

Review of Colorado and United States Economy

Based on April Employment Data



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Colorado-based Business and Economic Research

Prepared

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Overview

There is limited data that measures the day-to-day or weekly impact of the COVID-19 crisis on the economy. The data may accurately describe activity one to three months ago, but it may not reflect the changes that have occurred in the past week or two. This short analysis reviews the most recent release of U.S. and Colorado employment data and other metrics that foretell employment and economic changes in the weeks ahead.

Labor Data

- Real GDP Projections -- United States
- Initial and Continuing Unemployment Claims – United States and Colorado
- Number of Unemployed and Unemployment Rate – United States and Colorado
- Employment – United States and Colorado

Other Key Metrics

- Major Indices
- Production and Income
- Sampling of Other Key Metrics

Closing Comments

Real GDP Forecast

United States

On May 13th, the Conference Board provided a scenario of three forecasts for real GDP growth in the United States. They all show a severe downturn in real GDP in Q2 2020. Depending on the scenario, it could take at least 18 months for the return of real GDP to the Q4 2019 level.

Forecasts for U.S. Real GDP Growth

The Conference Board

The Conference Board provides a monthly forecast of the U.S. economy. The centerpiece is the forecast of real GDP growth and its components (C+I+G+X). The TCB May forecast included three scenarios for real GDP growth described below. Table I includes the U-Shape forecast and other key metrics.

Table I - Conference Board 2020 US Real GDP Growth – May 13, 2020							
	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2018	2019	2020
Real GDP	- 4.8%	- 44.5%	24.4%	18.9%	2.9%	2.3%	- 7.2%
Personal Consumption	- 7.6%	- 54.2%	36.3%	15.5%	3.0%	2.6%	-10.0%
Residential Investment	21.0%	- 25.0%	- 7.0%	11.0%	-1.5%	-1.5%	0.7%
Nonresidential Investment	- 8.6%	- 20.8%	- 2.4%	8.6%	6.4%	2.1%	- 6.9%
Total Government Spending	0.7%	4.0%	4.0%	4.0%	1.7%	2.3%	2.7%
Exports	- 8.7%	- 35.1%	11.1%	9.0%	3.0%	0.0%	- 8.0%
Real Disposable Income	0.5%	-18.0%	5.0%	12.0%	4.0%	2.9%	-1.6%
Unemployment Rate	3.8%	16.0%	13.6%	10.8%	3.9%	3.7%	11.1%
CPI Inflation	1.2%	- 2.0%	0.0%	1.0%	2.4%	1.8%	0.8%

Source: The Conference Board and cber.co.

V-Shape

The V-shape is the riskiest scenario because it assumes the greatest risk of opening too soon. There is a sharp contraction in Q2 with a solid recovery in Q3. This scenario projects the change in real GDP in 2020 will be -4.0%. Real GDP will return to the December 2019 level in Q2 2021.

U-Shape

The health aspect of the recovery will be managed with less risk in the U-shape. As a result, growth will begin in the second half of Q3. Real GDP growth for 2020 will be -7.2%. Real GDP will return to the December 2019 level in the second half of 2021 or the first half of 2022.

W-Shape

The W-shape begins with a rapid recovery, but there will be a resurgence of COVID-19 cases in Q3 or Q4. Real GDP growth for 2020 will be -6.1%. Real GDP will return to the 2019 level in 2022.

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

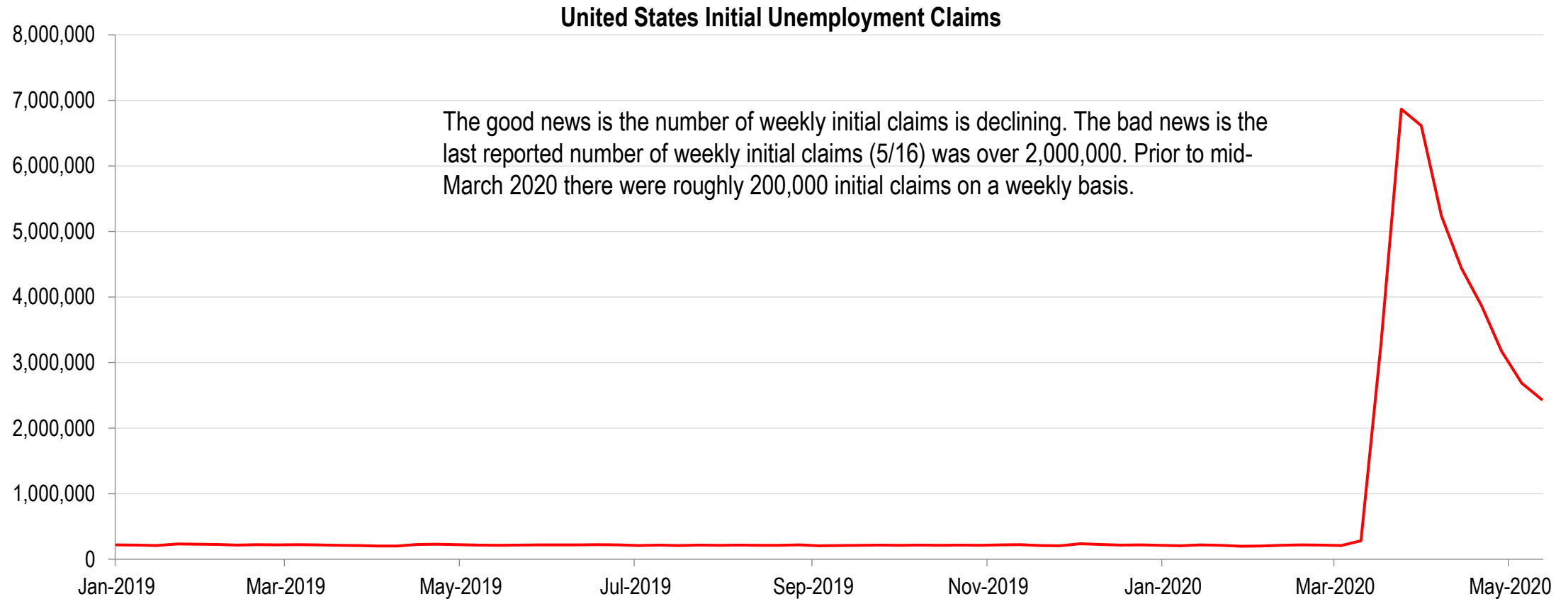
Unemployment Initial and Continuing Claims

United States and Colorado

At the outset of the crisis, unemployment initial claims were the primary source of timely employment data. The claims numbers estimated how fast and severe U.S. and Colorado employment was declining on a weekly basis. As the number of initial claims have decreased, it will be important to pay more attention to the number of continuing claims (People filing new claims plus people looking for work less people who have found jobs).

Initial Unemployment Claims

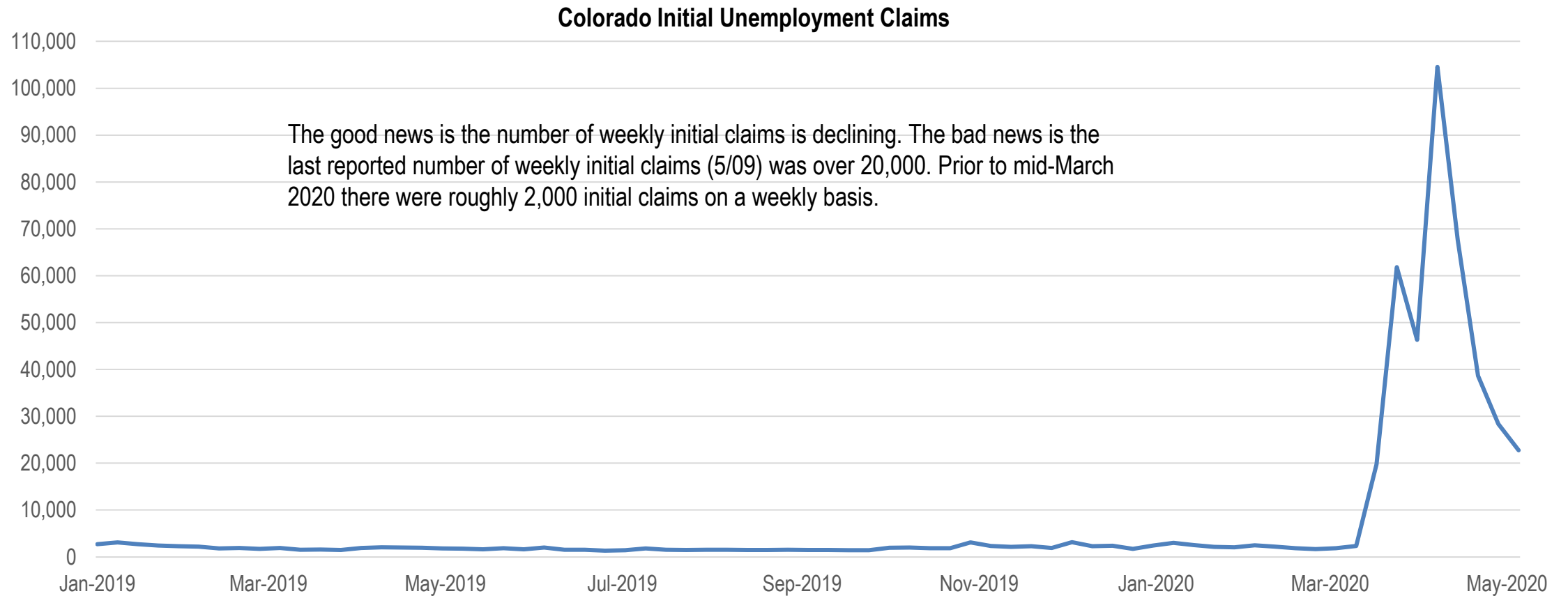
United States Seasonally Adjusted 2019 to Current



Source: FRED, Department of Labor, SA, cber.co.

