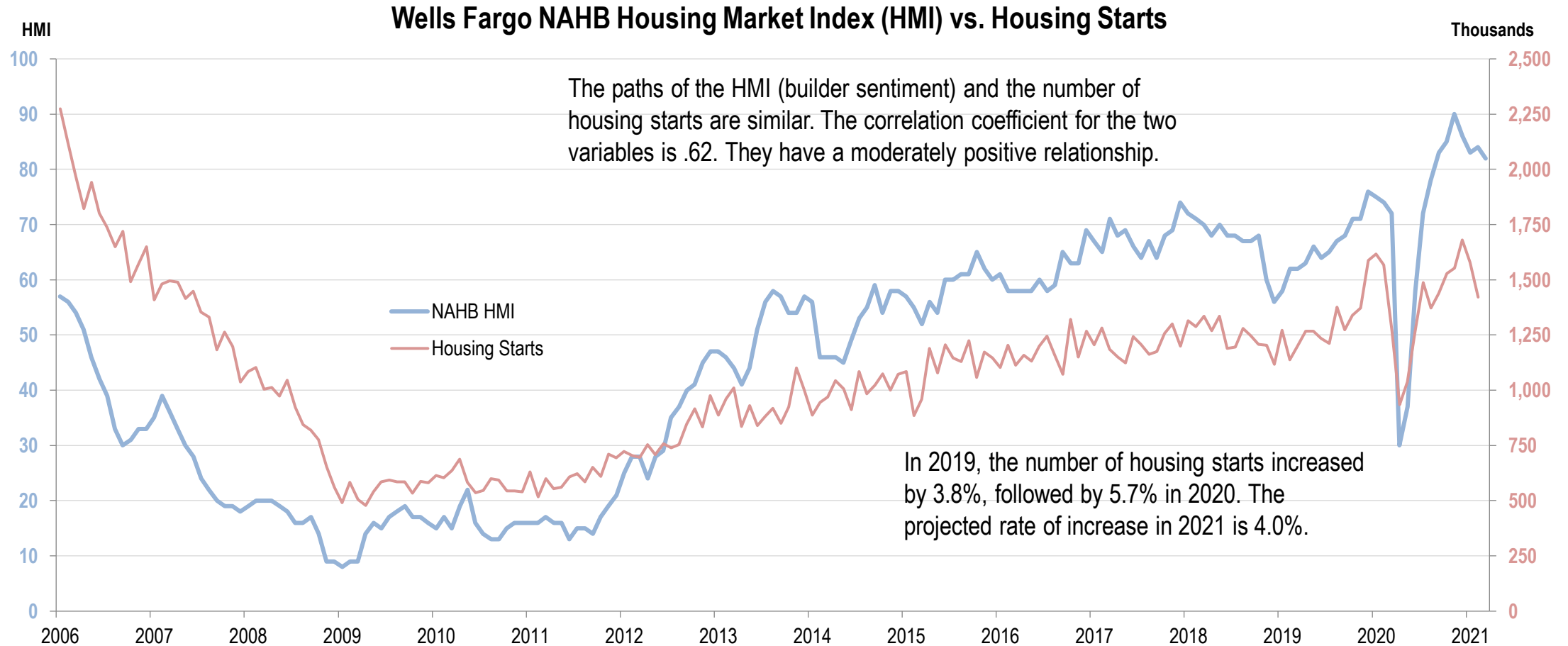
The housing market was strong in 2020. Growth will continue at a modest pace in 2021.

The Michigan Consumer Sentiment Index has remained flat for four months.

The NFIB Small Business Optimism Index has remained flat for several months.

The indices for manufacturing and services are in expansionary territory.

# Wells Fargo NAHB HMI vs. Housing Starts

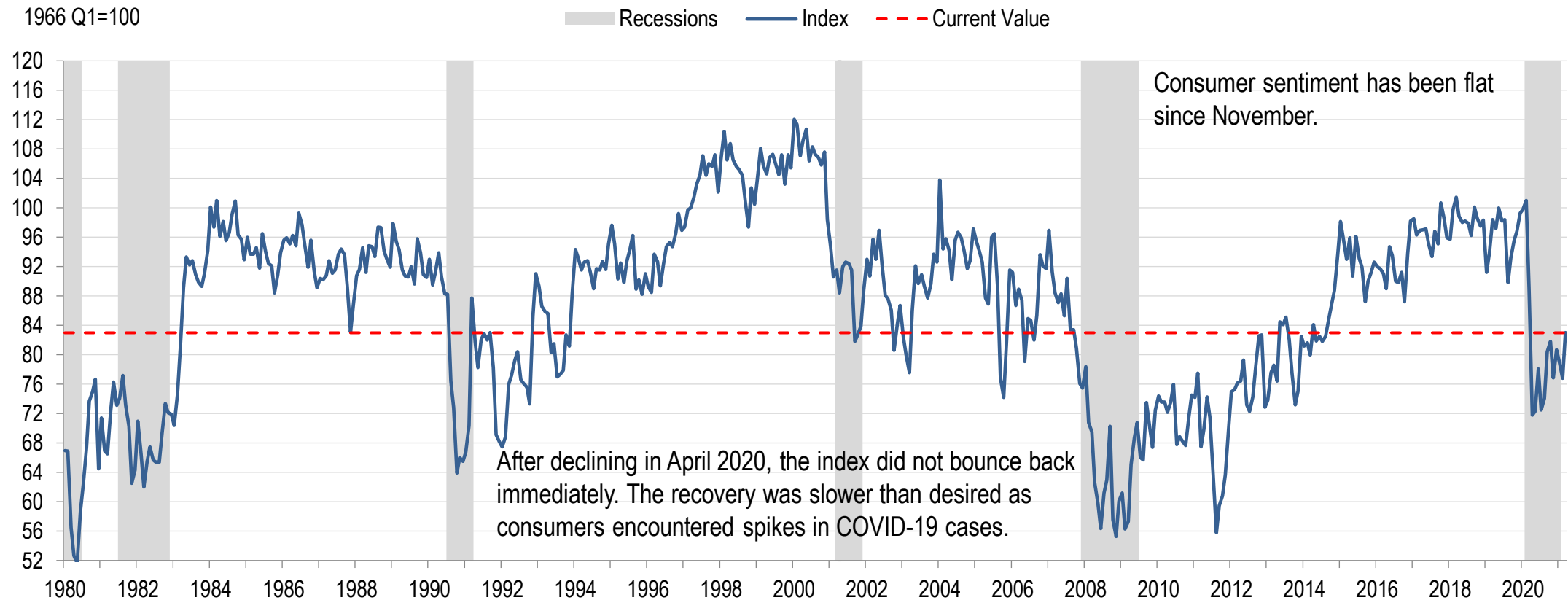


Source: NAHB, cber.co.

# Consumer Sentiment Index

University of Michigan

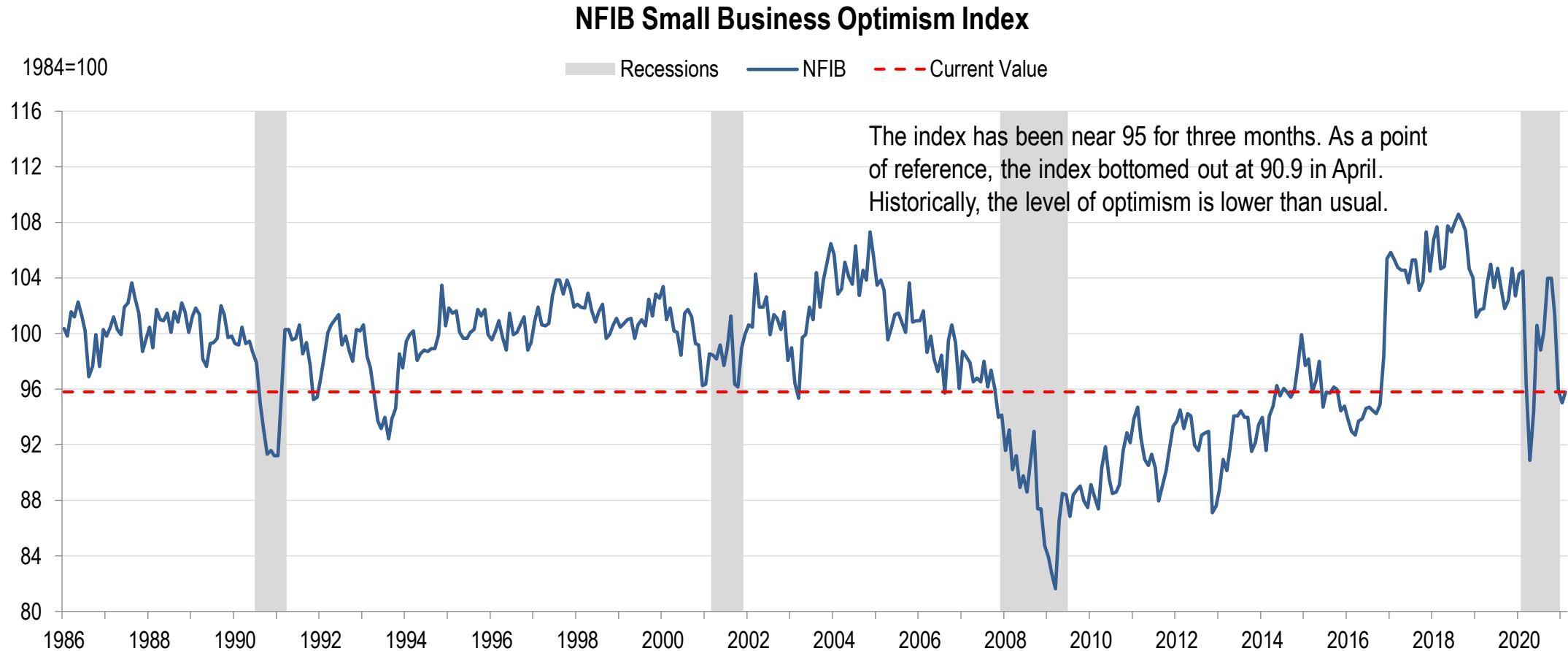
## Michigan Consumer Sentiment Index



Source: University of Michigan, cber.co.

# NFIB Small Business Optimism Index

## United States

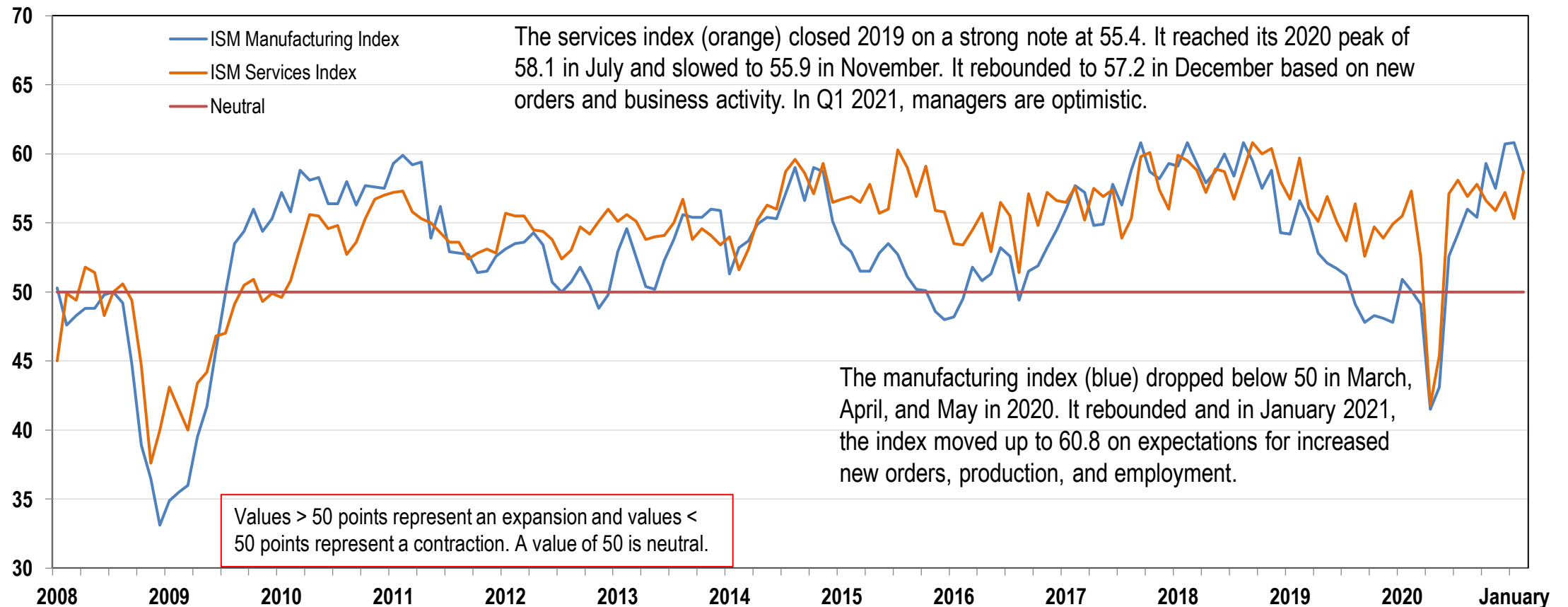


Source: NFIB, cber.co.

