Colorado Municipal League COVID Economic Discussion
What we know thus far

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Overview

• Resurgence in domestic cases
• Economy was on a strong footing prior to COVID-19
• CARES Act and Federal Reserve helped mitigate the impact
• Industries disproportionately impacted
• Don’t be fooled by the employment numbers
• Colorado outperforming early in the recovery
• Structural changes (e.g., Work From Home, Retail, Migration)
Confirmed COVID-19 Cases by State

Source: Bloomberg.
Business Cycle

Employment Loss and Recovery

Real GDP and Potential GDP

Sources: Congressional Budget Office and the Bureau of Economic Analysis. This file presents data that supplement CBO's July 2020 report An Update to the Economic Outlook: 2020 to 2030.
Personal Income

$ Billions, Seasonally Adj. Annual Rate

-5,000
0
5,000
10,000
15,000
20,000
25,000

Jan-20
Feb-20
Mar-20
Apr-20
May-20

Transfer Receipts
Dividends, Interest, and Rent
Proprietor Income
Employee Compensation
Contributions to Social Insurance

Source: Bureau of Economic Analysis.
National Employment

Month-over-Month Change

Recession 8 Months
Recession 18 Months

Sources: Bureau of Labor Statistics (Seasonally Adjusted), Moody’s Analytics, and the National Bureau of Economic Research.
Employment Growth

Employment Growth

1-Year Growth, June 2020

Labument Underutilization

Source: Bureau of Labor Statistics (Seasonally Adjusted). Unemployment by group is not seasonally adjusted.

<table>
<thead>
<tr>
<th>Group</th>
<th>July (NSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10.5</td>
</tr>
<tr>
<td>Men</td>
<td>9.7</td>
</tr>
<tr>
<td>Women</td>
<td>11.3</td>
</tr>
<tr>
<td>White</td>
<td>9.4</td>
</tr>
<tr>
<td>Black or African American</td>
<td>15.0</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>13.0</td>
</tr>
<tr>
<td>Asian</td>
<td>12.2</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>10.5</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>18.2</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>11.5</td>
</tr>
<tr>
<td>45 to 54 years</td>
<td>8.2</td>
</tr>
<tr>
<td>55 years and over</td>
<td>8.0</td>
</tr>
<tr>
<td>Less than a High School diploma</td>
<td>9.0</td>
</tr>
<tr>
<td>High School graduates, no college</td>
<td>14.9</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>10.8</td>
</tr>
<tr>
<td>Associate degree</td>
<td>10.5</td>
</tr>
<tr>
<td>Bachelor's degree and higher</td>
<td>9.7</td>
</tr>
<tr>
<td>Bachelor's degree only</td>
<td>7.1</td>
</tr>
<tr>
<td>Advanced degree</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics (Seasonally Adjusted). Unemployment by group is not seasonally adjusted.
Index of Consumer Confidence

Small Business Outlook

Business Conditions

Optimism Index

Source: National Federation of Independent Business.
ISM Indices

ISM Manufacturing Index

ISM Non-Manufacturing Index

Source: Institute for Supply Management (ISM).
1-Year Securities Trends

Indexed, August 13, 2019=100

<table>
<thead>
<tr>
<th>Change</th>
<th>S&amp;P 500</th>
<th>Dow Jones</th>
<th>Nasdaq</th>
<th>Russell 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Peak</td>
<td>-0.1%</td>
<td>-5.5%</td>
<td>-1.5%</td>
<td>-7.1%</td>
</tr>
<tr>
<td>1-Year</td>
<td>15.6%</td>
<td>6.2%</td>
<td>38.4%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Source: Yahoo! Finance.
Consumer Price Index

U.S. City Average, Core Inflation

January 2015:
Core Inflation: -0.4%
All Items: -0.6%

July 2020:
Core Inflation: 0.6%
All Items: 0.6%

November 2018:
Core Inflation: 0.0%
All Items: -1.8%

Household Debt Burden

Percent of Disposable Income

Debt Service Ratio (Left Axis)

Financial Obligations Ratio (Right Axis)

Source: Federal Reserve, Household Debt Service and Obligations Ratios.
Interest Rates

Sources: Federal Reserve and Moody’s Analytics.
Federal Budget Balance

2000 to 2020

Sources: Office of Management and Budget, Consensus Forecasts, and the Business Research Division.
The FED

Source: Board of Governors of the Federal Reserve System.
# Colorado Among Other States

<table>
<thead>
<tr>
<th>Metric</th>
<th>1-Year</th>
<th>3-Year</th>
<th>5-Year</th>
<th>10-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Employment Growth</td>
<td>18</td>
<td>9</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Population Growth</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Personal Income Growth</td>
<td>23</td>
<td>4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>PCPI Growth</td>
<td>39</td>
<td>5</td>
<td>13</td>
<td>NA</td>
</tr>
<tr>
<td>PCPI</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>NA</td>
</tr>
<tr>
<td>Average Annual Pay % Growth</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Average Annual Pay</td>
<td>9</td>
<td>11</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Unemployment Rate*</td>
<td>35</td>
<td>14</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>Labor Force % Growth</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>LFPR</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>FHFA Home Price Index Growth</td>
<td>17</td>
<td>9</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Colorado Employment Change—March + April

Colorado Employment Change—May + June

## Colorado Wages

**Q4 2019**

-$1B for every 16,200 jobs

### Above Average Total

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Employment (Thousands)</th>
<th>Share of Employment</th>
<th>Average Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of companies and enterprises</td>
<td>42</td>
<td>1.5%</td>
<td>$148,552</td>
</tr>
<tr>
<td>Utilities</td>
<td>8</td>
<td>0.3%</td>
<td>$110,324</td>
</tr>
<tr>
<td>Information</td>
<td>76</td>
<td>2.8%</td>
<td>$109,410</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>235</td>
<td>8.6%</td>
<td>$103,235</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>113</td>
<td>4.1%</td>
<td>$101,795</td>
</tr>
<tr>
<td>Natural Resources and Mining</td>
<td>48</td>
<td>1.8%</td>
<td>$90,350</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>110</td>
<td>4.0%</td>
<td>$90,319</td>
</tr>
<tr>
<td>Federal Government</td>
<td>53</td>
<td>1.9%</td>
<td>$85,527</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>150</td>
<td>5.5%</td>
<td>$73,939</td>
</tr>
<tr>
<td>State Government</td>
<td>107</td>
<td>3.9%</td>
<td>$67,461</td>
</tr>
<tr>
<td>Construction</td>
<td>179</td>
<td>6.5%</td>
<td>$64,625</td>
</tr>
<tr>
<td><strong>All Industries</strong></td>
<td><strong>2,736</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>$61,816</strong></td>
</tr>
</tbody>
</table>

### Below Average Total

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Employment (Thousands)</th>
<th>Share of Employment</th>
<th>Average Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real estate and rental and leasing</td>
<td>54</td>
<td>2.0%</td>
<td>$61,338</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>83</td>
<td>3.0%</td>
<td>$58,809</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>304</td>
<td>11.1%</td>
<td>$52,720</td>
</tr>
<tr>
<td>Local Government</td>
<td>268</td>
<td>9.8%</td>
<td>$50,289</td>
</tr>
<tr>
<td>Administrative and waste services</td>
<td>162</td>
<td>5.9%</td>
<td>$45,866</td>
</tr>
<tr>
<td>Educational services</td>
<td>38</td>
<td>1.4%</td>
<td>$42,492</td>
</tr>
<tr>
<td>Other services, except public administration</td>
<td>85</td>
<td>3.1%</td>
<td>$42,367</td>
</tr>
<tr>
<td>Arts, entertainment, and recreation</td>
<td>59</td>
<td>2.2%</td>
<td>$38,357</td>
</tr>
<tr>
<td>Retail trade</td>
<td>272</td>
<td>9.9%</td>
<td>$33,797</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>286</td>
<td>10.5%</td>
<td>$24,813</td>
</tr>
<tr>
<td><strong>Below Average Total</strong></td>
<td><strong>1,611</strong></td>
<td><strong>58.9%</strong></td>
<td><strong>$42,774</strong></td>
</tr>
</tbody>
</table>