Initial Unemployment Claims

Colorado Not Seasonally Adjusted

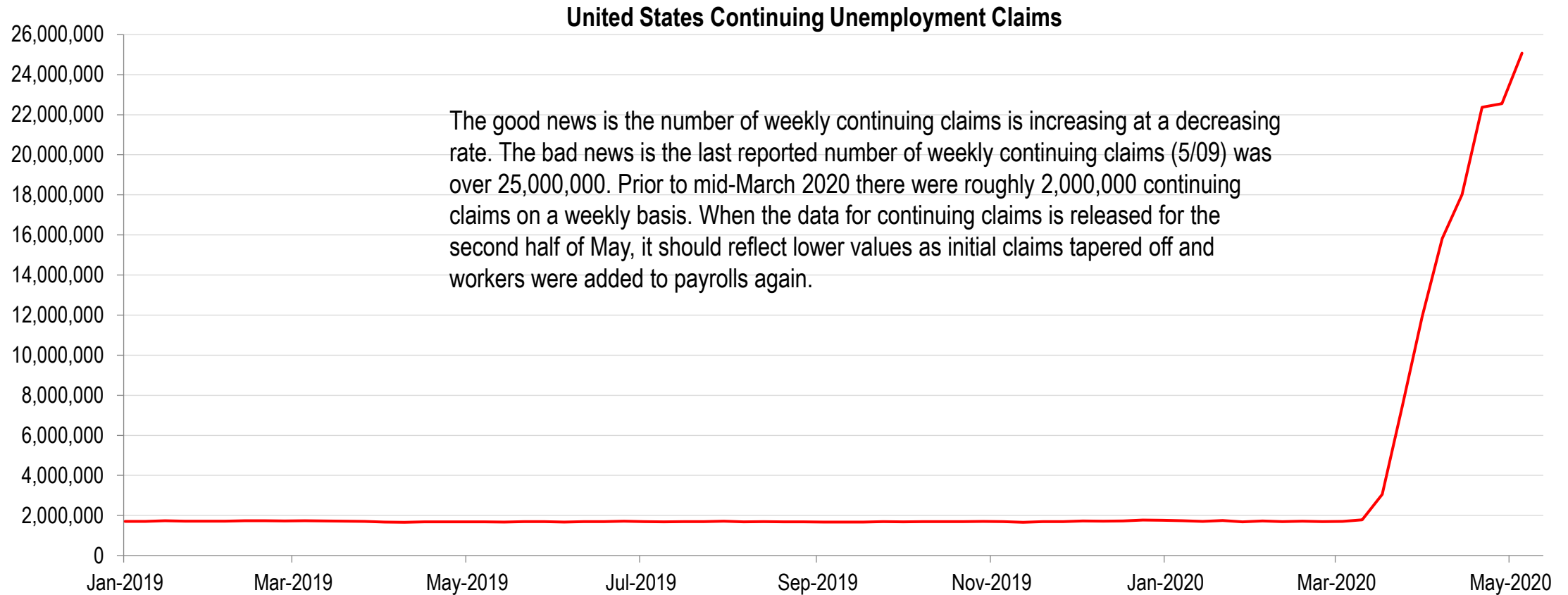


Source: FRED, Department of Labor, NSA, cber.co.

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Continuing Unemployment Claims

United States Seasonally Adjusted 2019 to Current

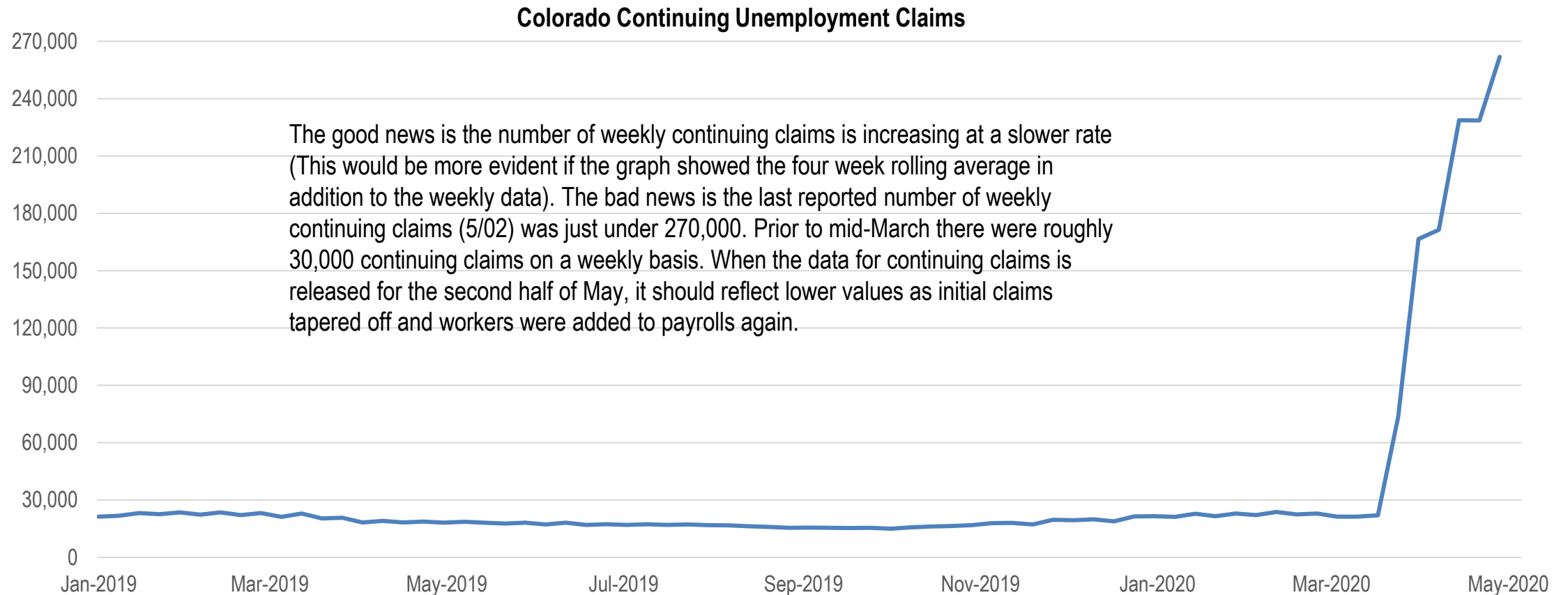


Source: FRED, Department of Labor, SA, cber.co.

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Continuing Unemployment Claims

Colorado Not Seasonally Adjusted



Source: FRED, Department of Labor, NSA, cber.co.

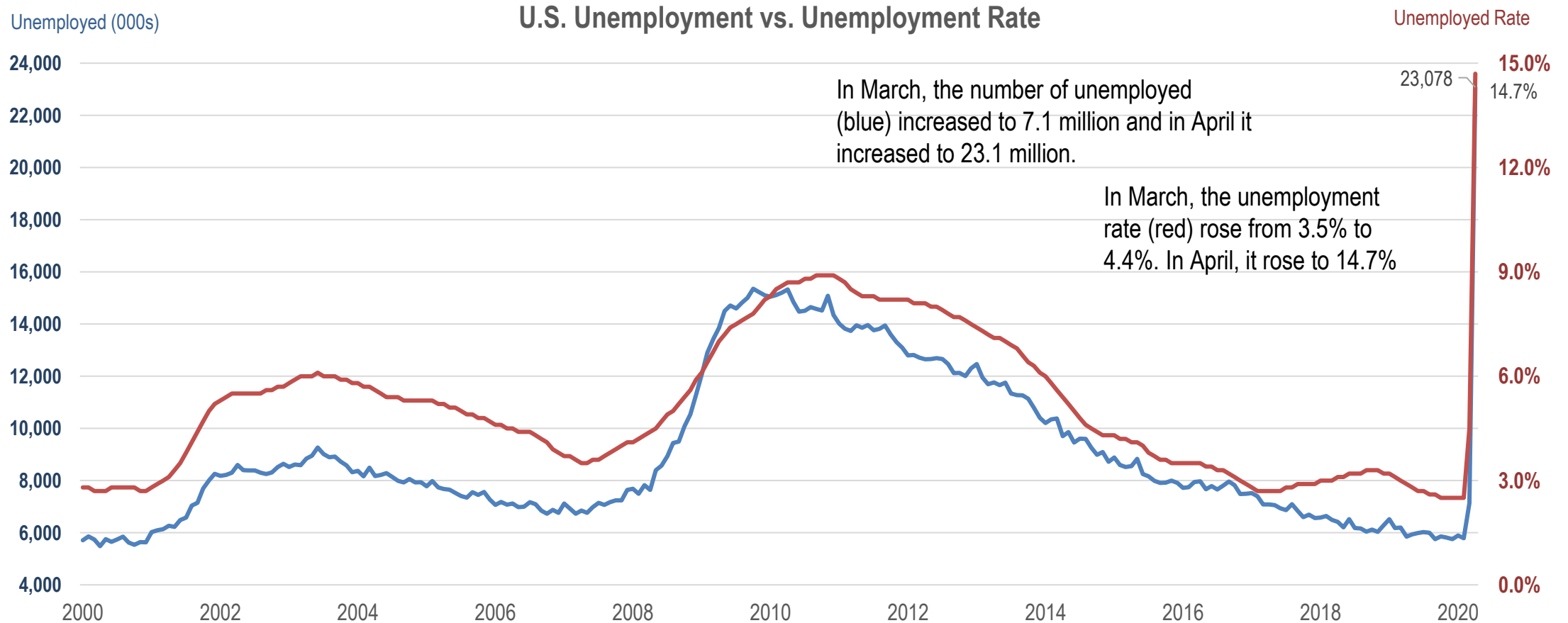
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Number of Unemployed and Unemployment Rate and Labor Force Participation Rate

United States and Colorado

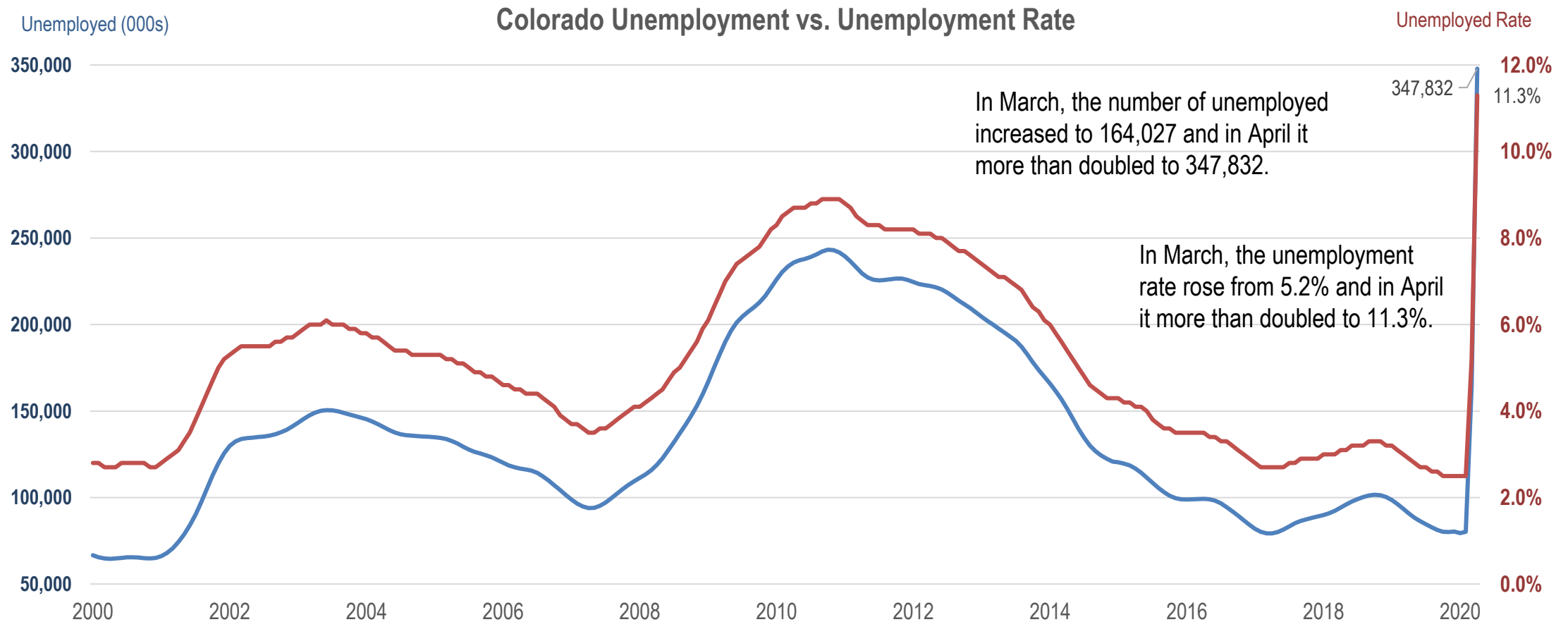
In April, the unemployment rate for the United States jumped to 14.7%. The unemployment rate increased to 11.3% in Colorado. Both rates were well above the peak for the Great Recession. Given the lockdown and rapid increase in unemployment rates, it stands to reason the labor force participation rate dropped significantly. In a shuttered economy, people are not actively looking for work because there are few jobs available.

U.S. Unemployment and Unemployment Rate



Source: Bureau of Labor Statistics and cber.co.

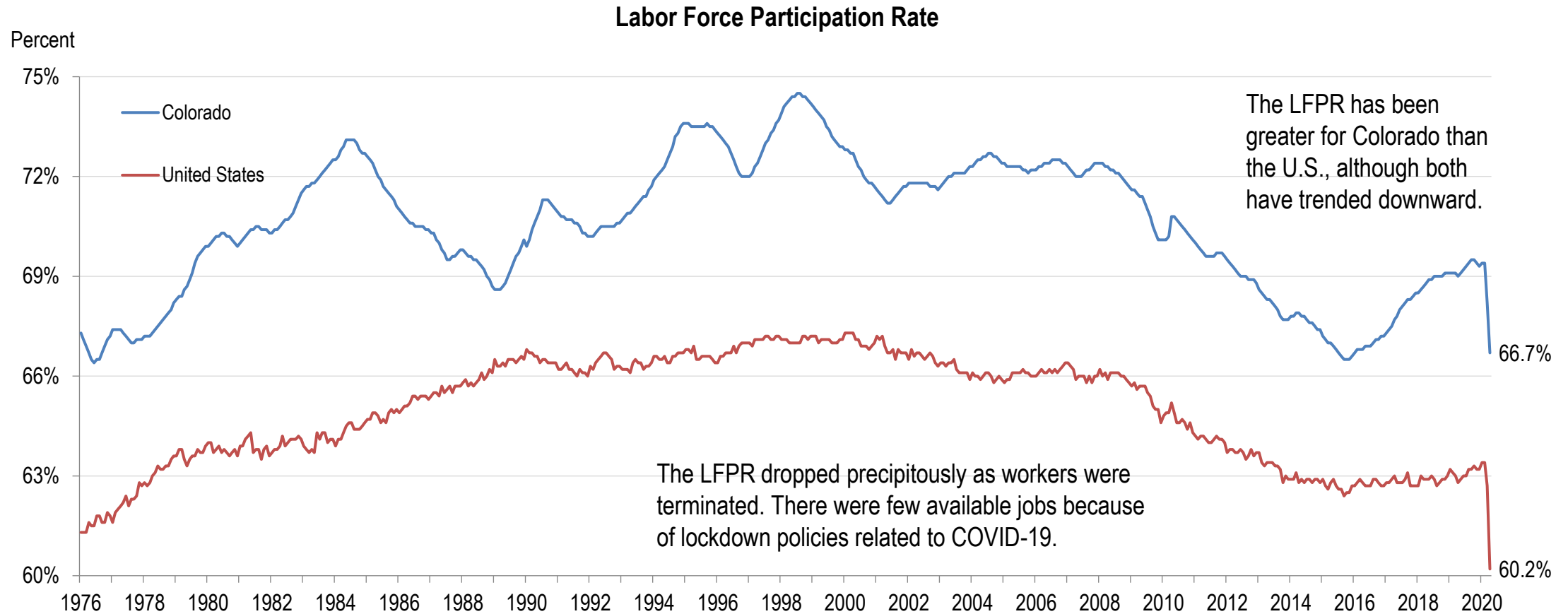
Colorado Unemployment and Unemployment Rate



Source: Bureau of Labor Statistics and cber.co.

Labor Force Participation Rate (LFPR)

United States and Colorado



Source: FRED, BLS, cber.co.

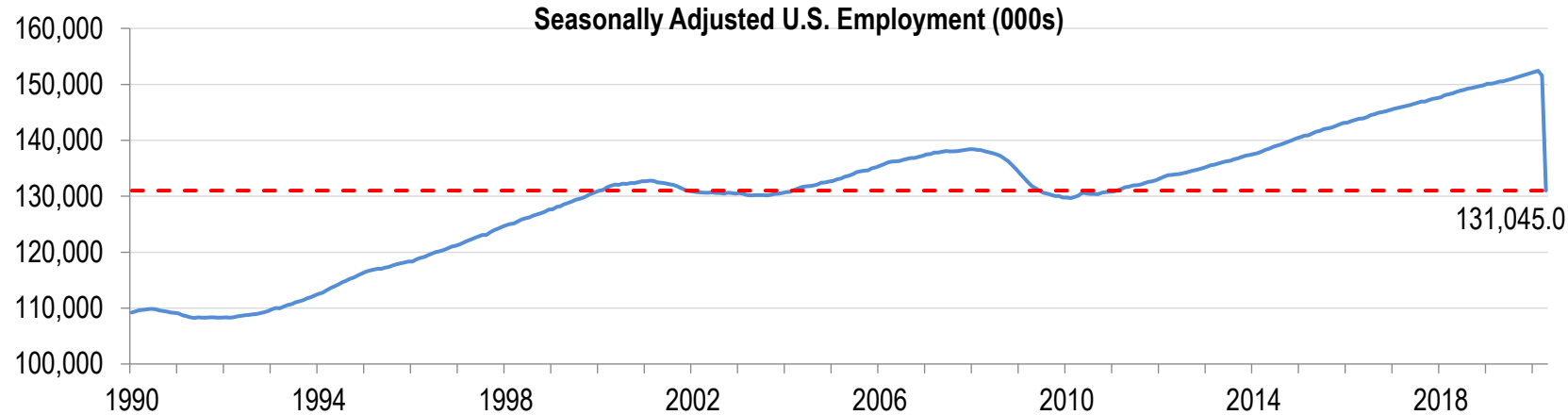
Employment

United States and Colorado

Both the United States and Colorado showed unprecedented wage and salary employment declines between February and April of this year. For that period, there were 21.4 million fewer employees in the United States and 340,000 fewer workers in Colorado. U.S. total employment has returned to pre-2000 levels, despite the fact the United States population has increased by more than 50 million people this century. The downturn has touched all 50 states and most sectors of the economy. There is nowhere to hide!

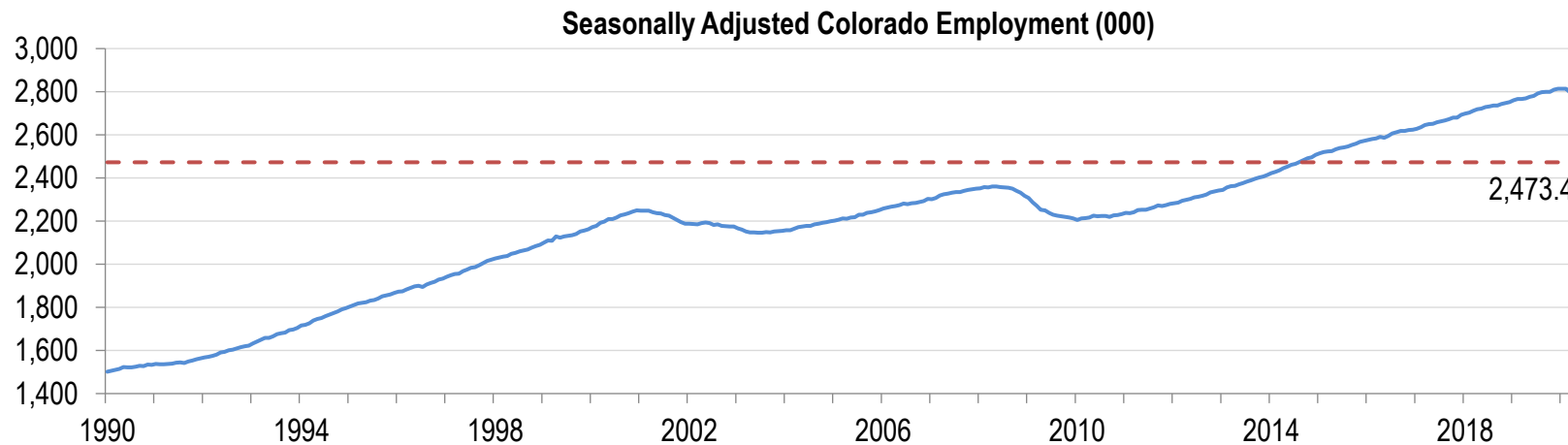
Seasonally Adjusted Wage and Salary Employment

Seasonally Adjusted



United States

U.S. seasonally adjusted wage and salary employment was 131.0 million (red line) in April. It fell by 21.4 million between February and April. The last time it was consistently below 131.0 million was prior to January 2000.



Colorado

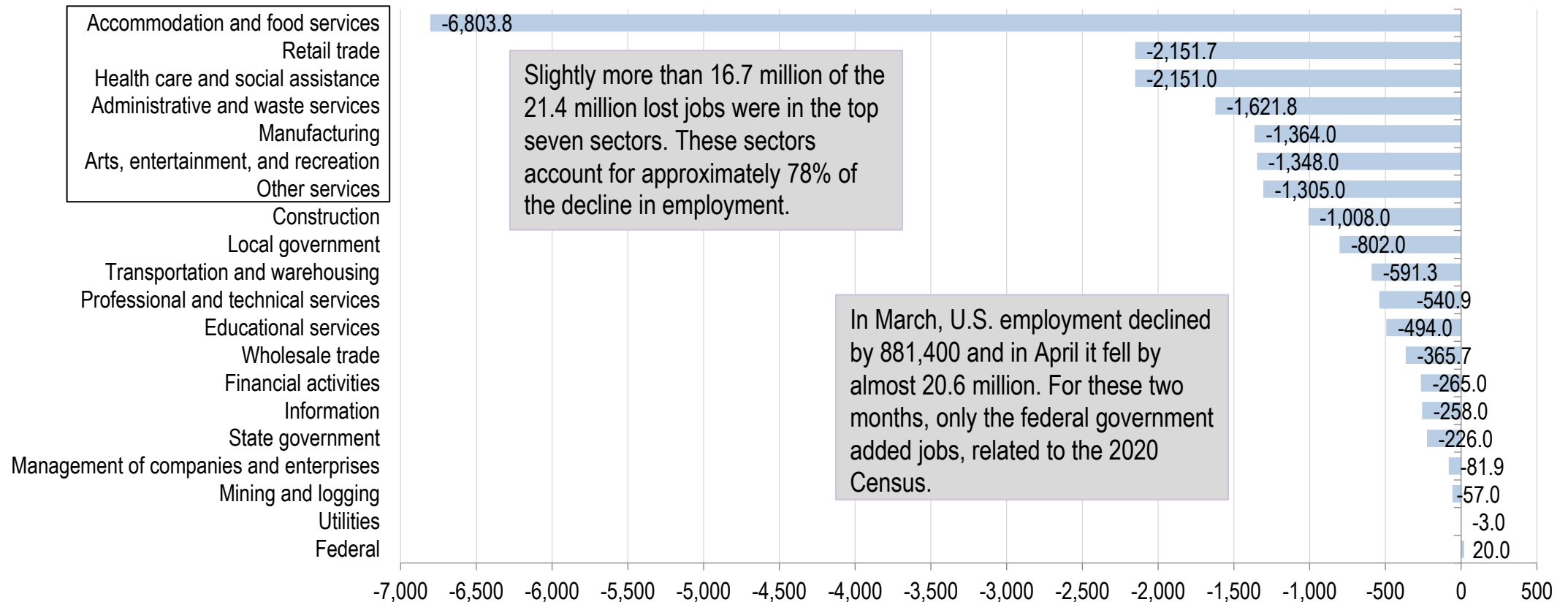
Colorado seasonally adjusted wage and salary employment was just under 2.5 million (red line) in April. It declined by 340,000 between February and April. The last time it was this low was in Q3 2014.

Source: Bureau of Labor Statistics and cber.co.

Change in U.S. Employment by Sector

Employment Losses Between February and April 2020

Change in Seasonally Adjusted Employment (000s) Between February and April 2020



Change in U.S. Employment

February 2020 vs. April 2020

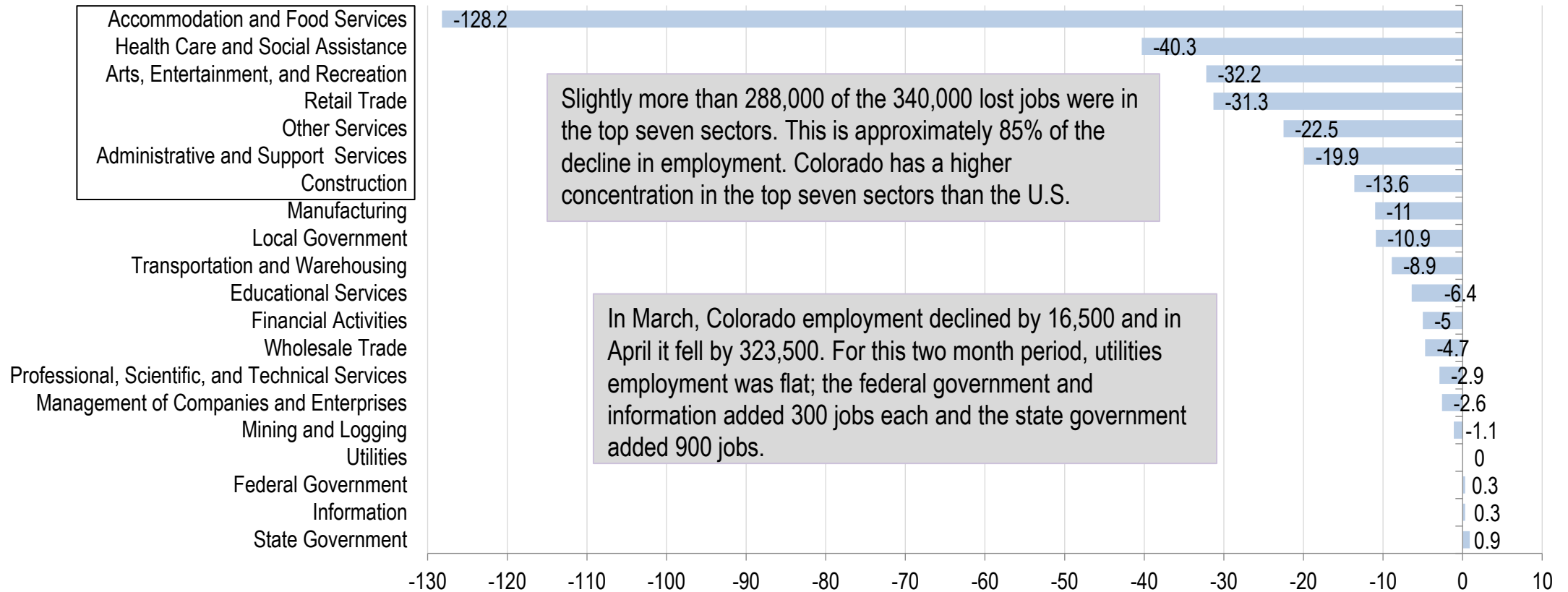
The amount of the decline in U.S. wage and salary employment between April 2020 and February 2020 (21.4 million) is similar to the total employment of the following 24 states.

Wyoming	Montana	Idaho	Nevada
Vermont	Rhode Island	District of Columbia	Kansas
Alaska	Maine	New Mexico	Iowa
North Dakota	Hawaii	Nebraska	Utah
South Dakota	New Hampshire	Mississippi	Connecticut
Delaware	West Virginia	Arkansas	Oklahoma

Change in Colorado Employment by Sector

Employment Losses Between February and April

Change in Seasonally Adjusted Employment (000s) Between February and April 2020



Source: Bureau of Labor Statistics, cber.co.

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Change in Colorado Employment

February 2020 vs. April 2020

The amount of the decline in Colorado wage and salary employment between April 2020 and February 2020 (340,000) is similar to the total employment of the Boulder MSA plus the Grand Junction MSA plus the Pueblo MSA.

The amount of the decline in Colorado employment between April 2020 and February 2020 (340,000) is greater than the employment for each of the following states: Wyoming (288,500), Vermont (314,000), and Alaska (329,800).

Percent Change in Employment by Sector

Colorado vs. United States

Percent Change in Employment April 2020 vs. February 2020		
Sector	Colorado	United States
Total Nonfarm	-12.1%	-14.0%
Arts, entertainment, and recreation	-53.9%	-54.5%
Accommodation and food services	-44.9%	-47.3%
Other services	-19.5%	-22.0%
Administrative and waste services	-12.1%	-17.3%
Retail trade	-11.6%	-13.7%
Construction	-7.6%	-13.2%
Educational services	-14.3%	-12.9%
Manufacturing	-7.3%	-10.6%
Transportation and warehousing	-9.8%	-10.4%
Health care and social assistance	-13.1%	-10.4%
Information	0.4%	-8.9%
Mining and logging	-4.0%	-8.0%
Wholesale trade	-4.2%	-6.2%
Professional and technical services	-1.2%	-5.6%
Local government	-4.0%	-5.5%
State government	0.7%	-4.3%
Management of companies and enterprises	-6.0%	-3.3%
Financial activities	-2.9%	-3.0%
Utilities	0.0%	-0.5%
Federal government	0.6%	0.7%

The overall change in employment for the U.S between April 2020 and February 2020 was -14.0% compared to -12.1% for Colorado.

