Emerging Trends in the U.S. and Colorado Economies

Alison Felix
Economist and Branch Executive
Federal Reserve Bank of Kansas City
Denver Branch

The views expressed are those of the presenter and do not necessarily reflect the positions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.
The Structure of the Federal Reserve System

• The Federal Reserve System was created by Congress in 1913.

• It is a public-private, decentralized institution consisting of the Board of Governors in Washington, D.C. and 12 regional Reserve Banks.
  – Board of Governors
    • Consists of seven members who are appointed by the President and confirmed by the Senate to serve 14-year terms.
    • There are currently five members of the Board of Governors: Jerome Powell, Michelle Bowman, Lael Brainard, Richard Clarida and Randal Quarles.

  – Regional Federal Reserve Banks
    • There are 12 Regional Reserve Banks, each serving a unique district. These are semi-independent by design.
    • The Reserve Banks are governed by their Board of Directors, and the Directors (excluding Banking Directors) select the President of the Bank.

  – Federal Open Market Committee (FOMC)
    • Comprised of the 7 members of the Board of Governors and the 12 Reserve Bank Presidents (only 5 presidents are voting members on a rotating basis).
    • Charged with conducting monetary policy.
Regional Federal Reserve Banks and Branch Locations
The Primary Functions of the Federal Reserve System

- **Conduct the Nation’s Monetary Policy**
  - The Federal Open Market Committee is the group charged with conducting monetary policy within the U.S.
  - The Committee has a statutory mandate from Congress to promote maximum employment, stable prices and moderate long-term interest rates.

- **Provide and Maintain an Effective and Efficient Payments System**
  - The Federal Reserve supplies payments services to the public through depository institutions including banks, credit unions and savings and loans.
  - We also serve as a banking and fiscal agent for the United States government.
  - Payment services includes cash processing, processing and clearing checks, transferring funds and issuing, transferring and redeeming U.S. government securities.

- **Supervise and Regulate Banking Operations**
  - The Federal Reserve ensures the safety and soundness of banks and ensures that banks provide fair and equitable services to consumers.
  - The Federal Reserve also monitors and promotes the stability of the financial system as a whole.
The U.S. economy is expected to expand at a moderate pace this year.

**REAL U.S. GROSS DOMESTIC PRODUCT**

*Percent Change from Previous Quarter at Seasonally Adjusted Annualized Rates*

-10%  -8%  -6%  -4%  -2%  0%  2%  4%  6%

Year-over-Year Percent Change

Sources: Bureau of Economic Analysis and Federal Open Market Committee (FOMC) / Haver Analytics

*Projections as of September FOMC meeting*
The unemployment rate has declined steadily over the past nine years and has fallen below most estimates of its longer-run level.

Sources: Bureau of Labor Statistics, National Bureau of Economic Research and Federal Open Market Committee (FOMC) / Haver Analytics

*Projections as of September FOMC meeting; median unemployment rate

Sources: Bureau of Labor Statistics, National Bureau of Economic Research and Federal Open Market Committee (FOMC) / Haver Analytics

*Projections as of September FOMC meeting; median unemployment rate
Inflation is expected to move toward the FOMC’s two percent target over the next few years.

**PERSONAL CONSUMPTION EXPENDITURE PRICE INDEX (PCEPI)**

Percent Change Year-over-Year

- **Headline Inflation**
- **Core Inflation**

FOMC’s Target Inflation Rate

FOMC* Projections

Sources: Bureau of Economic Analysis and Federal Open Market Committee / Haver Analytics

*Projections as of September FOMC meeting; median projections
“Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In light of the implications of global developments for the economic outlook as well as muted inflation pressures, the Committee decided to lower the target range for the federal funds rate to 1-1/2 to 1-3/4 percent.”

- October 2019 FOMC Statement
Employment has been increasing in Colorado and the nation for more than nine years.

**PAYROLL EMPLOYMENT GROWTH**

*Index 100 = December 2007, Seasonally Adjusted*

<table>
<thead>
<tr>
<th>Percent Change</th>
<th>Dec. '07 to Present</th>
<th>Past Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. (Oct. '19)</td>
<td>9.8%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Colorado (Sep. ‘19)</td>
<td>18.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Denver (Sep. ‘19)</td>
<td>22.2%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Sources: Bureau of Labor Statistics / Haver Analytics and author’s calculations.
The majority of industries in Colorado have added jobs over the past year.

**Change in Payroll Employment, September 2019**

*Seasonally Adjusted*

**Percent Change Year-over-Year**

- **Professional & Business Services**: 6.7%
- **Leisure & Hospitality**: 3.0%
- **Other Services**: 2.4%
- **Health Care & Social Assistance**: 2.2%
- **Local Government**: 1.9%
- **Manufacturing**: 1.8%
- **Natural Resources & Mining**: 1.8%
- **State Government**: 1.3%
- **Federal Government**: 1.1%
- **Transportation & Utilities**: 1.1%
- **Retail Trade**: 0.7%
- **Private Educational Services**: 0.0%
- **Wholesale Trade**: -0.4%
- **Construction**: -0.6%
- **Financial Activities**: -1.0%
- **Information**: -1.7%

Source: Bureau of Labor Statistics / Haver Analytics
Unemployment rates are low across Colorado.