### Notes

22.6% of employment

13.3% of total wages

Daily Commute

Denver County

- $8.6B Personal income inflow
- $14.4B Personal income outflow

Douglas County

- $8.6B Personal income inflow

Source: Census OntheMap, 2017.
Initial Jobless Claims Colorado

<table>
<thead>
<tr>
<th>Date</th>
<th>Initial Claims</th>
<th>Continued Claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/7/2020</td>
<td>1,865</td>
<td>22,908</td>
</tr>
<tr>
<td>3/14/2020</td>
<td>2,321</td>
<td>21,309</td>
</tr>
<tr>
<td>3/21/2020</td>
<td>19,774</td>
<td>21,956</td>
</tr>
<tr>
<td>3/28/2020</td>
<td>61,838</td>
<td>73,584</td>
</tr>
<tr>
<td>4/4/2020</td>
<td>46,326</td>
<td>166,593</td>
</tr>
<tr>
<td>4/11/2020</td>
<td>104,572</td>
<td>171,434</td>
</tr>
<tr>
<td>4/18/2020</td>
<td>67,639</td>
<td>229,398</td>
</tr>
<tr>
<td>4/25/2020</td>
<td>38,367</td>
<td>228,683</td>
</tr>
<tr>
<td>5/2/2020</td>
<td>28,360</td>
<td>261,951</td>
</tr>
<tr>
<td>5/9/2020</td>
<td>22,732</td>
<td>246,735</td>
</tr>
<tr>
<td>5/16/2020</td>
<td>18,054</td>
<td>265,499</td>
</tr>
<tr>
<td>5/23/2020</td>
<td>15,719</td>
<td>244,600</td>
</tr>
<tr>
<td>5/30/2020</td>
<td>12,519</td>
<td>263,810</td>
</tr>
<tr>
<td>6/6/2020</td>
<td>13,098</td>
<td>242,785</td>
</tr>
<tr>
<td>6/13/2020</td>
<td>10,382</td>
<td>259,341</td>
</tr>
<tr>
<td>6/20/2020</td>
<td>10,013</td>
<td>238,126</td>
</tr>
<tr>
<td>6/27/2020</td>
<td>8,368</td>
<td>246,108</td>
</tr>
<tr>
<td>7/4/2020</td>
<td>7,928</td>
<td>229,058</td>
</tr>
<tr>
<td>7/11/2020</td>
<td>10,495</td>
<td>239,098</td>
</tr>
<tr>
<td>7/18/2020</td>
<td>8,531</td>
<td>224,839</td>
</tr>
<tr>
<td>7/25/2020</td>
<td>8,037</td>
<td>224,130</td>
</tr>
<tr>
<td>8/1/2020</td>
<td>7,167</td>
<td>201,119</td>
</tr>
<tr>
<td>8/8/2020</td>
<td>6,077</td>
<td></td>
</tr>
</tbody>
</table>

Jobless Claims Colorado

Initial Claims

Continued Claims

Continued Jobless Claims by Industry

Sources: Colorado Department of Labor and Employment
<table>
<thead>
<tr>
<th>County</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbert</td>
<td>7.1</td>
</tr>
<tr>
<td>Park</td>
<td>8.6</td>
</tr>
<tr>
<td>Douglas</td>
<td>8.7</td>
</tr>
<tr>
<td>Larimer</td>
<td>9.2</td>
</tr>
<tr>
<td>Boulder</td>
<td>9.5</td>
</tr>
<tr>
<td>Mesa</td>
<td>10.0</td>
</tr>
<tr>
<td>Weld</td>
<td>10.1</td>
</tr>
<tr>
<td>Broomfield</td>
<td>10.1</td>
</tr>
<tr>
<td>Jefferson</td>
<td>10.4</td>
</tr>
<tr>
<td>El Paso</td>
<td>10.4</td>
</tr>
<tr>
<td>Pueblo</td>
<td>10.8</td>
</tr>
<tr>
<td>Teller</td>
<td>11.4</td>
</tr>
<tr>
<td>Arapahoe</td>
<td>11.5</td>
</tr>
<tr>
<td>Adams</td>
<td>11.6</td>
</tr>
<tr>
<td>Denver</td>
<td>11.9</td>
</tr>
<tr>
<td>Clear Creek</td>
<td>12.9</td>
</tr>
<tr>
<td>Gilpin</td>
<td>19.7</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics (Not Seasonally Adjusted),
Colorado Employment Growth