The change in employment was negative for every U.S. sector except federal government. The change in Colorado employment was positive for four sectors (highlighted in green).

The change in U.S. employment was lower for 16 of the 20 sectors and lower for only four Colorado sectors (highlighted in light red). This suggests the following:

- Colorado may be lagging the U.S. in entering the recession.
- Colorado may be outperforming the U.S because of the diversification or mix of Colorado's industries.
- The Colorado employment data produced by the Bureau of Labor Statistics may be subject to greater downward revisions in future months.
- Some industries such as mining and retail may have incurred structural losses in 2019.

Percent Change in State Wage and Salary Employment

April 2020 vs. February 2020

Percent Change in Employment Less than 14.0%

Rank	State	April vs. February	Rank	State	April vs. February
1	Oklahoma	-8.5%	17	Missouri	-11.6%
2	Wyoming	-8.6%	18	Iowa	-11.8%
3	District of Columbia	-8.7%	19	New Mexico	-11.8%
4	Arkansas	-8.7%	20	Colorado	-12.1%
5	South Dakota	-8.8%	21	Tennessee	-12.3%
6	Utah	-8.9%	22	Florida	-12.8%
7	Nebraska	-9.0%	23	Montana	-12.9%
8	Kansas	-9.9%	24	West Virginia	-12.9%
9	North Dakota	-10.0%	25	Minnesota	-13.0%
10	Virginia	-10.1%	26	South Carolina	-13.2%
11	Arizona	-10.4%	27	North Carolina	-13.4%
12	Alabama	-10.5%	28	Illinois	-13.4%
13	Texas	-10.7%	29	Maryland	-13.6%
14	Mississippi	-10.8%	30	Oregon	-13.6%
15	Idaho	-10.9%	31	Indiana	-13.7%
16	Georgia	-11.3%	32	Louisiana	-13.7%

Percent Change in Employment Greater than 14.0%

Rank	State	April vs. February
33	California	-14.5%
34	Alaska	-14.5%
35	Wisconsin	-15.5%
36	Washington	-15.7%
37	Ohio	-15.8%
38	Kentucky	-15.9%
39	Maine	-16.6%
40	Connecticut	-17.0%
41	New Hampshire	-17.1%
42	Delaware	-17.3%
43	Pennsylvania	-17.9%
44	Massachusetts	-18.0%
45	Nevada	-18.7%
46	Hawaii	-19.1%
47	Rhode Island	-19.4%
48	New Jersey	-19.6%
49	New York	-19.8%
50	Vermont	-20.8%
51	Michigan	-23.5%

All states have been affected by the COVID-19 crisis. Because they have a different mix of industries and policies, the impact on employment has been different.

Between February and April 2020 employment in the United States decreased by 14.2%. There were 31 states and the District of Columbia (green) that decreased at a rate less than 14.2% and 19 states (red) that decreased at a rate greater than 14.2%.

There are 85.2 million employees in the states with the lower rates of decline. Employment in those states declined by 10.0 million. There are 66.8 million employees in the states with the higher rates of decline. Employment in those states decreased by 11.6 million.

Major Indices

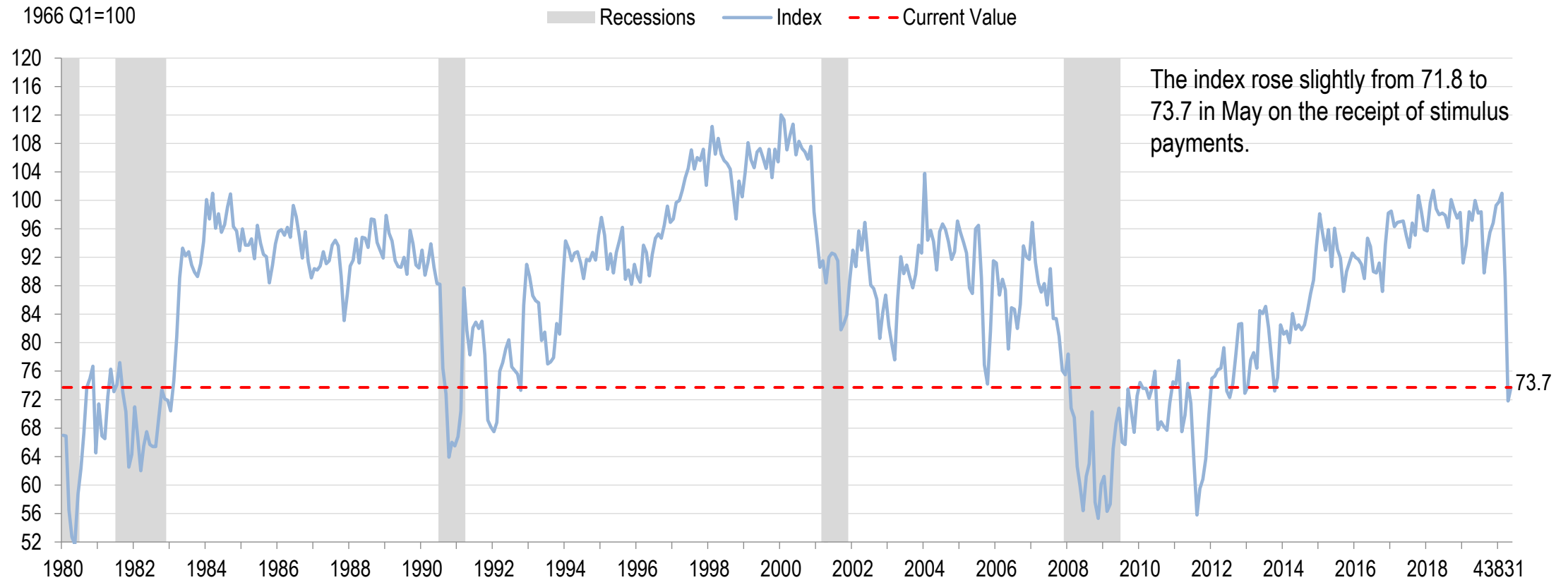
Consumer Sentiment Index, NFIB Small Business Optimism Index, and ISM PMI and NMI Indices

There are many indices that show the impact of the economic crisis in the United States. Consumer and small business indices indicate the economy is in a recession. Industrial production and the ISM indices for manufacturers and non-manufacturers tell the same story.

Consumer Sentiment Index

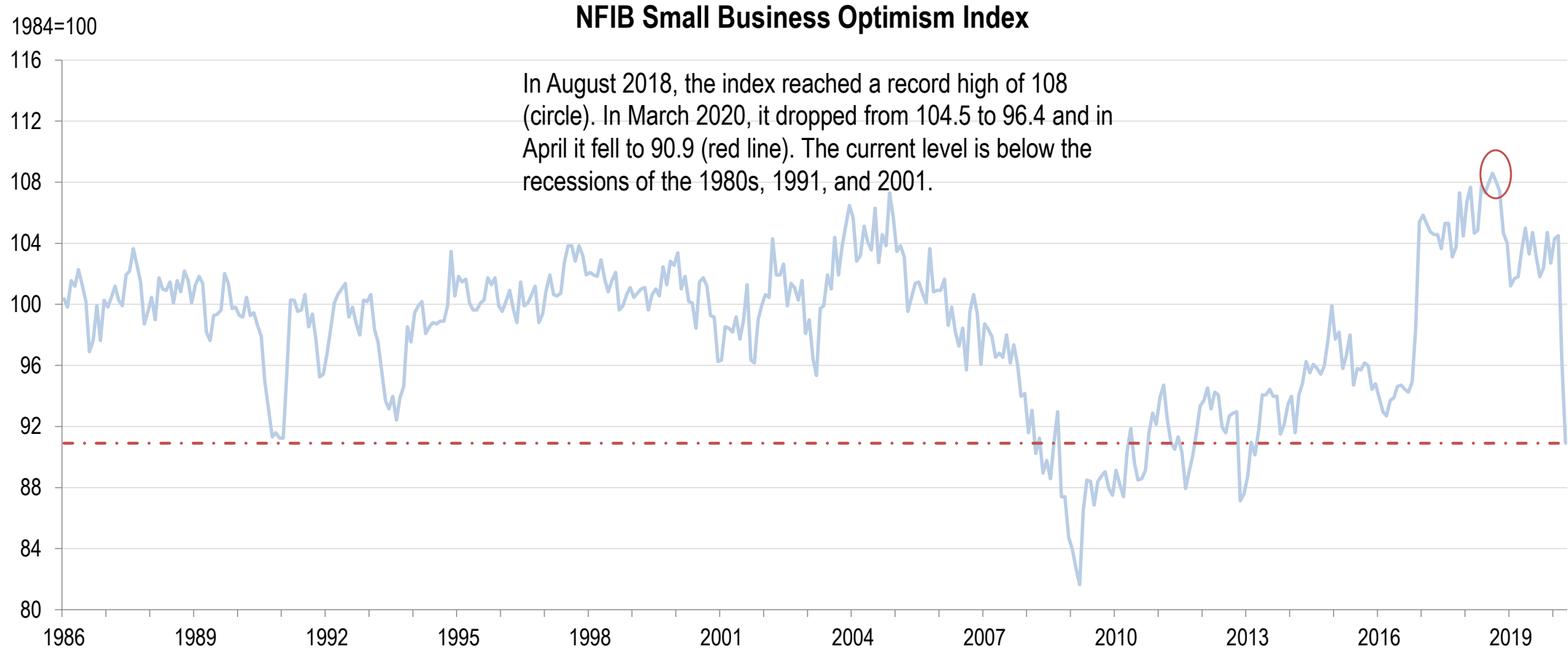
University of Michigan

Michigan Consumer Sentiment Index



Source: University of Michigan, cber.co.

