Will the Recovery Ever End?
Louisville Economic Development Forum

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Senior Economist and Associate Dean for Business and Government Relations
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#COBizOutlook
Real GDP Growth

Sources: Bureau of Economic Analysis and Consensus Forecasts.
Economic Growth

Sources: Bureau of Economic Analysis, the National Bureau of Economic Research, Moody’s Analytics, and the Business Research Division.
National Employment
Month-over-Month Change, 12-Month Average

Thousands, Month-over-Month, 12-Mo Average

Sources: Bureau of Labor Statistics (Seasonally Adjusted), Moody’s Analytics, and NBER.
State Employment Growth
Year-over-Year April 2019

Source: Bureau of Labor Statistics (Seasonally Adjusted).
Labor Underutilization

Source: Bureau of Labor Statistics (Seasonally Adjusted).
Labor Force Participation Rate

Percent of Population 16 and Over

Source: Bureau of Labor Statistics (Seasonally Adjusted).
U.S. Income and Consumption

Sources: Consensus Forecasts.
2018-2019 Securities Trends

Indexed, January 2, 2018=100

- NASDAQ
- Dow Jones
- S&P 500
- Russell 2000

Source: Yahoo! Finance.
Household Debt Burden
Percent of Disposable Income

DSR

Debt Service Ratio (L)

Financial Obligations Ratio (R)

Source: Federal Reserve, Household Debt Service and Obligations Ratios.
Vehicle Sales and Retail Sales

Vehicle Sales

Retail and Food Services Sales

Sources: Bureau of Economic Analysis, Moody's Analytics, U.S. Census Bureau (Seasonally Adjusted Annual Rate).
Nominal Corporate Profits and Business Fixed Investment

Sources: Bureau of Economic Analysis, Consensus Forecasts.
ISM Indices

ISM Manufacturing Index

ISM Non-Manufacturing Index

Source: Institute for Supply Management (ISM).
U.S. and Colorado Economies
Q2 2004 – Q2 2019

National and State Expectations

Index (50=Neutral)

Colorado

United States

Source: Business Research Division.
Home Price Growth by State
Year over Year Q4 2018

All states recorded growth
- 31 had 5%+ growth
- 3 had 10%+ growth

Source: Federal Housing Finance Agency Home Price Index, All Transactions Index.
Federal Budget Balance

$ Billions

Sources: Office of Management and Budget and Consensus Forecasts.
U.S. Nominal Broad Dollar Index and Real Net Exports

Sources: Federal Reserve, Bureau of Economic Analysis, and Consensus Forecasts.
Money, Interest Rates, and Prices
Sources: Federal Reserve and Moody’s Analytics.
Loan Delinquency
Percent of Balance 90+ Days Delinquent by Loan Type

Source: FRBNY Consumer Credit Panel.
National Inflation

Year-over-Year Percent Change

Colorado Change in Population

- Colorado’s population changes
  - 79,800 in 2018
  - 76,300 in 2019

- Ranked 8th in total state growth
- Ranked 9th for fastest growth
- Continued net migration into the state

Sources: Colorado Demography Office, U.S. Census Bureau, and the Business Research Division.
Colorado Employment Growth

Jobs Added

Sources: Colorado Department of Labor and Employment and the Colorado Business Economic Outlook Committee.
Employment In Current Decade
National, State, and Local

Percent Change from January 2010

Colorado Employment Change

2019 Growth

Total jobs gained: 53,200

Employment in Thousands

2018

2019

### Colorado Wages

**2018 Q4 (4Q Rolling Average)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Employment</th>
<th>YoY Employment Growth</th>
<th>Average Wages</th>
<th>YoY Wage Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of companies and enterprises</td>
<td>41,446</td>
<td>5.7%</td>
<td>$136,060</td>
<td>-8.6%</td>
</tr>
<tr>
<td>Utilities</td>
<td>8,033</td>
<td>0.2%</td>
<td>$104,512</td>
<td>4.8%</td>
</tr>
<tr>
<td>Information</td>
<td>75,210</td>
<td>4.1%</td>
<td>$100,757</td>
<td>0.0%</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>228,191</td>
<td>4.3%</td>
<td>$96,242</td>
<td>4.0%</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>112,822</td>
<td>1.0%</td>
<td>$95,315</td>
<td>3.4%</td>
</tr>
<tr>
<td>Natural Resources and Mining</td>
<td>46,931</td>
<td>7.3%</td>
<td>$87,526</td>
<td>3.9%</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>109,076</td>
<td>1.4%</td>
<td>$85,486</td>
<td>3.0%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>52,916</td>
<td>-0.5%</td>
<td>$84,020</td>
<td>5.7%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>148,099</td>
<td>2.4%</td>
<td>$70,680</td>
<td>1.8%</td>
</tr>
<tr>
<td>State Government</td>
<td>103,411</td>
<td>1.6%</td>
<td>$64,912</td>
<td>3.7%</td>
</tr>
<tr>
<td>Construction</td>
<td>176,213</td>
<td>4.7%</td>
<td>$62,414</td>
<td>5.0%</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>52,583</td>
<td>2.3%</td>
<td>$59,452</td>
<td>3.9%</td>
</tr>
<tr>
<td><strong>All Industries</strong></td>
<td><strong>2,697,493</strong></td>
<td><strong>2.3%</strong></td>
<td><strong>$58,942</strong></td>
<td><strong>3.6%</strong></td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>81,018</td>
<td>7.3%</td>
<td>$56,746</td>
<td>1.6%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>300,305</td>
<td>1.5%</td>
<td>$51,211</td>
<td>2.9%</td>
</tr>
<tr>
<td>Local Government</td>
<td>266,103</td>
<td>1.9%</td>
<td>$48,461</td>
<td>3.4%</td>
</tr>
<tr>
<td>Administrative and waste services</td>
<td>160,056</td>
<td>-0.1%</td>
<td>$44,041</td>
<td>7.2%</td>
</tr>
<tr>
<td>Educational services</td>
<td>36,358</td>
<td>3.8%</td>
<td>$41,575</td>
<td>3.1%</td>
</tr>
<tr>
<td>Other services, except public administration</td>
<td>82,527</td>
<td>2.4%</td>
<td>$40,992</td>
<td>3.6%</td>
</tr>
<tr>
<td>Arts, entertainment, and recreation</td>
<td>54,240</td>
<td>2.8%</td>
<td>$37,979</td>
<td>5.2%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>276,173</td>
<td>0.4%</td>
<td>$32,452</td>
<td>2.8%</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>281,282</td>
<td>1.1%</td>
<td>$23,442</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