# 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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# S&P 500 Index and WTI Crude Oil Prices

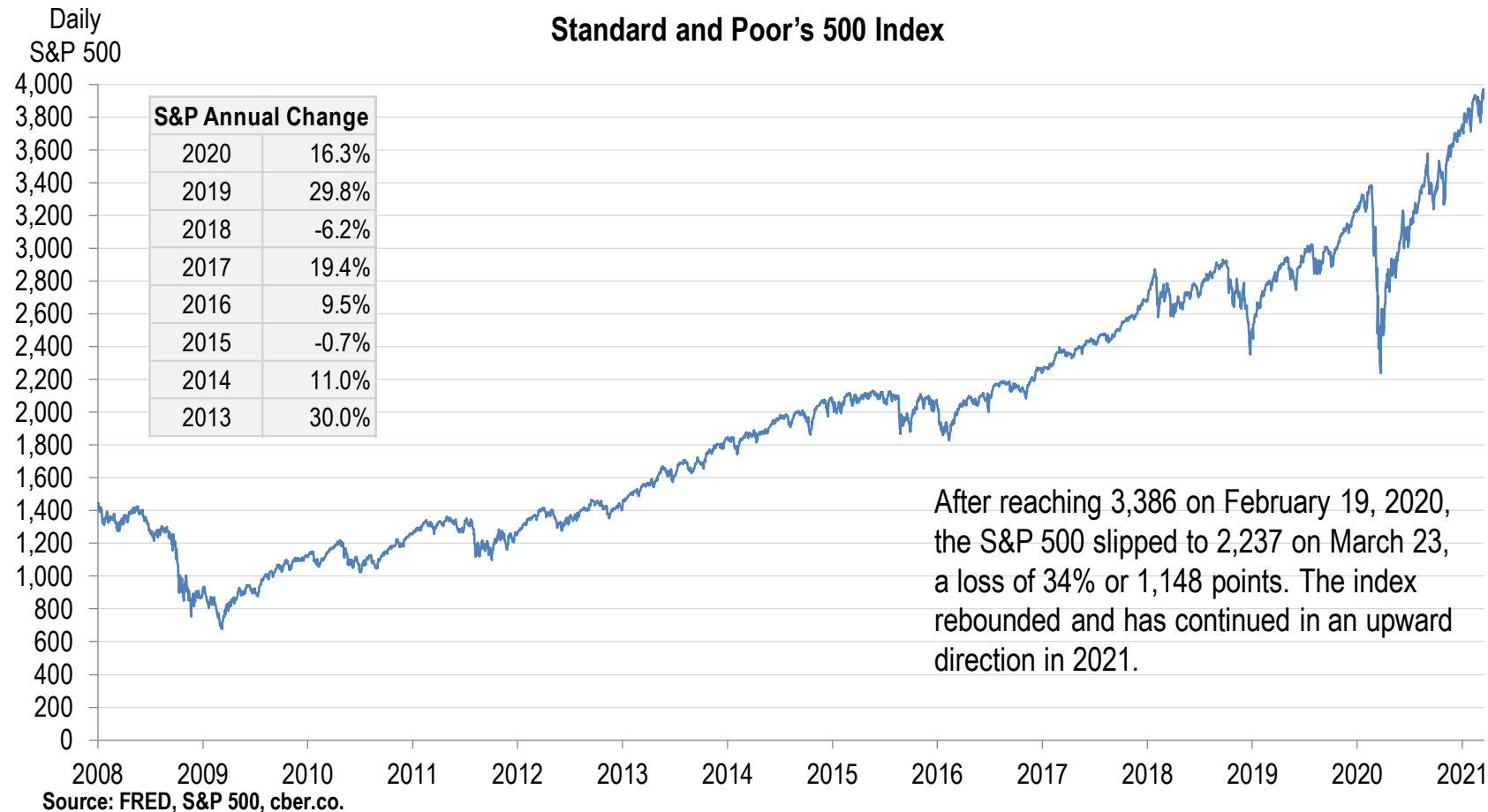
## Key Points

The S&P Index posted double-digit gains in 2020. Growth will continue in 2021.

In 2020 the price for a barrel of oil declined because of lower demand. Oil was in the \$40 range through the second half of the year and approached \$50 near the end of 2020. In mid-February, it topped \$60 per barrel.



# Standard and Poor's 500 Index

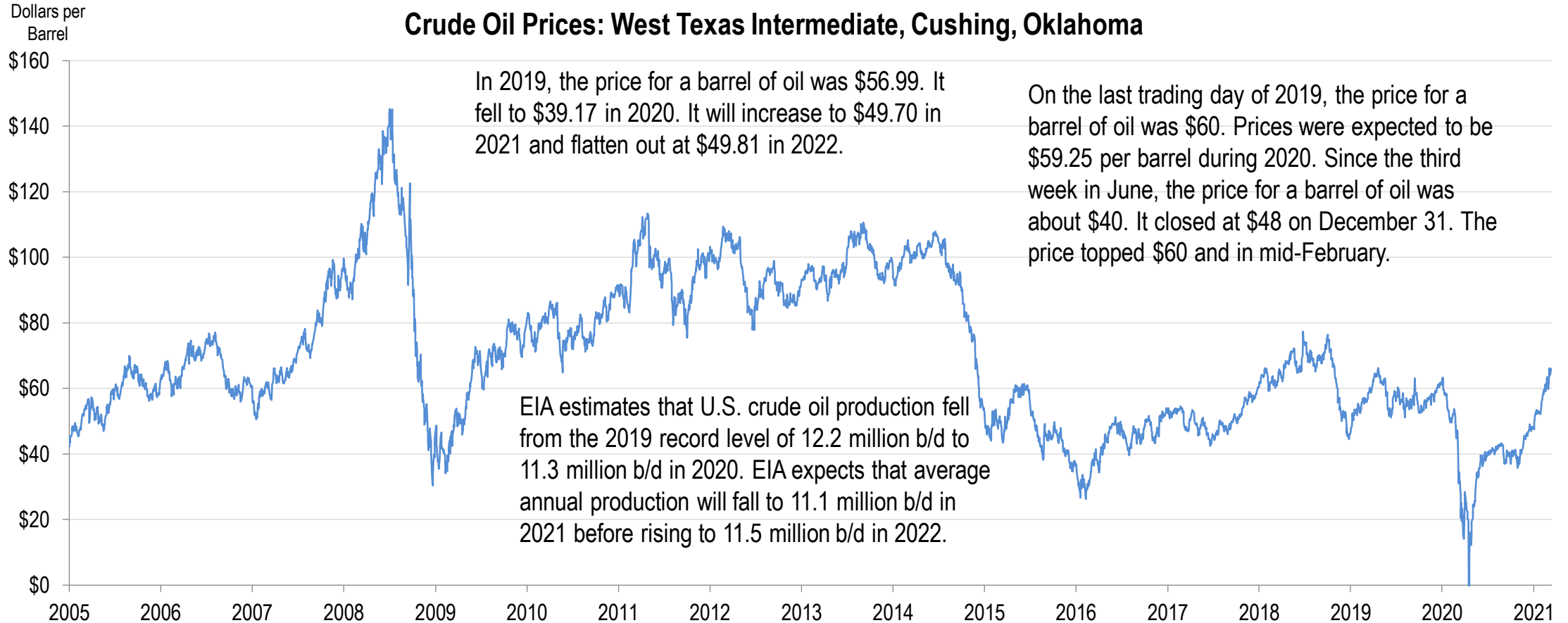


## Various Thoughts About the Equity Markets in 2021

- Inflation/Stagflation
- Resilience
- Watch the P/E ratio
- Uncertainty
- Stimulus
- Change in tax policy
- New opportunities to invest
- Caution
- Biden economic policies
- Be aware of increased regulations
- Opportunities with recovery stocks
- The gap between Wall Street and Main Street is increasing
- Equity markets will increase at a rate significantly less than 2020

# Crude Oil Prices

## West Texas Intermediate



Source: FRED, EIA, cber.co.

# Summary

United States

# Summary

## United States

Real GDP growth for 2021 will reach its highest level in Q2 or Q3. The value of real GDP will return to its pre-pandemic level in the second half of 2021.

A similar pattern will occur in the labor market. As more people are vaccinated, the economy will open further, and more people will return to work. The highest level of job growth will occur in mid-year.

Total employment will return to its 2019 level in 2022 or 2023. The unemployment rate will continue to decline.

	U.S. Forecast			
	2019	2020	2021	2022
<b>Real GDP Value (trillions)</b>	\$19.09	\$18.42	\$19.48	\$20.16
<b>% Change Real GDP</b>	2.2%	-3.5%	5.5%	3.5%
<b>% Change in Personal Consumption</b>	2.4%	-3.8%	6.3%	3.5%
<b>CES Employment (millions)</b>	150.9	142.2	146.7	149.7
<b>Annual Change (millions)</b>	2.03	-8.82	4.50	3.00
<b>% Change</b>	1.3%	-5.8%	3.2%	2.0%
<b>Unemployment Rate</b>	3.7%	8.1%	6.4%	5.3%
<b>Retail Sales (billions)</b>	\$5.462	\$5.582	\$5.833	\$6.037
<b>% Change</b>	3.5%	2.2%	4.5%	3.5%
<b>Light Vehicle Sales (millions)</b>	17.0	14.5	15.7	16.5
<b>Consumer Price Index</b>	1.8%	1.2%	1.9%	2.1%
<b>Housing Starts (millions) SAAR</b>	1.29	1.38	1.43	1.46
<b>WTI Price of Oil (price per barrel)</b>	\$56.99	\$39.17	\$49.70	\$49.81
<b>Crude Oil Production (million b/d)</b>	12.2	11.3	11.1	11.5

Personal consumption will become positive in 2021. Pent-up demand and stimulus support will drive retail sales higher. Both will return to pre-pandemic levels in 2022.

Light vehicle sales will gradually improve and return to 17 million units in 2023.

Inflation will remain near the Federal Reserve's target of 2.0%.

The number of housing starts will increase in 2021 as interest rates remain low.

Crude oil production and prices will remain flat in 2021. They will post slight increases in 2022.

Source: FRED, BEA, BLS, Census Bureau, EIA, cber.co.

# Colorado Employment



# Colorado Employment

## Change in Total Employment and Wage Categories

### Key Points

The December 2020 seasonally adjusted employment data for Colorado was 192,300 less than February 2020. The December value was 93.2 % of the February total.

Sectors with high-level average wages are recovering faster (97.1%) than sectors with mid-level average wages (96.2%) and sectors with lower-level average wages (86.5%). The high-wage sectors account for 25% of the jobs compared to 44% for mid-wage sectors. Low-wage sectors account for about 31% of total employment.

# Change in Employment

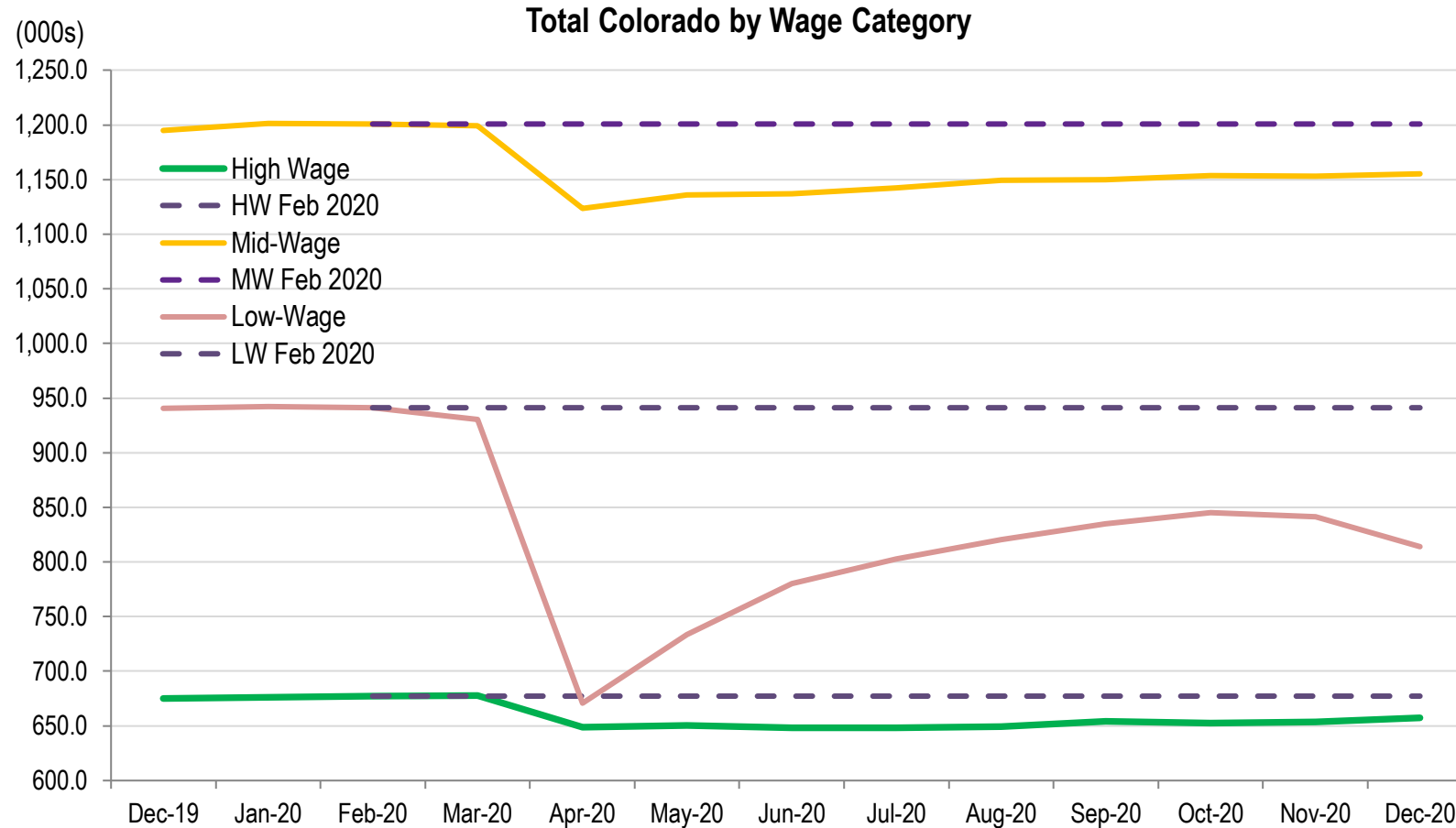
## Colorado



Source: Bureau of Labor Statistics, cber.co.

# Change in Employment

## Total Colorado by Wage Category



Mid-Wage (thousands) YELLOW 44% of Total

February 2020 employment	1,200.6
December 2020 employment	1,155.4
Difference	-45.2
December as % of February	96.2%

Low-Wage (thousands) PINK 31% of Total

February 2020 employment	941.4
December 2020 employment	814.0
Difference	-127.4
December as % of February	86.5%

High-Wage (thousands) GREEN 25% of Total

February 2020 employment	677.0
December 2020 employment	657.3
Difference	-19.7
December as % of February	97.1%

Source: Bureau of Labor Statistics, cber.co.



# Colorado Employment

## Change in Total Employment for High-level Wage Sectors

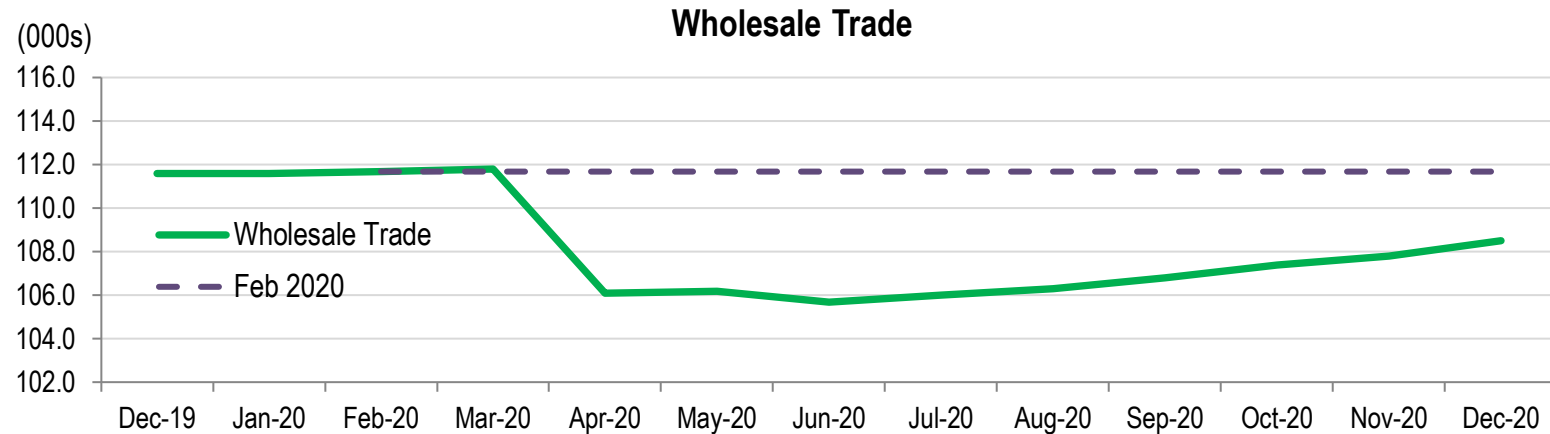
### Key Points

This section compares February 2020 through December 2020 seasonally adjusted employment for six sectors. It looks at only the sectors with high-level average wages.

The MCE sector surpassed its pre-pandemic employment level. PST and financial activities should surpass it in 2021. Wholesale trade and information will surpass it in 2021 or 2022. Natural resources and mining is facing numerous challenges.

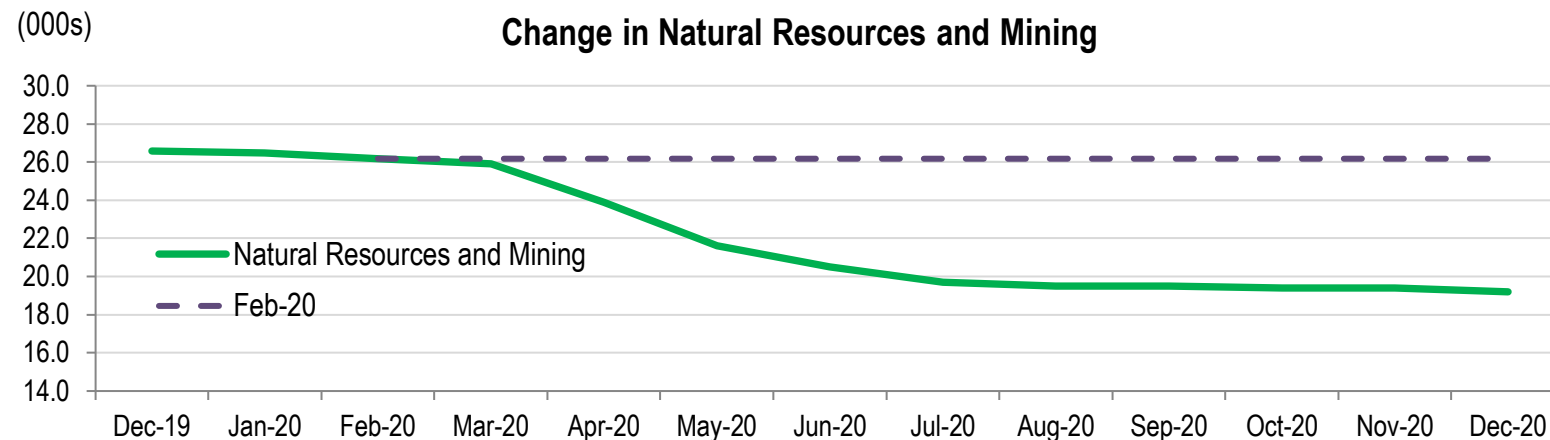
# Change in Employment

## Wholesale Trade and Natural Resources and Mining



*Wholesale Trade (thousands)*

February 2020 employment	111.7
December 2020 employment	108.5
Difference	-3.2
December as % of February	97.1%



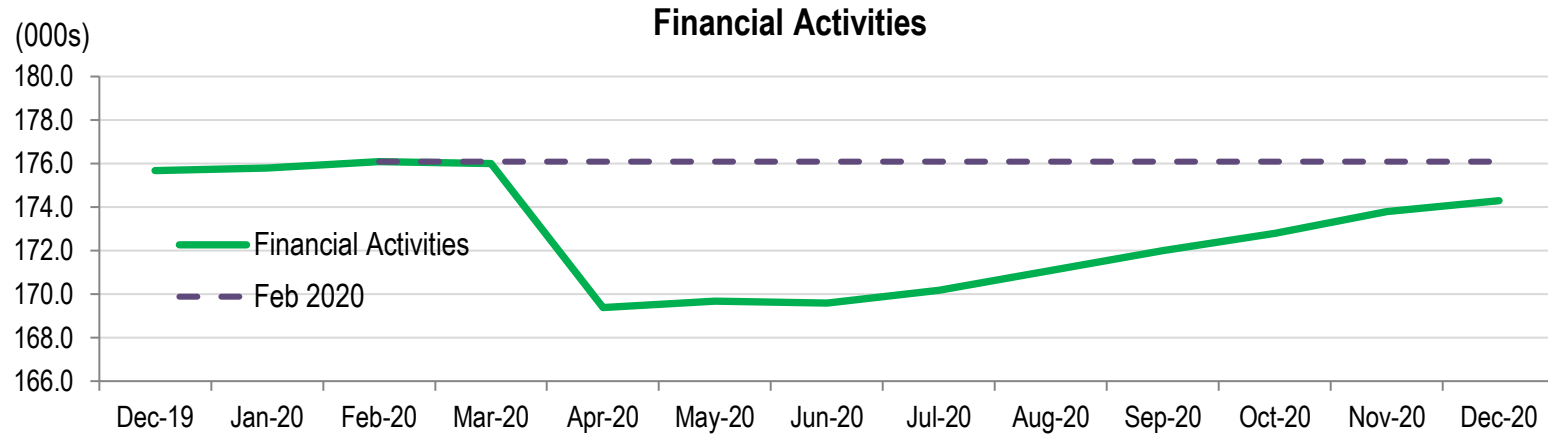
*Natural Resources and Mining (thousands)*

February 2020 employment	26.2
December 2020 employment	19.2
Difference	-7.0
December as % of February	73.3%

Source: Bureau of Labor Statistics, cber.co.

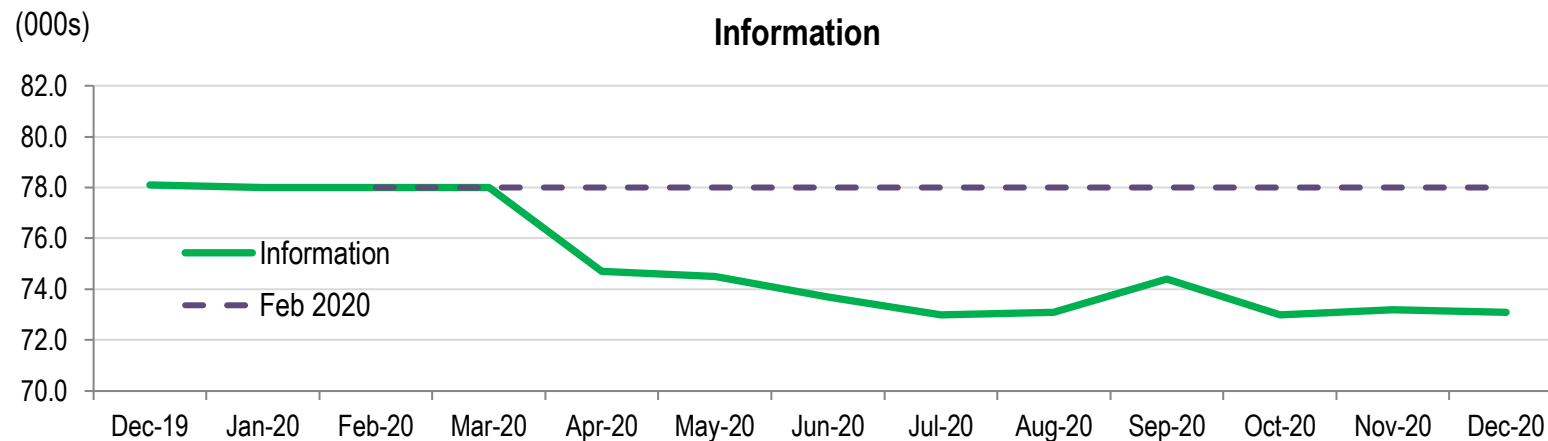
# Change in Employment

## Financial Activities and Information



*Financial Activities (thousands)*

February 2020 employment	176.1
December 2020 employment	174.3
Difference	-1.8
December as % of February	99.0%



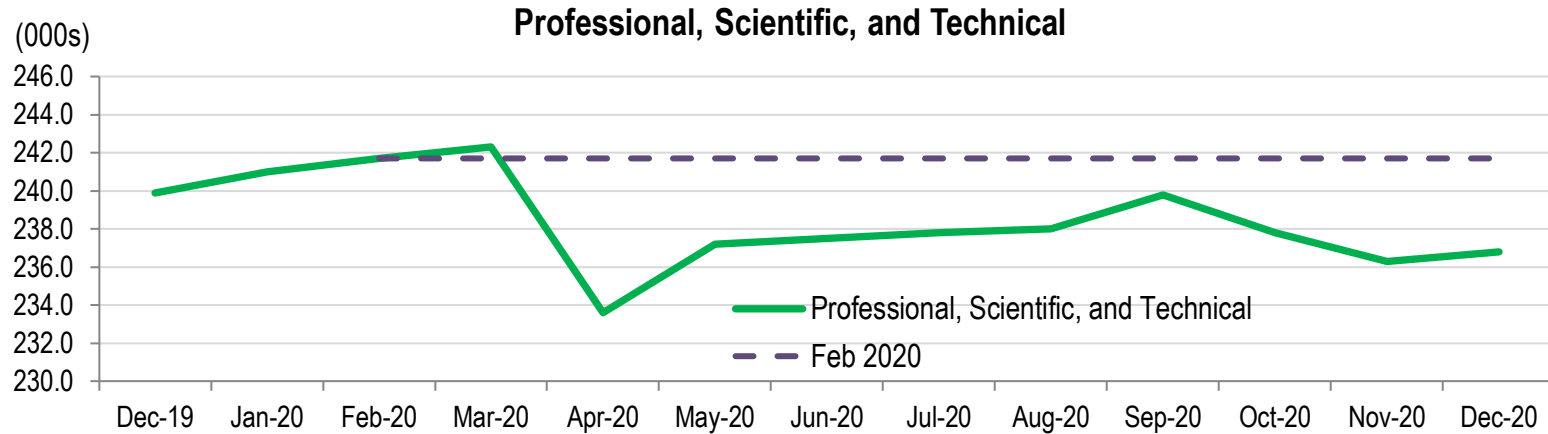
*Information (thousands)*

February 2020 employment	78.0
December 2020 employment	73.1
Difference	-4.9
December as % of February	93.7%

Source: Bureau of Labor Statistics, cber.co.

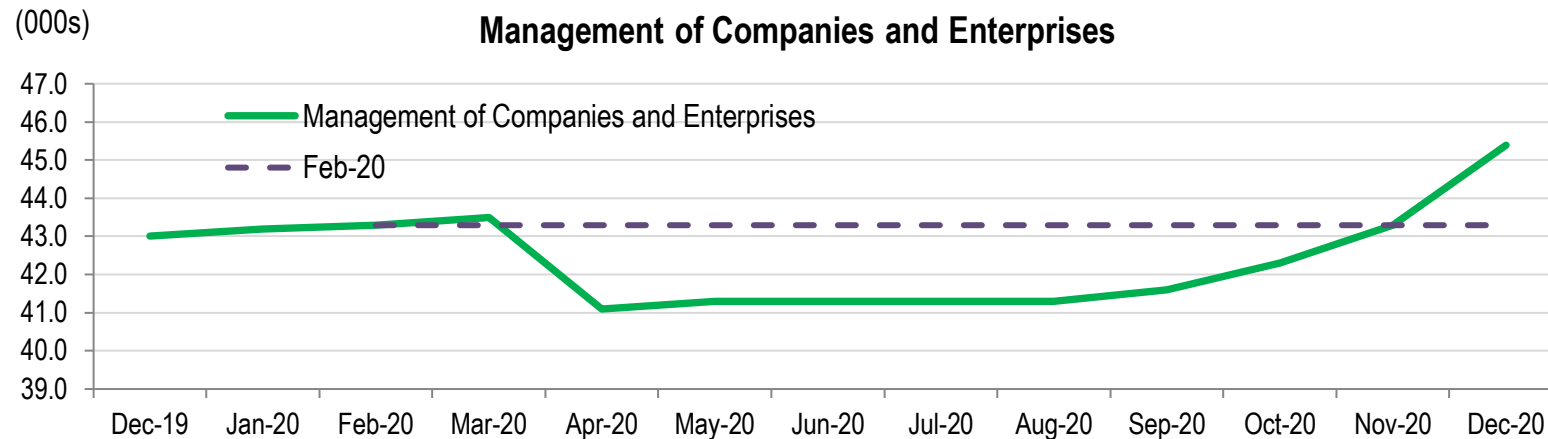
# Change in Employment

## PST and MCE



*PST (thousands)*

February 2020 employment	241.7
December 2020 employment	236.8
Difference	-4.9
December as % of February	98.0%



*MCE (thousands)*

February 2020 employment	43.3
December 2020 employment	45.4
Difference	+2.1
December as % of February	104.8%

Source: Bureau of Labor Statistics, cber.co.

# Colorado Employment

## Change in Total Employment for Mid-level Wage Sectors

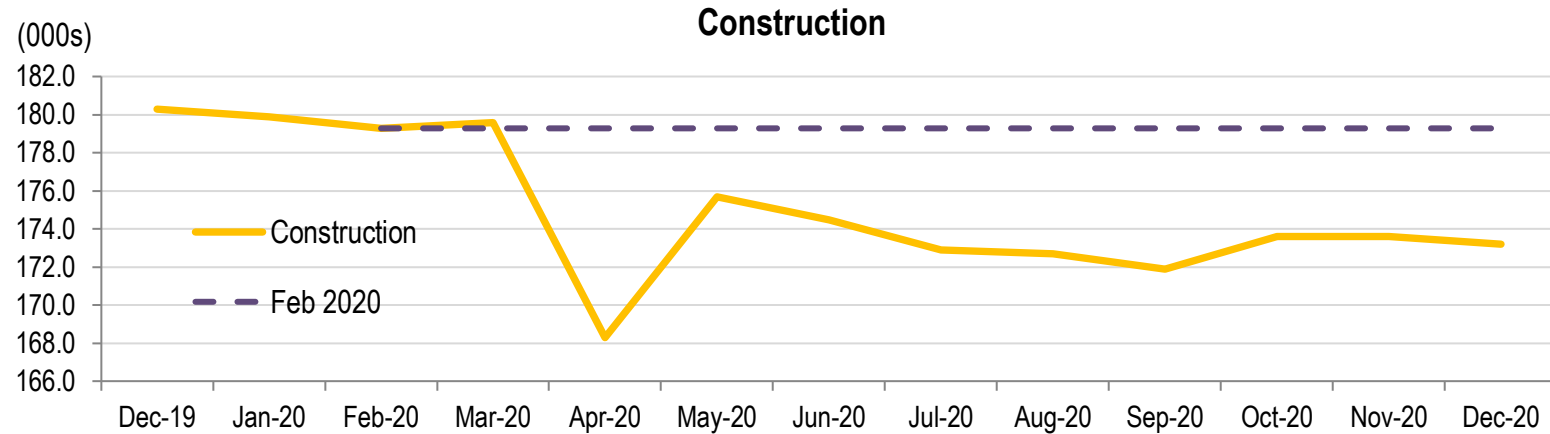
### Key Points

This section compares February 2020 through December 2020 seasonally adjusted employment for six sectors. It looks at only the sectors with mid-level average wages.

The top sector in the recovery was TWU. This is a result of the number of warehousing jobs. Construction, manufacturing, and healthcare will return to pre-pandemic levels in 2021 or 2022. State government employment will remain below its pre-pandemic levels through 2022.

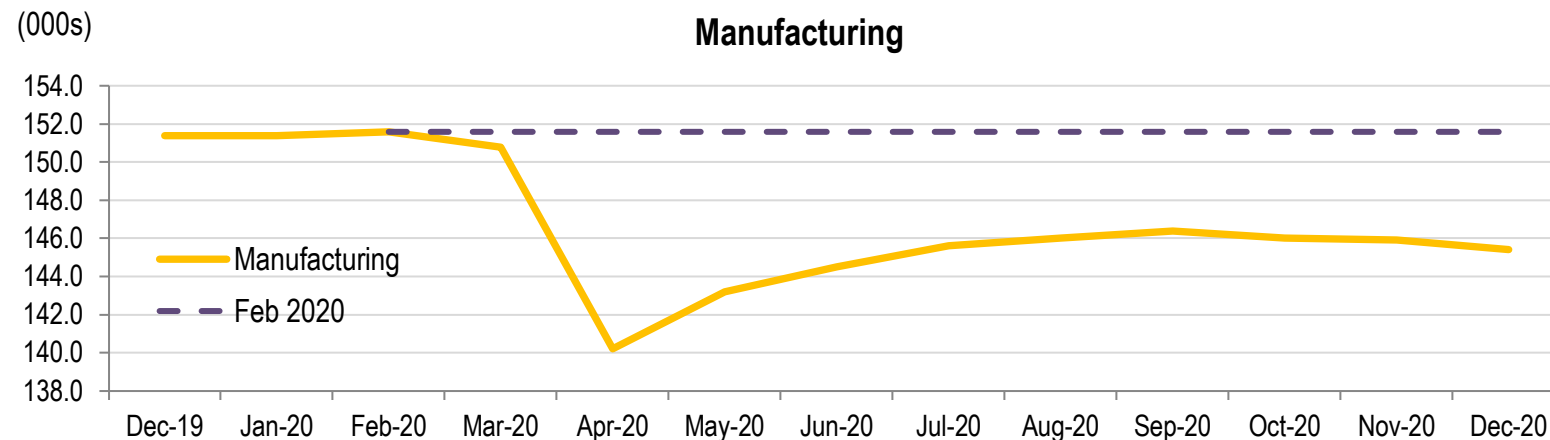
# Change in Employment

## Construction and Manufacturing



*Construction (thousands)*

February 2020 employment	179.3
December 2020 employment	173.2
Difference	-6.1
December as % of February	96.6%