NFIB Small Business Optimism Index

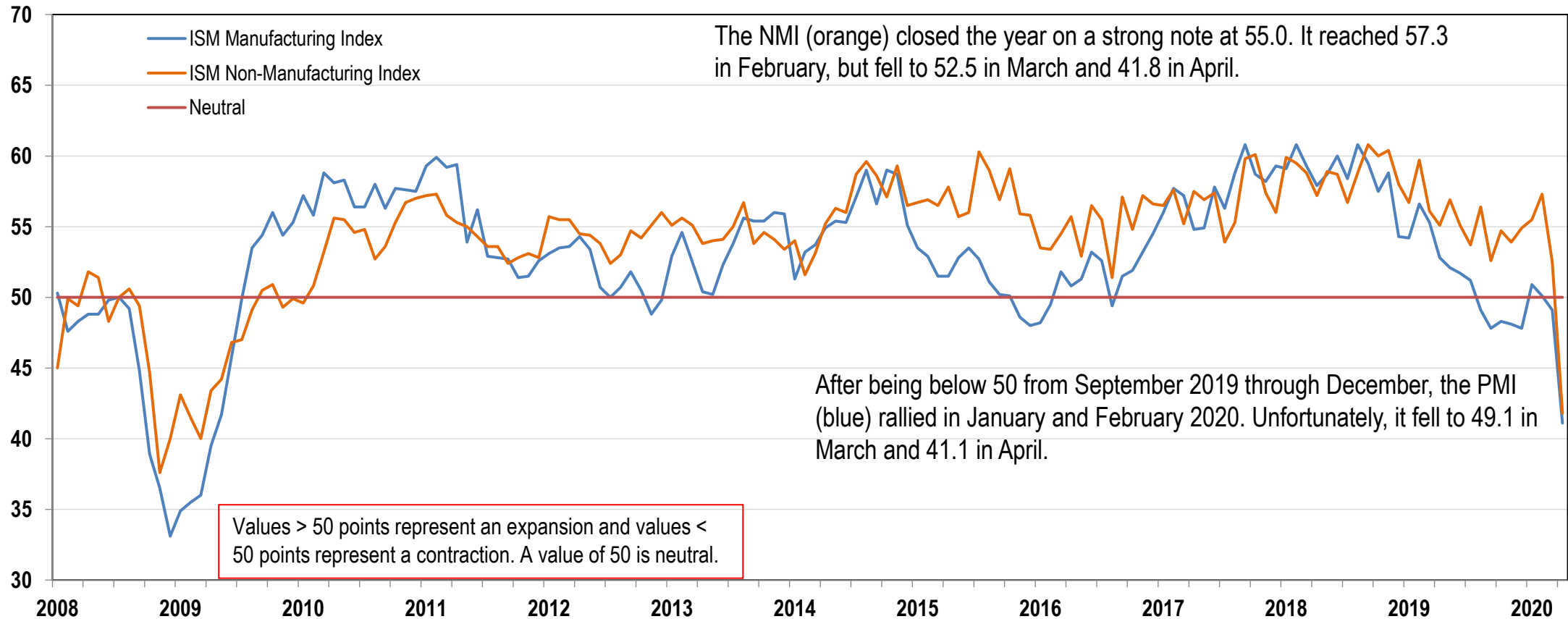


Source: NFIB, cber.co. Index 1984=100

ISM PMI Composite Indices

Manufacturing vs. Non-manufacturing

ISM Manufacturing (PMI) vs. Non-Manufacturing (NMI) Composite Indices



Source: FRED, ISM, cber.co

Production and Income

Industrial Production and Change in Real Disposable Personal Income

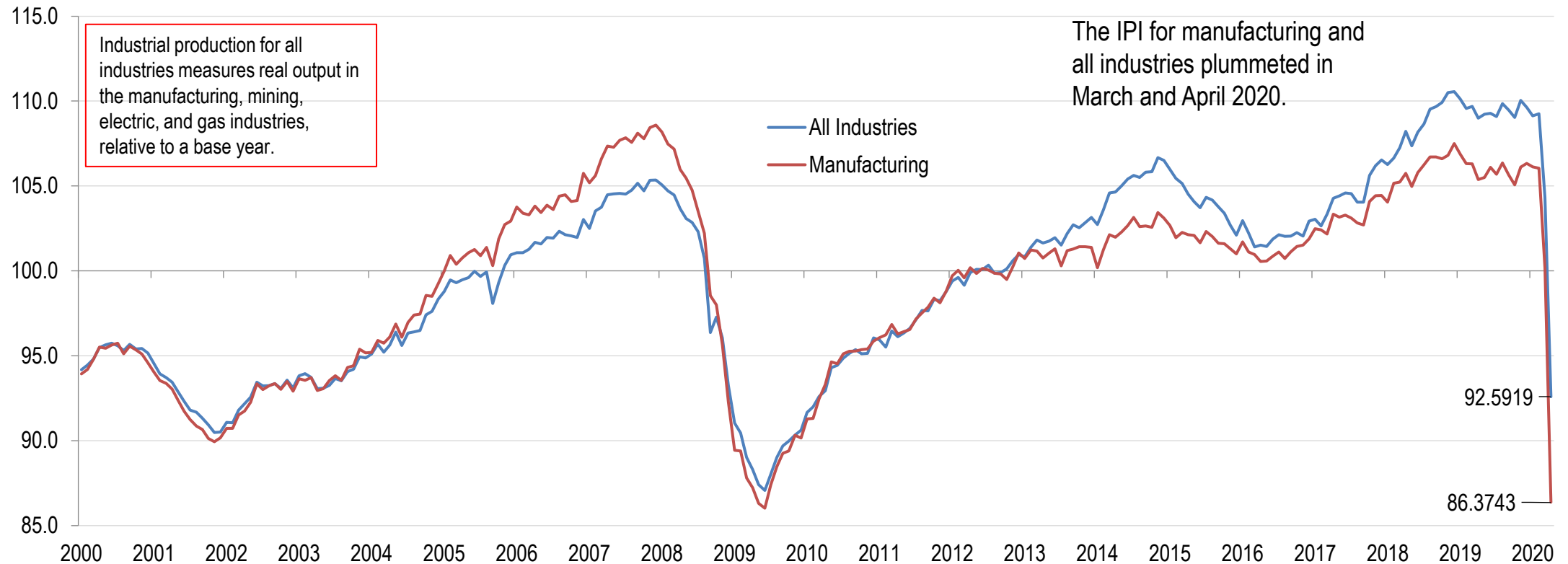
Industrial production for March and April declined significantly. Real DPI is available only through March. The decline in March is expected to continue into April. Businesses will have less money to invest and consumers will have less discretionary income.

Industrial Production Index

All Industries and Manufacturing

Industrial Production, All Industries and Manufacturing

Index, 2012 = 100



Industrial production for all industries measures real output in the manufacturing, mining, electric, and gas industries, relative to a base year.

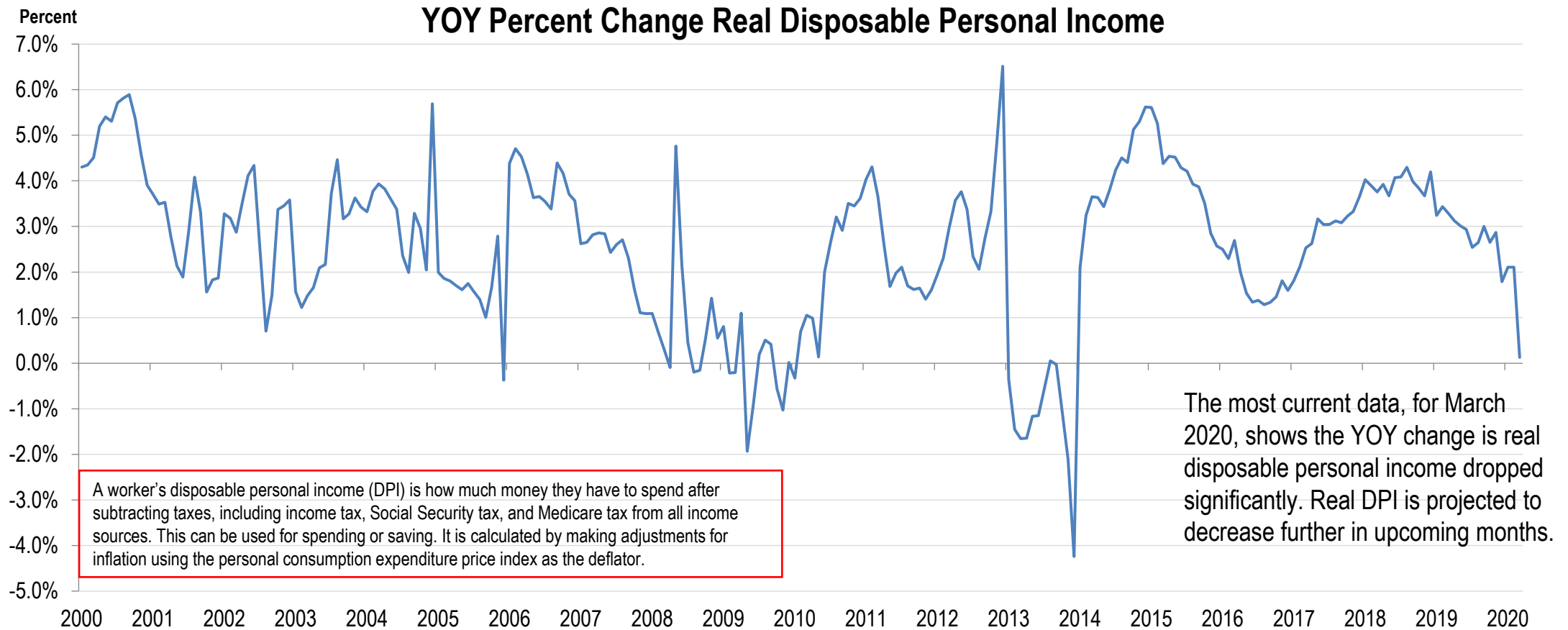
The IPI for manufacturing and all industries plummeted in March and April 2020.

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

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Real Disposable Personal Income

Percent Change Prior Year



Source: FRED, SA.

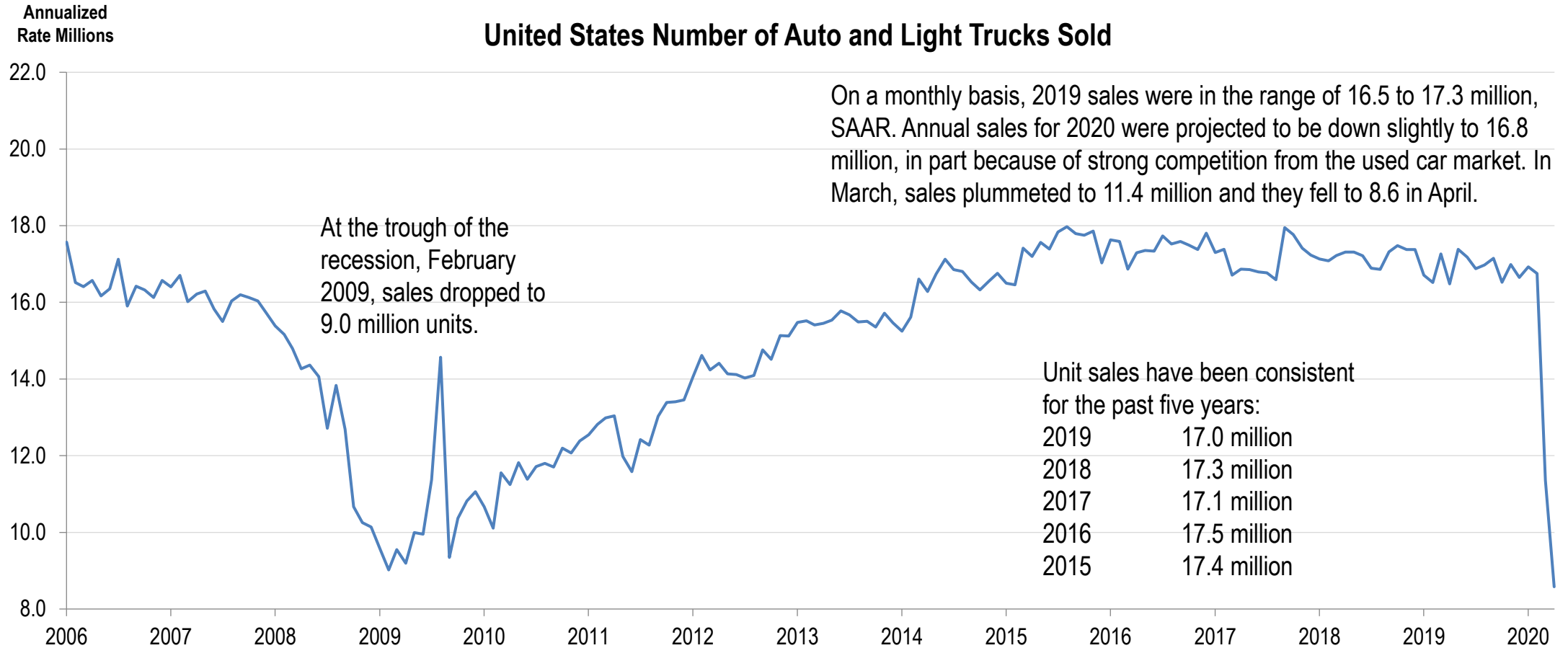
Sampling of Other Key Metrics

U.S. Light Truck and Auto Sales, Advanced Retail Sales, S&P 500 Index, WTI Crude Oil Prices and Colorado Oil Production

This section includes additional metrics that illustrate the state of the economy. Auto and retail sales have fallen off the cliff, although a few segments of retail, such as groceries, are doing better than most. The S&P Index fell 34%, but it has rebounded. The lower demand for oil has caused prices to decrease. A surplus has developed with has caused oil production in Colorado to taper off.

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

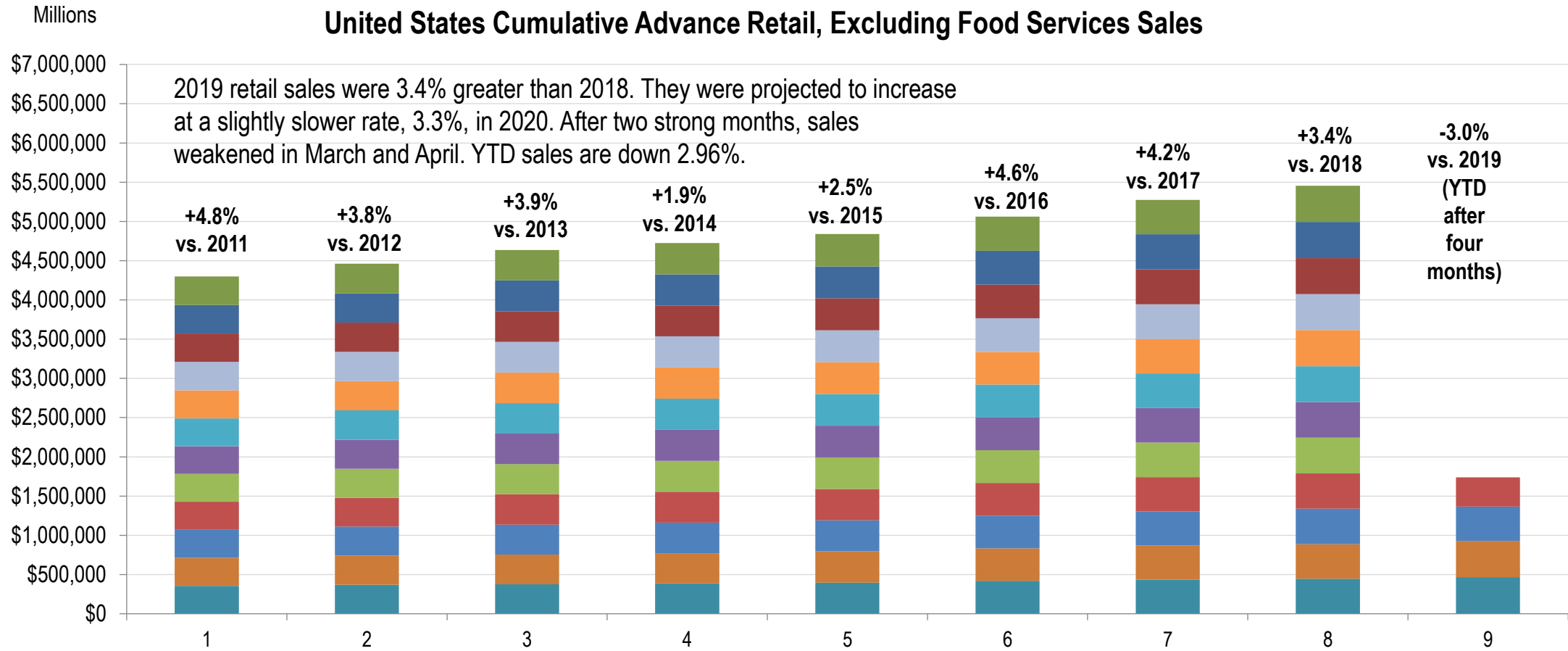
Monthly (Annualized Rate Millions)



Source: FRED, Federal Reserve Bank of St. Louis, Seasonally Adjusted Annualized Rates (SAAR), cber.co.