Sources: Colorado Department of Labor and Employment and the Colorado Business Economic Outlook Committee.
Leisure and Hospitality Share of Employment

Leisure and Hospitality
- Arts, Entertainment, and Recreation
  - Ski
  - Golf
  - Pro Sports
  - Performing Arts
  - Museums
  - Gaming
  - Fitness
- Accommodation and Food Services
  - Hotels
  - Restaurants
  - Bars
- Local Concentrations
  - Boulder: 11.7%
  - Denver: 12.6%
  - Pitkin: 39%
  - Summit: 41.1%

Versus
- Pitkin: 39%
- Summit: 41.1%
DIA Enplanements and Deplanements

Thousands


-72.6% YoY Change

June

Source: Denver International Airport.
Baker Hughes Rig Count

WTI (Left Axis)
Rig Count (Right Axis)

1-Year Change:
WTI: -29%
Rig Count: -84%

Source: Energy Information Administration and Baker Hughes.
Retail Gasoline

July 2008:
- U.S. $4.17
- Colorado: $4.08

December 2008:
- U.S. $1.67
- Colorado: $1.54

August 2020:
- U.S. $2.26
- Colorado: $2.50

May 2020:
- U.S. $1.88
- Colorado: $1.78

Source: Energy Information Administration (All Grades/All Formulations). Data through December 2019.
FHFA Home Price Index by MSA

1-Year Home Price Change, Q1 2020

Source: Federal Housing Finance Agency, All Transactions Index (Not Seasonally Adjusted).
Value of Construction

Inflation


Percent Change

All Items

Denver-Aurora-Lakewood MSA
United States

All Items Less Shelter

Shelter

Medical Care

Percent Change
National Retail Sales, February to April

- Electronic shopping and mail order houses
- Food & beverage stores
- Building material & garden eq.
- General merchandise stores
- Health & personal care stores
- Total
- Motor vehicle & parts dealers
- Miscellaneous store retailers
- Gasoline stations
- Sporting goods, hobby, musical instrument, & book stores
- Electronics & appliance stores
- Food services & drinking places
- Furniture & home furn. stores
- Clothing & clothing accessories Stores

Month-over-Month Percent Change

Source: U.S. Census Bureau, Monthly Retail Trade (Advance Estimate), April 2020.
National Retail Sales, April to July

Month-over-Month Percent Change

- Food & beverage stores
- Building material & garden equip
- Health & personal care stores
- Total
- Gasoline stations
- Miscellaneous store retailers
- Motor vehicle & parts dealers
- Food services & drinking places
- Department stores
- Sporting goods, hobby, musical
- Electronics & appliance stores
- Furniture & home furn stores
- Clothing & clothing accessories

National Retail and Food Services Sales

July 2020: +1.2% from prior peak
-22.1% peak to trough

Source: U.S. Census Bureau.
Colorado Sales and Use Taxes

Source: Colorado Department of Revenue (collections through April) and the U.S. Census Bureau (2017).
Telework Due to Pandemic

- 31% of workers teleworked or worked from home because of the pandemic (Down from 35% in May).
- Women
- Asians
- Higher educational attainment
- By industry,
  - 66% of workers in educational services
  - 62% in finance and insurance
  - 60% in professional and technical services
  - 7% of workers in accommodation and food services
  - 6% in agriculture teleworked.

Work-From-Home Preferences

Work-From-Home Pre-COVID

- 5 days per week: 9.0%
- 4 days per week: 2.0%
- 3 days per week: 3.0%
- 2 days per week: 7.0%
- 1 day per week: 10.0%
- 1 to 4 days per month: 20.0%
- 0 full days, but part of a day: 20.0%
- None: 29.0%

Work-From-Home Post-COVID

- 5 days per week: 16%
- 4 days per week: 7%
- 3 days per week: 17%
- 2 days per week: 23%
- 1 day per week: 14%
- 1 to 4 days per month: 11%
- 0 full days, but part of a day: 6%
- None: 7%

Source: Global Work-From-Home Experience Survey
Q&A