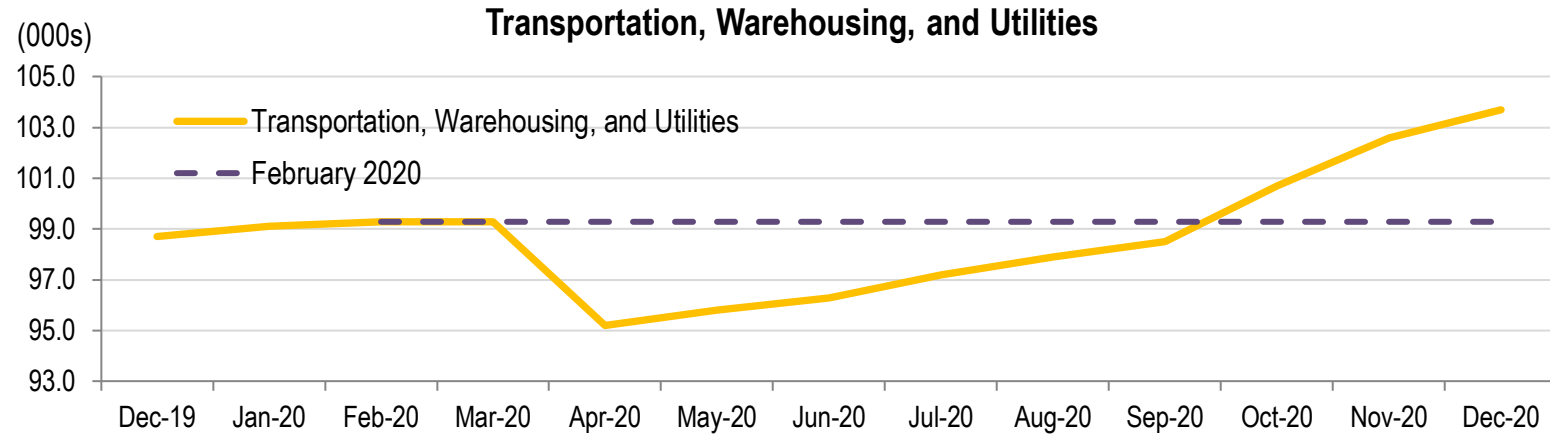
*Manufacturing (thousands)*

February 2020 employment	151.6
December 2020 employment	145.4
Difference	-6.2
December as % of February	95.9%

Source: Bureau of Labor Statistics, cber.co.

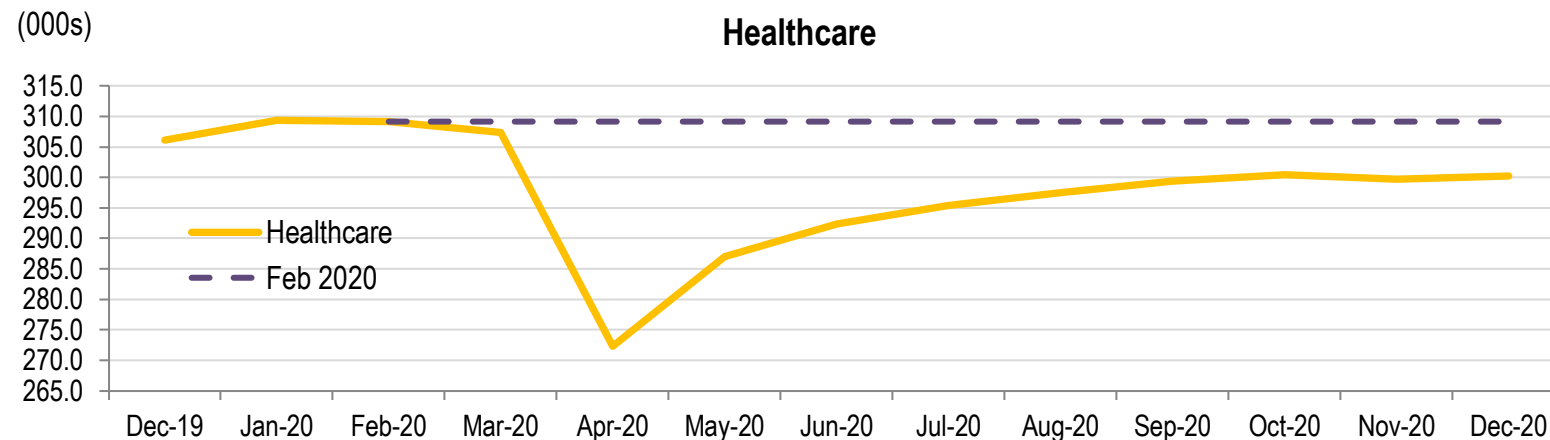
# Change in Employment

## TWU and Healthcare



*TWU (thousands)*

February 2020 employment	99.3
December 2020 employment	103.7
Difference	+4.4
December as % of February	104.4%



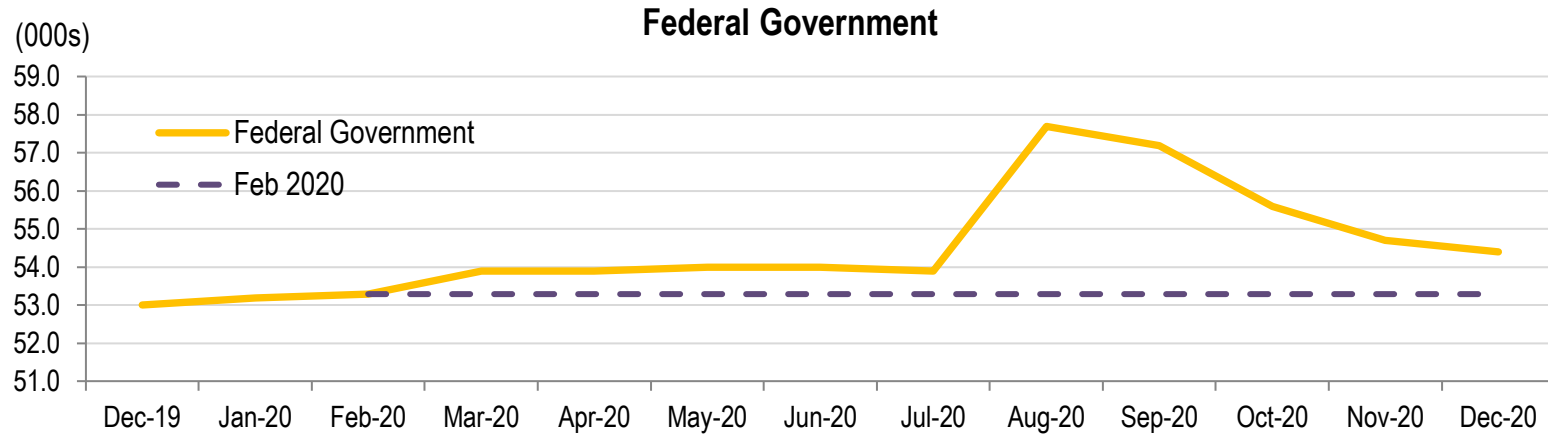
*Healthcare (thousands)*

February 2020 employment	309.2
December 2020 employment	300.2
Difference	-9.0
December as % of February	97.1%

Source: Bureau of Labor Statistics, cber.co.

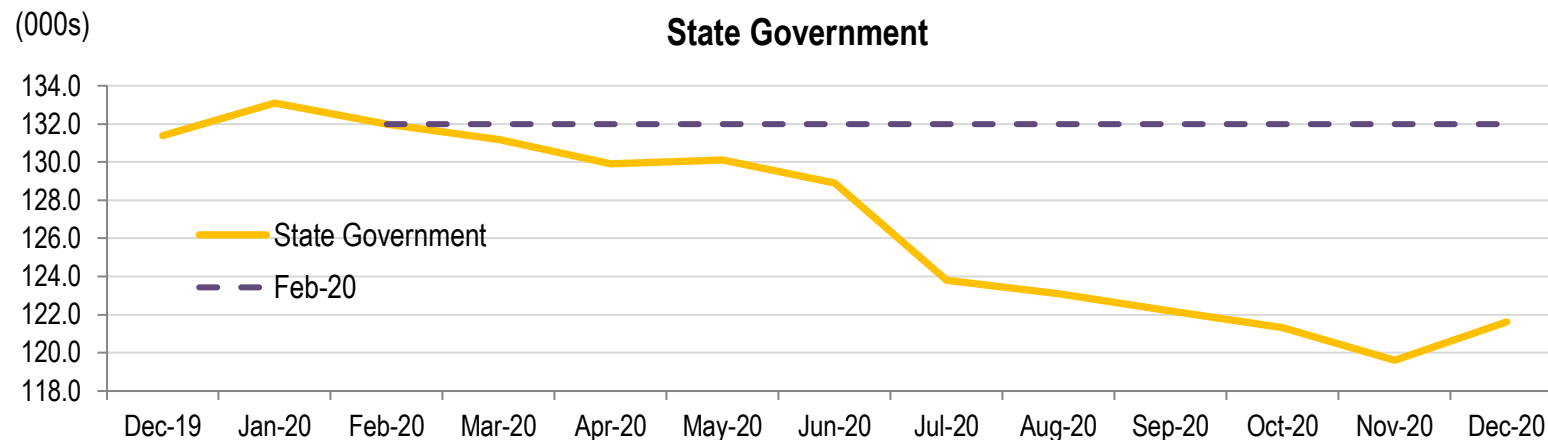
# Change in Employment

## Federal and State Government



*Federal Government (thousands)*

February 2020 employment	53.3
December 2020 employment	54.4
Difference	+1.1
December as % of February	102.1%



*State Government (thousands)*

February 2020 employment	132.0
December 2020 employment	121.6
Difference	-10.4
December as % of February	92.1%

Source: Bureau of Labor Statistics, cber.co.



# Colorado Employment

## Change in Total Employment for Low-level Wage Sectors

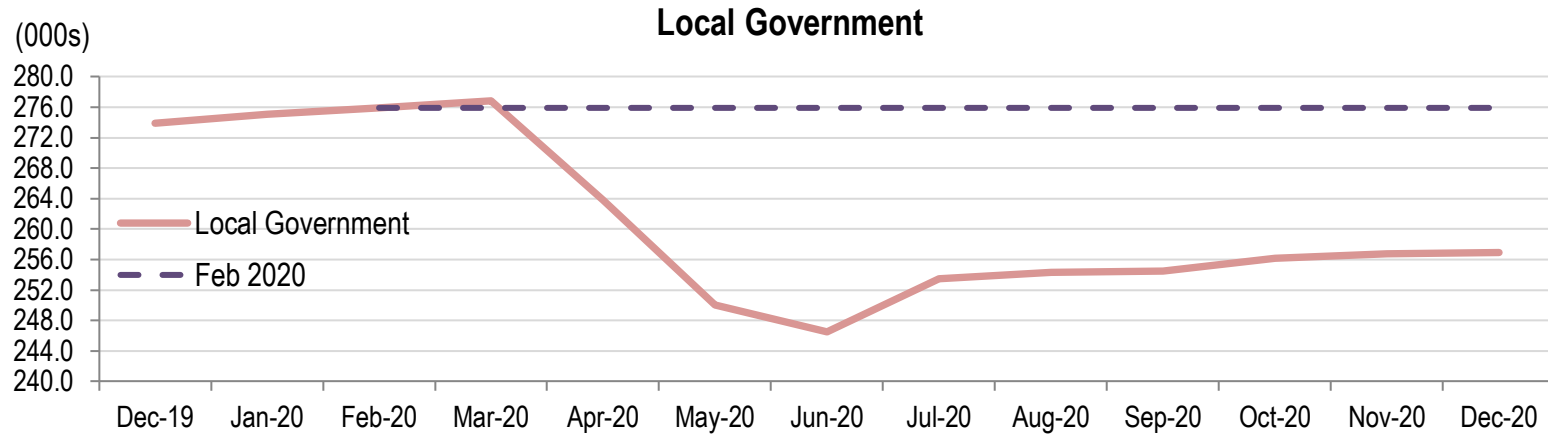
### Key Points

This section compares February 2020 through December 2020 seasonally adjusted employment for seven sectors. It looks at only the sectors with low-level average wages.

Surprisingly, the top sector was retail trade. All other sectors will remain below their pre-pandemic level through 2021. The hospitality industry will not recover until 2022 or 2023.

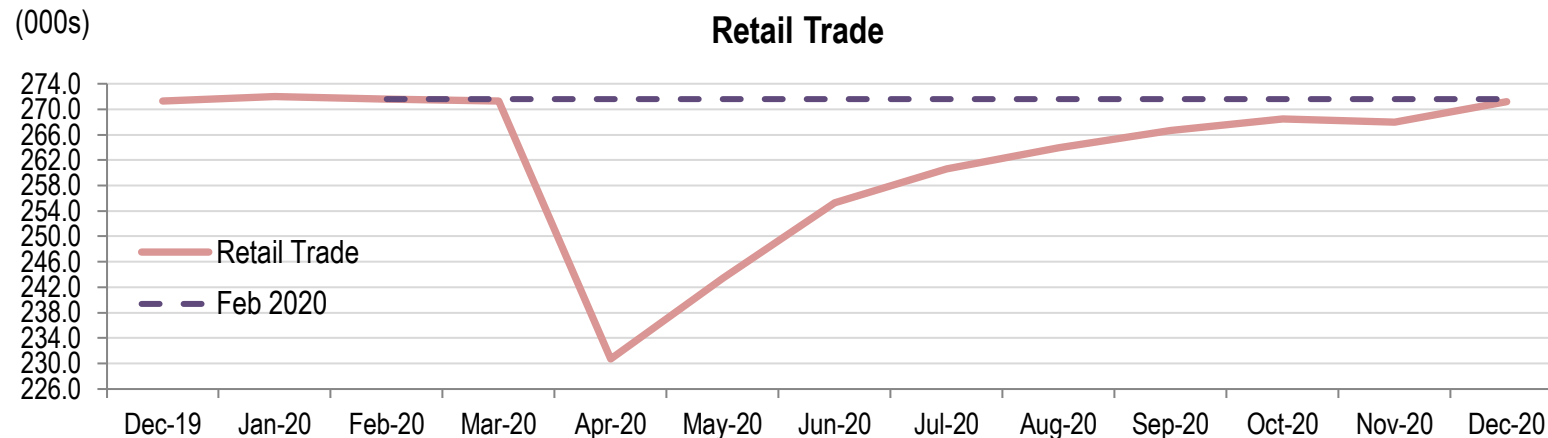
# Change in Employment

## Local Government and Retail Trade



*Local Government (thousands)*

February 2020 employment	275.9
December 2020 employment	256.9
Difference	-19.0
December as % of February	93.1%



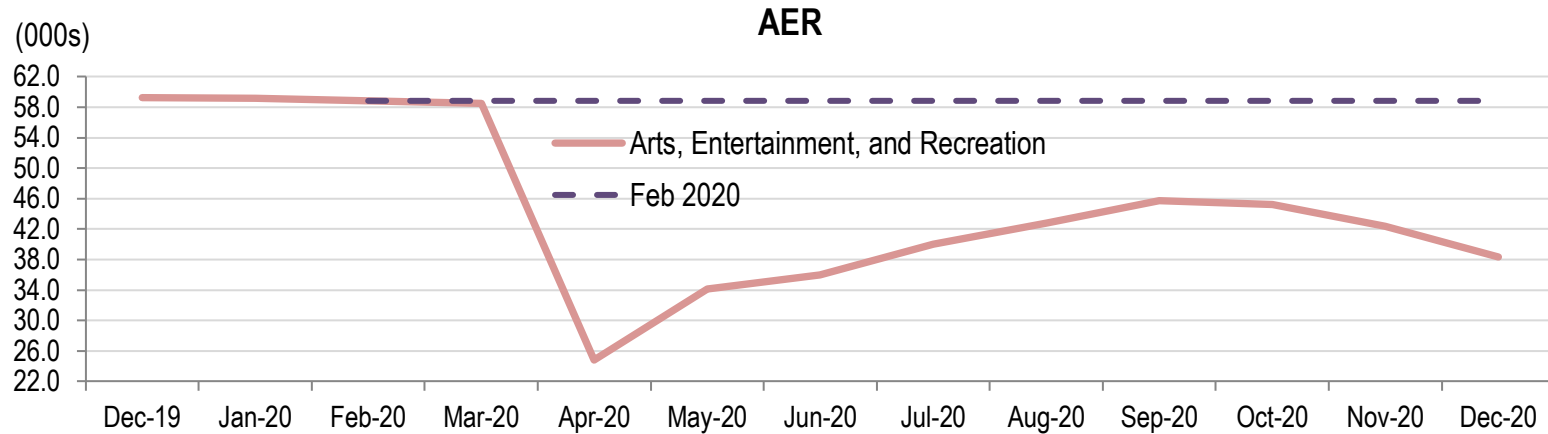
*Retail Trade (thousands)*

February 2020 employment	271.6
December 2020 employment	271.2
Difference	-0.4
December as % of February	99.9%

Source: Bureau of Labor Statistics, cber.co.

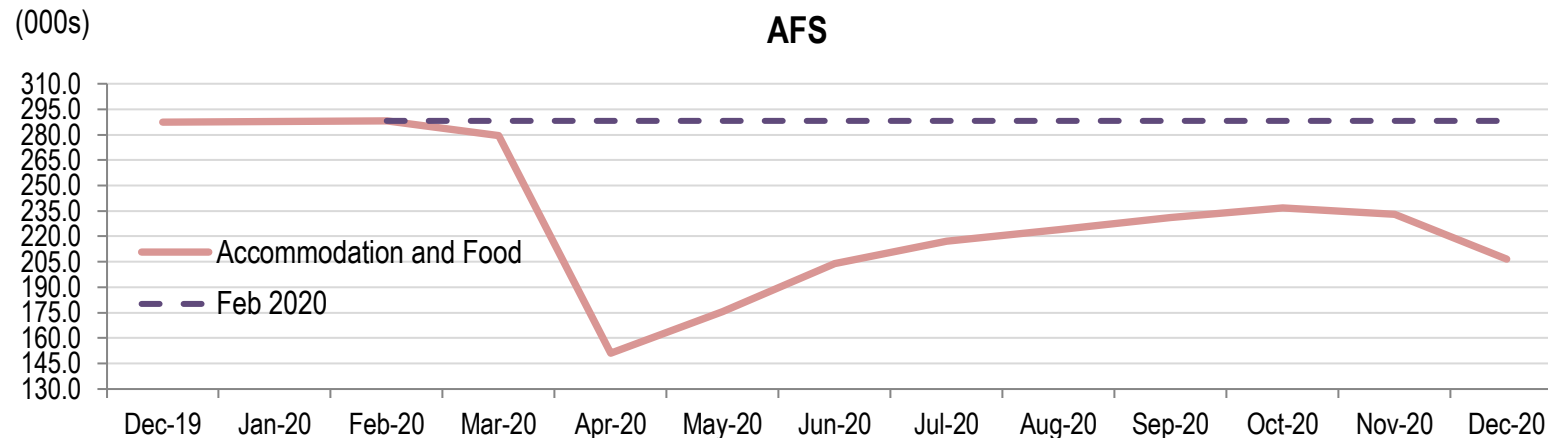
# Change in Employment

## Arts, Entertainment, and Recreation and Accommodation and Food Services



*Arts, Entertainment, and Recreation (thousands)*

February 2020 employment	58.8
December 2020 employment	38.3
Difference	-20.5
December as % of February	65.1%



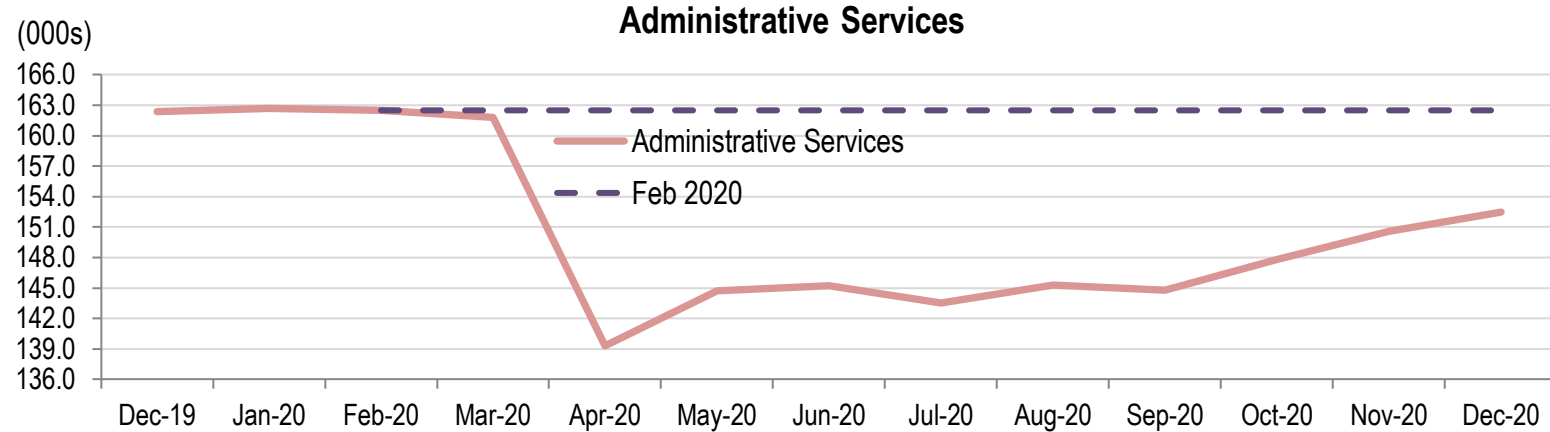
*Accommodation and Food (thousands)*

February 2020 employment	288.1
December 2020 employment	206.5
Difference	-81.6
December as % of February	71.7%

Source: Bureau of Labor Statistics, [cber.co](https://cber.co).

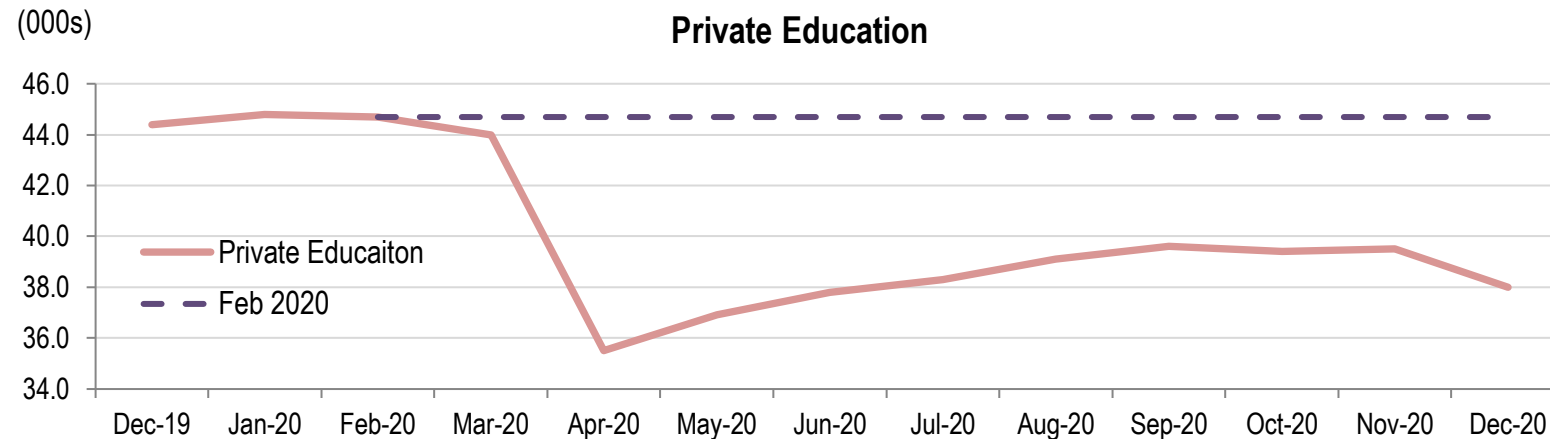
# Change in Employment

## Administrative Services and Private Education



*Administrative Services (thousands)*

February 2020 employment	162.5
December 2020 employment	152.5
Difference	-10.0
December as % of February	93.8%



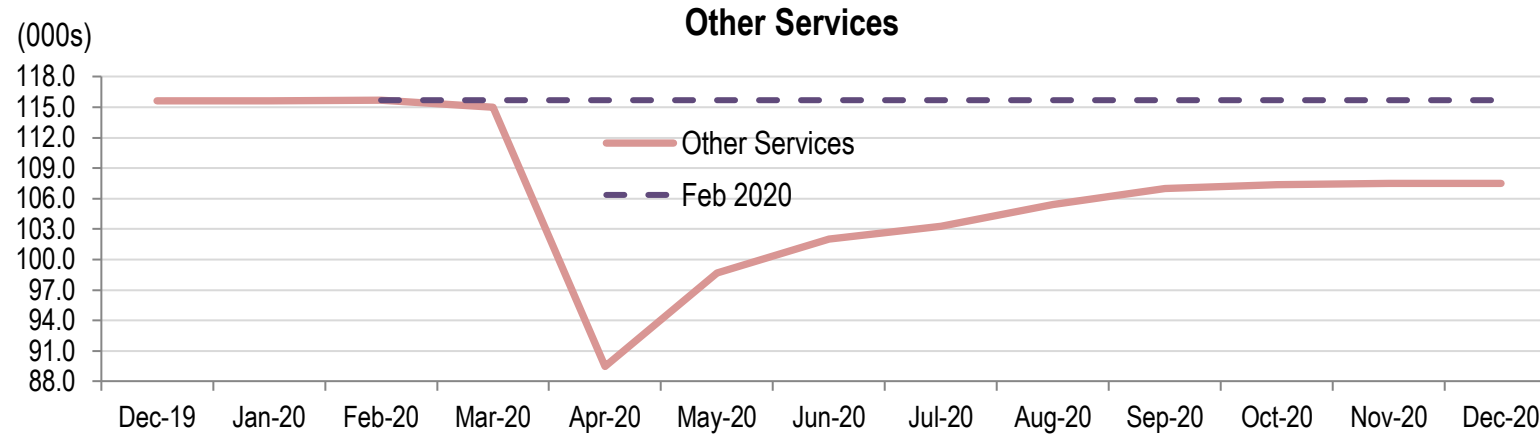
*Private Education (thousands)*

February 2020 employment	44.7
December 2020 employment	38.0
Difference	-6.7
December as % of February	85.0%

Source: Bureau of Labor Statistics, cber.co.

# Change in Employment

## Other Services



*Other Services (thousands)*

February 2020 employment	115.7
December 2020 employment	107.5
Difference	-8.2
December as % of February	92.9%

Source: Bureau of Labor Statistics, cber.co.

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

# Colorado Employment

## Change in Total Employment for MSAs

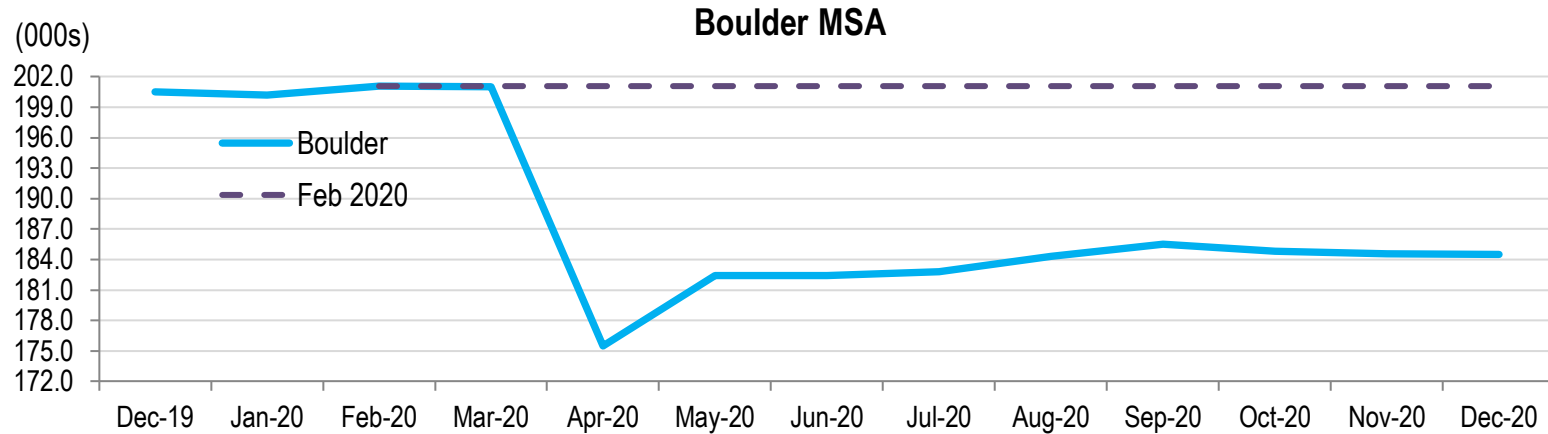
### Key Points

This section compares February 2020 through December 2020 seasonally adjusted employment for the seven Colorado MSAs.

Through December, employment decreased by 170,200 jobs in the 17 MSA counties. It declined by approximately 22,100 in the 47 non-MSA counties. The MSA counties are at 93.1% of the pre-pandemic level compared to 93.4% for the non-MSA counties.

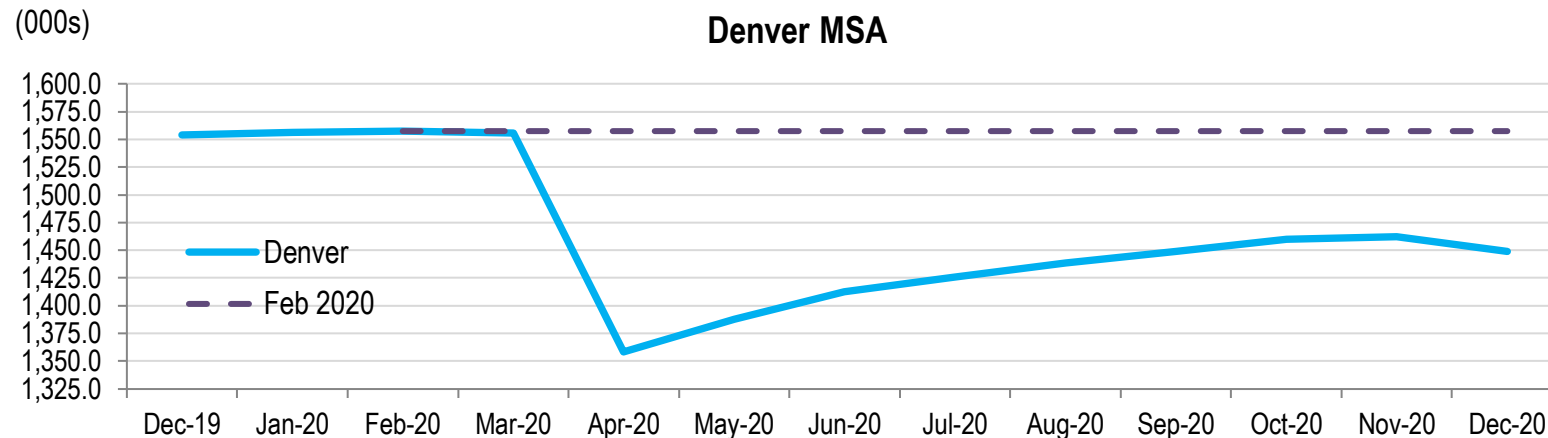
# Change in Employment

## Boulder and Denver



*Boulder MSA (thousands)*

February 2020 employment	201.1
December 2020 employment	184.5
Difference	-16.6
December as % of February	91.7%



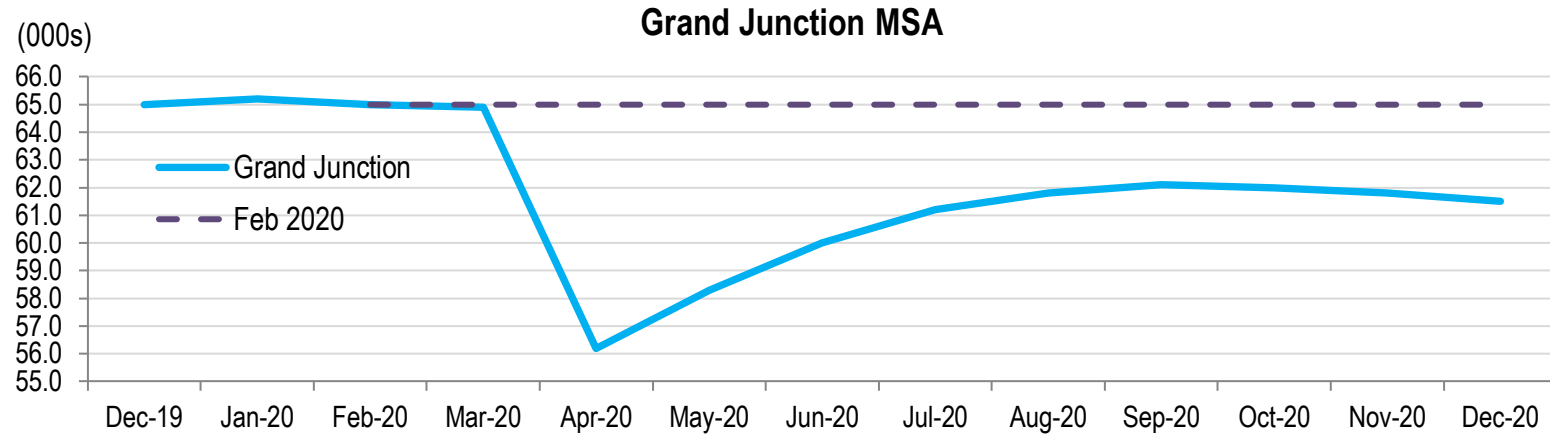
*Denver MSA (thousands)*

February 2020 employment	1,557.5
December 2020 employment	1,449.1
Difference	--108.4
December as % of February	93.0%

Source: Bureau of Labor Statistics, cber.co.

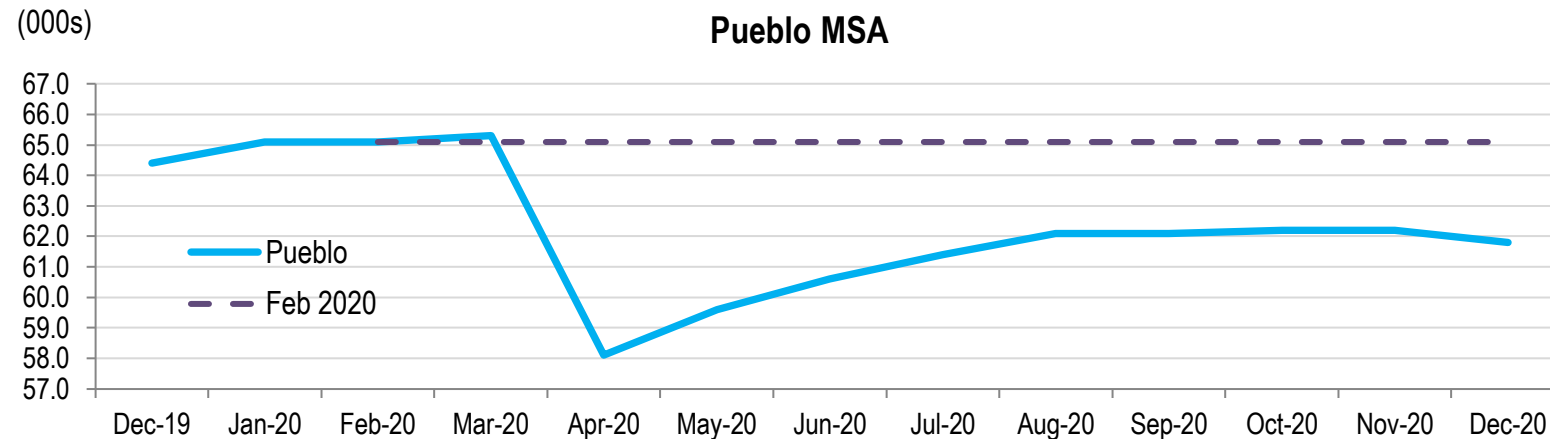
# Change in Employment

## Grand Junction and Pueblo



*Grand Junction MSA (thousands)*

February 2020 employment	65.0
December 2020 employment	61.5
Difference	-3.5
December as % of February	94.6%