Cumulative Advance Retail, Excluding Food Services Sales

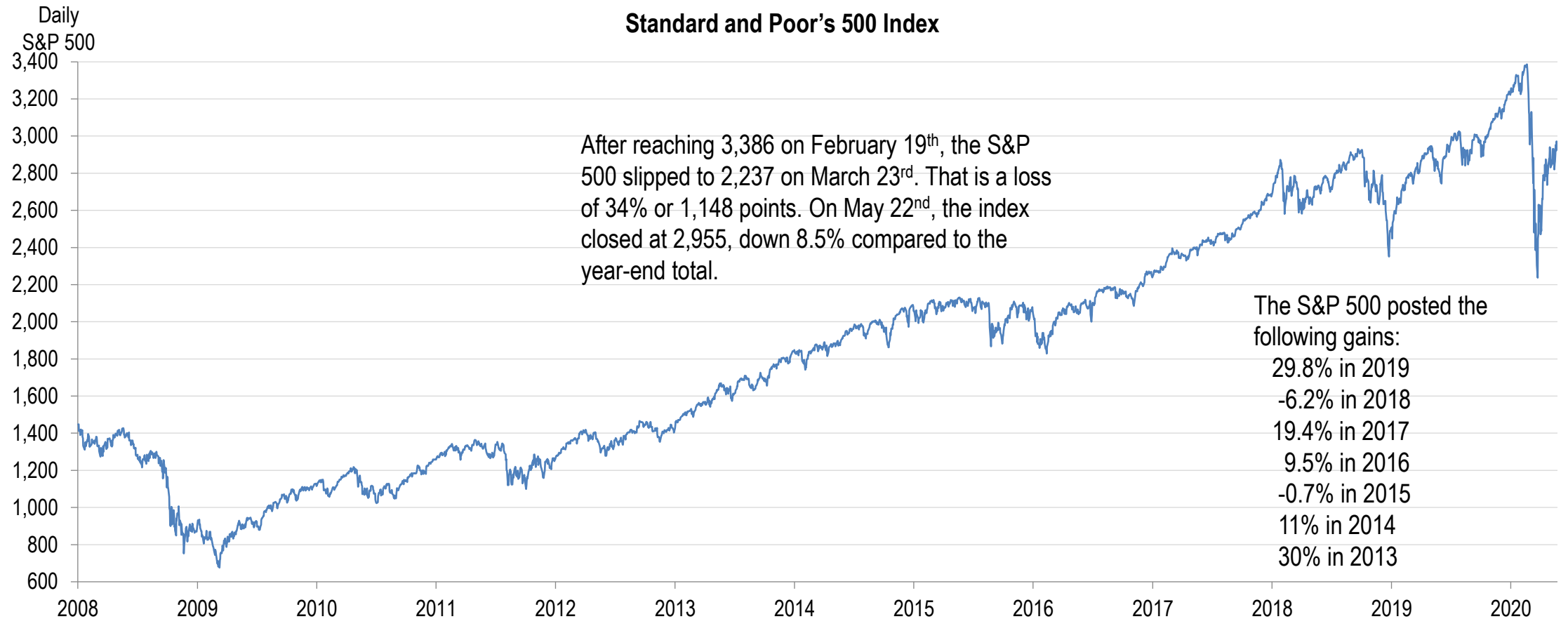
Monthly



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

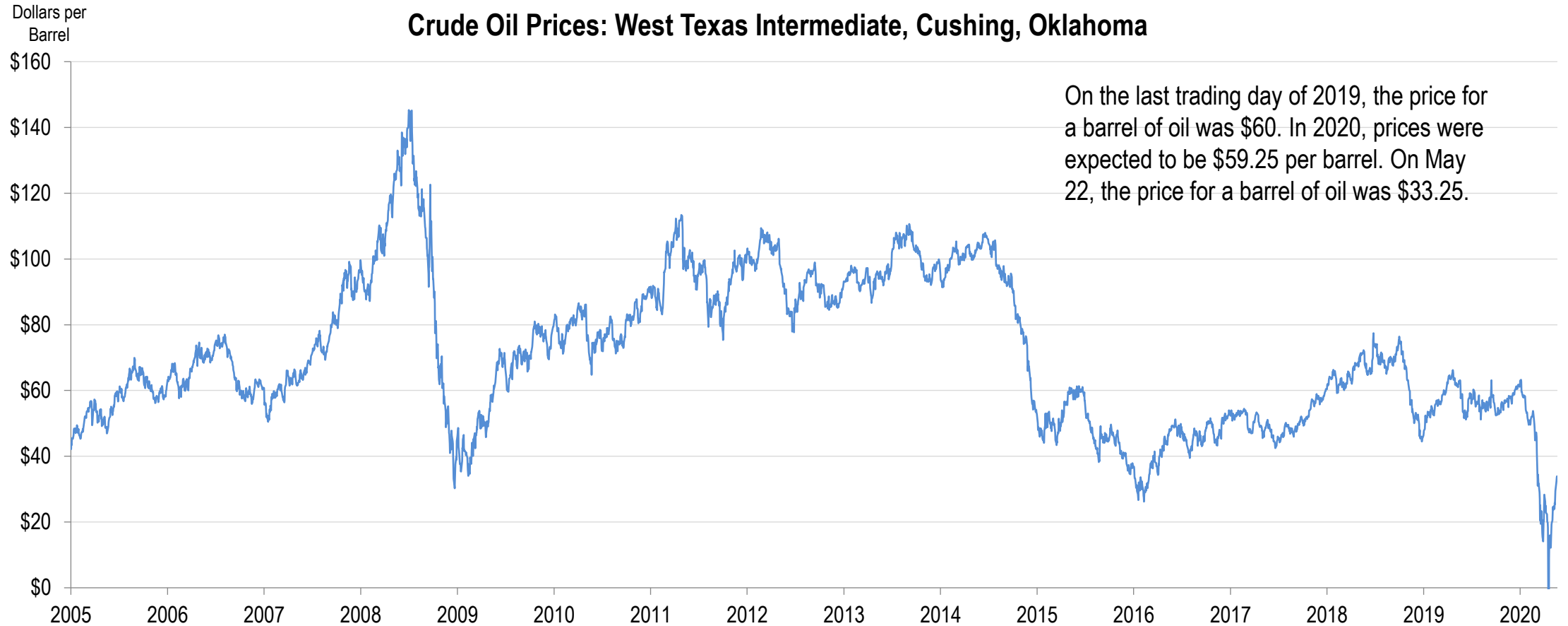
Note: Data is in descending order with December at the top and January at the bottom, not adjusted for inflation.

Standard and Poor's 500 Index



Crude Oil Prices

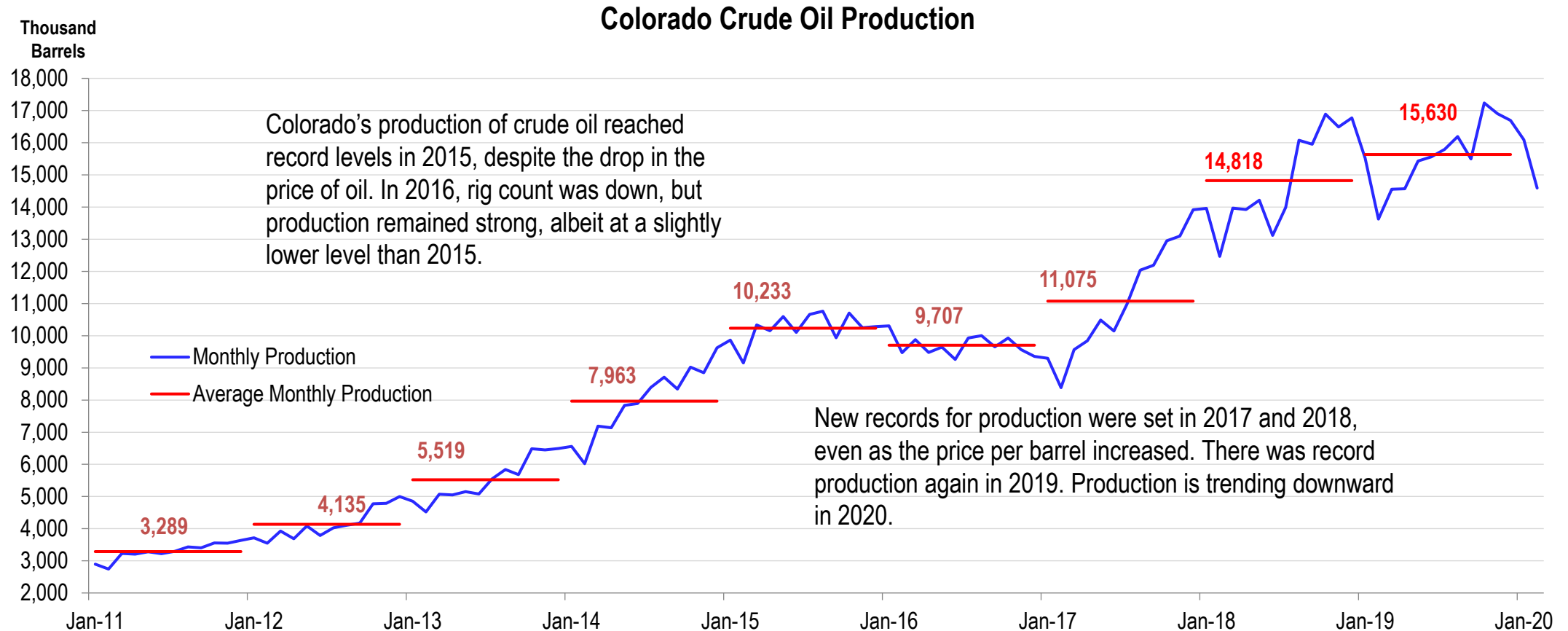
West Texas Intermediate



Source: FRED, EIA, cber.co.

Colorado Field Production of Crude Oil

2011 to 2020 (Thousand Barrels)



Source: EIA, cber.co.

Summary

Closing Comments

During March and April, the economies of the United States and all 50 states have deteriorated significantly. No states and very few industries have been spared. There is no place to hide!

Comments About the U.S. Economy

- The opening of the economy from the lockdown will be a short-term event that will extend into the summer. The actual recovery will take much longer and require individuals and public and private leaders to be strong, disciplined, innovative, and resilient.
- From a health perspective the virus is being managed as best as possible given the available information. The health and safety of American citizens will continue to be a factor in the speed of the economic recovery.
- A critical factor in determining the shape of the recovery (U, V, W, L, Swoosh) is the ability and willingness of the consumer to spend. Consumers account for about two-thirds of the country's GDP.
- Personal consumption directly supports businesses and indirectly supports state and local governments through taxes associated with ownership of property and consumption of goods and services.
- To that point, the economic health of state and local governments is critical because they provide necessary services such as education, safety, maintenance, recreation, and utilities.
- It is tragic when companies go out of business, but that is the Darwinian part of recessions that allow economies to grow and become stronger. Companies and organizations must adapt and innovate to remain relevant.
- There have been a variety of losses associated with the lockdown. It is essential that individuals and public and private leaders work to regain the loss of human capital, i.e. the personal and professional relationships, the personal trust in the system, and the faith in mankind.

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ABOUT THE AUTHOR

Gary Horvath has produced annual employment forecasts of the state economy for over 30 years. They have been supplemented by monthly economic updates and indices that track economic performance over the short term. In addition, he has directed three statewide analyses that included reviews of all 64 county economies.

Horvath was the principal investigator for a state and federally funded project to prepare a nanotechnology roadmap for Colorado. As well, he was a co-founder of the Colorado Photonics Industry Association, a trade group for Colorado’s Photonics cluster. Horvath has been an active board member of the group since its inception.

Horvath has also served on the Board of Directors for the Economic Development Council of Colorado, Northwest Denver Business Partnership, Adams County Economic Development, and Broomfield Economic Development Corporation. Horvath has also been the chair of the photonics/electronics committee in the Governor’s Office of Economic Development and International Trade early stage and proof of concept grant program.