Inflation

Construction
Colorado Residential Building Permits

Sources: U.S. Census Bureau and the Colorado Business Economic Outlook Committee.
Colorado Value of Construction

$ Millions

Nonbuilding
Nonresidential
Residential

Sources: Dodge Data & Analytics.
Colorado Sales Tax Collections

$ Millions, 12-Month Rolling Sum

Sources: Colorado Office of the State Controller and the Colorado Department of Revenue.

- Strong job and income growth
- High consumer confidence
- High profile bankruptcies
- Competition from e-commerce
- Retail sales growth
  - 5.5% in 2018
  - 5.3% in 2019
Colorado General Fund

Source: Colorado Office of the State Controller and the Colorado Office of State Planning and Budgeting (March 2019). Note: Excludes revenue transferred to the State Education Fund.
Employment and New Entity Filings

Employment, thousands

New Entity Filings

12-month total new entity filings

Note: Solid line displays actual seasonally adjusted employment numbers; dotted line reflects calculated forecasts.
## Colorado Ranking 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>13</td>
<td>10</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Employment Growth</td>
<td>13</td>
<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Population Growth</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Personal Income Growth</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>PCPI Growth</td>
<td>10</td>
<td>22</td>
<td>15</td>
<td>NA</td>
</tr>
<tr>
<td>PCPI</td>
<td>11</td>
<td>13</td>
<td>14</td>
<td>NA</td>
</tr>
<tr>
<td>Average Annual Pay % Growth</td>
<td>11</td>
<td>21</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Average Annual Pay</td>
<td>9</td>
<td>12</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>20</td>
<td>1</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Labor Force % Growth</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>LFPR</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>FHFA Home Price Index Growth</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Potential Headwinds for 2019

International/National
- Interest rates
- Global growth
- Value of the dollar
- Trade/Tariffs

State
- Commodity prices/cycle
- Drought and weather
- Housing affordability
- Talent shortage
- Real wage increases
The Boulder MSA and Louisville Economy

Photo courtesy of the Louisville Historical Museum.
Real Gross Domestic Product
Boulder MSA

Millions of Chained 2009 Dollars

Source: Bureau of Economic Analysis.
Single Family v. Multifamily Permits
Boulder MSA, Year-to-Date

Source: U.S. Census Bureau.
Single Family v. Multifamily Permits
Louisville, CO, Year-to-Date

Source: U.S. Census Bureau.
Median Price of Single Family Homes Sold
City of Louisville

Source: Boulder Area Realtor Association. Excludes condos and townhomes.
Boulder County Value of Construction

Sources: McGraw-Hill Construction Dodge Research and Analytics.
Boulder MSA Employment

YoY growth: 2.6% or 5,000

Boulder County
Jobs Added, 5 Years

Source: Colorado Department of Labor and Employment, QCEW.
Boulder County Wages
Annual Rate (4Q Rolling)

Source: Bureau of Labor Statistics, QCEW Data Series, NSA.
Boulder County Average Wages

Annual Rate (4Q)

12-Month Average

$70,000

$65,000

$60,000

$55,000

$50,000

$45,000

$40,000


1-Year Growth: 4.4%

Average Annual Wages
Front Range

Sales Tax Collections
City of Louisville, 12-Month Rolling Sum

Source: City of Louisville.
Venture Capital Investment
City of Louisville

Source: CB Insights.

Sample Deals:
Forge Nano
Boulder Surgical
Eximis Surgical
Solid Power
Threat X
FIFTY-FOURTH ANNUAL
COLORADO
BUSINESS ECONOMIC OUTLOOK
2019
#COBizOutlook