*Pueblo MSA (thousands)*

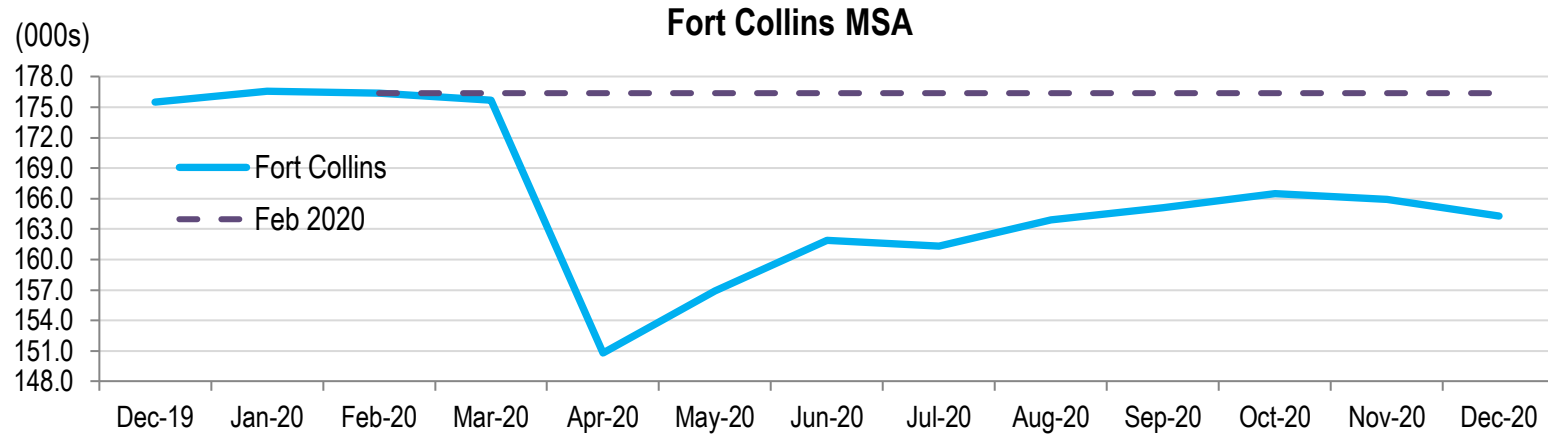
February 2020 employment	65.1
December 2020 employment	61.8
Difference	-3.3
December as % of February	94.9%

Source: Bureau of Labor Statistics, cber.co.



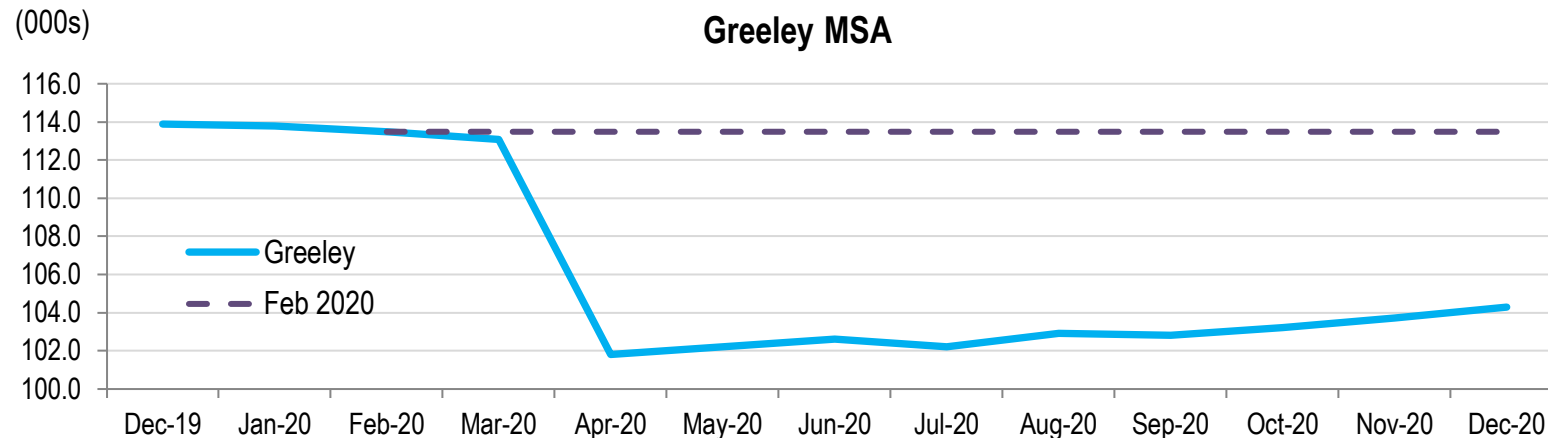
# Change in Employment

## Fort Collins and Greeley



*Fort Collins MSA (thousands)*

February 2020 employment	176.4
December 2020 employment	164.3
Difference	-12.1
December as % of February	93.1%



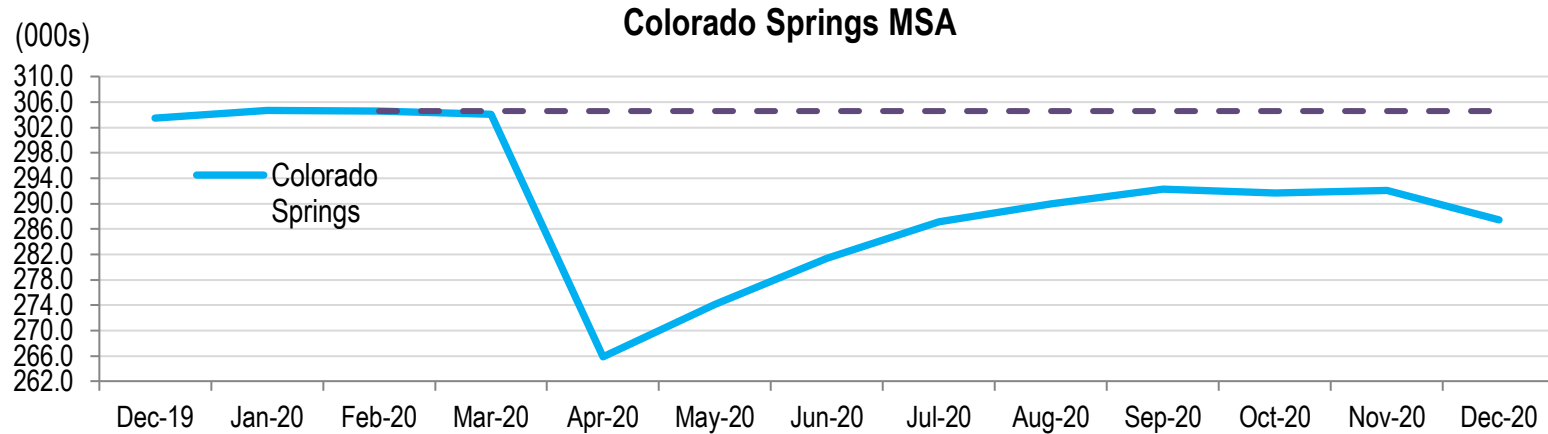
*Greeley MSA (thousands)*

February 2020 employment	113.5
December 2020 employment	104.3
Difference	-9.2
December as % of February	91.9%

Source: Bureau of Labor Statistics, cber.co.

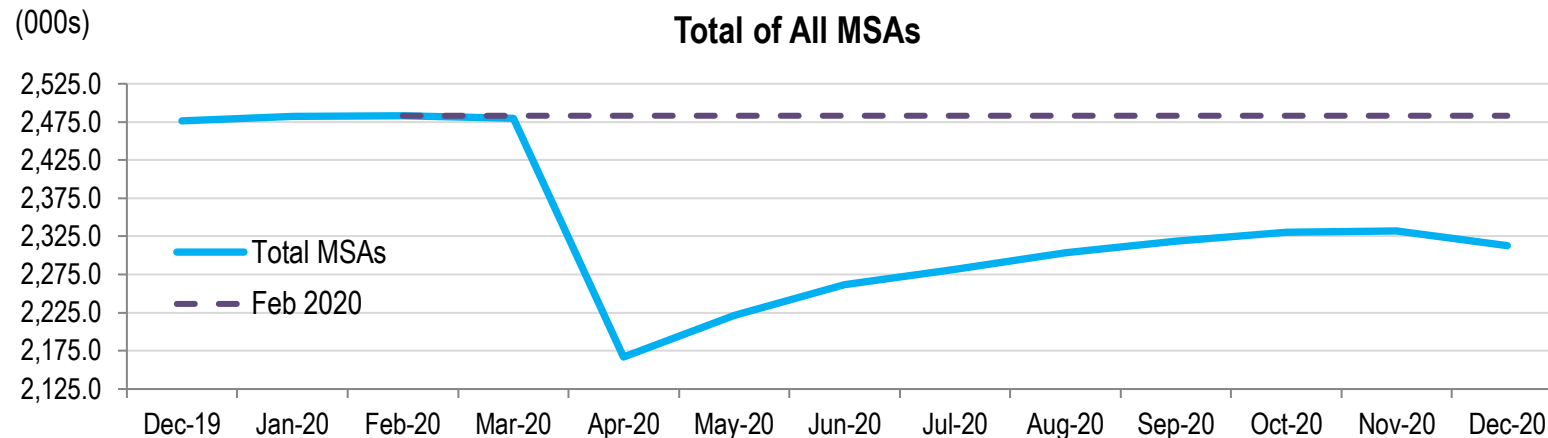
# Change in Employment

## Colorado Springs and Total MSA



*Colorado Springs MSA (thousands)*

February 2020 employment	304.6
December 2020 employment	287.5
Difference	-17.1
December as % of February	94.4%



*Total All MSAs (thousands)*

February 2020 employment	2,483.2
December 2020 employment	2,313.0
Difference	-170.2
December as % of February	93.1%

Source: Bureau of Labor Statistics, cber.co.

# Summary

## Colorado

# Summary of Colorado Forecast

Colorado's real GDP growth rate for 2021 will be slightly higher than the U.S. rate. It will return to its pre-pandemic value in late 2021.

Employment will return to its 2019 level in 2023. Colorado's unemployment rate will be greater than most states because unemployment claims will remain high.

Retail sales will rebound in 2021 as a result of pent-up demand. Sales will level off at pre-pandemic levels in 2022.

In 2021 and 2022, inflation will be higher than the U.S. rate.

Colorado Economic Forecast				
	2019	2020	2021	2022
<b>Real GDP Value (billions)</b>	\$356.28	\$343.45	\$357.19	\$369.34
<b>% Change Real GDP</b>	3.9%	-3.6%	4.0%	3.4%
<b>CES Employment (thousands)</b>	2,790.1	2,644.6	2,690.4	2,748.4
<b>Annual Change (thousands)</b>	62.8	(145.5)	45.0	58.0
<b>% Change</b>	2.3%	-5.2%	1.7%	2.2%
<b>Unemployment Rate</b>	2.7%	7.3%	5.8%	4.9%
<b>Retail Sales (billions)</b>	\$224.6	\$227.0	\$243.0	\$252.0
<b>% Change</b>	9.0%	1.1%	7.0%	3.7%
<b>Consumer Price Index</b>	1.9%	2.0%	2.1%	2.2%
<b>DIA Passengers (millions)</b>	69.0	33.0	52.0	61.0
<b>Single Family Permits</b>	24,756	26,489	26,900	27,350
<b>Multi-family Permits</b>	13,877	13,738	13,950	14,200
<b>Oil Production (thousands) barrels</b>	189,707	172,000	170,000	175,000

The number of passengers through DIA in 2020 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 more permits in 2021 as the population increases. Also, there is a need for affordable housing in the metro areas.

State regulations and reduced demand caused a decline in oil production in 2020. The production of oil will be flat in 2021 and 2022.

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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.