**UNEMPLOYMENT RATES**  
*September 2019, Seasonally Adjusted*

<table>
<thead>
<tr>
<th>Unemployment Rate</th>
<th>U-3</th>
<th>U-5*</th>
<th>U-6*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States (Oct. ‘19)</td>
<td>3.6%</td>
<td>4.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Colorado (Sep. ‘19)</td>
<td>2.7%</td>
<td>3.5%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Denver (Sep. ‘19)</td>
<td>2.6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*U-5 and U-6 values are 12-month moving averages as of Q3 2019 for Colorado and are for Oct. 2019 for the United States.*
Population growth has slowed in Colorado since the 1990s, but people continue to migrate into the state.

Contributions to Population Change in Colorado

Annual

Net Migration (Left)
Births – Deaths (Left)
Year-over-Year Percent Population Change (Right)

Source: Census Bureau / Haver Analytics
Residential construction activity has increased significantly since 2009, but permitting has declined so far this year.

**Residential Permits**
*Seasonally Adjusted, Year-to-Date through September*

Source: Census Bureau / Haver Analytics
Low inventories have led to strong home price appreciation in recent years in Colorado.

Source: Federal Housing Finance Agency / Haver Analytics
24 percent of renters and 9 percent of homeowners are severely burdened by housing costs in Colorado.

**COLORADO HOUSING COST-BURDEN RATES BY HOUSEHOLD INCOME**

*Percent of Ownership Category*

<table>
<thead>
<tr>
<th>Year</th>
<th>Renters</th>
<th>Owners</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>2007</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>2008</td>
<td>20</td>
<td>12</td>
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<tr>
<td>2009</td>
<td>18</td>
<td>14</td>
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<tr>
<td>2010</td>
<td>16</td>
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<td>2011</td>
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<tr>
<td>2012</td>
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<td>2013</td>
<td>10</td>
<td>22</td>
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<td>2014</td>
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<td>24</td>
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<td>2015</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>2017</td>
<td>2</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: Moderate burdens are defined as households with housing costs of between 30 – 50% of household income. Costs above 50% of household income are considered severely burdening.

Source: IPUMS-USA and author’s calculations
The services sector weakened in October.

**Non-Manufacturing and Services Activity**

_Diffusion Index, Seasonally Adjusted, Month-over-Month_

<table>
<thead>
<tr>
<th>Month</th>
<th>U.S.</th>
<th>Kansas City District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. '14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. '15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. '16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. '17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. '18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. '19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_54.7_ November 2019

_U.S.  54.7_  
_October 2019_

_Kansas City 47.5_  
_District_  
_October 2019_

Sources: Kansas City Federal Reserve Bank and ISM / Haver Analytics
Manufacturing activity has contracted slightly in recent months.

Manufacturing Activity
Diffusion Index, Seasonally Adjusted, Month-over-Month

Sources: Kansas City Federal Reserve Bank and ISM / Haver Analytics
Colorado exports have decreased so far this year.

COLORADO EXPORTS BY TRADING PARTNER

Billions

SEPTEMBER 2019 YEAR-TO-DATE

Year-over-Year Percent Change

<table>
<thead>
<tr>
<th></th>
<th>2019 YTD</th>
<th>2018 YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Trade</td>
<td>-4.6%</td>
<td></td>
</tr>
<tr>
<td>All Other</td>
<td>0.4</td>
<td>31.5%</td>
</tr>
<tr>
<td>Japan</td>
<td>-10.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>-21.1</td>
<td>15.1</td>
</tr>
<tr>
<td>Canada</td>
<td>0.2</td>
<td>17.3</td>
</tr>
<tr>
<td>China</td>
<td>-9.1</td>
<td>12.5</td>
</tr>
<tr>
<td>Eurozone</td>
<td>1.4</td>
<td>18.1</td>
</tr>
</tbody>
</table>

*Shares are for 2018

Sources: WISERTrade and Census Bureau
Energy activity has increased substantially over the past few years.

**Crude Oil Production**

*Millions of Barrels, Monthly, Seasonally Adjusted*

- United States (left)
- Colorado (right)

Sources: Baker Hughes and Energy Information Administration / Haver Analytics
Looking ahead, contacts expect energy activity to weaken in the months ahead.

**Energy Survey Activity Indicators**

*Quarterly Diffusion Index*

- Drilling/Business Activity
- Profits
- Number of Employees

Source: Kansas City Federal Reserve Bank Energy Survey
For additional information on the regional economy: